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# 2018 DAIHAN Scientific

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DAIHAN Scientific was founded in 1980 and has been broadening its business as one of the leaders in global Laboratory market. We have been cooperating with 70 international distributors to support Laboratory customers with various kind of high-quality instruments under the brand of DAIHAN. We've focused on extending the product lines with some new innovative products especially valuable for the customers in Life Science, Pharmaceutical, and Medical. This catalog provides the information of all the DAIHAN Product Lines, and you can get the same full information in our website, "[DAIHAN-Sci.com](http://DAIHAN-Sci.com)" at any time and in any place in the world. DAIHAN would make its best efforts to be the best Service company for Customer Satisfaction rather than a simple manufacturer. Thank you very much.

CEO / Chairman **Shu, Chong Ku**

09 Apr. 2018

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Centrifuge  
Furniture  
Heating Block

Hotplate Stirrer  
Magnifier  
Measuring Meters  
Melting Point Analyzer  
Mill

Reactor Complete Set  
Refrigerator  
Shaker  
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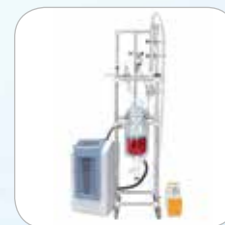
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DAIHAN Scientific

# Autoclave

**Bench-top Autoclave, Steam Sterilizer** ..... P. 8  
    , Steam Sterilizer, SMART-model ..... P. 9  
**Vertical-type Autoclave, Steam Sterilizer** ..... P. 6~7

Coming Soon



**Programmable Bench-top  
"MaXterile™ B"**

Coming Soon



**SMART Bench-top  
"MaXterile™ SB"**



**Standard-type  
"MaXterile™ 80"**



**Built in Recorder-type  
"MaXterile™ 80R"**

DAIHAN-brand® Digital Fuzzy-control Autoclaves “MaXterile™”, Standard-/Recorder-type, 47-/60-/80-/100-Lit. with Electronic Door Lock Sys, Lever-type Sliding Door, Steam Condensing, Solid-/Liquid-Modes, Max.2 kgf/cm<sup>2</sup>, up to 132 °C  
 (1) **NEW** PED Certified-model(φ 3.0mm Thick-Tank), (2) Non-PED-model(φ 2.0mm Thick-Tank), 전자동 고압 멸균기, 전자식 도어 잠금 시스템



Standard-type, “MaXterile™ 80”  
 (1) With PED Certi. 3mm Thick-Tank  
 (2) Without PED Certi. 2mm Thick-Tank



Built in Recorder-type, “MaXterile™ 80R”  
 (1) With PED Certi. 3mm Thick-Tank  
 (2) Without PED Certi. 2mm Thick-Tank

- Made in Korea ■ CE and PED Certified ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Special Steam Condensing Mechanism, Lever-type Sliding Door
- Built in DAIHAN-brand® New Generation Controller : Patented Jog-Dial Control System
- Electronic Door Lock Sensing System for User Safety.
- Door Open Button Automatically Lock Over 80°C for User Safety
- Built in Recorder model (only MaXterile 47R/60R/80R/100R models) : Print Sterilization Cycle Data for Validation and Analyze Sterilization (Temperature, Pressure, Time, Error Status, etc.)

- \* Ideal for Biotechnology, Clinical, Environmental, Medical and Food Industry.
- \* Innovative Easy-to-Use Digital Fuzzy Controller. \* Included 2× Wire Baskets
- \* Casters equipped for Excellent Mobility. \* Digital LCD with Back-Light Function.
- \* Digital Timer Function - 'Delay Time' and 'Operation Time' can be Controlled.
- \* Solid / Liquid Mode can be chosen by a customer considering a Sample Phase.
- \* Water Low Level Detection \* Automatic Over Pressure Release Valve ensures User Safety.
- \* Sterilization Error Indication : Error Alarm and Massage in case of Power Failure and Temperature Error

Specifications & Ordering information

Standard-type Models	“MaXterile 47”	“MaXterile 60”	“MaXterile 80”	“MaXterile 100”	
	Standard-type				
Built in Recorder-type Models	“MaXterile 47R”	“MaXterile 60R”	“MaXterile 80R”	“MaXterile 100R”	
	Recorder-type : Built in Recording Printer, Sterilization Cycle Data (Date, Temperature, Pressure, Time, Error Status, etc.)				
Capacity	47 Lit.	60 Lit.	80 Lit.	100 Lit.	
Temp. Range & Accuracy	Room Temp +5°C to 132°C, ±0.5°C at 121°C				
Pressure & Gauge	1.2 kgf/cm <sup>2</sup> at 121°C / 2.0 kgf/cm <sup>2</sup> at 132°C, 0 ~ 3 kgf/cm <sup>2</sup>				
Sterilization mode	Solid- or Liquid-mode				
Heating Power/Consumption	2 kW	3 kW	2 kW×2	2 kW×2	
Timer & Alarm	60 min, Error status & Timer-end				
Display	Digital LCD with Back-Light Function				
Controller	Digital Fuzzy-Control System (Fully Automatic)				
Door & Closing System	Lever-type Sliding Door / Safety Electronic Door Closing System				
Safety Circuit	Over-Temp./-Pressure/-Current protection, Sensor Error Detection				
Printer	Thermal type printer, Record Paper Roll: w58 × φ40 mm				
Material	Stainless steel (# 304)-Pressure Vessel, Powder Coated steel-External				
Basket	2ea of Stainless steel Wire Baskets are Included				
Basket Dimension (mm)	φ 270 × h240	φ 320 × h240	φ 370 × h240	φ 420 × h240	
Dimension (w×d×h)	Inner (mm)	φ 300 × h670	φ 350 × h650	φ 400 × h650	φ 450 × h630
	Outer (mm)	700×470×1080	700×470×1080	810×580×1140	810×580×1140
Packing Size (mm)	840×610×h1,252 mm		950×730×h1,352 mm		
Gross Weight (kg)	117 kg	120 kg	170 kg	170 kg	
Electric Reqts.	1Phase - AC 120V, 60Hz or - AC 230V, 50/60Hz		1 Phase - AC 120V, 60Hz or - AC 230V, 50/60Hz 3 Phase with Terminal Block		

(1) With PED(Pressure Equipment Directive) Certification, φ 3.0mm Thickness Tank **NEW**

Standard-type Cat. No.	230V	DH.WAC05047P	DH.WAC05060P	DH.WAC05080P	DH.WAC05100P
	120V	DH.WAC06047P	DH.WAC06060P	DH.WAC06080P	DH.WAC06100P
	3Phase	-	-	DH.WAC07080P	DH.WAC07100P
Price, Each. ₩					
Built in Recorder-type Cat. No.	230V	DH.WACR2047P	DH.WACR2060P	DH.WACR2080P	DH.WACR2100P
	120V	DH.WACR1047P	DH.WACR1060P	DH.WACR1080P	DH.WACR1100P
	3Phase	-	-	DH.WACR3080P	DH.WACR3100P
Price, Each. ₩					

(2) Without PED(Pressure Equipment Directive) Certification, φ 2.0mm Thickness Tank

Standard-type Cat. No.	230V	DH.WAC05047	DH.WAC05060	DH.WAC05080	DH.WAC05100
	120V	DH.WAC06047	DH.WAC06060	DH.WAC06080	DH.WAC06100
	3Phase	-	-	DH.WAC07080	DH.WAC07100
Price, Each. ₩					
Built in Recorder-type Cat. No.	230V	DH.WACR2047	DH.WACR2060	DH.WACR2080	DH.WACR2100
	120V	DH.WACR1047	DH.WACR1060	DH.WACR1080	DH.WACR1100
	3Phase	-	-	DH.WACR3080	DH.WACR3100
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request. \* 운임 약 ₩ 30,000 별도!

<Continued On Next Page>

Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Digital Fuzzy-control Autoclaves "MaXterile™" Standard-/Recorder-type>



### (3) Spare Wire Baskets, Stainless-steel & Thermal Paper for Recorder

		Ea. Price, ₩
SL.Bas7011	Wire Basket, $\phi 270 \times h240$ mm, "Bas7011", for 47 Lit, "MaXterile 47", "MaXterile 47R"	
SL.Bas7012	Wire Basket, $\phi 320 \times h240$ mm, "Bas7012", for 60 Lit, "MaXterile 60", "MaXterile 60R"	
SL.Bas7013	Wire Basket, $\phi 370 \times h240$ mm, "Bas7013", for 80 Lit, "MaXterile 80", "MaXterile 80R"	
SL.Bas7014	Wire Basket, $\phi 420 \times h240$ mm, "Bas7014", for 100 Lit, "MaXterile 100", "MaXterile 100R"	
DH.WACR5005	Thermal Paper, 5 $\times$ Paper Roll for "MaXterile R"	

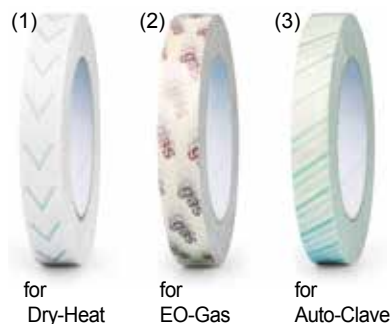
### (4) Optional Perforated Bottom Baskets, Stainless-steel

		Ea. Price, ₩
DH.WAC20047	Perforated Basket, $\phi 270 \times h250$ mm, "WAC20047", for 47 Lit. "MaXterile 47", "MaXterile 47R"	
DH.WAC20060	Perforated Basket, $\phi 320 \times h250$ mm, "WAC20060", for 60 Lit. "MaXterile 60", "MaXterile 60R"	
DH.WAC20080	Perforated Basket, $\phi 370 \times h250$ mm, "WAC20080", for 80 Lit. "MaXterile 80", "MaXterile 80R"	
DH.WAC20100	Perforated Basket, $\phi 420 \times h250$ mm, "WAC20100", for 100 Lit. "MaXterile 100", "MaXterile 100R"	

### Autoclave with Validation (IQ, OQ) Service

		Ea. Price, ₩
DH.WAC30047	Validation Service(IQ, OQ), with "MaXterile 47", "ACV47", with "MaXterile 60", "ACV60", with "MaXterile 80", "ACV80", with "MaXterile 100", "ACV100"	
DH.WAC30060		
DH.WAC30080		
DH.WAC30100		
DH.WACR0047	Validation Service(IQ, OQ), with "MaXterile 47R", "ACRV47", with "MaXterile 60R", "ACRV60", with "MaXterile 80R", "ACRV80", with "MaXterile 100R", "ACRV100"	
DH.WACR0060		
DH.WACR0080		
DH.WACR0100		

## Autoclaves, Accessories



### Sterilization Indicator Tapes, w19mm $\times$ L50m/Roll for Dry-Heat, EO-Gas, and Steam Sterile/Autoclaving, 멸균 감지 테이프

\* Changing Color after Expose to Sterilization Process(Dry-Heat, EO-gas, Steam Sterile)

(1) For Dry-Heat Sterile \* Supplied by Kartell® in Italy

KA.1051 Dry-Heat Sterile Indicator, w19mm  $\times$  L50m-Roll, White  $\rightarrow$  Brown

(2) For EO-Gas Sterile \* Supplied by Heinz Herenz® in Germany

HH.1080551 EO-Gas Sterile Indicator, w19mm  $\times$  L50m-Roll, Red  $\rightarrow$  Green

(3) For Steam Sterile/Autoclaving \* Supplied by Heinz Herenz® in Germany

HH.1080550 Autoclave/Steam Sterile Indicator, w19mm  $\times$  L50m-Roll, Green  $\rightarrow$  Brown

Ea.	Price, ₩
1roll	

Ea.	Price, ₩
1roll	

Ea.	Price, ₩
1roll	



### Dry-Heat Sterilizer Indicator Label on Sheet, 160°C/3h, 180°C/30min, Pink $\Rightarrow$ Brown for Indicating Sterilizer, Color-Changing : from Pink to Brown, 가열 멸균 감지 라벨

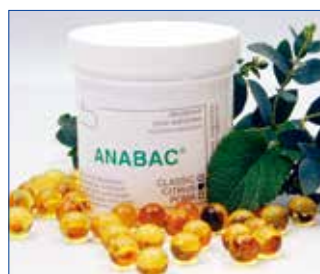
■ Supplied by LMS® in Japan

\* Change of Color : Pink  $\rightarrow$  Brown

\* Changing Time : 30 minutes at 180°C, 3 Hours at 160°C

AS2.6419.01 Heat-Sterile Label "D-L", w19  $\times$  L32mm

Cs.	Price, ₩
500ea	



### Anabac® Deodorant "Classic" for Autoclaving, 100 Tablets

Ideal for deodorization, Deodorant Capacity : max 200Lit. per One-tablet, 오토클레이브용 탈취제

■ Supplied by LMS® in Japan

\* French Bracing Fragrance

\* 100 Tablets / Packed in PP/Paper Container

\* Deodorant Volume : Max 200Lit. per 1-Tablet

AS2.6361.01 Deodorant for Autoclave, 100 Tablets / a Container

Pk.	Price, ₩
100ea	

DAIHAN-brand® Programmable Bench-top Autoclaves “MaXterile™ B”, Class-B Cycle, Squared Chamber, 21.5 Lit Coming Soon  
 with Pre-vacuum & Post-vacuum Drying, Safety Door Lock Sys., 2×Perforated STS Trays, HEPA Filter, Max 2.40 bar, 121~134 °C  
 벤치탑 고압 멸균기, 전자식 도어 잠금 시스템



**2-Year Warranty**

Programmable Bench-top Autoclave “MaXterile™ B”

- Made in Korea
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
- Ideal for Dental Clinical, Medical, Biotechnology, etc.
- Pre-vacuum Air Removal & Post Vacuum Drying for Perfect Sterilizing.
- Safety Door Lock System for User Safety.
- Class-B Sterilization Cycle by EN13060 Standard :  
 Hollow Load Test in compliance with EN13060 & EN 867-5 Standard.  
 Suitable to SAL=10<sup>-6</sup>CFU, EN556-1 Certificate Sterilization Standard.
- Air Filtration System : HEPA Filter of efficiency up to 99.999% & 0.3 micron size.
- Special Steam Condensing Mechanism for User Safety
- \* Manual Top Water Filling(Built in Water Level Sensor).      \* Optional Built-in Thermal Printer
- \* Efficient Space Saving Compact Size Body and Squared Inner Chamber.
- \* Programmable Function : Provide 7-Program Sterilizing Operation Cycles  
 (Pre-set 5 Programs & Customizable 2 Programs)
- \* Intuitive User Interface : LCD & Capacitive Touch Button Controller for User Convenience.
- \* High-performance Microprocessor Controller      \* includes 2 Perforated Stainless-steel Shelves
- \* Class-B Sterilizing Cycle Process by EN13060 Standard :  
 Pre-vacuum→ Water Filling→ Heating→ Sterilizing→ Exhaust→ Post-vacuum Drying→ End of Cycle



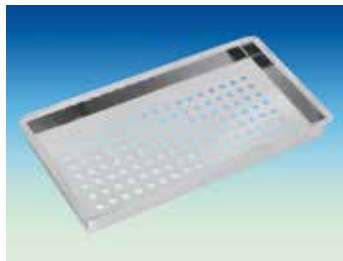
Squared Inner Chamber



Telescopic Sliding Perforated Shelves



(1) Optional Thermal Printer



(2) Spare STS Perforated Trays

**Specifications & Ordering information**

Spec.	Model	“MaXterile™ B21”
<b>Sterilizing Cycle-type</b>		Class-B Cycle by EN13060 Standard
<b>Capacity</b>		21.5 Lit.
<b>Temp. Range</b>		Room Temp +5°C to 134°C
<b>Pressure &amp; Gauge</b>		Min -1.00bar, Max 2.40 bar, Built-in Digital Pressure Gauge
<b>Timer &amp; Alarm</b>		60 min, Error status & Timer-end
<b>Display</b>		Digital LCD with Back-Light Function
<b>Controller</b>		Digital PID Control System (Fully Automatic), Touch Button UI
<b>Programmable Function</b>		Pre-set 5 Programs & Customizable 2 Programs
<b>Door-type</b>		Manual Double Lever-type Door Lock System
<b>Trays</b>		Two STS Perforated Trays ( 216×405×h44mm) are Included
<b>Air Filtration System</b>		Built-in HEPA filter, 0.3µm Particle Removal 99.97%
<b>Vacuum Pump</b>		Built-in 11Lit/min Vacuum Pump for Pre-vacuum & Post-vacuum Drying
<b>Air Removal-type</b>		Vacuum & Gravity
<b>Water Filling Tank</b>		4.2Lit., 238×117×h233mm
<b>Safety Circuit</b>		Over-Temp./-Pressure/-Current protection, Sensor Error Detection
<b>Material</b>		Stainless steel -Pressure Vessel, Powder Coated steel-External
<b>Dimension (w×d×h)</b>	<b>Interior</b>	225×425×h225 mm
	<b>Exterior</b>	530×692×h391 mm
<b>Power Consumption</b>		2,300 W
<b>Net Weight</b>		56 kg
<b>Electric Reqts.</b>		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
<b>Cat. No.</b>	<b>230V</b>	<b>DH.WACB0021</b>
	<b>120V</b>	<b>DH.WACB0121</b>
<b>Price, Each. ₩</b>		

\* Other Specifications are available upon Customer's Request.

**Optional Thermal Printer**

- DH.WACP001 (1) Thermal Printer, Built-in type, 76.5×72mm
- DH.WACR5005 Thermal Paper, 5×Paper Rolls, w58×φ40mm, for Thermal Printer

<b>Ea. Price, ₩</b>

**Spare Stainless-steel Perforated Tray**

- DH.WACB1001 (2) STS Perforated Tray, 216×405×h44mm

<b>Ea. Price, ₩</b>

**Validation (IQ, OQ) Service with Bench-top Autoclave**

- DH.WACB5021 Validation Service(IQ, OQ), with “MaXterile B21”

<b>Ea. Price, ₩</b>



DAIHAN-brand® SMART Bench-top Autoclaves “MaXterile™ SB”, Class-B Cycle, Squared Chamber 21.5 Lit Coming Soon  
with Smart-Lab™ System, Pre-vacuum & Post-vacuum Drying, Safety Door Lock Sys., HEPA Filter, Max 2.40 bar, 121~134 °C  
벤치탑 스마트 고압 멸균기, 전자식 도어 잠금 시스템



2-Year Warranty

SMART Bench-top Autoclave “MaXterile™ SB”

- Made in Korea ■ Smart-Lab™ System ■ PL(Product Liability) Insurance.
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
- Ideal for Dental Clinical, Medical, Biotechnology, etc.
- Pre-vacuum Air Removal & Post Vacuum Drying for Perfect Sterilizing.
- Safety Door Lock System for User Safety.
- Class-B Sterilization Cycle by EN13060 Standard :  
Hollow Load Test in compliance with EN13060 & EN 867-5 Standard.  
Suitable to SAL=10<sup>-6</sup>CFU, EN556-1 Certificate Sterilization Standard.
- Air Filtration System : HEPA Filter of efficiency up to 99.999% & 0.3 micron size.
- Special Steam Condensing Mechanism for User Safety
- Smart-Lab™ Controller : Ergonomic 4" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- \* Manual Top Water Filling(Built in Water Level Sensor).      \* Optional Built-in Thermal Printer
- \* Efficient Space Saving Compact Size Body and Squared Inner Chamber.
- \* Includes 2 Perforated Stainless-steel Shelves
- \* Programmable Function : Provide 7-Program Sterilizing Operation Cycles  
(Pre-set 5 Programs & Customizable 2 Programs)
- \* High-performance Microprocessor Controller
- \* Class-B Sterilizing Cycle Process by EN13060 Standard :  
Pre-vacuum→ Water Filling→ Heating→ Sterilizing→ Exhaust→ Post-vacuum Drying→ End of Cycle



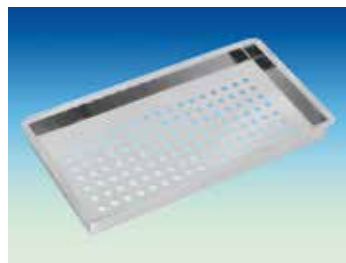
Squared Inner Chamber



Telescopic Sliding Perforated Shelves



(1) Optional Thermal Printer



(2) Spare STS Perforated Trays

## Specifications &amp; Ordering information

Spec.	Model	“MaXterile™ SB21”
Sterilizing Cycle-type		Class-B Cycle by EN13060 Standard
Capacity		21.5 Lit.
Temp. Range & Accuracy		Room Temp + 5°C to 134°C
Pressure & Gauge		Min -1.00bar, Max 2.40 bar, Built-in Digital Pressure Gauge
Timer & Alarm		60 min, Error status & Timer-end
Controller & Display		Smart-Lab Controller, 4" Full Touch Screen TFT LCD, WiRe™ App Service
Programmable Function		Pre-set 5 Programs & Customizable 2 Programs
Door-type		Manual Double Lever-type Door Lock System
Trays		Two STS Perforated Trays ( 216×405×h44mm) are Included
Air Filtration System		Built-in HEPA filter, 0.3µm Particle Removal 99.97%
Vacuum Pump		Built-in 11Lit/min Vacuum Pump for Pre-vacuum & Post-vacuum Drying
Air Removal-type		Vacuum & Gravity
Water Filling Tank		4.2Lit., 238×117×h233mm
Safety Circuit		Over-Temp./-Pressure/-Current protection, Sensor Error Detection
Material		Stainless steel -Pressure Vessel, Powder Coated steel-External
Dimension (w×d×h)	Interior	225×425×h225 mm
	Exterior	530×692×h391 mm
Power Consumption		2,300 W
Net Weight		56 kg
Electric Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
Cat. No.	230V	DH.SACB0021
	120V	DH.SACB0121
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

## Optional Thermal Printer

- DH.WACP001 (1) Thermal Printer, Built-in type, 76.5×72mm  
DH.WACR5005 Thermal Paper, 5×Paper Rolls, w58×φ40mm, for Thermal Printer

Ea. Price, ₩

## Spare Stainless-steel Perforated Tray

- DH.WACB1001 (2) STS Perforated Tray, 216×405×h44mm

Ea. Price, ₩

## Validation (IQ, OQ) Service with Bench-top Autoclave

- DH.SACB7021 Validation Service(IQ, OQ), with “MaXterile SB21”

Ea. Price, ₩

# Balances

**Balances** - Analytical *New* ..... P. 11~12  
 - Electronic Laboratory *New* ..... P. 13~14  
 - General purpose *New* ..... P. 15  
 - Pocket *New* ..... P. 14

**Bench Scales** - industry *New* ..... P. 16  
 - Platform Scales *New* ..... P. 17

**InBalance™** - 200 *New* ..... P. 18  
 - 300 *New* ..... P. 19

**Moisture Analyzer** ..... P. 20

**Accessories** ..... P. 21



**Analytical Balance**  
Standard Analytical Balance  
"WBA-220A" 0.1mg ~ 220g



**Electronic Lab Balance**  
Hi-Standard Lab Balance  
"WBA-3200 / 6200" 0.01 ~ 3200 / 6200g



**Body Composition Analyzer**  
Foldable Smart Analyzer  
"InBalance™ 200"



**General purpose Balance**  
Digital Basic Balance  
"Bap310" 0.1g ~ 310g



**Moisture Analyzer**  
High-performance Moisture Analyzer  
"WBA-110M" 1mg ~ 110g

Cat. No	Description	Articles
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DAIHAN-brand® 0.1mg~220g Standard Analytical Balance, Ext-CAL “WBA-220”, Int-CAL “WBA-220A” **NEW**  
 with Glass Draft Shield, Backlit LCD, Counting Function, Various Weight Mode,  $\phi$  80 / 90mm Weighing Plate  
 “Ext-CAL 외부 보정형” & “Int-CAL 자동 보정형” 표준 분석/화학 천평, 계수계 겸용, 작업보호커버포함



Ext-CAL 0.1mg ~ 220g “WBA-220”

- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Available Counting & Weighing Mode
- Various Weight Mode (g/ct%/GN/dwt/etc)
- Numeric Linearity Calibration
- Weighing Response Time Adjustable
- Blue Back Light LCD
- Supplied with : -  $\phi$  80/90mm Weighing Plate and Glass Draft Shield  
 - AC 230V Adapter for DC Power 9V / 3A  
 - 200g Calibration Weight (Ext-CAL Model)

- \* Ambient Temperature 5.0~35°C
- \* Stabilization Time(Typical at Fast)  $\leq$  8 Seconds
- \* Appearance Parameters
- \* Built in RS232C for Printer
- \* Built in Under Hook
- \* Electro Magnetic Base

Specifications & Ordering information

Spec.	Model	“WBA-220” Ext-CAL	“WBA-220A” Int-CAL <b>New</b>
Weighing Range. mg		0.1 mg ~ 220 g	
Weighing Plate. mm		$\phi$ 80 mm	$\phi$ 90 mm
Read-Out [d]. mg		0.1 mg	
Reproducibility. mg		0.1 mg	
Linearity. mg		0.1 mg	
Ambien Temperature		5.0~35°C	
Weight Mode		g / ct	g / ct / % / GN / dwt / etc
Counting Mode		Available Counting & Weighing Mode	
Calibration		External Calibration, Included 200g Calibration Weight	Internal Calibration, AUTO
Display		Digital LCD with Back-Light Function	
Dimension & Net Weight		190×240×h265mm / 6.3 kg	223×345×h331mm / 5.7 kg
Packing Size & Gross Weight		290×420×h490mm / 8.3 kg	390×510×h520mm / 10.1 kg
Electrical Reqts.		AC 220V, 50 / 60Hz	DC 15V, with AC 230V Adapter, 50/60Hz
Cat. No.		DH.WBA0220	DH.WBA0220A
Price, Each. ₩			



Int-CAL 0.1mg ~ 220g “WBA-220A”

Optional Thermal Printers

\* Model Name Required for Printer Installation

- |             |   | Ea. Price, ₩ |
|-------------|---|--------------|
| SL.WBA.100P | (1) Thermal Printer, Paper Roll, “WBA-100”<br>Included Cable Module, 1×Paper Roll             |              |
| DH.WBA0084  | Thermal Paper Package, 5×Paper Roll, for “WBA-100”  |              |
| SL.WBA.420P | (2) Thermal Printer, Label Paper Roll, “WBA-420”<br>Included Cable Module, 1×Label Paper Roll |              |
| DH.WBA0771  | Thermal Label Paper Package, 5×Label Paper Roll, for “WBA-420”                                |              |



(1) RS-232C Thermal Printer, Paper “WBA-100”



(2) RS-232C Thermal Printer, Label “WBA-420”

DAIHAN-brand® 1mg~320/620g Hi-Precision Lab Balance, Ext-CAL “WBA-320/620”, Int-CAL “WBA-620A” **NEW**  
 with Glass Draft Shield, Super Size Backlit LCD, Counting Function, Various Weight Mode,  $\phi$  90 / 110 / 128mm Weighing Plate  
 “Ext-CAL 외부 보정형” & “Int-CAL 자동 보정형” 다기능 랩 바란스, g / 계수 / % 측정, 작업보호커버 포함

“Ext-CAL” 1mg ~ 320g / 620g **CE**



Included 200g Calibration Weight

**2-Year Warranty**

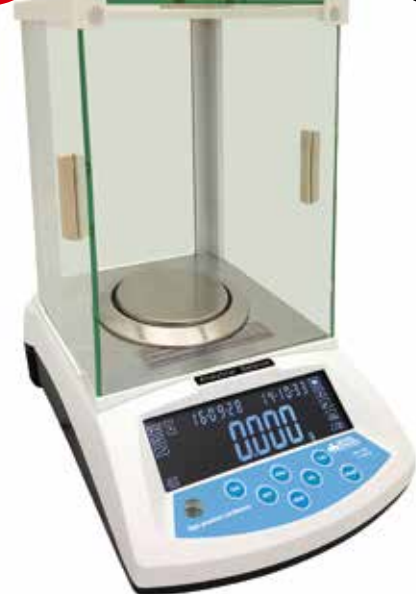
Ext-CAL 0.001~320g “WBA-320”  
 & Ext-CAL 0.001~620g “WBA-620”

- Made in Korea
  - CE Certified
  - PL(Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Available Counting & Weighing Mode
  - Various Weight Mode (g/ct/GN/dwt/etc.) and Percent(%) Weighing Mode
  - Numeric Linearity Calibration
  - Time & Date Setting for Recording Data
  - Supplied with : - Glass Draft Shield
  - 200g or 500g Calibration Weight (WBA-320 : 200g, WBA-620 : 500g)
  - AC Adapter for DC Power 12V/500mA(WBA-320), 15V/300mA(WBA-620/-620A)
  - Available Rechargeable Battery(6V/1.2A, Excluded)
  - Four Level Anti-shock Adjustable Function
  - For Both AC and DC
  - Weighing Response Time Adjustable
  - Super Size Back Light LCD
- \* Ambient Temperature 5.0~35°C  
 \* Stabilization Time(Typical at Fast) ≤ 8 Seconds  
 \* Default and Auto Lock Present Working Mode  
 \* Built in RS232C & USB port for Printer
- \* Electro Magnetic Base  
 \* Display Present Temperature  
 \* Built in Under Hook

**Specifications & Ordering information**

Spec.	Model	“WBA-320” Ext-CAL	“WBA-620” Ext-CAL	“WBA-620A” Int-CAL <b>New</b>
Weighing Range. g		0.001 ~ 320 g	0.001 ~ 620 g	
Weighing Plate. mm		$\phi$ 90 mm	$\phi$ 128 mm	$\phi$ 110 mm
Read-Out [d]. g			0.001 g	
Reproducibility. g			0.001 g	
Linearity. g			0.001 g	
Ambient Temp.		5.0~35°C		
Weight Mode		% Mode and Available g-/ct-/GN-/dwt-/etc...		
Counting Mode		Available Counting & Weighing Mode		
Calibration		External Calibration		Internal Calibration
		Included 200g Calibration Weight	Included 500g Calibration Weight	AUTO
Display		Digital Super Size LCD with Back-Light Function		
Dimension & Net Weight		223 × 345 × h331mm 3.6 kg	223 × 345 × h331mm 5.7 kg	
Packing Size & Gross Weight		290 × 385 × h365mm 5.1 kg	390 × 510 × h520mm 10.1 kg	
Electrical Reqts.		DC 12V, with AC 230V Adapter, 50/60Hz	DC 15V, with AC 230V Adapter, 50/60Hz	
Cat. No.		DH.WBA0320	DH.WBA0620	DH.WBA0620A
Price, Each. ₩				

**NEW** “Int-CAL” 1mg ~ 620g **CE**



**2-Year Warranty**

Int-CAL 0.001~620g “WBA-620A”

**Optional Thermal Printers**

\* Model Name Required for Printer Installation

- |             |  | Ea. Price, ₩ |
|-------------|--|--------------|
| SL.WBA.100P | (1) Thermal Printer, Paper Roll, “WBA-100”<br>Included Cable Module, 1× Paper Roll             |              |
| DH.WBA0084  | Thermal Paper Package, 5× Paper Roll, for “WBA-100”  |              |
| SL.WBA.420P | (2) Thermal Printer, Label Paper Roll, “WBA-420”<br>Included Cable Module, 1× Label Paper Roll |              |
| DH.WBA0771  | Thermal Label Paper Package, 5× Label Paper Roll, for “WBA-420”                                |              |



(1) RS-232C Thermal Printer, Paper “WBA-100”



(2) RS-232C Thermal Printer, Label “WBA-420”

Cat. No	Description	Articles
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DAIHAN-brand® 0.01~3200/6200g Hi-Standard Lab Balance “WBA-3200/6200”, 168×168mm Weighing Plate with Super Size Back Light LCD, Counting Function, Ext-CAL, 2kg Cali. Weight, Various Weight Mode, with Certi. & Traceability 표준 다용도 랩 바란스, g / 계수 / % 측정, Ext-CAL(표준분동 포함), 4각플레이트



- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Available Counting & Weighing Mode
- Various Weight Mode (g/ct/GN/dwt/etc.) and Percent(%) Weighing Mode
- External Calibration
- Numeric Linearity Calibration
- For Both AC and DC
- Includes AC 230V Adapter for DC Power 12V/500mA
- Available Rechargeable Battery (6V/1.2A, Excluded)
- Four Level Anti-shock Adjustable Function
- Time & Date Setting for Recording Data
- Weighing Response Time Adjustable
- Super Size Back Light LCD
- \* Ambient Temperature 5.0 ~ 35℃
- \* Stabilization Time(Typically Fast) ≤ 8 Seconds
- \* Default and Auto Lock Present Working Mode
- \* Display Present Temperature
- \* Included 2kg Calibration Weight (only WBA-3200)
- \* Built in RS232C & USB port for Printer
- \* Electro Magnetic Base
- \* Built in Under Hook
- \* Glass Draft Shield(Optional)



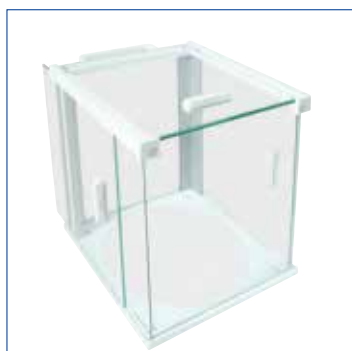
Included 2kg Calibration Weight (Only “WBA-3200” model)

**2-Year Warranty**

0.01~3200g or 6200g, Hi-Standard Lab Balances, ex. “WBA-3200”

Specifications & Ordering information

Spec.	Model	“WBA-3200”	“WBA-6200”
Weighing Range. g		0.01 ~ 3200 g	0.01 ~ 6200 g
Weighing Plate. mm		168 × 168 mm	
Read-Out [d]. g		0.01 g	
Reproducibility. g		0.01 g	
Linearity. g		0.01 g	
Ambient Temperature		5.0~35℃	
Weight Mode		% Mode and Available g-/ct-/GN-/dwt-/etc.	
Counting Mode		Available Counting & Weighing Mode	
Calibration		External Calibration	
		Included 2kg Calibration Weight	none
Display		Digital Super Size LCD with Back-Light Function	
Dimension & Net Weight		195 × 295 × h90mm / 2.6 kg	
Packing Size & Gross Weight		243 × 377 × h163mm / 3.2 kg	
Electrical Reqts.		DC 12V, with AC 230V Adapter, 50/60Hz	
Cat. No.		DH.WBA3200	DH.WBA6200
Price, Each. ₩			



(1) Glass Draft Shield (Optional)



(2) RS-232C Thermal Printer, Paper “WBA-100”



(3) RS-232C Thermal Printer, Label “WBA-420”

Optional Glass Draft Shield

\* Target Model Required for Shielding Installation

DH.WBA0003 (1) Glass Draft Shield, 3 Slide Doors(Left, Right, Top), 175 × 195 × h230 mm

Ea. Price, ₩

Optional Thermal Printers

\* Model Name Required for Printer Installation

SL.WBA.100P (2) Thermal Printer, Paper Roll, “WBA-100”  
Included Cable Module, 1 × Paper Roll

DH.WBA0084 Thermal Paper Package, 5 × Paper Roll, for “WBA-100”

SL.WBA.420P (3) Thermal Printer, Label Paper Roll, “WBA-420”  
Included Cable Module, 1 × Label Paper Roll

DH.WBA0771 Thermal Label Paper Package, 5 × Label Paper Roll, for “WBA-420”

Ea. Price, ₩

DAIHAN-brand® Pocket Digital Balance “Bap”, 9×14×2.4cm, 400g, Pocket-size Body, 0.05~300g or 0.2~1000g with Counting Pcs·%, Function and Leather Case, **포켓 디지털 바란스** **NEW**



1-Year Warranty

0.05~300g and 0.2~1000g Pocket Balance, Ex. “Bap300”

- **Made in Korea**
- **CE Certified**
- **1-Year Warranty**
- \* Ergonomic Design for Intuitive User Interface
- \* Pcs. Counting & Weighing Mode
- \* External Calibration
- \* Ambient Temperature 5℃~35℃
- \* Numeric Linearity Calibration
- \* Included Battery(AAA 1.5V)
- \* LCD-display

**Specifications & Ordering information**

Spec.	Model	“Bap300”	“Bap1.0k”
Weighing Range. g		0.05~300g	0.2~1000g
Weighing Plate. mm		68×85 mm	
Read-Out [d] / Reproducibility. g		0.05 g / 0.05 g	0.2 g / 0.2 g
Material		Body : ABS, Platform : Stainless-steel	
Dimension & Weight		90×140×h24 mm, and 0.4 kg	
Packing & Gross Weight		95×160×h35 mm, and 0.5 kg	
Power Supply		AAA Battery(DC 1.5V)	
Cat. No.		DH.Bal3011	DH.Bal3012
Price, Each. ₩			

DAIHAN-brand® 0.01~610g, 0.1~6100g Multi-use Digital Balance “Ba-series”, RS-232C, DC & AC Adapter **NEW** with g/Metric/Pcs/%/Carat/CHK/Bargraph/Density test-Function, **다용도 전자 바란스, 무게/계수/퍼센트/캐럿/비교계량/비중측정 & 동물계량 기능**

- **Made in Korea**
- **CE Certified**
- **1-Year Warranty**
- **Digital Large LCD Display and Ergonomic Design**
- \* Metric Function : Animal Weighing, Bar-Graph Display, Comparison Weighing CHK, Counting 10~100 Pcs., Density Determination, Percent % and Sub-Scale Dual Display
- \* Easy Operation Weighing Mode : Gram, Metric, and Carat
- \* Material : Stainless-steel Weighing Plate and ABS Resin Body
- \* RS-232C Interface and Level-Gauge integrated
- \* External Calibration
- \* 5× Touch Key : 1/2D\*, MODE, ZERO, TARE, ENTER, and PRINT
- \* 3Sec. Stabilization Time, and Permissible Ambient Temp. 5℃~35℃
- \* Rechargeable Battery integrated, and with AC 230V Adapter for DC Power 12V/300mA

(1) 0.01g~210/310 & 610g Models, Multi-use Balance



1-Year Warranty

(1) 0.01~610g Models, Multi-use Balance, Ex. “Ba610”

**Specifications & Ordering information**

Spec.	Model	“Ba210”	“Ba310”	“Ba610”
Weighing Range. g		0.01~210 g	0.01~310 g	0.01~610 g
Read-Out [d] / Reproducibility. g		0.01 g / 0.01 g		
Linearity. g		0.01 g		
Weighing Mode		Gram, Metric, Carat		
Weighing Plate. mm		120×130 mm Stainless-steel		
Color		Light Grey-color		Silver-color
Dimension & Weight		170×250×h65 mm, and 0.8 kg		
Packing & Gross Weight		210×315×h115 mm, and 1.7 kg		
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter		
Cat. No.		DH.Bal8011	DH.Bal8012	DH.Bal8013
Price, Each. ₩				

(2) 0.1g~2100/3100 & 6100g Models, Multi-use Balance



1-Year Warranty

(2) 0.1~6100g Models, Multi-use Balance, Ex. “Ba6.1k”

**Specifications & Ordering information**

Spec.	Model	“Ba2.1k”	“Ba3.1k”	“Ba6.1k”
Weighing Range. g		0.1~2100 g	0.1~3100 g	0.1~6100 g
Read-Out [d] / Reproducibility. g		0.1 g / 0.1 g		
Linearity. g		0.1 g		
Weighing Mode		Gram, Metric, Carat		
Weighing Plate. mm		160×170 mm Stainless-steel		
Color		Light Grey-color		Silver-color
Dimension & Weight		170×250×h65 mm, and 1.0 kg		
Packing & Gross Weight		210×315×h115 mm / 1.9 kg		
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter		
Cat. No.		DH.Bal8015	DH.Bal8016	DH.Bal8017
Price, Each. ₩				

Cat. No	Description	Articles
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DAIHAN-brand® 610/0.1g & 6100/1g Simple Weighing Digital Balance “Bas”, Compact : 17.5×24×6cm & 600g with Pcs. Counting, Back Light LCD, Battery, without Adapter, **단순계량 바란스, 계수 기능 NEW**



1-Year Warranty

0.1~610g and 1~6100g Balance Simple Weighing Digital Balance Ex. “Bas610”

- **Made in Korea**      ■ **CE Certified**      ■ **1-Year Warranty**
- \* Ergonomic Design for Intuitive User Interface
- \* Pcs. Counting & Weighing Mode
- \* Ambient Temperature 5℃~35℃
- \* Digital LCD with Backlight
- \* External Calibration
- \* Numeric Linearity Calibration

Specifications & Ordering information

Spec.	Model	“Bas610”	“Bas6.1k”
Weighing Range. g		0.1~610g	1~6100g
Weighing Plate. mm		155×155 mm	
Read-Out [d] / Reproducibility. g		0.1 g / 0.1 g	1 g / 1 g
Material		Body : ABS, Platform : Stainless-steel	
Dimension & Weight		175×240×h60 mm, and 0.6 kg	
Packing & Gross Weight		280×180×h80 mm, and 0.8 kg	
Power Supply		DC 9V/300mA	
Cat. No.		DH.Bal8021	DH.Bal8022
Price, Each. ₩			

DAIHAN-brand® 0.1~610g, 1~6100g Digital Basic Balance “Bap”, 10~100 Pcs. Counting **NEW** with Pcs. Count/Bargraph/LCD display, with DC & AC Adapter, **디지털 기본형 바란스**

- **Made in Korea**      ■ **CE Certified**
- \* Digital Large LCD Display and Ergonomic Design
- \* 10~100 Pcs. Counting and Bar-graph Display Function
- \* Material : Stainless-steel Weighing Plate and ABS Resin Body
- \* AA Battery and AC 230V Adapter for DC Power 12V/300mA

- **1-Year Warranty**      ■ **External Calibration**
- \* Easy Operation, Sturdy and Balancing with Level Gauge
- \* 4× Touch Key : MODE, ZERO, TARE, and ENTER
- \* Fast Stabilization Time - 3 Seconds
- \* Permissible Ambient Temp. 5℃~35℃

(1) 0.1g~310/510 & 610g Models, Basic Balances



1-Year Warranty

(1) 0.1~610g Models, Basic Bvalance, Ex. “Bap610”

Specifications & Ordering information

Spec.	Model	“Bap310”	“Bap610”
Weighing Range. g		0.1~310 g	0.1~610 g
Read-Out [d] / Reproducibility. g		0.1 g / 0.1 g	
Linearity. g		0.1 g	
Weighing Mode		Gram	
Weighing Plate. mm		120×130 mm Stainless-steel	
Color Light		Grey-color	Silver-color
Dimension & Weight		170×250×h65 mm, and 0.8 kg	
Packing & Gross Weight		210×315×h115 mm, and 1.7 kg	
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter	
Cat. No.		DH.Bal8025	DH.Bal8026
Price, Each. ₩			

(2) 1g~6100g Models, Basic Balances



1-Year Warranty

(2) 1~6100g Models, Basic Balance, Ex. “Ba6.1kS”

Specifications & Ordering information

Spec.	Model	“Ba6.1kS”
Weighing Range. g		1~6100 g
Read-Out [d] / Reproducibility. g		1 g / 1 g
Linearity. g		1 g
Weighing Mode		Gram
Weighing Plate. mm		160×170 mm Stainless-steel
Color Light		Silver-color
Dimension & Weight		170×250×h65 mm, and 1.0 kg
Packing & Gross Weight		210×315×h115 mm, and 1.9 kg
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter
Cat. No.		DH.Bal8031
Price, Each. ₩		

DAIHAN-brand® 2/10g~32/60kg Precision High Capacity Digital Bench Scales “Bah32P” & “Bah60P” **NEW**  
 with Pcs. • % • Alarm • Print & Check Function and Rechargeable Battery/Back Light & LCD display, DC & AC Adapter  
 정밀 대용량 다기능 바란스, Pcs. 계수 • % • 경보음 • 인쇄 및 체크 기능, 재충전 배터리/백라이트 내장



2g~32kg “Bah32P”

- Made in Korea
- CE Certified
- 1-Year Warranty
- Digital : 3×6 digits LCD display, 20mm Digits, and Sturdy/Ergonomic Design
- 7× Touch Key for “Bah32P” : UNIT, PRINT, FUNC., %, LIMIT, TARE, and ZERO
- 6× Touch Key for “Bah61P Series” : UNIT, M+, G/N, TARE, ZERO and ON/OFF
- Easy Operation & Multi-Function : Alarm, Check, Counting Pcs., Percent %, and Print. “RS-232C” : Option for “Bah32P”, and Standard for “Bah61P” (integrated)
- \* Integrated Rechargeable Battery(100Hr-Run) and Back Light
- \* Very Fast Stabilization Time : 2 Seconds
- \* Permissible Ambient Temp. - 10℃~ +40℃
- \* Material : Stainless-steel Platform and ABS Resin Body
- \* External Calibration \* with AC 220V Adapter for DC Power 9V / 850mA



10g~60kg “Bah60P”

Specification

Spec.	Model	“Bah32P”	“Bah60P”
Weighing Range. g		2g~32kg	10g~60kg
Read-Out [d]. g		0.1 g	0.5 g
Reproducibility. g		0.1 g	0.5 g
Linearity. g		0.1 g	0.5 g
RS-232C interface		Option	Integrated
Weighing Plate. mm		225 × 300 mm	355 × 320 mm
Dimension & Weight		320 × 340 × h125mm, 3.8kg	355 × 320 × h130 mm, 6.3kg
Packing & Gross Weight		370 × 440 × h210mm, 4.6 kg	500 × 450 × h230 mm, 7.3kg
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter	

Ordering Information

DH.Bal8035 Precision Hi-Capacity Balance, “Bah32P”, 2g~32kg  
 DH.Bal8036 , “Bah60P”, 10g~60kg

Ea.	Price, ₩

DAIHAN-brand® 10/20g~15/30kg Basic High Capacity Digital Bench Scales “Bah15L” & “Bah30L” **NEW**  
 with Pcs. • % • Alarm • Print & Check Function and Rechargeable Battery/Back Light & LCD display, DC & AC Adapter  
 기본형 대용량 다기능 바란스, Pcs. 계수 • % • 경보음 • 인쇄 및 체크 기능, 재충전 배터리/백라이트 내장



10/20g ~ 15 or 30kg “Bah15L” & “Bah30L”

- Made in Korea
- CE Certified
- 1-Year Warranty
- Digital : 3×6 digits LCD display, 20mm Digits, and Sturdy/Ergonomic Design
- 7× Touch Key : UNIT, PRINT, FUNC., %, LIMIT, TARE, and ZERO
- Easy Operation & Multi-Function : Alarm, Check, Counting Pcs., Percent %, and Print. “RS-232C”-Option
- \* Integrated Rechargeable Battery(100Hr-Run) and Back Light
- \* Very Fast Stabilization Time : 2 Seconds
- \* Permissible Ambient Temp. - 10℃~ +40℃
- \* Material : Stainless-steel Platform and ABS Resin Body
- \* External Calibration
- \* with AC 220V Adapter for DC Power 9V / 850mA

Specification

Spec.	Model	“Bah15L”	“Bah30L”
Weighing Range. g		10g~15kg	20g~30kg
Read-Out [d]. g		0.5 g	1 g
Reproducibility. g		0.5 g	1 g
Linearity. g		0.5 g	1 g
Weighing Plate. mm		225 × 300 mm	
Dimension & Weight		320 × 340 × h125 mm, 3.8 kg	
Packing & Gross Weight		370 × 440 × h210 mm, 4.6 kg	
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter	

Ordering Information

DH.Bal8041 Basic Hi-Capacity Balance, “Bah15L”, 10g ~ 15kg  
 DH.Bal8042 , “Bah30L”, 20g ~ 30kg

Ea.	Price, ₩



DAIHAN-brand® 10g~60/150kg Hi-Capacity Multi-func. Digital Platform Scales "Bab60" & "Bab150" **NEW**  
with Pcs./Alarm/Back Light/Rechargeable Battery & AC Adapter, 대용량 다기능 벤치 바란스



10g~60kg and 10g~150kg "Bab60" & "Bab150"

- Made in Korea
- CE Certified
- 1-Year Warranty
- Digital : 6 Digits, LCD-display, 24mm Digits
- Sturdy Ergonomic Design
- Easy Operation and Multi Function : Pcs. Count, Weighing Alarm, Weight Storage/Plus/Call, and Auto-TARE

- \* Integrated Rechargeable Battery & Back Light
- \* Very Fast Stabilization Time : 1 Sec.
- \* Permissible Ambient Temp. -10℃~ +40℃
- \* Material : Stainless-steel Platform, ABS Resin Indicator
- \* Automatic External Calibration
- \* with AC 220V Adapter for DC Power 9V/800mA

#### Specification

Spec.	Model	"Bab60"	"Bab150"
Weighing Range. g		10g~60kg	10g~150kg
Read-Out [d]. g		5 g	10 g
Reproducibility. g		5 g	10 g
Linearity. g		5 g	10 g
Weighing Plate. mm		420 × 520 mm	
Dimension & Weight		425 × 675 × h755 mm, 14 kg	
Packing & Gross Weight		580 × 710 × h820 mm, 15.9 kg	
DC Power & AC Adapter		with Rechargeable Battery & AC 220V Adapter	

#### Ordering Information

DH.Bal8045 Hi-Capacity Bench Scale, "Bab60", 10g ~ 60kg  
DH.Bal8046 "Bab150", 10g ~ 150kg

Ea.	Price, ₩

**“InBalance™ 200” Portable & Foldable Smart Body Composition Analyzer, Fluid-/Muscle-/Fat-mass measured with 3 frequencies**  
 Can be connected to any Smart Phone or Tablet with Bluetooth Connection, Internet Connection with Wi-Fi, Web & Mobile service with Cloud  
 접이식 스마트 체성분분석기, 체수분/체지방/근육량 측정, BMI/체지방율/비만도 판정, 스마트폰 또는 태블릿과 사용(별도구매) **NEW**



(1) “InBalance™ 200” Smart Body Composition Analyzer, without Smart Phone or Tablet

※ **Note!** You Can Use Own Smart Phone or Tablet Downloading “InBalance” App.



(2) “InBalance™ 200” Smart Body Composition Analyzer, with Tablet

► **DAIHAN-Biomedical ; Made in Korea**

- **It is Connected to any Smart Phone or Tablet with Bluetooth Connection :**  
 User’s Own Smart Phone or Tablet could be used with InBalance App, which is Available in Apple App Store and Google Play Store.
- **Measuring 20 Bio-impedance Using 3 Frequencies (50, 100, 250kHz)**
- **Tetrapolar 8 Point Tactile Bio-impedance Method**
- **Overall Obesity Diagnosis using BMI & Body Fat Mass Ratio**
- **Waist-hip Ratio & Visceral Fat Area Analysis**
- **Segmental Analysis for Muscle**
- **InBalance offers precise analysis of body compositions in consideration of individual weight, height, gender, age, and diagnose obesity.**
- **Tetrapolar 8-point tactile BIA method :**  
 4 each tactile points in hands and feet, and 3 frequencies provide more precise analytic results. Tetrapolar 8-point tactile BIA method
- **Providing all the information through mobile app & web service with cloud**
- **Conveniences for user :**
  - Intuitive UI for self measurement - Offering overall data for easy understanding
  - Measured data management by user registration
  - Offering Web Program for membership management, for administrator in hospitals or for trainers in the gym (Optional)
  - User App and Admin App both available.

Specifications & Ordering information

Spec.	Model	“InBalance™ 200”
Material Measuring Method		Multi Frequency, Segmental Bioelectrical Impedance Analysis using 3 different frequencies(50kHz, 100kHz, 200kHz) to measure 20 impedances of 5 body segments (trunk, left arm, right arm, left leg, right leg)
Electrode		Tetrapolar 8-point tactile electrodes
Measuring Items		Body Water (Intra-Cellular Fluid, Extra-Cellular Fluid), Mineral, Protein, Body Fat Mass, Fat Free Mass, Weight, Muscle Mass, Skeletal Muscle Mass, Segmental Muscle Mass, BMI(Body Mass Index), Percent Body Fat, Obesity Degree, Waist-Hip Ratio, Visceral Fat Area, Figure type, Body Ratio, Basal Metabolic Rate, Recommended Weight Control, Recommended Fat Control, 1 Day Required/ Recommended Calories, Overall Score, Abdomen Diagnosis, Measuring History, Impedances for each frequency.
Additional Information		Impedances by each different frequency, Dietary Guide
Measuring Scope		10 ~ 250kg, 5 ~ 99 year old
Measuring time		Within 20 seconds
Information Service		Mobile App for iOS & Android, Web service (InBalance.co.kr)
Display		Links to tablet (Can be connected to any Smart Phone or Tablet)
Interface		USB 1 Port, Bluetooth
Power		100~240V, 50/60Hz. 25VA
(1) Cat. No. (Only Analyzer)		<b>DH.HBC10200</b>
Price, Each. ₩		
(2) Cat. No. (with Tablet Package-set)		<b>DH.HBC10201</b>
Price, Each. ₩		

\* Other Specifications are available upon Customer’s Request.



**Conveniences for User**

: It needs to be connected to any Smart Phone or Tablet



**App & Web Service**

Registered user can access the recorded measuring data anywhere, anytime.

Cat. No	Description	Articles
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**“InBalance™ 300” Smart Body Composition Analyzer, Fluid-/Muscle-/Fast-mass measured with 4 frequencies**  
 BMI/Body Fat Percentage/Obesity Degree available, 10.1" LCD, Internet Connection with Wi-Fi, Web & Mobile service with Cloud  
 스마트 체성분분석기, 체수분/체지방/근육량 측정, BMI/체지방율/비만도 판정, 5~250kHz 4개 주파수 사용 **NEW**



**“InBalance™ 300” Smart Body Composition Analyzer**

- ▶ **DAIHAN-Biomedical ; Made in Korea**
- **Measuring 20 bio-impedance using 4 frequencies (5, 50, 100, 250kHz)**
- **Tetrapolar 8 point tactile bio-impedance method**
- **Overall obesity diagnosis using BMI & body fat mass ratio**
- **Waist-hip ratio & visceral fat area analysis**
- **Segmental analysis for muscle**
- **Result display on 10.1" wide screen with easy data for customer consulting**
- **Observation of changing trend of physical status by accumulated data**
- **Internet connection via LAN or Wi-Fi**
- **Providing all the information through mobile app & web service with cloud**
- **SMART healthcare platform based design capable of connection with other devices or service**

**Specifications & Ordering information**

Spec.	Model	“InBalance™ 300”
Material Measuring Method		Biological Impedance Analysis with 5, 50, 100, 250 kHz 5 body parts / 20 segmental impedance values
Electrode		Tetrapolar 8-point tactile touch
Measuring Items		Body Water, Intra-Cellular Fluid, Extra-Cellular Fluid, Mineral, Protein, Body Fat Mass, Fat-free Mass, Weight, Muscle Mass, Skeletal Muscle Mass, BMI, Body Fat Percentage, Obesity Degree, Waist-hip Ratio, Visceral Fat Area
Additional Information		Impedances by each different frequency, Dietary Guide
Measuring Scope		10 ~ 250kg, 5 ~ 149 year old
Measuring time		Within 70 seconds
Information Service		Mobile App for iOS & Android, Web service (InBalance.co.kr)
Display		1280 × 800 resolution, 10.1" IPS panel with capacitive touch
OS		Android
Interface		LAN, Wi-Fi, 4 × USB, RS232C
Power		100~240V, 50/60Hz, 25VA

Cat. No.	<b>DH.HBC10020</b>
Price, Each. ₩	

• Other Specifications are available upon Customer's Request.



**Analysis Result - Print**



**Analysis Result - Display**

DAIHAN-brand® 1mg~110g High-performance Moisture Analyzer "WBA-110M", 0.00~100.00 %, 40~199°C with 100g Cali. Weight, Back Light LCD, Counting Func., 3×displays of %(g) / °C / Time, & Ext-CAL program, 초정밀 / 다용도 수분측정기



CE

- CE Certified
- PL(Product Liability) Insurance
- The Percentage of moisture Content
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Included 100g Calibration Weight
- Store Historical Setting
- Halogen Light Heating
- Stainless-steel Chamber
- Temperature and Time can be Set
- External Calibration
- The Percentage of Dry Residual
- Back Light LCD
- Display after Drying : Moisture(%) - Moisture Content from Wet Weight  
Dry Content(%) - Dry Weight from Wet Weight  
ATRO(%) - 100 ~ 999%

- \* Digital Function, and AC 220V, 50/60Hz Operated
- \* Ambient Temperature 5.0~35°C
- \* Loadcell Sensor
- \* Default and Auto Lock Present Working Mode
- \* Built in RS232C & USB port for Printer
- \* Included 10 Sample Plates

Specifications & Ordering information

Spec.	Model	"WBA-110M"
Weighing Range. g		0.001 ~ 110 g
Weighing Plate. mm		φ 90 mm
Read-Out [d]. g		0.01 mg
Reproducibility. g		0.1 mg
Ambient Temperature		5.0~35°C
Heat Source / Temp. Sensor		Halogen Lamp / PT100 Sensor
Temp. Range / Resolution		40 ~ 199 °C / 1 °C
Moisture Range / Read ability		0.00 ~ 100% / 0.01%
Dry Residual		Range : 0.00 ~ 100.00%, Readability : 0.01%
ATRO		100 ~ 999%, 0 ~ 999%
Timer / Auto-stop		1 ~ 99min(Resolution : 1Sec.) / Auto-stop 0.1~9.9% within 1min.
Number of Storage		15
Calibration		External Calibration, Included 100g Calibration Weight
Display		Digital LCD with Back-Light Function
Power Consumption		400 W
Dimension & Net Weight		180×200×h380 mm / 5.8 kg
Packing Size & Gross Weight		290×305×h440 mm / 6.4 kg
Power Supply & Cord Plug		AC 220V, 50 / 60Hz
Cat. No.		DH.WBA110M
Price, Each. ₩		

Included 100g Calibration Weight

2-Year Warranty

1mg~110g High-performance Moisture Analyzer "WBA-110M"



(1) 10ea Sample Plates(Included)



(2) RS-232C Thermal Printer, Paper "WBA-100"



(3) RS-232C Thermal Printer, Label "WBA-420"

Optional Sample Plates

DH.WBA0005 (1) Sample Plates, φ 90 mm×h4mm

Pk. Price, ₩

10ea

Optional Thermal Printers

\* Model Name Required for Printer Installaion

SL.WBA.100P (2) Thermal Printer, Paper Roll, "WBA-100"  
Included Cable Module, 1×Paper Roll

DH.WBA0084 Thermal Paper Package, 5×Paper Roll, for "WBA-100"

SL.WBA.420P (3) Thermal Printer, Label Paper Roll, "WBA-420"  
Included Cable Module, 1×Label Paper Roll

DH.WBA0771 Thermal Label Paper Package, 5×Label Paper Roll, for "WBA-420"

Ea. Price, ₩

Cat. No	Description	Articles
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**Balance Printers “WBA-100” & “WBA-420”, Compact / Thermal / Saving Power-type with USB-interface / RS232, 바란스 프린터**

■ **Made in Korea** ■ **Direct Thermal-type** \* Model Name Required for Printer Installaion

Spec.	Model	“WBA-100P”	“WBA-420P”
Print Method		Direct Thermal, Auto-cutter	Direct Thermal
Print Speed		250mm/sec	152mm/sec
Resolution		180dpi	203dpi
Print / Paper Width(mm)		72mm / 80mm	104mm / 116mm
Electrical Reqts.		AC Adapter : Input AC 100~240V, Output DC 24V	
Dimensions & Weight		131×155×h133mm, 0.9kg	194×243×h171mm, 2.15kg
Cat. No.		<b>SL.WBA.100P</b>	<b>SL.WBA.420P</b>
Price, Each. ₩			



(1)



(2)



(3)

**Lotte® Disposable Multi-use Aluminum Dish & Cup, 45~300ml**  
 Made of Ultra-light Aluminum, Heat-resisting, Conductivity, Non-toxic, 일회용 알루미늄 디쉬와 컵

■ **Made in Korea**  
 \* Eco-friendly Aluminum Dish & Cup are Biodegradable \* Ideal for Laboratory, Hospital  
 \* Non-toxic \* Various Types & Sizes \* Made of Ultra-light Aluminum

(1) 45 & 110ml Dish-type,  $\phi 60 / 40 \times h25$ ,  $\phi 88 / 70 \times h25$ mm

**L5.310** Al. Dish, 45ml,  $\phi 60 / \phi 40 \times h25$ mm, 15 $\mu$ m thick  
**L5.330** ,  $\phi 88 / \phi 70 \times h25$ mm, 30 $\mu$ m thick

Pk.	Price, ₩
	200ea
	200ea

(2) 200ml Cup-type,  $\phi 80 / \phi 60 \times h57$ mm

**L5.360** Al. Cup, 200ml,  $\phi 80 / \phi 60 \times h57$ mm, 70 $\mu$ m thick

Pk.	Price, ₩
	10ea

(3) 300ml Rectangle-type, 140×85×h35mm

**L5.350** Al. Rectangle, 300ml, 140×85×h35mm, 70 $\mu$ m thick

Pk.	Price, ₩
	100ea



**Low-Nitrogen Weighing Paper, 평량지 / 유산지**

■ **Made in Korea**  
 \* Ideal for Chemical, Medical, Laboratory \* No Dust, No Absorbency  
 \* Perfect Surface Treatment : Can be Used Regardless of powder Samples

**DH.WEP001** Weighing Paper, 80×80mm  
**DH.WEP002** , 100×100mm  
**DH.WEP003** , 150×150mm

Pk.	Price, ₩
	500sheet
	500sheet
	500sheet



(1) Bowl/Dish only



(2) with Handling Stem

**Weighing Scoop, with or without Handling Stem, L70~250mm**  
 with 2-Models, Non-magnetic 18/10 Stainless-steel, Rustless, 1,400°C, 경제형 웨이빙 스푼

■ **Supplied by SciLab Korea**  
 \* Made of Non Magnetic 18/10 Stainless-steel (STS), Melting-point 1,400°C

(1) Bowl/Dish only, without Handling Stem, L70~120mm

**SL.Sco7031** Weighing Scoop, Dish, STS, Dish-32×70mm , 13g  
**SL.Sco7032** , Dish-32×90mm , 18g  
**SL.Sco7033** , Dish-32×105mm, 23g  
**SL.Sco7034** , Dish-32×120mm, 26g

Ea.	Price, ₩

(2) with Handling Stem, L200~250mm

**SL.Sco7036** Weighing Scoop, Handled, STS, Bowl-31×70 , overall-L200mm, 29g  
**SL.Sco7037** , Bowl-31×90 , -L220mm, 33g  
**SL.Sco7038** , Bowl-31×105, -L235mm, 45g  
**SL.Sco7039** , Bowl-31×120, -L250mm, 48g

Ea.	Price, ₩

# Baths

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### Basic-type Bath

Digital General Purpose water bath  
"WB" 6 / 11 / 22 Lit, 100 °C



### Basic-type Bath

Digital High-Temperature Oil Bath  
"WHB" 6 / 11 / 22 Lit, 250 °C



### Extraction Water Bath

Multi-purpose Extraction Water Bath  
"WEB" 4- / 6- / 8-Place, 100 °C



### Shaking Water Bath

Digital Precise Shaking Water Bath  
"MaXturdy™" 18 / 30 / 45 Lit, 100 °C



### Viscosity Bath

Digital Precise Viscosity Bath  
"WVB" 100 °C

Cat. No	Description	Articles
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DAIHAN-brand® Digital General Purpose Water Bath “WB”, 6-/11-/22- Lit, up to 100°C, ±0.1°C, CE-Certi. with Digital Fuzzy Control System, 1×Stainless-steel Flat Lid, and Back Light LCD, with Certi. & Traceability  
 정밀 범용 항온수조, 디지털 퍼지 제어 시스템, 스텐레스 스틸 리드 포함



Digital Precise Water Bath, 11Lit. “WB-11”

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* User's Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature (±10.0°C).
- \* 304 Stainless steel Bath & Lid for Superior Durability & High Thermal Efficiency/Constant.
- \* Digital Timer Function(99hr 59min) : 'Delay Time' and 'Operation Time' can be Controlled.
- \* Storage Function for the Set Values of Temperature and Timer.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).

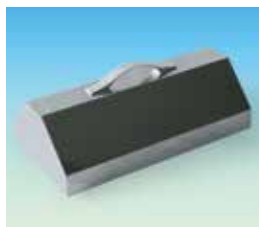
Specifications & Ordering information

Spec.	Model	“WB-6”	“WB-11”	“WB-22”
Capacity		6 Lit.	11 Lit.	22 Lit.
Temp. Range & Accuracy		Room Temp. +5°C ~ 100°C, ±0.1°C		
Temp. Resolution		0.1°C-Display, 0.1°C-Control		
Temp. Uniformity & Probe		±1.0°C, PT100		
Heating Power		800 W	1 kW	2 kW
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller		Digital Fuzzy Controller with Jog - Shuttle Switch (Turn + Push)		
Safety Circuit		Over-Temp. / -Current protection, Sensor Error Detection		
Material		Stainless-steel (#304)-Internal, Powder Coated steel-External		
Lid		included Stainless-steel Flat Lid, Optional Dome Lid		
Drain Valve		None		Mounted(φ9.5~11mm)
Dimension (w×d×h)	Effective Space	300×155×h110mm	302×240×h110mm	500×295×h110mm
	Internal	300×155×h150mm	302×240×h150mm	500×295×h150mm
	External	325×180×h260mm	325×265×h260mm	535×330×h260mm
Packing Size (mm) and Gross Weight (kg)		350×210×h310mm, 8 kg	350×300×h310mm, 10 kg	570×360×h310mm, 14 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		
Cat. No.	230V	DH.WB000106	DH.WB000111	DH.WB000122
	120V	DH.WB000206	DH.WB000211	DH.WB000222
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.



(1) Flat Lid, Stainless-steel (Included)



(2) Dome Lid, Stainless-steel



(3) “BFC106” Lid with Concentric Ring Cover Sets for 6Lit.



(4) “BFC111” Lid with Concentric Ring Cover Sets for 11Lit.



(5) “BFC122” Lid with Concentric Ring Cover Sets for 22Lit. Bath



(6) Test Tube Rack, Stainless-steel

Optional Lids and Tube Rack, Stainless-steel

- DH.WB010206 (2) Dome Lid, for 6 Lit, 324 × 176 × h100mm, “BD206”
- DH.WB010211 , for 11 Lit, 324 × 263 × h100mm, “BD211”
- DH.WB010222 , for 22 Lit, 533 × 328 × h100mm, “BD222”
- DH.WB030106 (3) Lid with 2 × Concentric Ring Cover Sets, for 6 Lit, Stainless-steel, 330 × 182 × h20mm, “BFC106”
- DH.WB030111 (4) Lid with 2 × Concentric Ring Cover Sets, for 11 Lit, Stainless-steel, 329 × 269 × h20mm, “BFC111”
- DH.WB030122 (5) Lid with 6 × Concentric Ring Cover Sets, for 22 Lit, Stainless-steel, 539 × 334 × h20mm, “BFC122”
- DH.WB020106 (6) Tube Rack, for 6 Lit, 36Hole × φ 17mm, “BTH106”, Stainless-steel, 220 × 125 × h78.5mm
- DH.WB020206 (6) Tube Rack, for 6 Lit, 15Hole × φ 32mm, “BTH206”, Stainless-steel, 220 × 125 × h78.5mm
- DH.WB020111 (6) Tube Rack, for 11 Lit, 63Hole × φ 17mm, “BTH111”, Stainless-steel, 220 × 205 × h78.5mm
- DH.WB020211 (6) Tube Rack, for 11 Lit, 25Hole × φ 32mm, “BTH211”, Stainless-steel, 220 × 205 × h78.5mm

Ea. Price, ₩

Water Bath with Validation (IQ, OQ) Service

- DH.WB040106 Validation Service(IQ, OQ), with “WB-6”, “BV106”
- DH.WB040111 , with “WB-11”, “BV111”
- DH.WB040122 , with “WB-22”, “BV122”

Ea. Price, ₩

DAIHAN-brand® Digital High-Temperature Oil Bath “WHB”, 6-/11-/22-Lit, with Certi. & Traceability with 1×Stainless-steel Flat Lid, Digital Fuzzy Control System, Back Light LCD, up to 250 °C, ±1.5 °C  
정밀 고온 오일 배스, 디지털 퍼지 제어 시스템, 스텐레스 스틸 리드 포함



Digital High Temperature Oil Bath, 11Lit., “WHB-11”



Included Flat Lid, Stainless-steel

- Made in Korea. ■ CE Certified. ■ PL(Product Liability) Insurance.
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
  - Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
  - Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function.
- \* Rustless 304 Stainless-steel Bath having 1.2mm & Ceramic Fiber Insulator of 50mm Thickness.  
\* User’s Self-Compensation Function to Control Difference between Real Temp. and Indicated Temp.  
\* Storage Function for the Set Values of Temperature & Timer.  
\* Alarm & Digital Timer : ‘Delay Time’ and ‘Operation Time’ can be Controlled.  
\* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).

Specifications & Ordering information

Spec.	Model	“WHB-6”	“WHB-11”	“WHB-22”
Capacity		6 Lit.	11 Lit.	22 Lit.
Temp. Range & Accuracy		Room Temp +5°C to 250°C, ±1.5°C		
Temp. Uniformity & Probe		±3.0°C, PT100		
Heating Power		1.5 kW	2.0 kW	2.5 kW
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)		
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection		
Material		Stainless-steel (#304)-Internal, Powder Coated steel-External, 50 mm Thickness Ceramic Fiber-Insulation		
Lid		Stainless-steel Flat Lid Included		
Drain Valve		Mounted		
Dimension (w×d×h)	Effective Space	270×180×h110 mm	300×250×h110 mm	400×300×h140 mm
	Mounted	270×180×h150 mm	300×250×h150 mm	400×300×h180 mm
	External	425×305×h340 mm	425×375×h340 mm	525×425×h370 mm
Packing Size (mm) & Gross Weight		470×400×h500 mm, 23 kg	600×490×h500 mm, 25 kg	600×490×h500 mm, 39 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or 230V, 50 / 60Hz		

Cat. No.	230V	DH.WHB00106	DH.WHB00111	DH.WHB00122
	120V		DH.WHB00206	DH.WHB00211
Price, Each. ₩				

\* Other Specifications are available upon Customer’s Request.

High-Temp. Oil Bath with Validation (IQ, OQ) Service

DH.WHB40106 Validation Service(IQ, OQ), with “WHB-6”, “HBV106”  
DH.WHB40111 , with “WHB-11”, “HBV111”  
DH.WHB40122 , with “WHB-22”, “HBV122”

Ea. Price, ₩

Therminol D12® –85+230 °C Best COOL-/HEAT-ing Transfer Fluid, Synthetic Hydrocarbon Mixture for Low/High-Temp Baths, Clearly Harmless Liquid, Low Odor FDA Grade, 4/18/200Lit, 냉매/열매 겸용 합성 탄화수소혼합물(액체)



(1) 4Lit

(2) 18Lit

- Supplied by “Eastman” USA ■ Clear, Water white Liquid / Non-Toxic / Low-Smell, FDA-Grade.
  - The Best Circulation Properties / Thermal Stability.
  - The Lowest Viscosity, cP ▶ (1) -50°C : 12cP, (2) 100°C : 0.46cP, (3) 200°C : 0.19cP, (4) 230°C : 0.16cP
- \* Specific Gravity : 0.759 at 25°C      \* Autoignition Temp : 247°C      \* Flash Point : 62°C  
\* Freezing Point : -94°C      \* Boiling Point(90%) : 204°C  
\* Package : (1) 4Lit. and (2) 18Lit. PE Square Bottle / Subdivision, Original-200Lit. Steel Drum / 155kg

SL.CirD12.1 (1) “Therminol D12” Cool/Heat Transfer Fluid, -85 +230 °C, 4 Lit.

4ℓ .dh pk	₩
4Lit	

SL.CirD12.2 (2) “Therminol D12” Cool/Heat Transfer Fluid, -85 +230 °C, 18Lit.

18ℓ .dh pk	₩
18Lit	

※ 운임 약 ₩ 25,000 별도!

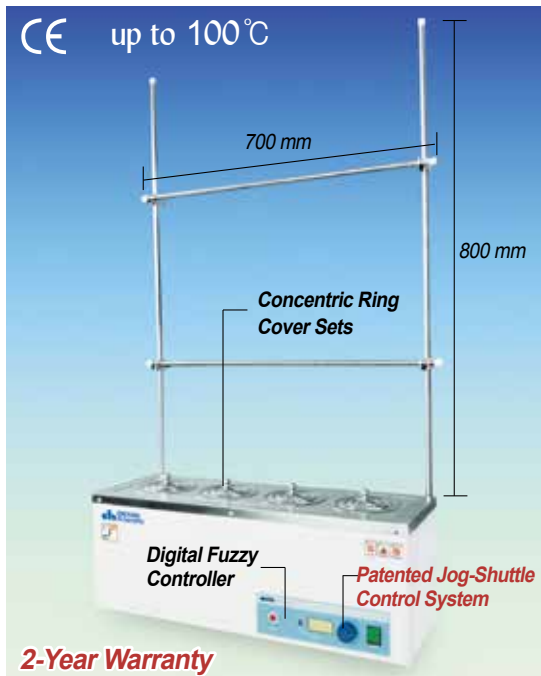
SL.CirD12 “Therminol D12” Cool/Heat Transfer Fluid, -85 +230 °C, 200Lit./Drum

Drum Price, ₩
200Lit



Cat. No	Description	Articles
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DAIHAN-brand® Extraction Water Bath “WEB”, Multi-purpose, 4-/6-/8-Place, with Certi. & Traceability with Concentric Ring Cover Sets & Holding Frame, Digital Fuzzy Control, Back Light LCD, up to 100°C, ±0.2°C  
 다용도 추출용 항온수조, 4-/6-구, 컨센트릭 링 커버 셋 & 홀딩 프레임 포함



Multi-purpose Extraction Water Bath “WEB-4”

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Gentle Extraction, Soxhlet Extraction and Determination of COD
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Concentric Ring Cover Sets make Effective Steaming Work
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function

- \* 4, 6, 8 Extraction Places are available.
- \* Included Concentric Ring Cover Set & Holding Frame
- \* User's Self-compensation Function to Control Difference between Real Temperature and Indicated Temperature (±10.0°C).
- \* High Quality 304 Stainless steel Bath and Holding Frame for Superior Durability.
- \* Storage Function for the Set Values of Temperature and Timer.
- \* Alarm Function : Error Status and Timer-end.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).

Specifications & Ordering information

Spec.	Model	“WEB-4”	“WEB-6”	“WEB-8”
Temp. Range & Accuracy		Room Temp. +5 °C to 100 °C, ±0.2°C		
Temp. Uniformity & Sensor		±1.0°C, PT100		
No. of Extraction Holes		4 Places	6 Places	8(4×2) Places
Heating Power		1.4 kW	1.8 kW	1.4 kW×2
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)		
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection, Leakage Breaker		
Material		Stainless steel (#304)-Internal, Powder Coated steel-External, Stainless steel-Holding Frame		
Lid & Top Opening Dia.		Concentric Ring Cover Sets included, φ110 mm		
Drain Valve		Mounted		
Drain Valve	Mounted	610×160×h160 mm	910×140×h160 mm	610×290×h160 mm
	External	720×245×h275 mm	975×245×h275 mm	720×375×h275 mm
Packing Size (mm) and Gross Weight (kg)		710×310×h300, 18 kg	1,030×320×h370, 25 kg	880×420×h300, 34 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or 230V, 50 / 60Hz		

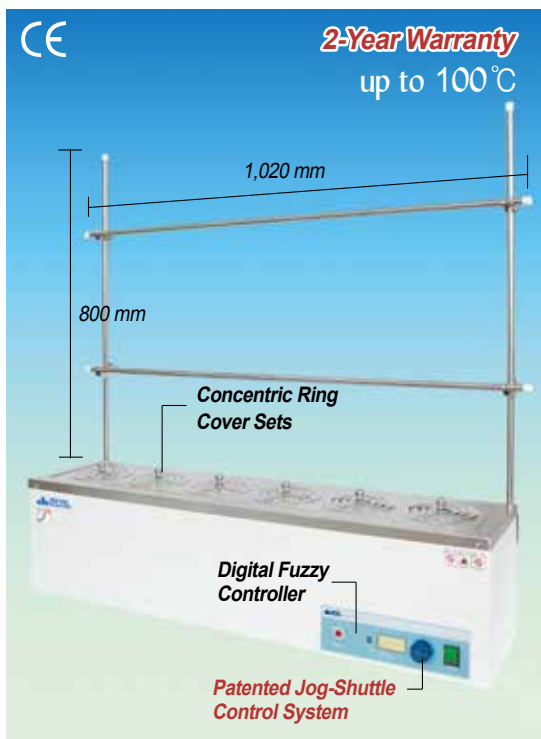
Cat. No.	230V	DH.WEB01004	DH.WEB01006	DH.WEB01008
	120V	DH.WEB02004	DH.WEB02006	DH.WEB02008
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 9,000 별도!

Spare Lid with Concentric Ring Cover Set and Holding Frame Set

- DH.WEB11000 Lid with Concentric Ring Cover Sets, “EBC100”, for all “WEB” models
- DH.WEB21004 Holding Frame Set, “EBF100”, for “WEB-4”, 2ea×800mm Pole & 2ea×700mm Pole
- DH.WEB21006 Holding Frame Set, “EBF200”, for “WEB-6”, 2ea×800mm Pole & 2ea×1,020mm Pole
- DH.WEB21008 Holding Frame Set, “EBF300”, for “WEB-8”, 4ea×800mm Pole & 4ea×740mm Pole

Ea. Price, ₩



Multi-purpose Extraction Water Bath “WEB-6”

DAIHAN-brand® Digital Precise Shaking Water Bath “MaXturdy™”, Reciprocating Motion, 18-/30-/45-Lit with Universal Spring Rack, Digital Fuzzy Control, up to 2 Lit. Flask, 20~250 rpm, up to 100℃, ±0.1℃, with Certi. & Traceability  
 정밀 진탕 항온수조, 왕복 진탕 운동, 디지털 피드백 제어, 고성능 셰이킹 엔진 탑재



Digital Precise Shaking Water Bath  
 “MaXturdy™ 30”

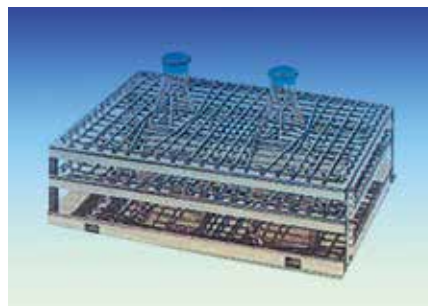
- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Digital Fuzzy Controller Provides Precise Temperature Control
  - Digital Feedback Controller Provides Precise Speed Control
  - Hi-Performance Shaking Engine ensures Best Smoothly Shaking Motion and Minimum Noise and Vibration
  - Easy to Disassemble Spring Rack for Cleaning
  - Patented Shaking Mechanism : Minimum Noise and Vibration
  - Patented Jog-Dial Control System and Digital LCD with Back-Light
- \* Ideal for Direct Immersion of Samples or Shaking in the Field of Biotechnology and Laboratories.  
 \* Hybridization Applications, Cell Cultures, Cell Aeration, Increasing Solubility Rates, Molecular Biology Assays, Bacterial Cultures  
 \* Stainless-steel Bath for Superior Durability & High Thermal Efficiency  
 \* Universal Stainless-steel Spring Rack Included : for various kind of Flasks and Tubes (up to 2 ℓ)  
 \* User's Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature (± 10.0℃)  
 \* Over Temp., Over Current Protection and Sensor Error Detection  
 \* Digital Timer Function : 'Delay Time' and 'Operation Time' : Can be Controlled

Specifications & Ordering information

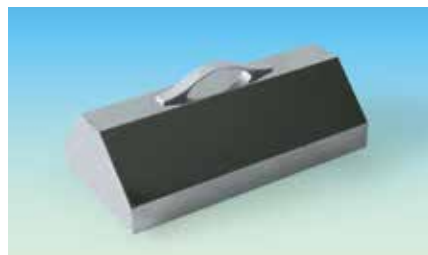
Spec.	Model	“MaXturdy™ 18”	“MaXturdy™ 30”	“MaXturdy™ 45”
Capacity		18 Lit.	30 Lit.	45 Lit.
Max.Q'ty of Erlenmeyer Flask		250 ml×6 ea, 500 ml×4 ea, 1000 ml×1 ea	250 ml×10 ea, 500 ml×8 ea, 1000 ml×3 ea	250 ml×18 ea, 500 ml×15 ea, 1000 ml×8 ea
Temp. Range & Accuracy		Room Temp. +5℃ to 100℃, ±0.1℃		
Temp. Resolution		0.1℃-Display, 0.1℃-Control		
Temp. Uniformity & Probe		±0.5℃, PT100		
Heating Power		1.4 kW	1.8 kW	2.4 kW
Shaking Speed & Resolution		20 ~ 250 rpm, 1rpm-Display/1rpm-Control		
Shaking Stroke (mm)		15, 20, 30 Available (20 as factory Default)		
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller Digital		Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)		
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection		
Rack		Included Stainless steel Spring Rack : Universal-type		
Drain Valve		Mounted		
Material		Stainless steel (# 304)-Internal, Powder Coated steel-External		
Dimension (w×d×h)	Internal (mm)	300×300×h200	500×300×h200	600×380×h200
	External (mm)	563×353×h340	763×353×h340	863×433×h340
Packing Size (mm) & Gross Weight (kg)		620×420×h450, 24 kg	820×420×h450, 26 kg	920×500×h450, 32 kg
Electric Reqts.		1 Phase, AC 120V, 60 Hz or 230V, 50 / 60Hz		
Cat. No.	230V	DH.WSB03018	DH.WSB03030	DH.WSB03045
	120V	DH.WSB03218	DH.WSB03230	DH.WSB03245
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 16,000 별도!



(1) Universal Spring Rack  
 (Included)



(2) Dome Lid, Stainless steel (Optional)

(1) Spare Universal Spring Racks

- DH.WSB55018 (1) Spring Rack, for 18 Lit, 245×270×h110mm, “SBR018”
- DH.WSB55030 , for 30 Lit, 445×270×h110mm, “SBR030”
- DH.WSB55045 , for 45 Lit, 545×350×h110mm, “SBR045”

Ea. Price, ₩

(2) Optional Stainless-steel Dome Lids

- DH.WSB02018 (2) Dome Lid, for 18 Lit, 363×353×h69mm, “SBD018”
- DH.WSB02030 , for 30 Lit, 563×353×h69mm, “SBD030”
- DH.WSB02045 , for 45 Lit, 663×433×h69mm, “SBD045”

Ea. Price, ₩

Shaking Water Bath with Validation (IQ, OQ) Service

- DH.WSB31018 Validation Service(IQ, OQ), with “MaXturdy 18”, “SBV018”
- DH.WSB31030 , with “MaXturdy 30”, “SBV030”
- DH.WSB31045 , with “MaXturdy 45”, “SBV045”

Ea. Price, ₩

Cat. No	Description	Articles
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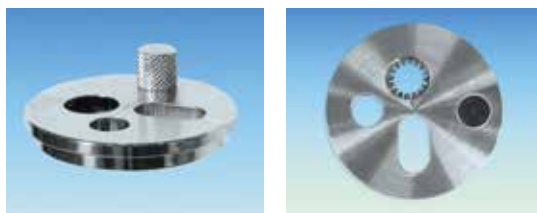
DAIHAN-brand® Digital Precise Viscosity Bath “WVB”, Useful 5 × Viscometer, up to 100°C, ±0.1°C with 5 Holes Stainless steel Lid for Viscometer Holder, Available Reverse & Routine-type Viscometer, Transparent Window, 30 Lit 투시형 정밀 점도 항온수조, 5 × 점도계 사용가능, 디지털 퍼지 제어 시스템, 5-구 스텐레스 스틸 리드포함



Digital Precise Viscosity Bath “WVB-30”, included Flat Lid for Viscometer Holder (without Viscometer Holder)



Flat Lid with Viscometer Holder



(1) Viscometer Holder “WVB02010” (Optional)

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Used for Precise Measurement with Capillary Viscometers
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Powerful Circulation Pump ensures Highest Uniformity of Temperature
- Viscometer Holder : Available Reverse & Routine-type Viscometer
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function.

- \* Stainless-steel(#304) made inner bath
- \* Stainless-steel Lid Contains Five Holes for Insertion of Viscometer Holders
- \* User's Self-compensation Function to Control Difference between Real Temperature and Indicated Temperature
- \* Storage Function for the Set Values of Temperature and Time
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Included Flat Lid for Viscometer(without Viscometer Holder)
- \* Over Temp., Over Current Protection and Sensor Error Detection
- \* Digital Timer Function : 'Delay Time' and 'Operation Time' : Can be Controlled

Specifications & Ordering information

Spec.	Model	“WVB-30”
Range & Accuracy		Room Temp. +5°C to 100 °C, ±0.1°C
Temp. Resolution		0.1°C-Display, 0.1°C-Control
Temp. Uniformity & Probe		±0.2°C , PT100
Heating Power		2 kW
Pump		Magnetic Drive, Max. Flow 30 Lit./min
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end
Display		Digital LCD with Back-Light Function
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection
Lid		Included 5 Holes Stainless-steel Lid for Viscometer Holder
Drain Valve		Mounted
Viewing Window Size(mm)		230×180
Material		Stainless-steel (# 304)-Internal, Powder Coated steel-External, Vacuum Sealed and Tempered Safety Pair Glasses-Window
Dimension (w×d×h)	Effective Space (mm)	330×300×h260 mm
	Internal (mm)	350×300×h300 mm
	External (mm)	585×375×h420 mm
Packing Size (mm) & Gross Weight (kg)		640×450×h500 mm, 24 kg
Electric Reqts.		1 Phase, AC 120V, 60Hz or 230V, 50 / 60Hz

Cat. No.	230V	DH.WVB01030
	120V	DH.WVB02030
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.      ※ 운임 약 ₩ 16,000 별도!

Spare Stainless-steel Flat Lid for Viscometer Holder

DH.WVB11030	Flat Lid, for 30 Lit, w380×d330, 5×φ50mm Holes, “VBF030”	Ea. Price, ₩
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Optional Viscometer Holder

DH.WVB02010	(1) Viscometer Holder, “WVB02010” for Ostwald, Ubbelohde	Ea. Price, ₩
DH.WVB02011	Viscometer Holder, “WVB02011” for Cannon-Fenske Reverse Flow, Cannon-Fenske Routine	
DH.WVB02012	Viscometer Holder, “WVB02012” for Thread-type Ubbelohde	

Viscosity Bath Validation (IQ, OQ) Service

DH.WVB31030	Validation Service(IQ, OQ), with “WVB-30”, “VBF030”	Ea. Price, ₩
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# Bath Circulator

**Bath Circulator**, Circulation Water Bath ..... P. 29  
    , Cold Trap ..... P. 30  
    , High-Temp. Bath Circulator ..... P. 31  
    , Refrigerated / Heating Bath Circulator ... P. 32~33



**Circulation Water Bath**  
Digital Precise Circulation Water Bath  
"WCB" 6 / 11 / 22 Lit, 100 °C



**Cold Trap Bath Circulator**  
Digital Precision Cold Trap Bath  
"WCT" 10 Lit, -40 / -80 °C



**High-Temp Bath Circulator**  
Precise High-temp Bath Circulator  
"MaXircu™ CH" 8 / 12 / 22 / 30 Lit, 250 °C



**Refrigerated / Heating Bath Circulator**  
Digital Precise Refrigerated/Heating Bath Circulator  
"MaXircu™ CR" 8 / 12 / 22 / 30 Lit, -25 ~ +150 °C

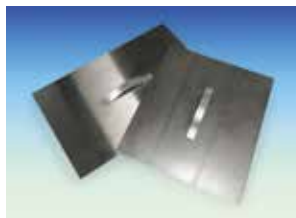
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**DAIHAN-brand® Digital Precise Circulation Water Bath “WCB”, 6-/11-/22- Lit, with Certi. & Traceability with 1×Stainless-steel Flat Lid, Powerful Circulation Pump, up to 100°C, ±0.1°C, 5 Lit./min, 정밀 항온 순환 수조**



**2-Year Warranty**

Digital Precise Circulation Water Bath “WCB-22”



Flat Lid, Stainless-steel (Included)

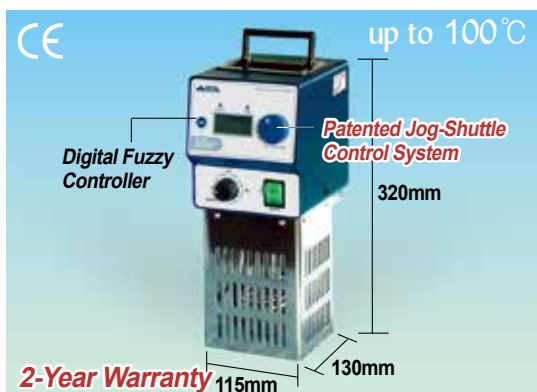
- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* Ideal for Biotechnology, Clinical, Environmental, Medical, Petroleum, Food Industry, Pharmaceutical and Industrial Applications.    \* Alarm function : Error Status and Timer-end
- \* Warning and Automatic Stop Function in case of Liquid Shortage.
- \* Powerful Circulation Pump Assures Temp. Uniformity : Internal and External Circulation.
- \* Connection with Evaporators and Viscometers is applicable.

**Specifications & Ordering information**

Spec.	Model	“WCB-6”	“WCB-11”	“WCB-22”
Capacity		6 Lit.	11 Lit.	22 Lit.
Temp. Range & Accuracy		Room Temp. +5°C ~ 100°C, ±0.1°C		
Temp. Resolution		0.1°C-Display, 0.1°C-Control		
Temp. Uniformity & Probe		±0.2°C, PT100		
Heating Power		800 W	1 kW	2 kW
Pump		5 Lit. / min (Internal / External)		
Circulation Nozzle		i.d. 7×o.d. 11 mm (i.d. 9 / o.d. 12mm silicon tube connected for inner circulation)		
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end		
Controller & Display		Digital Fuzzy Controller with Back Light Digital LCD		
Safety Circuit		Over-Temp./-Current protection, Sensor Error & Low Level Detection		
Material		Stainless-steel (# 304)-Internal, Powder Coated steel-External		
Drain Valve		None		Mounted(φ9.5~11mm)
Dimension (w×d×h)	Effective Space	120×155×h150 mm	170×240×h150 mm	372×295×h150 mm
	Internal	300×155×h150 mm	302×240×h150 mm	500×295×h150 mm
	External	330×185×h385 mm	335×275×h385 mm	540×335×h410 mm
Packing Size (mm) and Gross Weight (kg)		350×210×h410mm, 11 kg	360×300×h420mm, 13 kg	580×380×h470mm, 18 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		
Cat. No.	230V	DH.WCB00106	DH.WCB00111	DH.WCB00122
	120V	DH.WCB00206	DH.WCB00211	DH.WCB00222
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.    ※ 운임 약 ₩ 9,000 별도!

**DAIHAN-brand® Digital Precise Circulation Immersion Pump Head “WCB-H”, 11-/22- Lit, up to 100°C with Digital Fuzzy Control System, Certi. & Traceability, Power Circulation Pump, 5 Lit/min, 정밀 항온 순환기**



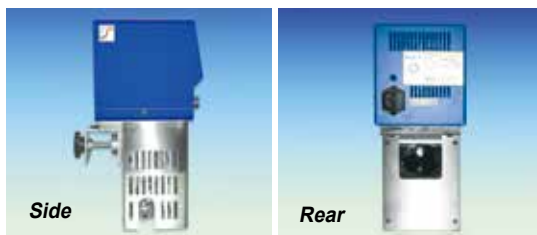
**2-Year Warranty**

Digital Precise Immersion Circulator Head “WCB-11H”

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* Ideal for Biotechnology, Clinical, Environmental, Medical, Petroleum, Food Industry, Pharmaceutical and Industrial Applications.    \* Alarm function : Error Status and Timer-end
- \* Powerful Circulation Pump Assures Temp. Uniformity : Internal and External Circulation.

**Specifications & Ordering information**

Spec.	Model	“WCB-11H”	“WCB-22H”
Capacity		11 Lit.	22 Lit.
Temp. Range & Sensor		Room Temp. +5°C ~ 100°C, PT100	
Heating Power & Pump		1 kW, 5 Lit. / min	2 kW, 5 Lit. / min
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end	
Controller & Display		Digital Fuzzy Controller with Back Light Digital LCD	
Safety Circuit		Over-Temp./-Current protector, Sensor Error & Low Level Detection	
Dimension		130×165×h320 mm	
Packing Size (mm) and Gross Weight (kg)		400×280×h200 mm, 8 kg	400×280×h200 mm, 10 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WCB10011	DH.WCB10022
	120V	DH.WCB20011	DH.WCB20022
Price, Each. ₩			



Side

Rear

**DAIHAN-brand® Digital Precision Cold Trap Bath “WCT”, -40°C/-80°C, 10 Lit, with Certi. & Traceability**  
 with 2×Glass Cold Trap, Digital PID Control System, Back-Light LCD, CFC-free Refrigeration System, **초저온 동결 트랩**



**Digital Precision Cold Trap Bath “WCT-40”**



**(1) Glass Cold Trap “CTG1000”**

※DAIHAN Recommendation : Combination of the Cold Trap Bath(WCT) with the Vacuum Oven and Vacuum Pump.

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital PID Controller
- CFC-free (R-404A) Refrigeration System
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* Ideal for exceptional Cooling System like Collecting Evaporation Vapor or Hazardous Vapor from Vacuum Line.
- \* Durable Stainless-steel Bath and Powder Coated steel
- \* Digital Timer Function : ‘Delay Time’ and ‘Operation Time’ : Can be Controlled.
- \* User’s Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

**Specifications & Ordering information**

Spec.	Model	“WCT-40”	“WCT-80”
Temperature Range		-40°C ~ -20°C	-80°C ~ -65°C
Bath Volume		10 Lit	
Bath Volume & Cold Trap Type		Stainless-steel 304, 2×Glass Trap	
Refrigerator		1/2 HP	1 HP
Power Consumption		900 W	1.8 kW
Refrigerator & Refrigerant		R-404A	HFC
Display		Digital LCD with Back-Light Function	
Controller		PID Controller with Jog-Shuttle Switch (Turn+Push)	
Drain Valve		Mounted	
Safety Circuit		Over Current protection, Sensor Error Detection, Leakage Breaker	
Material		Stainless-steel (#304)-Internal, Powder Coated steel, 1.2t, Doublepaint & Baked-External, 20 mm Thickness Polyurethane-Insulation	
Dimension (w×d×h)		220×220×h210 mm-Internal, 377×453×h705 mm-External	
Packing Dimension (mm) and Gross Weight (kg)		560×500×h1,010, 67 kg	680×640×h1,130, 90 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or 230V, 50 / 60Hz	
Cat. No.	230V	DH.WCT00140	DH.WCT00180
	120V	DH.WCT00240	DH.WCT00280
Price, Each. ₩			

\* Other Specifications are available upon Customer’s Request.

※ **운임 약 ₩ 16,000 별도!**

**Spare Glass Cold Trap**

	Ea. Price, ₩
DH.WCT11000 (1) 1×Glass Cold Trap, φ106×h249mm, “CTG1000”, DURAN® Borosilicate Glass α 3.3, Safety-Pressure, Resistant 1.5bar at 250°C, for “WCT”	

Cat. No	Description	Articles
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DAIHAN-brand® Precise High-temp Bath Circulator “MaXircu™ CH”, to 250°C, ±0.1°C, 8-/12-/22-/30- Lit with 1×Stainless-steel Flat Lid/Digital Fuzzy Control System/Certi. & Traceability, Flow 16 Lit./min, Lift 2.8m  
 Ideal for Reactors, etc., External Circulating Connect - od.12.5/id.10.5mm, 정밀 고온 배스겸용 고온 써클레이터



High Temp. Bath Circulators : “CH-8” & “CH-12”

- Made in Korea. ■ CE Certified. ■ PL(Product Liability) Insurance.
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
  - Advanced Heating System Ensures Temperature Performance.
  - Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
  - Innovative Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 16 Lit./min.).
  - Controlled 5 Steps Circulation speed(Flow Rate).
  - Patented Jog-Dial Control System and Capacitive Touch Button.
- \* 304 Stainless-steel Bath and Lid for Superior Durability and High Thermal Efficiency.  
 \* Compensation Function to Control Difference between Real Temp. and Indicated Temp.  
 \* Digital Timer Function : ‘Delay Time’ and ‘Operation Time’ can be Controlled.  
 \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled).

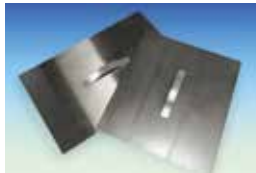
Specifications & Ordering information

Spec.	Model	MaXircu™ CH-8	MaXircu™ CH-12	MaXircu™ CH-22	MaXircu™ CH-30
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Pump		Max Flow Rate : 16 Lit./min, (Controlled 5 Steps Flow Rate Speed), Max Pressure : 5 psi, Max Lift : 2.8m			
Temp. Range & Accuracy		Room Temp +5°C ~ 250°C, ±0.1°C			
Temp. Resolution		0.1°C-Display, 0.5°C-Control			
Temp. Uniformity & Probe		±0.2°C, PT100			
Heating Power		1.0 kW	1.5 kW	2.2 kW	2.5 kW
Heat-up Time		50 min. to 100°C			
External Circulation Nozzle		id.10.5 / od.12.5 mm			
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end			
Display		Digital LCD with Back-Light Function			
Controller		Digital Fuzzy Controller with Jog - Dial Knob (Turn+Push)			
Safety Circuit		Over-Temp./-Current protection, Sensor Error & Low Level Detection			
Material		Stainless-steel (# 304)-Internal, Powder Coated steel-External, 50mm Thickness Ceramic Fiber-Insulation			
Lid & Drain Valve		included Stainless-steel Flat Lid, Ball Valve, Optional Dome Lid,			
Dimension (w×d×h)	Effective Space	180×130×h155	250×130×h155	340×250×h155	340×250×h200
	Mounted	180×320×h155	250×320×h155	340×440×h155	340×440×h200
	External	303×443×h569	373×443×h569	463×563×h569	463×563×h614
Packing Size (mm) & Gross Weight(kg)		470×400×h500	470×400×h500	600×490×h500	600×490×h500
		19 kg	21 kg	23 kg	37 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			
Cat. No.	230V	DH.WCH00408	DH.WCH00412	DH.WCH00422	DH.WCH00430
	120V	DH.WCH00508	DH.WCH00512	DH.WCH00522	DH.WCH00530
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 9,000 별도



External Circulating Nozzle



Flat Lid, Included



Ex. Multi-use High Temp. Bath Circulator with Modular Reactor System



(1) & (2)



(3)

Insulated Silicone & Teflon PFA Circulation Hose, Id  $\phi$  10 ~ 19mm, L1/1.5m

- Supplied by SciLab Korea \*  $\phi$  37mm Black NBR Foam Insulated Silicone or PFA-Hose
- \* Silicone Vacu-Hose : id 10×od 13mm, id 15×od 20mm, id 18×od 24mm, 220°C \* SL.Tub4031 & SL.Tub4032 : PFA Hose
- \* PFA Hose : id 10×od 12mm / PTFE Hose : id 15×od 16mm, id 19×od 21mm, -100 + 260°C

(1) Insulated Silicone Hose, 220°C

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4021	Sili-hose, id 10mm, L1m	1m	
SL.Tub4022	, L1.5m	1.5m	
SL.Tub4023	, id 15mm, L1m	1m	
SL.Tub4024	, L1.5m	1.5m	
SL.Tub4025	, id 18mm, L1m	1m	
SL.Tub4026	, L1.5m	1.5m	

(2) Insulated PFA Hose, 260°C

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4031	PFA-hose, id 10mm, L1m	1m	
SL.Tub4032	, L1.5m	1.5m	
SL.Tub4033	PTFE-hose, id 15mm, L1m	1m	
SL.Tub4034	, L1.5m	1.5m	
SL.Tub4035	, id 19mm, L1m	1m	
SL.Tub4036	, L1.5m	1.5m	

(3) Best Insulatedly & Flexible Stainless-steel Circulation Hose, Id  $\phi$  17mm, L1m, 360°C

SL.Tub	Material	Length	Ea. Price, ₩
SL.Tub7021	Flexible Stainless-steel Circulation Hose, id 17×od 60mm, L1m	L1m	

DAIHAN-brand<sup>®</sup> -25℃ ~ +150℃ Digital Precise Refrigerated/Heating Bath Circulator "MaXircu™ CR", ±0.2℃ with 1× Flat Lid/Digital Fuzzy Control/CFC-free Refrigeration/Certi. & Traceability, Flow 25Lit./min, Lift 4m, 8-/12-/22-/30- Lit. Ideal for Evaporators, etc., with External/Internal Circulating Connect - od.12/id.10mm, 정밀 냉동/가열 배스 겸용 써클레이터



-25℃ ~ 150℃  
**2-Year Warranty**

-25℃ ~ +150℃ Refrigerated / Heating Bath Circulator  
"MaXircu™ CR-8" & "MaXircu™ CR-12"

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
- Advanced Refrigerating System Ensures Temperature Performance.
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
- Innovated Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 25 Lit./min.).
- Controlled 5 Steps Circulation speed(Flow Rate).
- Innovated Refrigeration System, CFC-free (R-404A).
- Patented Jog-Dial Control System and Capacitive Touch Button, Digital LCD with Back-Light Function.
- External & Internal Circulation : Possible.
- \* For Inner Circulating : to Connect directly the In-/outlet Nozzles.
- \* RS232C Interface for Remote Monitoring and Controlling with PC.
- \* More Faster Cool-down Time. \* Urethane Foam Insulation.
- \* All models Built in Caster. \* Proper Liquid Level Line in Bath.
- \* User's Self-compensation Function to Control Difference between Real Temperature and Indicated Temperature (± 10.0℃ ).
- \* Warning and Auto-Stop Function in case of Liquid Shortage.
- \* Auto-controlled Refrigeration System for Compressor Protection and Power Saving.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled).

**Specifications & Ordering information**

Spec.	Model	MaXircu™ CR-8	MaXircu™ CR-12	MaXircu™ CR-22	MaXircu™ CR-30
Temp. Range & Accuracy		-25℃ ~ +150℃, ±0.1℃			
Temp. Resolution		0.1℃-Display, 0.1℃-Control			
Temp. Uniformity & Probe		±0.2℃ at -10℃, PT100			
Pump		Max Flow Rate : 25Lit./min(Controlled 5 Steps Flow Rate Speed), Max Pressure : 7.5 psi, Max Lift : 4m			
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Heating Power		1 kW	1.5 kW	2 kW	2.2 kW
Refrigerator		1/3HP	1/3HP	1/2HP	3/4HP
Cooling Capacity	at +20℃	300 W	380 W	680 W	850 W
	at 0℃	200 W	250 W	500 W	620 W
	at -20℃	110 W	130 W	300 W	400 W
Refrigerant		CFC -Free(R-404A) Refrigeration System			
Total Power Consumption		1.6 kW	2 kW	2.7 kW	3 kW
Compressor Control		Intelligent Control of Refrigerator for preventing Compressor Overload			
Pump		Max Flow Rate : 25Lit./min, Max Pressure : 7.5 psi, Max Lift : 4m			
External Circulation Nozzle		id.10.5 / od.12.5mm(For Inner Circulat. : to Connect directly the in-/outlet Nozzles)			
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end			
Display		Digital LCD with Back-Light Function			
Controller		Digital Fuzzy Controller with Jog-Dial Knob (Turn+Push)			
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection, Leakage Breaker			
Material		Stainless-steel (#304)-Internal, Powder Coated steel-External, 40mm Thickness Urethane Foaming - Insulation			
Lid & Drain Valve		included Stainless-steel Flat Lid, Ball Valve, Optional Dome Lid,			
Dimension (w×d×h)	Effective Space (mm)	175×153×150	230×181×150	290×220×200	330×290×200
	Internal (mm)	175×320×150	230×350×150	290×390×200	330×460×200
	External (mm)	330×474×752	400×523×807	483×563×850	494×633×906
Packing Size (mm) & Gross Weight (kg)		560×420×922	630×530×972	670×615×1022	740×625×1072
		45 kg	54 kg	63 kg	70 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			
Cat. No.	230V	DH.WCR00408	DH.WCR00412	DH.WCR00422	DH.WCR00430
	120V	DH.WCR00508	DH.WCR00512	DH.WCR00522	DH.WCR00530
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

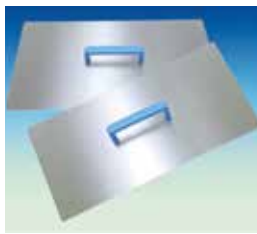
※ 운임 약 ₩ 16,000 별도!

**Refrigerated Circulator with Validation (IQ, OQ) Service**

DH.WCR30308	Validation Service(IQ, OQ), with "MaXircu CR-8", "CRBV208"	Ea. Price, ₩
DH.WCR30312	, with "MaXircu CR-12", "CRBV212"	
DH.WCR30322	, with "MaXircu CR-22", "CRBV222"	
DH.WCR30330	, with "MaXircu CR-30", "CRBV230"	



External Circulation Nozzle



Flat Lid, Stainless-steel (Included)

▶ Therminol D12<sup>®</sup> Cooling / Heating Transfer Fluid, Clear / Harmless : See page 24

▶ Insulated External Circulating Tubing : See page 31



Cat. No	Description	Articles
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DAIHAN-brand® -35°C ~ +150°C Digital Precise Refrigerated/Heating Bath Circulator "MaXircu™ CL", ±0.2°C with 1×Flat Lid/Digital Fuzzy Control/CFC-free/Certi. & Traceability, Flow 25Lit/min, Lift 4m, 8-/12-/22-/30-Lit.

Ideal for Evaporators, etc., with External/Internal Circulating Connect - od.12/id.10mm, 정밀 냉동/가열 배스 겸용 써클레이터

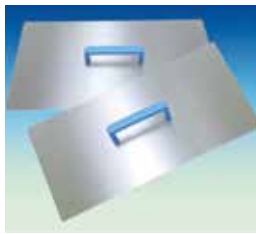


-35°C ~ +150°C  
2-Year Warranty

-35°C ~ +150°C Refrigerated / Heating Bath Circulator  
"MaXircu™ CL-8" & "MaXircu™ CL-12"



External Circulation  
Nozzle



Flat Lid, Stainless-steel  
(Included)

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Advanced Refrigeration System Ensures Temperature Performance
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Innovated Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 25 Lit./min.)
- Controlled 5 Steps Circulation speed(Flow Rate).
- Innovated Refrigeration System, CFC-free (R-404A)
- Patented Jog-Dial Control System and Capacitive Touch Button, Digital LCD with Back-Light Function
- External & Internal Circulation : Possible.
- \* For Inner Circulating : to Connect directly the In-/outlet Nozzle.
- \* RS232C Interface for Remote Monitoring and Controlling with PC
- \* More Faster Cool-down Time
- \* Urethane Foam Insulation
- \* All models Built in Caster
- \* Proper Liquid Level Line in Bath
- \* Connection with Evaporator or Viscometer is applicable
- \* User's Self-compensation Function to Control Difference between Real Temperature and Indicated Temperature (± 10.0°C).
- \* Warning and Auto-Stop Function in case of Liquid Shortage.
- \* Auto-controlled Refrigeration System for Compressor Protection and Power Saving.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)

Specifications & Ordering information

Spec.	Model	MaXircu™ CL-8	MaXircu™ CL-12	MaXircu™ CL-22	MaXircu™ CL-30
Temp. Range & Accuracy		-35°C ~ +150°C, ±0.1°C			
Temp. Resolution		0.1°C-Display, 0.1°C-Control			
Temp. Uniformity & Probe		±0.2°C at -20°C, PT100			
Pump		Max Flow Rate : 25Lit./min(Controlled 5 Steps Flow Rate Speed), Max Pressure : 7.5 psi, Max Lift : 4m			
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Heating Power		1 kW	1.5 kW	2 kW	2.2 kW
Refrigerator		1/2HP	1/2HP	7/8HP	1HP
Cooling Capacity	at +20°C	500 W	530 W	860 W	1030 W
	at 0°C	340 W	370 W	620 W	760 W
	at -20°C	200 W	210 W	400 W	500 W
Refrigerant		CFC -Free(R-404A) Refrigeration System			
Total Power Consumption		1.7 kW	2.2 kW	3 kW	3.3 kW
Compressor Control		Intelligent Control of Refrigerator for preventing Compressor Overload			
External Circulation Nozzle		id.10.5 / od.12.5mm(For Inner Circulat. : to Connect directly the in-/outlet Nozzles)			
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end			
Display		Digital LCD with Back-Light Function			
Controller		Digital Fuzzy Controller with Jog-Dial Knob (Turn+Push)			
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection, Leakage Breaker			
Material		Stainless-steel (# 304)-Internal, Powder Coated steel-External, 40 mm Thickness Urethane Foaming - Insulation			
Lid & Drain Valve		included Stainless-steel Flat Lid, Ball Valve, Optional Dome Lid			
Dimension (w×d×h)	Effective Space (mm)	175×153×150	230×181×150	290×220×200	330×290×200
	Internal (mm)	175×320×150	230×350×150	290×390×200	330×460×200
	External (mm)	400×523×807	400×523×807	483×563×850	494×633×906
Packing Size (mm) & Gross Weight (kg)		630×530×972	630×530×972	670×615×1022	740×625×1072
		50 kg	55 kg	65 kg	78 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			
Cat. No.	230V	DH.WCL00408	DH.WCL00412	DH.WCL00422	DH.WCL00430
	120V	DH.WCL00508	DH.WCL00512	DH.WCL00522	DH.WCL00530
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 16,000 별도!

Refrigerated Circulator with Validation (IQ, OQ) Service

DH.WCL30308	Validation Service(IQ, OQ), with "MaXircu CL-8", "CLBV208"	Ea. Price, ₩
DH.WCL30312	, with "MaXircu CL-12", "CLBV212"	
DH.WCL30322	, with "MaXircu CL-22", "CLBV222"	
DH.WCL30330	, with "MaXircu CL-30", "CLBV230"	

**Centrifuge, Mini-micro *New*** ..... P. 35  
    , Pro-micro *New* ..... P. 36  
    , Table-top General Purpose *New* ..... P. 37  
    , Table-top Micro Purpose *New* ..... P. 38



**Mini-micro Centrifuge**  
6 × 0.2 / 0.5 / 1.5 / 2.0 ml Tubes  
"MaXpin C-6mt"



**Mini-micro Centrifuge**  
6 × 0.2 / 0.5 / 1.5 / 2.0 ml Tubes  
"CF-5"



**Pro-micro Centrifuge**  
12 × 0.2 / 0.5 / 1.5 / 2.0 ml  
"MaXpin C-12mt"



**Table-top General Purpose Centrifuge**  
6 / 12 / 24 × (1.5~50)ml  
"Cef-50.6"



**Table-top Microprocessor Centrifuge**  
6 / 12 / 24 × (1.5~50)ml  
"Cef-D50.6"

Cat. No	Description	Articles
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DAIHAN-brand® **New-generation** Mini-microcentrifuge Set “MaXpin C-6mt”, Max. 5,500 rpm, Rapidly Stop Spin-motion for safety with Circular Fixed-Angle Rotor for 6×0.2/0.5/1.5/2.0ml Tubes and Strip Rotor for 2×0.2ml PCR 8-tubes Strips/16×0.2ml PCR Tubes  
 미니-마이크로 원심분리기 세트, 신속한 회전동작 정지, 앵글-/스트립-로터 포함, 0.2/0.5ml 튜브 어댑터 포함 **NEW**



Mini-microcentrifuge Set “MaXpin C-6mt” with Circular Fixed Angle Rotor

- **Made in Korea** ■ **PL(Product Liability) Insurance** ■ **Rapidly Stop Spin-motion for user safety**
- \* with Certificate & Traceability \* Complete Set with Circular Fixed-Angle Rotor and Fixed Strip Rotor
- \* Supplied with two Rotors :
  - **Circular Fixed-Angle Rotor** for 6×0.5-/1.5-/2.0-ml Tubes (6×0.2-/0.5-ml tube Adapters included)
  - **Strip Rotor** for 2×0.2ml PCR 8-tubes Strips or 16ea of individual 0.2ml PCR Tubes
- \* Smooth Opening of the Lid by Simply Pressing \* Rubbized Base
- \* Lid-Activated On/Off Safety Switch : Close the Clear Lid to Start and Open to Stop

**Specifications & Ordering information**

Spec.	Model	“MaXpin C-6mt”
RPM & Max. RCF		Max. 5,500 rpm, 1,775×g
Max. Capacity		6×0.5-/1.5-/2.0-ml tubes, 2×0.2ml PCR 8-tube Strip or 16×0.2ml PCR 8 Tubes
Rotor (included)	Angle Rotor	6 Holes Circular Fixed-Angle Rotor for 0.5-/1.5-/2.0-ml Tubes
	Strip Rotor	16 Holes Strip Rotor for 0.2ml PCR 8-tube Strip or individual Tubes
Adapter		Included 6×0.2-/ 0.5-ml Tube Adapter
Material		Lid-PC, Body-ABS, Rotor-ABS
Dimension (w×d×h)		Unit : 144×192 ×h108 mm, 1.1kg, Packing : 175×255×h215 mm, 1.6 kg
Power Consumption		8 W
Electric Reqts.		1 Phase, AC 100 ~ 240V, 50/60Hz
Cat. No.	230V	DH.WCF00006
	120V	DH.WCF00026
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

DAIHAN-brand® High performance Mini-microcentrifuge Set “CF-5”, Max. 5,500 rpm, with Certi. & Traceability with Circular Fixed-Angle Rotor for 6×0.2/0.5/1.5/2.0ml Tubes and Strip Rotor for 2×0.2ml PCR 8-tubes Strips/16×0.2ml PCR Tubes  
 미니-마이크로 원심분리기 세트, 앵글-/스트립-로터 포함, 0.2/0.5ml 튜브 어댑터 포함



Mini-microcentrifuge Set “CF-5” with Circular Fixed Angle Rotor

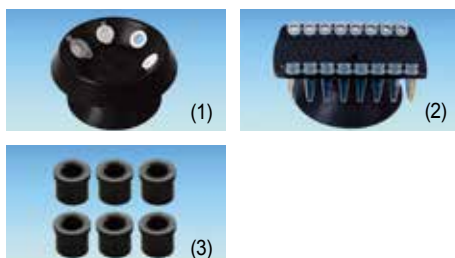
- **Made in Korea** ■ **CE Certified** ■ **PL(Product Liability) Insurance**
- \* with Certificate & Traceability \* Complete Set with Circular Fixed-Angle Rotor and Fixed Strip Rotor
- \* Supplied with two Rotors :
  - **Circular Fixed-Angle Rotor** for 6×0.5-/1.5-/2.0-ml Tubes (6×0.2-/0.5-ml tube Adapters included)
  - **Strip Rotor** for 2×0.2ml PCR 8-tubes Strips or 16ea of individual 0.2ml PCR Tubes
- \* Smooth Opening of the Lid by Simply Pressing \* Operation Display LED Lamp
- \* Lid-Activated On/Off Safety Switch : Close the Clear Lid to Start and Open to Stop

**Specifications & Ordering information**

Spec.	Model	“CF-5”
RPM & Max. RCF		Max. 5,500 rpm, 1,775×g
Max. Capacity		6×0.5-/1.5-/2.0-ml tubes, 2×0.2ml PCR 8-tube Strip or 16×0.2ml PCR 8 Tubes
Rotor (included)	Angle Rotor	6 Holes Circular Fixed-Angle Rotor for 0.5-/1.5-/2.0-ml Tubes
	Strip Rotor	16 Holes Strip Rotor for 0.2ml PCR 8-tube Strip or individual Tubes
Adapter		Included 6×0.2-/ 0.5-ml Tube Adapter
Material		Lid-PC, Body-ABS, Rotor-ABS
Dimension (w×d×h)		Unit : 178×150 ×h109 mm, Packing : 200×180×h175 mm, 2 kg
Power Consumption		8 W
Electric Reqts.		1 Phase, AC 100 ~ 240V, 50/60Hz
Cat. No.	230V	DH.WCF00005
	120V	DH.WCF00025
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

**Fixed Rotor & Adapter for Spare, 0.2-/0.5-ml Tube Adapter-set, 스페어 로터/튜브 어댑터**



- DH.WCF00105 (1) Circular Fixed Angle Rotor, for “MaXpin C-6mt”, “CF-5” for 6×0.2-/0.5-/1.5-/2.0-ml Tubes
- DH.WCF00205 (2) Fixed Strip Rotor, for “MaXpin C-6mt”, “CF-5” for 2×0.2ml PCR8-tube Strips or 16×0.2ml PCR Tubes
- DH.WCF00201 (3) 0.2ml Tube Adapter-sets, 6ea Adapter/1set, for Circular Fixed Angle Rotor, for “MaXpin C-6mt”, “CF-5”
- DH.WCF00301 (3) 0.5ml Tube Adapter-sets, 6ea Adapter/1set, for Circular Fixed Angle Rotor, for “MaXpin C-6mt”, “CF-5”

Ea. Price, ₩

DAIHAN-brand® **New-generation** High-Performance Pro-microcentrifuge Set “MaXpin C-12mt”, Max. 13,500rpm **NEW** with **Aluminum Die Casting Lid** & Electronic Lid Lock System for safety, Autoclavable PP Fixed Angle Rotor for 12 × 0.2-/0.5-/1.5-/2.0-ml Tubes 프로-마이크로 원심분리기, 전자식 안전 도어 잠금 시스템, 앵글 로터 포함, 0.2/0.5ml 튜브 어댑터 포함



**New Generation High Performance Pro-microcentrifuge Set “MaXpin C-12mt”**

- **Made in Korea**      ■ **PL(Product Liability) Insurance**
- **Unbelievably Quiet Operation due to Optimized Air Flow Design (Noise Level ≤ 57db)**
- **Brushless DC Motor Provides Maintenance Free Operation.**
- **Perfectly Constructed Frame Structure. Strong Layered Aluminum Die Casting Lid with Auto Lock Mechanism Assuring a Safe and Secure Lock.**
- **High Performance - Digital Feedback Speed Control, Max. 13,500rpm, 12,225 × g**
- **Useful Exclusive Spin Down Function**
- **Supplied in Complete Set : PP Fixed Angle Rotor for 1.5-/2.0-ml × 12 Tubes and PCR Tube Adapters (12 × 0.2ml & 12 × 0.5ml)**
- **Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function**
- \* Easy to Use Compact Design Allows for Fast Centrifugation      \* Sleek, Space Saving Footprint
- \* Intuitive Controls and Easy to Read Display Simplifies Operation.
- \* Ideal for Fast Isolating and Pelleting of DNA, RNA, Proteins, and Cell Viruses
- \* Max. 13,500 rpm with 12 Position, Autoclavable PP Fixed Angle Micro-Rotor
- \* Large Backlit LCD-screen for Settings and Parameters
- \* The System Displays Errors, Excess Speed, and Open Lid.
- \* Load Imbalance Detection.
- \* Strong Steel Layered Door with Safety, Auto-Lock Function
- \* Automatic Door Release      \* Easy to Close Lid
- \* Biocontainment Rotor Lid Ensuring Securely Contained Samples
- \* Soft Brake Function to Protect Delicate Samples
- \* PP Inner Lid for Maximize Safety (optional)



**Perfectly Constructed Frame Structure, Strong Layered Lid**

**Specifications & Ordering information**

Spec.	Model	“MaXpin C-12mt”
RCF		1,000~13,500 RPM , 12,225 × g
Max. Capacity		0.2-/0.5-/1.5-/2.0-ml × 12 Tubes
Rotor (included)		PP Fixed Angle Rotor for 0.2-/0.5-/1.5-/2.0-ml × 12 Tubes
Adapter (included)		12 × 0.2ml & 12 × 0.5ml PCR Tubes
Drive System		Brushless DC motor, Direct drive, Vibration Insulated, Counterclockwise Rotating
Noise Level		≤ 57 dB
Acceleration & Braking Time		≤ 12 sec (at Max. speed)
Cooling Device		Air Cooling System
Timer & Alarm		99hr 59min (Continuous run), Error status & Timer-end
Display		Large Digital LCD with Back-Light Function
Controller		Digital Feedback Control with Jog-Shuttle Switch (Turn+Push)
Safety Circuit		Motor Error Detector, Electronic Safety Lid Lock System
Material		Lid-Aluminum Die Casting, Body-ABS, Rotor-PE
Dimension & Weight		187 × 253 × h155 mm, 3.8 kg
Packing Size & Gross Weight		230 × 290 × h245 mm, 4.3 kg
Power Consumption		90W
Electric Reqts.		1 Phase, AC 120V, 50/60Hz or AC 230V, 50/60Hz

Cat. No.	230V	DH.WCF01350
	120V	DH.WCF01351
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

**Spare Rotor & Adapter Set**



**(2) Tube Adapter(Included)**  
12 × 0.2/0.5ml Tube Adapter

- DH.WCF11350 (1) PP Fixed Angle Rotor, Autoclavable, for “MaXpin C-12mt”, 12 × 0.2-/0.5-/1.5-/2.0-ml Tubes
- DH.WCF00200 (2) 0.2ml Tube Adapter-sets, 12ea Adapter/1set, for Fixed Angle Rotor, “CFTA1”
- DH.WCF00300 (2) 0.5ml Tube Adapter-sets, 12ea Adapter/1set, for Fixed Angle Rotor, “CFTA2”

Ea. Price, ₩

**Optional PP Inner Lid**

- DH.WCF21350 (3) PP Inner Lid for Maximize Safety, for “MaXpin C-12mt”

Ea. Price, ₩

Cat. No	Description	Articles
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DAIHAN-brand® 1.5~50ml Popular Classic Centrifuge “Cef”, Safety Balance, 3000- & 6000-rpm, Economy Model with 6- & 8-Holes, or 12- & 24-Holes(in 50ml Model) Fixed Angle Rotor, 1.5~50ml 튜브용 경제형 원심분리기



2-Year Warranty

I. “Cef-6” for 6 Tubes of 1.5~15ml, with 6 Holes Fixed Angle Rotor, 3000rpm



2-Year Warranty

II. “Cef-8” for 8 Tubes of 1.5~15ml, with 8 Holes Fixed Angle Rotor, 6000rpm



2-Year Warranty

III. “Cef-50.6” for 6 Tubes of 50ml, with 6 Holes Fixed Angle Rotor, 4000rpm

- DAIHAN Designed
- Speed is Linear and Stables
- Interchangeable Rotor
- Ideal for Biology, Medicine, Pharmacology, Laboratory, etc. Various Application
- with 6- & 8-Holes or 12- & 24-Holes Fixed Angle Rotor for 1.5ml ~ 50ml Tubes ; On Adapters Adjustable 1.5/2ml, 5~7ml, 10~15ml, and 50ml

- \* The Design is up-to-date, Beautiful Outlook and Durable
- \* Auto-balancing System
- \* Stepless Controller : Speed and Operating Time
- \* ABS Outer Shell can Resist Collision.
- \* with Safety Switch when Centrifuge Lid Opened the Motor can be Stop

Specifications & Ordering information

Spec.	Model	I. 15ml “Cef-6” 6 Holes - 1.5~15ml	II. 15ml “Cef-8” 8 Holes - 1.5~15ml	III. New 50ml “Cef-50.6” 6 Holes - 50ml or 12/24 Holes - 1.5~15ml
		Fixed Angle Rotor&Capa.	Included Option	6Hole ; (1.5~15)ml Tubes
Useful Tube size & Acceptance		6 Tubes ; 10~15ml, 1.5~7ml on Adapters	8 Tubes ; 10~15ml, 1.5~7ml on Adapters	(1) 6 Tubes ; 50ml When option Rotor ; (2) 12 Tubes ; 10~15ml (3) 24 Tubes ; 10~15ml 1.5~7ml on Adapters
Adapter and Size	Included Option	② 6ea×10~15ml Tubes Size ; id17.5×L95mm ③ 6ea×5~7ml Tubes Size ; id13.5×L69mm ④ 6ea×1.5/2ml Tubes Size ; id11×L42mm	② 8ea×10~15ml Tubes Size ; id17.5×L95mm ③ 8ea×5~7ml Tubes Size ; id13.5×L69mm ④ 8ea×1.5/2ml Tubes Size ; id11×L42mm	① 6ea×50ml Tubes Size ; id30.7×L104mm ② 12/24ea×10~15ml Tubes Size ; id17.5×L95mm ③ 12/24ea×5~7ml Tubes Size ; id13.5×L69mm ④ 12/24ea×1.5/2ml Tubes Size ; id11×L42mm
Speed Range (rpm)		300~3000rpm at 60Hz (300~2500rpm at 50Hz)	300~6000rpm	600~4000rpm
R.C.F		1,066×g	4,265×g	2,325×g
Display		None	Tachometer for Speed & R.C.F	None
Timer		0~30min Analog Timer		
Motor		Induction Motor	DC Motor	
Safety Manual Brake		None	Yes	None
Dimension & Weight		280×280×h255mm, Net. 3.5kg, Gross. 4kg	280×280×h265mm, Net. 4.5kg, Gross. 5kg	300×300×h315mm, Net. 8.5kg, Gross. 9kg
Electric Reqts		AC 230V, 50/60Hz or AC 120V, 60Hz		

Cat. No.	230V	DH.Cef0006	DH.Cef0008	DH.Cef0010
		120V	DH.Cef0106	DH.Cef0108
Price, Each. ₩				

Spare Rotor and Tube Adapters

- DH.CefR5006 (1) 50ml 6Holes Angle Rotor “R5006” with 6ea×50ml Tube Adapter PP “TA50”, idφ30.7×L104mm, for “Cef-50.6” & “Cef-D50.6”
- DH.CefA050 ① 50ml Tube Adapter PP “TA50”, idφ30.7×L104mm, Fit to Rotor “R5006”, for Centrifuge “Cef-50.6” & “Cef-D50.6”
- DH.CefA015 ② 10~15ml Tube Adapter PP “TA15”, idφ17.5×L98mm, for Centrifuge “Cef-6” & “Cef-8”, and Rotor “R1512” & “R1524”

Ea. Price, ₩

Optional Rotor and Tube Adapters

- DH.CefR1512 (2) 10~15ml 12Holes Angle Rotor “R1512”, with 12ea×10/15ml Tube Adapter “TA15”, idφ17.5×L98mm, for Centrifuge “Cef-50.6” & “Cef-D50.6”
- DH.CefR1524 (3) 10~15ml 24Holes Angle Rotor “R1524”, with 24ea×10/15ml Tube Adapter “TA15”, idφ17.5×L98mm, for Centrifuge “Cef-50.6” & “Cef-D50.6”
- DH.CefA007 ③ 5~7ml Tube Adapter PP “TA7”, idφ13.5×L69mm, Fit to “TA15”, Tube Adapter, for Centrifuge “Cef-6”, “Cef-8”, “Cef-50.6”, and “Cef-D50.6”
- DH.CefA002 ④ 1.5/2ml Tube Adapter PP “TA2”, idφ11×L42mm, Fit to “TA15”, “TA1503” Tube Adapter, for Centrifuge “Cef-6”, “Cef-8”, “Cef-50.6”, and “Cef-D50.6”

Ea. Price, ₩



①TA50  
(1) Fixed Angle Rotor ; 50ml 6Holes, “R5006”



②TA15  
(2) Fixed Angle Rotor ; 10~15ml 15Holes, “R1512”



②TA15  
(3) Fixed Angle Rotor ; 10~15ml 24Holes, “R1524”



Optional Tube Adapters

DAIHAN-brand® 1.5~50ml Microprocessor Centrifuge “Cef-D50.6”, Safety Interlock, Max. 4000rpm, Digital Model with 6-Holes or 12- & 24-Holes Fixed Angle Rotor, 1.5~50ml 튜브용 디지털 원심분리기 **NEW**



**2-Year Warranty**

“Cef-D50.6” for 6 Tubes of 50ml, with 6 Holes Fixed Angle Rotor, 4000rpm



①TA50  
(1) Fixed Angle Rotor ; 50ml 6Holes, “R5006”



②TA15  
(2) Fixed Angle Rotor ; 10~15ml 12Holes, “R1512”



③TA15  
(3) Fixed Angle Rotor ; 10~15ml 24Holes, “R1524”



(4) Swing Rotor ; 4×50ml, 12×1.5/2ml & 10~15ml, 16×5~7ml “SR1550”  
Included ⑤,⑥,⑦ / Option ④



Optional Tube Adapters

- **Made in Korea**
- **Durable and Maintenance Free - Brushless DC Motor**
- **Ideal for Biology, Medicine, Pharmacology, Laboratory, etc. Various Application**
- **with 6-Holes or 12- & 24-Holes Fixed Angle Rotor for 1.5ml ~ 50ml Tubes ; On Adapters Adjustable 1.5/2ml, 5~7ml, 10~15ml, and 50ml**
- **Automatic Quick Self-Cooling by Fan**
- **Interchangeable Rotor**
- \* Compact Design with Automatic Door Release. \* Easy to Use Controls and Display
- \* Self-diagnostic Function : Lid Opening, Unbalance, Over-Heat/ Current/ Voltage/ Speed
- \* Auto-balancing System for Extend Motor Life and Reduce Noise
- \* Program Memory Function : 9Set. \* Precision Digital Timer, Set to 10Sec. / Max 30 Min
- \* Pushing the Function Key for Short Runs \* Rapid Deceleration due to Automatic Brake System

**Specifications & Ordering information**

Spec.	Model	“Cef-D50.6”	
		6 Holes - 50ml or 12/24 Holes - 1.5~50ml	
Fixed Angle Rotor&Capa.	Included	(1) 6Hole ; 50ml Tubes	
	Option	(2) 12Hole ; (1.5~15)ml Tubes, (3) 24Hole ; (1.5~15)ml Tubes	
Swing Rotor & Capa.	Option	(4) SR1550 ; ⑤ 4×1Hole - 50ml, ⑥ 4×3Hole - 10~15ml, ⑦ 4×4Hole - 5~7ml, ⑧+④ 4×3Hole : 1.5/2.0ml	
		(1) 6 Tubes ; 50ml	
Useful Tube size & Acceptance	Option	When Option Fixed Angle Rotor	When Option Swing Rotor ;
		(2) 12 Tubes ; 1.5~15ml (3) 24 Tubes ; 1.5~15ml	(4) SR1550 ⑤ 4 Tubes : 50ml, ⑥ 12 Tubes : 10~15ml ⑦ 16 Tubes : 5~7ml ⑧+④ 12 Tubes : 1.5/2.0ml
Adapter and Size	Included	① 6ea×50ml Tubes, Size ; id30.7×L104mm	
	Option	When Option Fixed Angle Rotor ② 12/24ea×10~15ml Tubes Size ; id17.5×L95mm ③ 12/24ea×5~7ml Tubes Size ; id13.5×L69mm ④ 12/24ea×1.5/2ml Tubes Size ; id11×L42mm	When Option Swing Rotor ; ⑤ 4×1Hole - 50ml Tubes ⑥ 4×3Hole - 10~15ml Tubes ⑦ 4×4Hole - 5~7ml Tubes ⑧+④ 4×3Hole - 1.5/2.0ml Tubes
Speed Range (rpm) & RCF	600~4000rpm & 2,325×g (Swing Rotor ; 2,683×g)		
Motor	Brushless DC Motor		
Timer	0~30min		
Dimension & Weight	390×505×290mm, 19.8kg, Gross. 21.8kg		
Electric Reqts.	AC 230V, 50/60Hz or AC 120V, 60Hz		

Cat. No.	230V	DH.CefD0030
	120V	DH.CefD0130
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

**Spare Rotor and Tube Adapters**

		Ea. Price, ₩
DH.CefR5006	(1) 50ml 6Holes Angle Rotor “R5006” with 6ea×50ml Tube Adapter PP “TA50”, idφ 30.7×L104mm, for “Cef-50.6” & “Cef-D50.6”	
DH.CefA050	① 50ml Tube Adapter PP “TA50”, idφ 30.7×L104mm, Fit to Rotor “R5006”, for Centrifuge “Cef-50.6” & “Cef-D50.6”	
DH.CefA015	② 10~15ml Tube Adapter PP “TA15”, idφ 17.5×L98mm, for Centrifuge “Cef-6” & “Cef-8”, and Rotor “R1512” & “R1524”	

**Optional Rotor and Tube Adapters**

		Ea. Price, ₩
DH.CefR1512	(2) 10~15ml 12Holes Angle Rotor “R1512”, with 12ea×10/15ml Tube Adapter “TA15”, idφ 17.5×L98mm, for Centrifuge “Cef-50.6” & “Cef-D50.6”	
DH.CefR1524	(3) 10~15ml 24Holes Angle Rotor “R1524”, with 24ea×10/15ml Tube Adapter “TA15”, idφ 17.5×L98mm, for Centrifuge “Cef-50.6” & “Cef-D50.6”	
DH.CefSR1550	(4) Swing Rotor “SR1550”, with Tube Adapter PP 1Hole×4ea×50ml “TA5001”, 3Hole×4ea×1.5/2ml & 10~15ml “TA1503” and 4Hole×4ea×5~7ml “TA704”, for Centrifuge “Cef-D50.6”	
DH.CefA007	③ 5~7ml Tube Adapter PP “TA7”, idφ 13.5×L69mm, Fit to “TA15”, Tube Adapter, for Centrifuge “Cef-6”, “Cef-8”, “Cef-50.6”, and “Cef-D50.6”	
DH.CefA002	④ 1.5/2ml Tube Adapter PP “TA2”, idφ 11×L42mm, Fit to “TA15”, “TA1503” Tube Adapter, for Centrifuge “Cef-6”, “Cef-8”, “Cef-50.6”, and “Cef-D50.6”	
DH.CefA5001	⑤ 50ml Tube Adapter PP “TA5001”, Fit to Rotor “SR1550”, for Centrifuge “Cef-D50.6”	
DH.CefA1503	⑥ 10~15ml 3Hole Tube Adapter PP “TA1503”, Fit to Rotor “SR1550”, for Centrifuge “Cef-D50.6”	
DH.CefA704	⑦ 5~7ml 4Hole Tube Adapter PP “TA704”, Fit to Rotor “SR1550”, for Centrifuge “Cef-D50.6”	

Cat. No	Description	Articles
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DAIHAN-brand® Chiller, -20°C +40°C Heavy-duty Refrigerated External Circulator “MaXircu™ Chi”, Flow 20-/30-Lit/min  
 Ideal for 1~50Lit Evaporators, Cooling Line, etc. Lift 8-/27-m, Cooling Capa 0.87-/1.3-/3.0kW, 다용도 냉각 써큘레이터/칠러



Chiller, -20°C +40°C  
 Heavy-duty Refrigerated External Circulator  
 “MaXircu™ Chi-30”



Assembly-type Safety Connection Ports/Pipe  
 for Fluid In/Out-let ;  
 ISO RC 1/2" Thread, Located On Rear-Upper Panel

- Made in Korea
  - PL (Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Ideal for Wide-range Reaction System and Evaporator. ■ Max. Lift 8-/27-m
  - Assembly-type Safety Connection Ports/Pipe for Fluid In/Out-let : ISO RC 1/2" Thread, Stainless-steel.
  - Digital PID Control System Implementing Superior Temperature Accuracy.
  - Embedded External Nozzle Part for the Prevention of Nozzle Damaged.
  - Stainless-steel Internal Bath for Prevention of Corrosion.
- \* Wide-range Filling Volume 17Lit. / 29Lit. / 47Lit. \* Effective Cooling Capacity  
 \* Useful for 1~50Lit. Various Reactors and Evaporators. \* Emergency Stop Button for safety.  
 \* High Quality Circulation Pump : 20-/30-Lit/min Max Flow Rate and 1.0-/3.3-bar Max. Pressure.  
 \* Built in Pump Pressure Gauge and Compressor Pressure Gauge.

Specifications & Ordering information

Spec.	Model	“MaXircu™ Chi-20”	“MaXircu™ Chi-30”	“MaXircu™ Chi-50”
Temp. Range & Stability		-20°C ~ +40°C-Range, ±0.2°C(at 15°C)-Stability		
Cool-Fluid, Filling Volume		17 Lit. max	29 Lit. max	47 Lit. max
Useful for 1~50Lit Evaporators, etc.		for 1~20Lit Evaporator	for 10~30Lit Evaporator	for 20~50Lit Evaporator
Refrigerator Capacity(HP)		1/2 HP	1 HP	2 HP
Lid & Top Opening Dia.		φ100 mm		
Fluid In/Out-let Connector		ISO RC 1/2" (English System AG 1/2") Thread, Stainless-steel		
Pump Power, Lift Height, m	Max. Flow Rate	20 Lit/min	30 Lit/min	
	Max. Pressure & Lift	1.0 bar Max. Lift : 8m	3.3 bar Max. Lift : 27m	
Cooling Capacity	at +20°C	1.7 kW	2.8 kW	6.5 kW
	at 0°C	0.87 kW	1.3 kW	3.0 kW
	at -20°C	0.32 kW	0.45 kW	1.2 kW
External Dimension		450×630×h650 mm	550×830×h975 mm	605×975×h1265 mm
Material		Stainless steel-Internal, Powder Coated steel-External		
Electrical Reqts.		1 Phase 230V, 50 / 60 Hz or 3Phase 380V		
Cat. No.	230V	DH.Chi0020	DH.Chi0030	-
	3 Phase	-	-	DH.Chi0050
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 20,000 별도!

- ▶ Thermanol D12® Cooling / Heating Transfer Fluid, Clear / Harmless : See page 24
- ▶ Insulated External Circulating Tubing : See page 31



▶ Figure : One of the Applications in the Large Volume Evaporator Line.

# Desiccator Cabinets

**Desiccator, Auto-Dry** ..... P. 42~43  
 , Gas Exchangeable/General Purpose ..... P. 41~42  
 , General Purpose ..... P. 41  
 , UV Protection Auto-Dry ..... P. 44  
 , Vacuum ..... P. 45~46



**General Purpose Desiccator**  
"DeLL", 33Lit.



**Auto-Dry Desiccator**  
"DeADLH", 33Lit.



**UV Protection Auto-Dry Desiccator**  
"DeADLL.UV", 33Lit.



**Vacuum Desiccator**  
"DeVM", 9.2Lit.



**Vacuum Desiccator**  
"DeVL", 12Lit.



**Vacuum Desiccator**  
"DeVLH", 30Lit.



**Vacuum Desiccator**  
"DeVW", 48Lit.



**Auto-Dry Desiccator**  
"DeADAWS", 604Lit.



**Gas Exchangeable/General Purpose Desiccator**  
"DeBG1K", 207Lit.



**Auto-Dry Desiccator**  
"DeADDWS", 604Lit.



Cat. No	Description	Articles
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**2-Year Warranty**



(1) Horizontal-type, 33Lit.

**2-Year Warranty**



(2) Vertical-type, 33Lit.

**DAIHAN-brand® General Purpose Desiccator, Horizontal- & Vertical-types, 33Lit. with ABS Frame, Transparent PMMA Panel, “DeLL”, “DeLH”, 일반 데시케이터**

- \* DAIHAN® Designed Korea-made
- \* Superior Sealing and Airtight Door using Rubber Packing
- \* Excellent Impact Resistance and Stiffness with ABS Body frame
- \* Transparent PMMA for Easy Viewing ensures over 99% Permeability.
- \* Adjustable shelf allows easy storage from small to large.
- \* Material : Frame - ABS (Acrylonitrile Butadiene Styrene resin), Panel & Shelves -Transparent PMMA (Polymethyl Methacrylate), Rubber Leg - Natural Rubber
- \* Horizontal-type is Supplied with 1 Shelf (Size : 397×302×5mm)
- \* Vertical-type is Supplied with 3 Shelves (Size : 267×302×4mm)
- \* Number of Shelves and Height can be adjusted.
- \* Shelf Load : 2kg \* Shelf Movement Interval : 30mm
- \* Including 1 Silica Gel Plate

※ 운임 약 ₩ 6,000 별도!

(1) Horizontal-type, 33Lit.

**DH.DeLL** General Desiccator, Horizontal-type, 33Lit.  
Outer : 450×330×h350mm, Inner : 400×305×h270mm

Ea.	Price, ₩

(2) Vertical-type, 33Lit.

**DH.DeLH** General Desiccator, Vertical-type, 33Lit.  
Outer : 330×330×h480mm, Inner : 270×305×h400mm

Ea.	Price, ₩

*Spare Shelves*

**DH.DeSH003** Spare PMMA Shelves, Horizontal-type, Load 2kg, w397×d302mm  
**DH.DeSH002** , Vertical-type, Load 2kg, w267×d302mm

Ea.	Price, ₩

**2-Year Warranty**



(1) Floor-type, 2-Doors

**2-Year Warranty**



(2) Bench-type, 1-Doors

**DAIHAN-brand® Gas Exchangeable/General Purpose Desiccator, 164-/207-Lit with Aluminum Frame, Transparent PMMA Panel, with-/without-Wheel, “DeBG2”, “DeBG1K” Bench-type 1-Door 164Lit, Floor-type 2-Doors 207Lit, 가스치환가능/일반 데시케이터, 중형**

- \* DAIHAN® Designed Korea-made
- \* **Easy Viewing of the Internal Temp. and Humidity by a Front Door-mounted Digital Thermo Hygrometer.**
- \* Transparent PMMA Main Body for Easy Viewing of the Contents
- \* Maintain Airtightness by Using Rubber Packing.
- \* Material : Main Body - Transparent PMMA, Frame - Aluminum, Shelf - Stainless-steel
- \* Nylon Caster ensures Convenience of Moving.
- \* Shelf Movement Interval : 50 mm
- \* “DeBG1K” is Supplied with 4 Shelves and “DeBG2” is Supplied with 2 Shelves.
- \* Number of Shelves and Height can be adjusted.
- \* Available Gas Exchange, and Mounted Gas Valve.
- \* Order Made for Non-standard Dimensions, UV Protection and Antistatic is available.
- \* Purpose : Storage of Various Samples, Precision Instrument and Semiconductor-related Product that User want to Perform a Reliable Humidity Control, and Used in Simple and Easy Low Humidity Characterization Test.

※ 운임 약 ₩ 16,000 별도!

**DH.DeBG1K** (1) 207Lit, Floor-type Desiccator, with Caster, 2-Doors  
Outer : 574×535×h1070mm, Inner : 490×460×h920mm

Ea.	Price, ₩

**DH.DeBG2** (2) 164Lit, Bench-type Desiccator, 1-Door  
Outer : 574×535×h765mm, Inner : 490×460×h730mm

*Spare Shelves*

**DH.DeSH001** Spare Stainless-steel Shelves, Load 20kg, w490×d460mm

Ea.	Price, ₩

*Spare Accessories*

**DH.DeDHY** Spare Digital Thermo Hygrometer

Ea.	Price, ₩

with Digital Thermo Hygrometer



**2-Year Warranty**

**2-Year Warranty**

"DH.DeSS", 320Lit.  
1-Room, 2-Doors

"DH.DeW4S", 604Lit.  
4-Rooms, 4-Doors

**with Digital Thermo Hygrometer**

## DAIHAN-brand® Gas Exchangeable/General Purpose Desiccator 320-/640-/604-Lit. and 1-/2-/4-Rooms, "DeSS", "DeWS", "DeW4S" with Al-Frame, Clear PMMA, 2- or 4-Doors, 가스치환가능/일반 데시케이터, 대형

- \* DAIHAN® Designed Korea-made
- \* Transparent Main Body for Easy Viewing of the Contents
- \* **Easy Viewing of the Internal Temperature and Humidity by a Front Door-mounted Digital Thermo Hygrometer.**
- \* Material : Main Body - Transparent PMMA, Frame - Aluminum, Shelves - Stainless-steel
- \* Available Gas Exchange, and Mounted 2 Gas valves.
- \* Maintain Airtightness by Using Rubber Packing.
- \* Design of 4 Independent Structures, exchanging gas to store sample, is Reduced the Gas Consumption Because It does not Affect Other Rooms when One Door is Opened. (DH.DeW4S Model Only ) \* Nylon Caster ensures Convenience of Moving.
- \* Number of Shelves and Height can be adjusted. \* Shelves Movement Interval : 50mm
- \* Purpose : Storage of Various Samples, Precision Instrument and Semiconductor-related Product that User want to Perform a Reliable Humidity Control, and Used in Simple and Easy Low Humidity Characterization Test. ※ **운임 약 ₩ 30,000 별도!**
- \* Order Made for Non-standard Dimensions is available.

		Ea.	Price, ₩
<b>DH.DeSS</b>	General Desiccator, 320Lit, 1-Room, 2-Doors Outer : 574 × 535 × h1770mm, Inner : 490 × 460 × h1420mm Including 4 Shelves, 1 Silica gel Tray, and 2 Gas valves		
<b>DH.DeWS</b>	General Desiccator, 640Lit, 2-Rooms, 4-Doors Outer : 1164 × 535 × h1770mm, Inner : 490 × 460 × h1420mm, 2Rooms Including 8 Shelves, 2 Silica gel Trays, and 2 Gas valves		
<b>DH.DeW4S</b>	General Desiccator, 604Lit, 4-Rooms, 4-Doors Outer : 1164 × 535 × h1770mm, Inner : 490 × 460 × h670mm, 4Rooms Including 8 Shelves, 4 Silica gel Trays, and 8 Gas valves		
<b>Spare Shelves</b>			
<b>DH.DeSH001</b>	Spare Stainless-steel Shelves, Load 20kg, w490 × d460mm		
<b>DH.DeDHY</b>	Spare Digital Thermo Hygrometer		



**2-Year Warranty**

(1) Horizontal-type, 33Lit.



**2-Year Warranty**

(2) Vertical-type, 33Lit.

## DAIHAN-brand® Auto-Dry Desiccator, Horizontal- & Vertical-types, "DeADLL", "DeADLH", 33Lit. with ABS-Frame, Clear PMMA, Built-in Dehumidification ~25%RH, 자동습도조절 데시케이터

- \* DAIHAN® Designed Korea-made
- \* Transparent PMMA for Easy Viewing ensures over 99% Permeability.
- \* Equipped with an Analog Hygrometer to Read the Internal Humidity.
- \* Due to the Energy-saving Design, Power Consumption is 3 Watt and It can be Economically Used as a Dehumidifying Storage which is Always Powered On. \* Superior Sealing and Airtight Door using Rubber Packing
- \* Excellent Durability : Dehumidification-unit has no Driving Part causing Sound or Vibration.
- \* Excellent Impact Resistance and Stiffness with ABS Body frame
- \* Method of Dehumidification : Performs Dehumidification Function without adding Silica Gel by Silica Gel Automatic Regeneration Method
- \* Shelves Movement Interval : 30mm \* Number of Shelves and Height can be adjusted.

### Specifications

- \* Range of Humidity : ~25%RH (Depend on Surrounding Environmental Condition) \* Dry Module
- \* Material : Frame - ABS, Panel & Shelf - Transparent PMMA, Rubber Leg- Natural Rubber
- \* Horizontal-type is Supplied with 1 Shelf (Size : 397 × 302 × 5mm)
- \* Vertical-type is Supplied with 3 Shelves (Size: 267 × 302 × 4mm)
- \* Shelf Load : 2kg
- \* Power Supply : AC220V, 50/60Hz, 3W

### (1) Auto-Dry Desiccator, Horizontal-type, 33Lit.

**DH.DeADLL** Auto-Dry Desiccator, Horizontal-type, 33Lit.  
Outer : 450 × 330 × h350mm, Inner : 400 × 305 × h270mm

※ **운임 약 ₩ 6,000 별도!**

Ea.	Price, ₩

### (2) Auto-Dry Desiccator, Vertical-type, 33Lit.

**DH.DeADLH** Auto-Dry Desiccator, Vertical-type, 33Lit.  
Outer : 330 × 330 × h480mm, Inner : 270 × 305 × h400mm

※ **운임 약 ₩ 6,000 별도!**

Ea.	Price, ₩

### Spare Shelves

**DH.DeSH003** Spare PMMA Shelves, Horizontal-type, Load 2kg, w397 × d302mm  
**DH.DeSH002** , Vertical-type, Load 2kg, w267 × d302mm

Ea.	Price, ₩

### Spare Accessories

**DH.DeAHY** Spare Analog Hygrometer  
**DH.DeHY** Spare Dehumidification Unit

Ea.	Price, ₩



Built-in Dehumidification Unit

**with Analog Hygrometer**

Cat. No	Description	Articles
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**2-Year Warranty**

**2-Year Warranty**

Auto-Dry "DH.DeADASS", 320Lit., 1-Room, 2-Doors

Auto-Dry "DH.DeADAWS", 604Lit., 2-Rooms, 4-Doors

**with Digital Thermo Hygrometer**

**DAIHAN-brand® Auto-Dry Desiccator, Analog Control, 207-/320-/604-Lit and 1-/2-Rooms, 1-or 2- or 4-Doors, "DeADABG1K", "DeADASS", "DeADAWS" with Al-frame, 20~50%RH, 아날로그 방식 자동 제습 데시케이터**

- \* DAIHAN® Designed Korea-made
- \* **Easy Viewing of the Internal Temperature and Humidity by a Front Door-mounted Digital Thermo Hygrometer.**
- \* Method of Dehumidification : Repeated Regeneration of Solid Silica gel Improves Dehumidification Capacity.
- \* Using the Excellent Airtight Rubber Packing and Super Dehumidifier to Reach the Desired Humidity in Minimum Time
- \* The Dehumidifier is Analog Controlled and the Power Supply is 220V.
- \* Purpose: Storage of Various Samples, Precision Instrument and Semiconductor-related Product that User want to Perform a reliable Humidity Control, and Used in Simple and Easy Low Humidity Characterization Test.
- \* Humidity Control Range : 20~50%RH
- \* Display(Humidity) : LED Digital \* Mounted Wheels
- \* Material : Main Body - Transparent PMMA, Frame - Aluminum, Shelves - Stainless-steel
- \* Including 4 Shelves(No. of Shelves & Height can be adjusted) ※ **운임 약 ₩ 30,000 별도!**
- \* Order Made for Non-standard Dimensions is available

		Ea. Price, ₩
<b>DH.DeADABG1K</b>	Auto-Dry Desiccator, Analog Control, 207Lit., 1-Room, 1-Doors, Outer : 574 × 535 × h1070mm, Inner : 490 × 460 × h920mm	
<b>DH.DeADASS</b>	Auto-Dry Desiccator, Analog Control, 320Lit., 1-Rooms, 2-Doors, Outer : 574 × 535 × h1770mm, Inner : 490 × 460 × h1420mm	
<b>DH.DeADAWS</b>	Analog Control Desiccator, 604Lit., 2-Rooms, 4-Doors, Outer : 1154 × 535 × h1770mm, Inner : 490 × 460 × h1420mm	

**Spare Shelves**

		Ea. Price, ₩
<b>DH.DeSH001</b>	Spare Stainless-steel Shelves, Load 20kg, w490 × d460mm	

**Spare Accessories**

		Ea. Price, ₩
<b>DH.DeDHY</b>	Spare Digital Thermo Hygrometer	



**2-Year Warranty**

Auto-Dry "DH.DeADDWS", 604Lit. 2-Rooms, 4-Doors

**with Digital Thermo Hygrometer**

**DAIHAN-brand® Auto-Dry Desiccator, Digital Control, with 207-/320-/604-Lit. and 1-/2-Rooms, 1-or 2- or 4-Doors, "DeADDBG1K", "DeADDSS", "DeADDWS" with Al-frame, Transparent PMMA-Panel, 15~60%RH, 디지털 고성능 자동 제습 데시케이터**

- \* DAIHAN® Designed Korea-made
- \* **Easy Viewing of the Internal Temp. and Humidity by a Front Door-mounted Digital Thermo Hygrometer**
- \* Method of Dehumidification : Repeated Regeneration of Solid Silica gel Improves Dehumidification Capacity.
- \* Using the Excellent Airtight Rubber Packing & Super Dehumidifier to Reach the Desired Humidity in Minimum Time
- \* The Dehumidifier is Digital Controlled and the Power Supply is 220V.
- \* Purpose : Storage of Various Samples, Precision Instrument and Semiconductor-related Product that User want to Perform a reliable humidity control, and Used in Simple and Easy Low Humidity Characterization Test.
- \* Humidity Control Range : 15~60%RH
- \* Humidity Control Resolution : 5%RH - Atmospheric Humidity
- \* Material : Main Body - Transparent PMMA, Frame - Aluminum, Shelves - Stainless-steel
- \* Display(Humidity) : LED Digital Display
- \* Including 4 Shelves \* Mounted Wheels
- \* Number of Shelves and Height can be adjusted.
- \* Order Made for Non-standard Dimensions is available. ※ **운임 약 ₩ 30,000 별도!**

		Ea. Price, ₩
<b>DH.DeADDBG1K</b>	Auto-Dry Desiccator, Digital Control, 207Lit., 1-Room, 1-Doors Outer : 574 × 535 × h1070mm, Inner : 490 × 460 × h920mm	
<b>DH.DeADDSS</b>	Auto-Dry Desiccator, Digital Control, 320Lit., 1-Rooms, 2-Doors Outer : 574 × 535 × h1770mm, Inner : 490 × 460 × h1420mm	
<b>DH.DeADDWS</b>	Auto-Dry Desiccator, Digital Control, 604Lit., 2-Rooms, 4-Doors Outer : 1154 × 535 × h1770mm, Inner : 490 × 460 × h1420mm Including 8 Shelves	

**Spare Shelves**

		Ea. Price, ₩
<b>DH.DeSH001</b>	Spare Stainless-steel Shelves, Load 20kg, w490 × d460mm	



**2-Year Warranty**

UV Protection, Auto-Dry Desiccator Vertical-type "DeADLH.UV", 33Lit.



Built-in Dehumidification Unit

**with Analog Hygrometer**

**DAIHAN-brand® UV Protection Auto-Dry Desiccator "DeADLH.UV", Vertical-type, 33Lit with ABS-Frame, Clear PMMA, ~25%RH, 520nm or Less, UV차단 자동습도조절 데시케이터**

- \* DAIHAN® Designed Korea-made
- \* UV Protection : 520nm or less
- \* **Equipped with an Analog Hygrometer to Read the Internal Humidity.**
- \* Due to the Energy-saving Design, Power Consumption is 3 Watt and It can be Economically Used as a Dehumidifying Storage which is Always Powered On.
- \* Excellent Durability : Dehumidification-unit has no Driving Part causing Sound or Vibration.
- \* Method of Dehumidification : Performs Dehumidification Function without adding Silica Gel by Silica Gel Automatic Regeneration Method
- \* Superior Sealing and Airtight Door by Rubber Packing
- \* Excellent Impact Resistance and Stiffness with ABS Body Frame
- \* Using the Transparent PMMA for Easy Observation.
- \* Number of Shelves and Height can be Adjusted.      \* Adjustable Shelf Movement Interval : 30mm

**Specifications**

- \* Range of Humidity : ~25%RH (Depend on Surrounding Environmental Condition)
- \* Dry Module
- \* Material : Frame - ABS , Panel / Shelf - Transparent PMMA, Rubber Leg - Natural Rubber
- \* Shelf Size : 267×302×4mm      \* Weight(Including Shelves) : 5kg
- \* Shelf Load : 2kg      \* Including 3 Shelves
- \* Power Supply : AC220V, 50/60Hz, 3W      \* **운임 약 ₩ 6,000 별도!**

**DH.DeADLH.UV** UV Protection Desiccator, Auto-Dry, Vertical-type, 33Lit.  
Outer : 330×330×h480mm, Inner : 270×305×h400mm

Ea.	Price, ₩

**Spare Shelves**

**DH.DeSH002** Spare PMMA Shelves, Vertical-type, Load 2kg, w267×d302mm

Ea.	Price, ₩

**Spare Accessories**

**DH.DeAHY** Spare Analog Hygrometer  
**DH.DeHY** Spare Dehumidification Unit

Ea.	Price, ₩



**2-Year Warranty**

UV Protection, Auto-Dry Desiccator Horizontal-type "DeADLL.UV", 33Lit.



Built-in Dehumidification Unit

**with Analog Hygrometer**

**DAIHAN-brand® UV Protection Auto-Dry Desiccator "DeADLL.UV", Horizontal-type, 33Lit with ABS-Frame, Clear PMMA, ~25%RH, 520nm or Less, UV차단 자동습도조절 데시케이터**

**Feature**

- \* DAIHAN® Designed Korea-made      \* UV Protection : Protect from Less 520nm.
- \* **Equipped Analog Hygrometer : To Read the Internal Humidity.**
- \* Power Consumption is 3 Watt by Energy-saving Designed, User can use Efficiently as Dehumidified Storage that always Put the Power to Use.
- \* Excellent Durability : Dehumidification-unit has no Driving Part the Source of Sound or Vibration and in Dehumidification-unit
- \* Method of Dehumidification : Perform Auto-regeneration and Dehumidification Function without having to put a Silica gel by Auto-regenerated Silica gel Method
- \* Superior Sealing and Airtight of Door Part by Rubber Packing Door
- \* Excellent Impact Resistance and Stiffness with ABS Body frame
- \* Using the Transparent PMMA for Easy Observation.      \* Adjustable Shelf Interval : 30mm

**Specifications**

- \* Range of Humidity : ~25%RH (Depend on Surrounding Environmental Condition)
- \* Equipped Analog Hygrometer : To Read the Internal Humidity.      \* Dry Module
- \* Material : Main Body - Frame(ABS), Panel / Board for Shelf - Transparent PMMA, Rubber Leg- Natural Rubber
- \* Board for Shelf Size : 397×302×5mm      \* Weight(Included Board for Shelf) : 5kg
- \* Board for Shelf Load : 2kg      \* Included 1ea Shelves
- \* Power Supply : AC220V, 50/60Hz, 3W      \* **운임 약 ₩ 6,000 별도!**

**DH.DeADLL.UV** UV Protection Desiccator, Auto-Dry, Horizontal-type, 33Lit.  
Outer : 450×330×h350mm, Inner : 400×305×h270mm

Ea.	Price, ₩

**Spare Shelves : Adjustable Shelves Number and Height**

**DH.DeSH003** Spare PMMA Shelves, Horizontal-type, Load 2kg, w397×d302mm

Ea.	Price, ₩

**Spare Accessories**

**DH.DeAHY** Spare Analog Hygrometer  
**DH.DeHY** Spare Dehumidification Unit

Ea.	Price, ₩

Cat. No	Description	Articles
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Vacuum Desiccator "DeVS", 7Lit.

**DAIHAN® Vacuum Desiccator "DeVS", Clear PMMA, with Pressure Gauge, 7Lit. with Top Door Open, Horizontal-type, 진공 데시케이터, 투명 PMMA**

- \* DAIHAN® Designed Korea-made
- \* Transparent Main Body for Easy Viewing of the Contents.
- \* Material : Main Body - Transparent PMMA(20mm thick), Valve and Installed Part of the Vacuum Gauge - Acetal
- \* Silicon Packing is Applied to the Contact Area between the Main Body and the Door to Increase the Airtightness.
- \* Two Vacuum Valves : Outer Diameter  $\phi$  8mm \* Permissible Degree of Vacuum : 1 Torr(Approx.133Pa)
- \* Supplied with 1 Pressure Gauge, 1 Shelf, and 1 Silica gel Tray
- \* Upper Door Open Type
- \* Order Made for Non-standard Dimensions and for UV Protection is available.

※ 운임 약 ₩ 6,000 별도!

Ea.	Price, ₩

**DH.DeVS** Vacuum Desiccator, Outer : 300×300×h170mm, Inner : 260×260×h100mm



Vacuum Desiccator "DeVM", 9.2Lit.

**DAIHAN® Vacuum Desiccator "DeVM", Clear PMMA, with Pressure Gauge, 9.2Lit. with Upper Door Open, Vertical-type, 진공 데시케이터, 투명 PMMA**

- \* DAIHAN® Designed Korea-made
- \* Transparent Main Body for Easy Viewing of the Contents.
- \* Material : Main Body - Transparent PMMA(20mm thick), Valve and Installed Part of the Vacuum Gauge - Acetal
- \* Silicon Packing is Applied to the Contact Area between the Main Body and the Door to Increase the Airtightness.
- \* Two Vacuum Valves : Outer Diameter  $\phi$  8mm
- \* Permissible Degree of Vacuum : 1 Torr(Approximately 133Pa)
- \* Supplied with 1 Pressure Gauge and 1 Silica gel Tray
- \* Order Made for Non-standard Dimensions and for UV Protection is available.

※ 운임 약 ₩ 6,000 별도!

Ea.	Price, ₩

**DH.DeVM** Vacuum Desiccator, Outer : 260×260×h360mm, Inner : 210×210×h210mm



Vacuum Desiccator "DeVL", 12Lit.

**DAIHAN® Vacuum Desiccator "DeVL", Clear PMMA, with Pressure Gauge, 12Lit. with Front Door Open, Vertical-type, 진공 데시케이터, 투명 PMMA**

- \* DAIHAN® Designed Korea-made
- \* Transparent Main Body for Easy Viewing of the Contents.
- \* Material : Main Body - Transparent PMMA (20mm thick), Valve and Installed Part of the Vacuum Gauge - Acetal
- \* Silicon Packing is Applied to the Contact Area between the Main Body and the Door to Increase the Airtightness.
- \* Supplied with 1 Pressure Gauge, 1 Shelf, and 1 Silica gel Tray
- \* Two Vacuum Valves : Outer Diameter  $\phi$  8mm
- \* Permissible Degree of Vacuum : 1 Torr(Approximately 133Pa)
- \* Order Made for Non-standard Dimensions and for UV Protection is available.

※ 운임 약 ₩ 6,000 별도!

Ea.	Price, ₩

**DH.DeVL** Vacuum Desiccator, Outer : 310×225×h430mm, Inner : 260×180×h260mm



Vacuum Desiccator "DeVLH", 30Lit.

**DAIHAN® Vacuum Desiccator "DeVLH", Clear PMMA, with Pressure Gauge, 30Lit. with Front Door Open, Vertical-type, 진공 데시케이터, 투명 PMMA**

- \* DAIHAN® Designed Korea-made
- \* Transparent Main Body for Easy Viewing of the Contents.
- \* Material : Main Body - Transparent PMMA (25mm thick), Valve and Installed Part of the Vacuum Gauge - Acetal
- \* Silicon Packing is Applied to the Contact Area between the Main Body and the Door to Increase the Airtightness.
- \* Supplied with 1 Pressure Gauge, 4 Shelves, and 1 Silica gel Tray
- \* Two Vacuum Valves : Outer Diameter  $\phi$  8mm
- \* Permissible Degree of Vacuum : 1 Torr(Approximately 133Pa)
- \* Shelf Movement Interval : 85mm
- \* Order Made for Non-standard Dimensions and for UV Protection is available.

※ 운임 약 ₩ 6,000 별도!

Ea.	Price, ₩

**DH.DeVLH** Vacuum Desiccator, Outer : 320×335×h600mm, Inner : 260×280×h410mm



2-Year Warranty

Vacuum Desiccator "DeVW", 48Lit.

## DAIHAN-brand® Vacuum Desiccator "DeVW", Clear PMMA, with Pressure Gauge, 48Lit. with Front Door Open, Vertical-type, 진공 데시케이터, 투명 PMMA

- \* DAIHAN® Designed Korea-made
- \* Transparent Acrylic (PMMA) Main Body for Easy Viewing of the Contents.
- \* Permissible Degree of Vacuum : 1 Torr (Approximately 133Pa)
- \* Material : Main Body - Tempered Transparent Acrylic (Thickness 25mm), Valve and Installed Part of the Vacuum Gauge : Acetal
- \* Enhancement of Adhesion by Silicon Packing of Contact Surface Between Main Body and Door.
- \* Order Made for Non-standard Dimensions and for UV Protection is available.
- \* Included Pressure Gauge 1ea, Board for Shelf 3ea and Silica gel Tray 1ea
- \* Number of Shelves : 3ea (Board for Shelf Interval : 96mm)
- \* Vacuum Valve : Out Diameter  $\phi$  8mm  $\times$  2ea

※ 운임 약 ₩ 10,000 별도!

Ea.	Price, ₩
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**DH.DeVW** Vacuum Desiccator, Outer : 470×365×h600mm, Inner : 400×300×h400mm



Gas Flowmeter

## DAIHAN-brand® Gas Flowmeter, 70×170mm, 10 l/min Ideal for Desiccator, 유량계 (데시케이터용 약세사리)

- \* Desiccator Accessory \* Size : 70×170mm
- \* Included Bracket and Fitting 2ea (for  $\phi$  6mm Tube)

Ea.	Price, ₩
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**DH.DeFL** Gas Flowmeter, Desiccator Accessory, 70×170mm, 10 l/min

### Desiccant



(1) OPP Film Packing



(2) Paper Packing



(3) Non-woven Fabric Packing



(4) Blue-Gel Bulk Can Packing

## Sungel® Drying Agent "Silica-Gel" or "Blue-Gel", Narrow Pore-type, 1g~20g & 1kg Ideal for Food & Medical Supplies, Non-toxic / Odorless, 실리카겔 or 블루겔 건조제

\* Insoluble in water, No Chemical Changes

### (1) Silica-Gel, Non-Indicating Type, OPP Film 1~5g

\* OPP Film : The Excellent Chemical Resistance and Durability

- S19.101** Silica-gel, OPP Film, 35×35mm, 1g
- S19.102** , 45×35mm, 2g
- S19.103** , 50×50mm, 3g
- S19.105** , 50×60mm, 5g

Pk.	Price, ₩	Cs.	Price, ₩
10ea		1,200pk	
10ea		800pk	
10ea		500pk	
10ea		400pk	

### (2) Silica-Gel, Non-Indicating Type, Paper Packing, 5~10g

- S19.205** Silica-gel, Paper, 50×60mm, 5g
- S19.210** , 60×80mm, 10g

Pk.	Price, ₩	Cs.	Price, ₩
10ea		350pk	
10ea		160pk	

### (3) Silica-Gel, Non-Indicating Type, Non-woven Fabric Packing, 20g

- S19.320** Silica-gel, Non-woven Fabric, 70×85mm, 20g

Pk.	Price, ₩	Cs.	Price, ₩
10ea		100pk	

### (4) Blue-Gel, Indicating Type, Bulk Can Packing, 1kg

\* Contact with water Changes Color to White.

- S19.401** Blue-gel, Bulk Can, 73×142×h230mm, 1kg

Pk.	Price, ₩
1kg	

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**Gel Documentation System**

Portable Gel Documentation System  
"WGD-20"  
1.5M Pixel CCD Camera



**Gel Imaging System**

Unified Gel Imaging System  
"MaXidoc™ G2"  
1.45 Mega Pixel CCD

**UV Transilluminator**

Transilluminator, Standard Case-type  
"WUV-L50"



Max. 3,000 rpm

DAIHAN-brand® Portable Gel Documentation System “WGD-20”, 1.5M Pixel CCD Camera, with Certi. & Traceability with Digital CCD Camera & Optical Lens, Portable Darkroom Hood, WiseCapture II™ Capture Software, USB Interface  
 젤이미지 분석 시스템, 고성능/최저가, 디지털 CCD 카메라(150만 화소) 장착



- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- The Most Cost-Effective System
- High Precise and Large Caliber Optical Lens with Zoom, Focus and Iris Control are Used

- \* DNA, RNA gel Imaging Capture and Analysis
- \* Digital CCD Camera (Resolution 1.5 Million pixel) with Portable Darkroom is Offered
- \* 1360×1024, 10-bit CCD, Available for 8-bit Gray Level Image Capturing
- \* Power Consumption : Supplied USB(USB 2.0)
- \* Very Compact Portable Darkroom System Enables the Existing Transilluminators in the Lab to be used together with this system. High Flexibility in use is Offered
- \* USB 2.0 Interface is available, through which Real-Time Images are transferred directly to PC
- \* WiseCapture II™ Software : Easy and Fast Capture of Gel Image
- \* TotalLab™ Software : Fully Automatic, Single Button Press Complete Image Analysis in Interesting Area(Optional)

### Specifications & Ordering information

Spec.	Model	“WGD-20”	“WGD-20S”
CCD Module	CCD & Pixel Size	1/2" CCD, 4.65×4.65 um	
	Max. Resolution	1360×1024	
	Lens Mount & Optical Size	C mount, 7.6×6.2 mm	
	Connect to PC & Power	USB 2.0, Supplied USB	
Zoom Lens	Iris & Focal Length	F1.0 - Close, 8~48mm	
	Ambient Temp.	-10℃ to +50℃	
Overall	Dimension & Weight	260×260×h430 mm, 9 kg	
	Software Capability	Windows XP, Vista & 7	
Included Standard S/W		WiseCapture II (Real-time Image Viewing/Capture/Save)	
Included DNA Analysis S/W		none	TotalLab™ Quant
Packing Size & Weight		400×350×h510 mm, 18 kg	
Cat. No.		DH.WGD00020	DH.WGD00024
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 9,000 별도!

#### ※ Computer System Requirements

- Intel Chipset, USB 2.0 Support Mainboard
- Over Pentium 4 Processor
- Over 256MB Main Memory
- Over 60MB Space of HDD for Installation and Running
- Window XP, Vista & 7 OS(32bit)

#### WiseCapture II™

: Included S/W, Real-Time Image Viewing/Capture, Manipulate and Save Images



(1) UV Transilluminator(Optional)

### Optional Transilluminator & S/W

		Ea. Price, ₩
DH.WUV00020	(1) Transilluminator, “WUV-L20”, 20×20cm Filter 312nm, 15W UV Lamp×6ea	
DH.WUV00050	(1) Transilluminator, “WUV-L50”, 20×20cm Filter 365nm+312nm, 15W UV Lamp×6ea	
DH.WUV00120	(1) Transilluminator, “WUV-M20”, 20×20cm Filter 312nm, 8W UV Lamp×6ea	
DH.WGD00100	(2) TotalLab™ Quant, DNA Analysis S/W	
DH.WGD00120	(3) Phoretix 1D, DNA Analysis S/W	
DH.WGD00121	(4) Phoretix 1D Pro, DNA Analysis S/W	
DH.WGD00200	LapTop Computer, WGD-Laptop, for WGD Gel Doc.System	

### DNA Analysis S/W

#### (2) TotalLab™ Quant

- Automatic and Manual Lane Detection, Background Subtraction
- Fully Automatic Band Detection, Molecular Size / pI Calibration
- Quantity Calibration, Normalization

#### (3) Phoretix 1D (additional function)

- Band Matching, Band Picking, Dendrograms, Intensity Calibration

#### (4) Phoretix 1D Pro (additional function)

- Match Band Data Patterns across Large Groups of Lanes
- Choice of Algorithms to Generate Dendrograms : NeighborJoining, UPGMA, Complete Linkage, Single Linkage, Ward Library, Queries Function



One Stop Analysis



Cat. No	Description	Articles
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DAIHAN-brand® Gel Imaging System “MaXidoc™ G2”, Built-in Transilluminator, 1.45M Pixel, 4.65 μm, F1.0, 8~48mm Manual Zoom with Capture Software, High-quality CCD Camera & Optical Lens, Auto Control Sys, USB Connection, Certi. & Traceability  
 이미지 분석 시스템, 자외선 발산기 일체형, 디지털 CCD 카메라(145만 화소) 장착



2-Year Warranty

“MaXidoc™ G2” Gel Imaging System, Built-in Transilluminator

- Made in Korea
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
- Complete System with 1.45M Pixel Digital CCD Camera, Safety Darkroom Hood and Built-in Transilluminator(6×8W UV Lamps, 312nm) is Offered.
- High-quality F1.0 Optical Lens with 8~48mm Manual Zoom, Focus and Iris Control is Used.
- Included MaXidoc Gel Imaging Capture Software.

- \* Ideal for Various Applications of DNA, RNA Gel Imaging Capture and Analysis.
- \* Unified Darkroom System with Built-in Sliding Transilluminator offers very safety and convenience in use
- \* Built-in Single Wave Transilluminator : 312nm, 6×8W UV Lamps and 3×White LED Lamps
- \* 1360×1024 CCD Resolution
- \* Can be Used with Tablet PC(Optional)
- \* USB 2.0 Interface is Available through Which Real-time Images are Transferred Directly to PC

Specifications & Ordering information

Spec.	Model	“MaXidoc™ G2”
Camera Resolution		1.45 Mega Pixel CCD
Pixel Size		4.65 μm
Lens		F1.0 Fixed, 8~48mm Manual Zoom
Transilluminator		312nm, 6×8W UV Lamps, Filter Size : 210×260mm
Software		Included MaXidoc Gel Imaging Capture Software
White Light		3×LED Lamps
PC Interface(OS)		Window 7 (32 bit)
Camera Interface		USB 2.0
Dimension & Weight		360×380×h700 mm, 24 kg
Packing Size (mm) & Gross Weight (kg)		430×490×h830 mm, 28 kg
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz
Cat. No.	230V	DH.WGD00300
	120V	DH.WGD00301
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

Optional Software/Transilluminator/White Light Table

DH.WGD00100	DNA/Protein Analysis S/W, TotalLab™ Quant
DH.WGD00120	DNA Analysis S/W, Phoretix 1D
DH.WGD00121	, Phoretix 1D Pro
DH.WUV01110	UV Lamp, 365nm, 8W
DH.WUV02110	, 312nm, 8W
DH.WGD10300	10inch Tablet PC, Window7, i3 CPU, RAM 2GB 1366×768 Display, Included Stationary Stand

Ea.	Price, ₩



MaXidoc™ Imaging Capture S/W

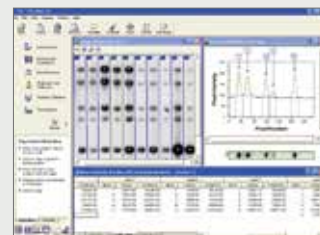
: Included S/W, Real-Time Image Viewing/Capture, Manipulate and Save Images



- Sturdy Camera Bracket
- F1.0, 8~48mm Manual Len
- Enterfilter

DNA Analysis S/W

- (2) TotalLab™ Quant
  - Automatic and Manual Lane Detection, Background Subtraction
  - Fully Automatic Band Detection, Molecular Size / pI Calibration
  - Quantity Calibration, Normalization
- (3) Phoretix 1D (additional function)
  - Band Matching, Band Picking, Dendrograms, Intensity Calibration
- (4) Phoretix 1D Pro (additional function)
  - Match Band Data Patterns across Large Groups of Lanes
  - Choice of Algorithms to Generate Dendrograms : NeighborJoining, UPGMA, Complete Linkage, Single Linkage, Ward Library, Queries Function



One Stop Analysis

DAIHAN-brand® UV Transilluminators “WUV”, Standard- & Compact Case-type, 48W/90W with Hinged UV-Blocking Safety Cover, Robust, Versatile, 312-/365-/312+365-nm, with Certi. & Traceability  
자외선 발산기, 기본형 핵산(DNA, RNA), 스탠더드-컴팩트-케이스 타입



(1) Transilluminator, Standard Case-type “WUV-L50”



(2) Transilluminator, Compact Case-type “WUV-M20”

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Low Cost, Robust, Versatile, Affordable & Gentle Excitation
- Hinged UV-Blocking Safety Cover Protects User from UV Radiation
- Stainless steel Frame and Robust Steel Housing

\* Ideal for Standard Gel Documentation and Preparative Work, especially for Detection of very small amount of DNA & RNA Stained by EtBr  
\* Long-Life Electronic (Low Heat, no Flickering) \* High (100%) / Low (75%) Intensity Switch

#### Specifications & Ordering information

Spec.	Model	“WUV-L10”	“WUV-L20”	“WUV-L50”	“WUV-M10”	“WUV-M20”
Body Size-type		(1) Standard Case-type			(2) Compact Case-type	
Dimension		495 × 330 × h95 mm			350 × 275 × h95 mm	
Filter Size		200 × 200 mm				
Wave Length		Single 365 nm	Single 312 nm	Dual 365+312 nm	Single 365 nm	Single 312 nm
UV Lamps		15W × 6ea (90W)			8W × 6ea (48W)	
Power Consumption		95 W			52 W	
Weight		10 kg			8 kg	
Packing Size (mm) & Gross Weight (kg)		520 × 380 × h220 mm, 12 kg			380 × 320 × h220 mm, 10 kg	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz				
Cat. No.	230V	DH.WUV00010	DH.WUV00020	DH.WUV00050	DH.WUV00110	DH.WUV00120
	120V	DH.WUV02010	DH.WUV02020	DH.WUV02050	DH.WUV00210	DH.WUV00220
Price, Each. ₩						

\* Other Specifications are available upon Customer's Request.

#### Spare UV Lamps

	Ea. Price, ₩
DH.WUV01010 UV Lamp, 365nm, 15W, for “WUV-L10/-L50”, “UVL365”	
DH.WUV01020 , 312nm, 15W, for “WUV-L20/-L50”, “UVL312”	
DH.WUV01110 , 365nm, 8W, for “WUV-M10”, “UVM365”	
DH.WUV02110 , 312nm, 8W, for “WUV-M20”, “UVM312”	



UV-intensity Meter

Custom® Digital UV-intensity Meter, 1999~19,990 μW/cm<sup>2</sup> with UV Sensor, 70 × 25 × h131mm, 335g, 디지털 자외선 강도계

#### ■ Supplied by LMS® in Japan

- \* Range ( μ W/cm<sup>2</sup>): 1999 · 19990 \* Accuracy : ±(4%rdg+2 dgt)
- \* Wavelength Sensitivity Characteristics : 290-390 nm \* Sampling : 2.5time/sec
- \* Size : Body / 70 × 25 × 131mm, Sensor / 46 × 27 × 168mm, Cord Length / 700mm
- \* Measurement of UVA, UVB is Possible
- \* Separated Sensor enables you to Measure from Further.

AS1.6395.11 “UV340” Meter, Digital, UV-intensity

Ea. Price, ₩



UV-indicator Dot Label

Jayu® UV-indicator Dot Label, φ 18mm, 자외선 감시 라벨

#### ■ Supplied by LMS® in Japan

- \* Original Color → Discoloration : UV-L / Clear(White) → Reddish Brown, UV-M / Clear(White) → Pink, UV-H / Clear(White) → Orange, UV-S / Clear(White) → Red
- \* Labels Change Color by UV and keep Remaining Once Discolored.
- \* The Back has Special Adhesives so that it can Stick Easily. \* Quantity : 1pack (100sheet)

AS6.7789.03 “UV.S” Label UV-indicator Dot, for UV-lamp  
AS6.7789.04 “UV.L” , Solar

Pk.	Price, ₩
100ea	
100ea	

DAIHAN Scientific

# Evaporator

<b>Evaporator Circulator Coolers “Chillers”</b> .....	P. 60
<b>Evaporator Vacuum Aspirator and Cooler</b> .....	P. 61
<b>Rotary Vacuum Evaporators, 0.5~2 Lit.</b> .....	P. 52~53
, 5 Lit. ....	P. 54~55
, 10 & 20 Lit. ....	P. 56~57
, 50 Lit.....	P. 58~59



► Installation Figure : with 20Lit Evaporator

DAIHAN-brand® 0.5~2 Lit Digital Rotary Evaporator “WEV-1001V” & “WEV-1001L”, Vertical & Diagonal-type with 6.5 Lit Digital Bath 100°C, PID Control & Lifting Table, 10~180rpm, Cooling Surface 1,300 cm², Certi. & Traceability, 회전식 증발 농축기



2-Year Warranty

(1) Digital Rotary Evaporator, Vertical-type  
“WEV-1001V”, 0.5 ~ 2 Lit

- Cooling Surface 1,300 cm²
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Distilling (Mixed) Solvent, Condensation Solution and Suspension, Concentrating Liquid, Re-crystallization Dry Powder and Granulate, Synthesizing Chemical, Soxhlet Extraction, etc.
- Included Two Evaporating Flasks : 1×0.5Lit. & 1×1Lit.
- The Temperature adopts PID Control, which ensures accurate Temperature Control.
- Speed Display, Operate Visually and easily
- \* Digital Speed Display, Digital Temp. Display on Water Bath.
- \* Double Sealing with PTFE and Vinton Materials to ensure High Vacuum Degree.
- \* The Air Extraction Nozzle of Condenser is set down, and it is Safer after Connection with Vacuum Pipe
- \* Building Block Design is Easily to be Extended.
- \* Easy Operation of Lifting, Move up and Down Smoothly and Easy to Lock.
- \* Dedicated Electric Machinery, Worm and Gear Drive Steadily.
- \* The Separation of Bath and the Mainframe makes Configure Flexible.
- \* These Rotary Evaporators could Set with Circulation Aspirator Pump (P. 61)

Specifications & Ordering information

Spec.		Model	“WEV-1001V”	“WEV-1001L”
Condenser Type			Vertical-type	Diagonal-type
Bottle Capacity	Evaporating		Included 2×Evaporating Flasks : 1×0.5Lit. & 1×1Lit, Available 100-/250-ml, 2Lit. Evaporating Flask(Optional)	
	Receiving		Included 1ea 1 Lit. Flask	
Rotary Speed			10 ~ 180 rpm	
Evaporating Capability			20 ml/min	
Cooling Surface			1,300 cm²	
Achievable Vacuum			399.9Pa(below 3mmHg)	
Bath Capacity			6.5 Lit. / φ254×130 mm	
Temp. Range			0°C ~ 100°C	
Functional of Lifting Table			Weight Balancing Gliding Elevating & Manual Lifting	
Elevating Stroke			100 ~ 250 mm	
Vacuum Sealing			Double Sealing Rings made of Teflon + Vinton Materials	
Power Consumption			Motor : 25 W, Heater : 1.05kW	
Controller & Display			PID Controller, Digital display	
Dimension & Net Weight			560×320×h660mm / 9.5 kg	750×320×h540mm / 9.5 kg
Electrical Reqts.			AC220V, 50/60Hz or AC110V, 60Hz	
Cat. No.			DH.WEV01001V	DH.WEV01001L
Price, Each. ₩				



2-Year Warranty

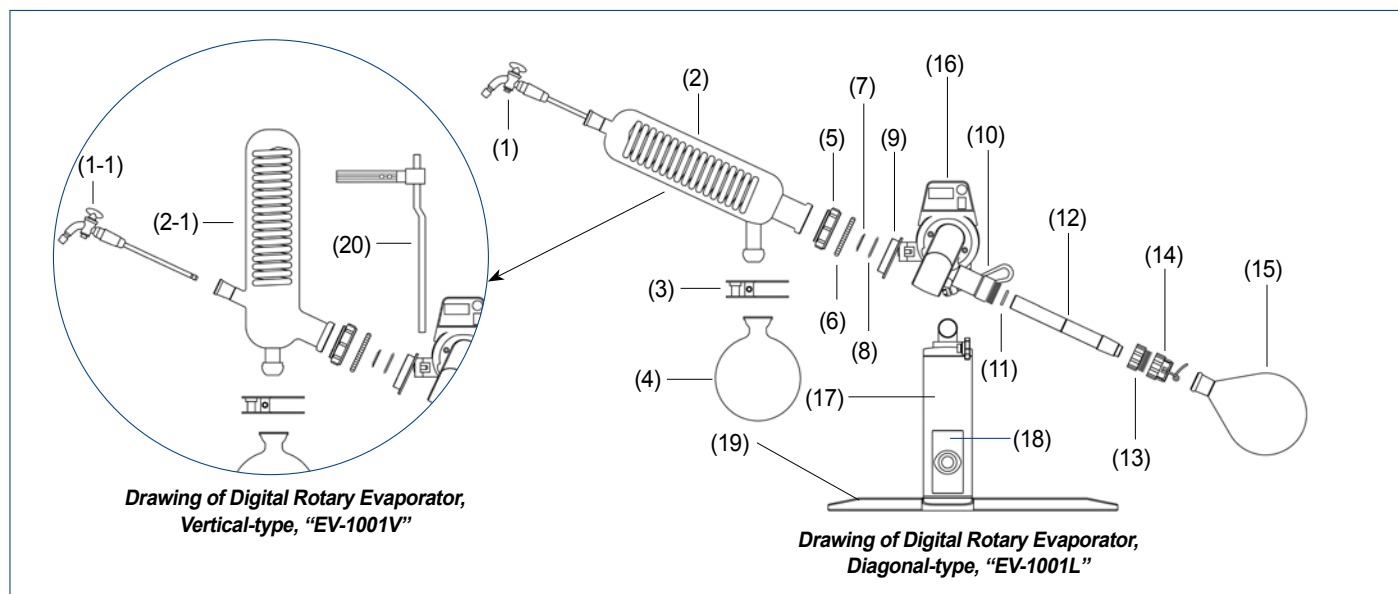
(2) Digital Rotary Evaporator, Diagonal-type  
“WEV-1001L”, 0.5 ~ 2 Lit.

The Details of Spare Parts : Please See the Just Next Page

<Continued On Next Page>

<Continued From...DAIHAN-brand® 0.5~2 Lit Digital Rotary Evaporator “WEV-1001V” & “WEV-1001L”>

### The Details of Spare Parts for 0.5~2Lit Digital Rotary Evaporator “WEV-1001V” & “WEV-1001L” models



#### Ordering Information

Seq. No.	Cat. No.	Description	Ea.	Price, ₩
(1)	DH.Ev1001.A01	Glass Feeding Valve(19#), for “Ev-1001L”		
(1-1)	DH.Ev1001V.A01	Glass Feeding Valve(19#), for “Ev-1001V”		
(2)	DH.Ev1001L.A02	Glass Condenser, $\phi 85 \times 390$ mm, for “Ev-1001L”		
(2-1)	DH.Ev1001V.A02	Glass Condenser, $\phi 85 \times 385$ mm, for “Ev-1001V”		
(3)	DH.Ev1001.A03	Clamp for Receiving Flask, STS304, $90 \times 33 \times 50$ mm, for “Ev-1001L”, “Ev-1001V”		
(4)	SL.Fla2081	DURAN glass Receiving Flask, 250ml, 35/20, for “Ev-1001L”, “Ev-1001V”		
(4)	SL.Fla2082	DURAN glass Receiving Flask, 500ml, 35/20, for “Ev-1001L”, “Ev-1001V”		
(4)	SL.Fla2083	DURAN glass Receiving Flask, 1,000ml, 35/20, for “Ev-1001L”, “Ev-1001V”		
(4)	SL.Fla2084	DURAN glass Receiving Flask, 2,000ml, 35/20, for “Ev-1001L”, “Ev-1001V”		
(5)	DH.Ev1001.A05	Condenser Locknut, PP, $\phi 75 \times 23$ mm, for “Ev-1001L”, “Ev-1001V”		
(6)	DH.Ev1001.A06	Circlip, STS304, $\phi 38$ mm, for “Ev-1001L”, “Ev-1001V”		
(7)	DH.Ev1001.A07	Deputy Vacuum Seal, FTFE, $\phi 51 \times 5$ mm, for “Ev-1001L”, “Ev-1001V”		
(8)	DH.Ev1001.A08	Main Vacuum Seal, PTFE, $\phi 51 \times 5$ mm, for “Ev-1001L”, “Ev-1001V”		
(9)	DH.Ev1001.A09	Bearing end Cap, PA, $\phi 83 \times 28$ mm, for “Ev-1001L”, “Ev-1001V”		
(10)	DH.Ev1001.A10	Rotary Axis, STS304, $\phi 38 \times 67$ mm, for “Ev-1001L”, “Ev-1001V”		
(11)	DH.Ev1001.A11	O-ring, Silicon, $\phi 20 \times 3$ mm, for “Ev-1001L”, “Ev-1001V”		
(12)	DH.Ev1001.A12	Glass Rotation Axis, $\phi 22 \times 190$ mm, for “Ev-1001L”, “Ev-1001V”		
(13)	DH.Ev1001.A13	Auxiliary Flask Opener, PC, $\phi 41 \times 53$ mm, for “Ev-1001L”, “Ev-1001V”		
(14)	DH.Ev1001.A14	Main Flask Opener, PC, $\phi 41 \times 53$ mm, for “Ev-1001L”, “Ev-1001V”		
(15)	SL.Fla2061	DURAN glass Evaporating Flask, 100ml, ₩ 24/40, for “Ev-1001L”, “Ev-1001V”		
(15)	SL.Fla2063	DURAN glass Evaporating Flask, 250ml, ₩ 24/40, for “Ev-1001L”, “Ev-1001V”		
(15)	SL.Fla2065	DURAN glass Evaporating Flask, 500ml, ₩ 24/40, for “Ev-1001L”, “Ev-1001V”		
(15)	SL.Fla2067	DURAN glass Evaporating Flask, 1,000ml, ₩ 24/40, for “Ev-1001L”, “Ev-1001V”		
(15)	SL.Fla2069	DURAN glass Evaporating Flask, 2,000ml, ₩ 24/40, for “Ev-1001L”, “Ev-1001V”		
(16)	DH.Ev1001.A16	Motor Shroud, ABS, $145 \times 100 \times 180$ mm, for “Ev-1001L”, “Ev-1001V”		
(17)	DH.Ev1001.A17	Lifting Column, Aluminum, $38 \times 30 \times 230$ mm, for “Ev-1001L”, “Ev-1001V”		
(18)	DH.Ev1001.A18	Lifting Handle, PP, $\phi 24 \times 115$ mm, for “Ev-1001L”, “Ev-1001V”		
(19)	DH.Ev1001.A19	Base Plate, Aluminum, $320 \times 460 \times 20$ mm, for “Ev-1001L”, “Ev-1001V”		
(20)	DH.Ev1001V.A20	Glass Condenser Bracket, STS304, $\phi 10 \times 280$ mm, for “Ev-1001V”		

DAIHAN-brand® 5 Lit Digital Rotary Evaporator “WEV-1005”, Large Capacity, Vertical-type with Digital Controlled Stainless-steel Bath 99℃, Electric Lift Bath, 20~140 rpm, 대용량 회전식 증발 농축기



2-Year Warranty

Digital Rotary Evaporator, Large Capa. “WEV-1005” 5Lit.

- Cooling Surface 2,700 cm<sup>2</sup>
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Distilling (Mixed) Solvent, Condensation Solution and Suspension, Concentrating Liquid, Re-crystallization Dry Powder and Granulate, Synthesizing Chemical, Soxhlet Extraction, etc.
- Teflon (PTFE) and Fluorine Rubber Dual Rotating Seal, Patented Technology to ensure High Vacuum.
- A Vacuum Switching Valve, without Affecting the System Vacuum Distillation of the Situation and the Solution can be Continuously Collected.
- Stainless steel Water Bath Electric Lift, Easy to Use.
- \* The Introduction of Foreign Advanced Frequency Control System, Temperature Control System, Accurate and Reliable.
- \* PTFE Discharge Valve, Corrosion Resistance, Pollution-free.
- \* These Rotary Evaporators could Set with Circulation Aspirator Pump (P.61)

Specifications & Ordering information

Spec.	Model	“WEV-1005”
Evaporating Flask		5 Lit, Flange Opening $\phi$ 50 mm
Receiving Flask & Condenser		3 Lit, Vertical type Water Refrigerating
Temp. Range & Rotary Speed		0℃ ~ 99℃, 20 ~ 140 rpm
Evaporating Capability		Water : 2 Lit./h, Alcohol : 4 Lit/h
Cooling Surface		2,700 cm <sup>2</sup>
Achievable Vacuum		399.9Pa(below 3mmHg)
Functional of Lifting Table & Stroke		Electric, 0 ~ 150 mm
Vacuum Sealing		PTFE and Fluorine Rubber Dual Rotating Seal
Motor		250 W, Phase DC Induction Motor
Heating Boiler		Stainless-steel Water Bath
Display		Digital display
Dimension (mm)		835 × 400 × h1090
Electrical Reqts.		2.3kW, 220V, 50/60Hz
Cat. No.		DH.WEV01005
Price, Each. ₩		

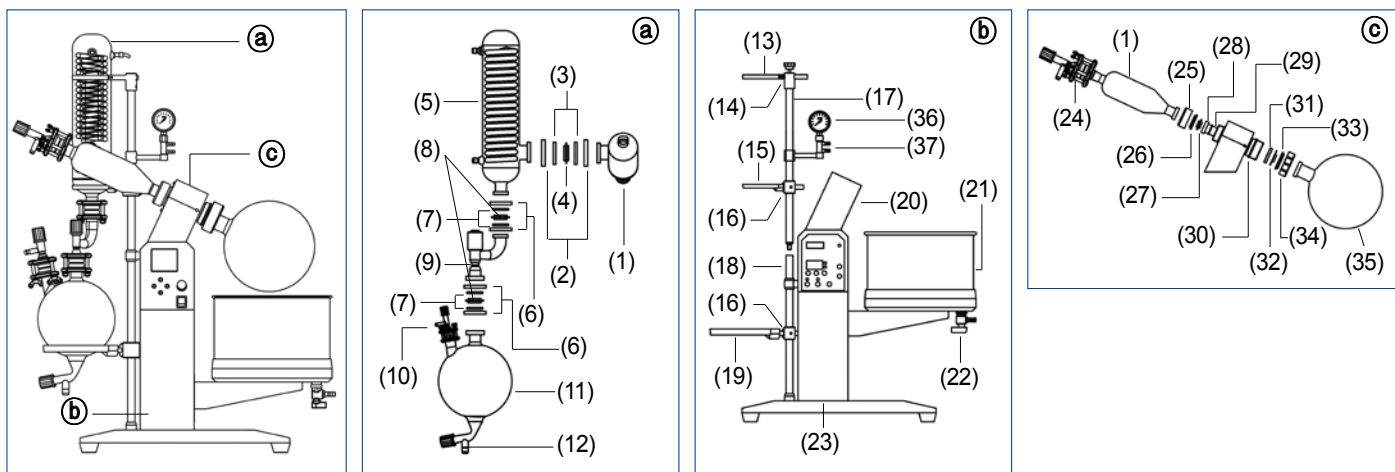
※ 운임 약 ₩ 9,000 별도!

The Details of Spare Parts : Please See the Just Next Page

<Continued On Next Page>

<Continued from...DAIHAN-brand® 5 Lit Digital Rotary Evaporator “WEV-1005”>

### The Details of Spare Parts for 5Lit Digital Rotary Evaporator “WEV-1005” model



### Ordering Information

Seq. No.	Cat. No.	Description	Ea.	Price, ₩
(1)	DH.Ev1005.A01	3-way Glass Flask, $\phi 80 \times 300$ mm, for “Ev-1005”		
(2)	DH.Ev1005.A02	Connection Flange Set(50#), Aluminum, $\phi 82 \times 10$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(3)	DH.Ev1005.A03	Flange Retaining Ring(50#), EPDM, $\phi 60 \times 6$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(4)	DH.Ev1005.A04	Flange Gasket(50#), PTFE, $\phi 45 \times 12$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(5)	DH.Ev1005.A05	Glass Condenser(Main), $\phi 100 \times 455$ mm, for “Ev-1005”		
(6)	DH.Ev1005.A06	Connection Flange Set(40#), Aluminum, $\phi 72 \times 10$ mm, for “Ev-1005”		
(7)	DH.Ev1005.A07	Flange Retaining Ring(40#), EPDM, $\phi 50 \times 6$ mm, for “Ev-1005”		
(8)	DH.Ev1005.A08	Flange Gasket(40#), PTFE, $\phi 35 \times 12$ mm, for “Ev-1005”		
(9)	DH.Ev1005.A09	Condenser Connector, Glass, $135 \times 96 \times 39$ mm, for “Ev-1005”		
(10)	DH.Ev1005.A10	Glass Bleed Valve(35#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(11)	DH.GL22095	DURAN glass Receiving Flask, 3Lit., for “Ev-1005”		
(12)	DH.Ev1005.A12	Discharge Valve, PTFE, $\phi 56 \times 120$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(13)	DH.Ev1005.A13	Condenser Clamp, SUS304, 91-113, for “Ev-1005”		
(14)	DH.Ev1005.A14	Condenser Clamp Holder, SUS304, $\phi 28 \times 45$ mm, for “Ev-1005”		
(15)	DH.Ev1005.A15	Condenser Tray, EPDM, $\phi 102$ mm, for “Ev-1005”		
(16)	DH.Ev1005.A16	Stand Folder, SUS304, $\phi 19 \times \phi 12$ mm, for “Ev-1005”		
(17)	DH.Ev1005.A17	Stand Pole, SUS304, $\phi 20 \times 480$ mm, for “Ev-1005”		
(18)	DH.Ev1005.A18	Under Stand Pole, SUS304, $\phi 20 \times 450$ mm, for “Ev-1005”		
(19)	DH.Ev1005.A19	Glass Receiving Flask Tray, $\phi 167$ mm, for “Ev-1005”		
(20)	DH.Ev1005.A20	Machine Head Capsule, Aluminum, $179 \times 100 \times 90$ mm, for “Ev-1005”		
(21)	DH.Ev1005.A21	Water Bath, SUS304, $\phi 314 \times 168$ mm, for “Ev-1005”		
(22)	DH.Ev1005.A22	Drain Valve, PTFE, 1/2", for “Ev-1005”		
(23)	DH.Ev1005.A23	Stand Base, Carbon Steel, $570 \times 266$ mm, for “Ev-1005”		
(24)	DH.Ev1005.A24	Glass Feeding Valve(40#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(25)	DH.Ev1005.A25	Fixed Nut, for 3-way Glass Flask, Aluminum, $\phi 62 \times 24$ mm, for “Ev-1005”		
(26)	DH.Ev1005.A26	Fixed Nut Retainer Ring, 3-way Glass Flask, PA, $\phi 50 \times 8$ mm, for “Ev-1005”		
(27)	DH.Ev1005.A27	Flange Seals, PTFE, $\phi 35 \times 12$ mm, for “Ev-1005”		
(28)	DH.Ev1005.A28	Rotation Glass Axis, $\phi 40 \times 160$ mm, for “Ev-1005”		
(29)	DH.Ev1005.A29	O-ring, EPDM, $\phi 27 \times 2.65$ mm, for “Ev-1005”		
(30)	DH.Ev1005.A30	Couplings, SUS304, $\phi 64 \times 34$ mm, for “Ev-1005”		
(31)	DH.Ev1005.A31	Main Vacuum Seal, PTFE, $\phi 50 \times 8$ mm, for “Ev-1005”		
(32)	DH.Ev1005.A32	Deputy Vacuum Seal, FTFE, $\phi 50 \times 8$ mm, for “Ev-1005”		
(33)	DH.Ev1005.A33	Retaining Ring, PA, $57 \times 67 \times 8$ mm, for “Ev-1005”		
(34)	DH.Ev1005.A34	Rotating Shaft Nut, PA, $\phi 78 \times 29$ mm, for “Ev-1005”		
(35)	DH.GL220892	DURAN glass Evaporating Flask, 5Lit., for “Ev-1005”		

DAIHAN-brand® 10-/20-Lit Digital Rotary Evaporator “WEV-1010” & “WEV-1020”, Large Capacity, Vertical-type with Digital Controlled Stainless-steel Bath 99℃, Electric Lift Bath, 20~130 rpm, 대용량 회전식 증발 농축기



2-Year Warranty

Digital Rotary Evaporator, Large Capa.  
“WEV-1010” 10Lit, “WEV-1020” 20 Lit.

- Cooling Surface : “WEV-1010” total 6,500 cm<sup>2</sup> and “WEV-1020” total 11,500 cm<sup>2</sup>
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Distilling (Mixed) Solvent, Condensation Solution and Suspension, Concentrating Liquid, Re-crystallization Dry Powder and Granulate, Synthesizing Chemical, Soxhlet Extraction, etc.
- Cooling Surface : “WEV-1010” total 6,500 cm<sup>2</sup> and “WEV-1020” total 11,500 cm<sup>2</sup>
- Teflon (PTFE) and Fluorine Rubber Dual Rotating Seal, Patented Technology to ensure High Vacuum.
- A Vacuum Switching Valve, without Affecting the System Vacuum Distillation of the Situation and the Solution can be Continuously Collected.
- Stainless-steel Water Bath Electric Lift, Easy to Use.

- \* The Introduction of Foreign Advanced Frequency Control System, Temperature Control System, Accurate and Reliable.
- \* PTFE Discharge Valve, Corrosion Resistance, Pollution-free.
- \* These Rotary Evaporators could Set with Circulation Aspirator Pump (P.61)

Specifications & Ordering information

Spec.	Model	“WEV-1010”	“WEV-1020”
Evaporating Flask		10 Lit., Flange Opening $\phi$ 95 mm	20 Lit., Flange Opening $\phi$ 125 mm
Receiving Flask		5 Lit.	10 Lit.
Condenser		Standing, Main & Auxiliary Cooling and Highly Efficient 3 Circulating Cold Trap	
Temp. Range		0℃ ~ 99℃	
Rotary Speed		20 ~ 130 rpm	
Evaporating Capability		Water : 3.2 Lit./h, Alcohol : 6.5 Lit./h	Water : 5 Lit./h, Alcohol : 11 Lit./h
Cooling Surface		Main Condenser 4,500 cm <sup>2</sup> Auxiliary Condenser 2,000 cm <sup>2</sup>	Main Condenser 8,000 cm <sup>2</sup> Auxiliary Condenser 3,500 cm <sup>2</sup>
Achievable Vacuum		399.9Pa(below 3mmHg)	
Functional of Lifting Table		Electric	
Elevating Stroke		0 ~ 160 mm	0 ~ 190 mm
Vacuum Sealing		PTFE and Fluorine Rubber Dual Rotating Seal	
Motor		Phase DC Induction Motor	
		250 W	250 W
Heating Boiler		Stainless-steel Water Bath	
Display		Digital display	
Power Consumption		3.8 kW	6.3 kW
Dimension (mm)		990×550×h1655	1195×635×h2070
Electrical Reqts.		1Phase 220V, 50/60Hz or 3Phase 380V, 50Hz	
Cat. No.	230V	DH.WEV01010	DH.WEV01020
	3Phase	DH.WEV01011	DH.WEV01021
Price, Each. ₩			

※ 운임 약 ₩ 9,000 별도!

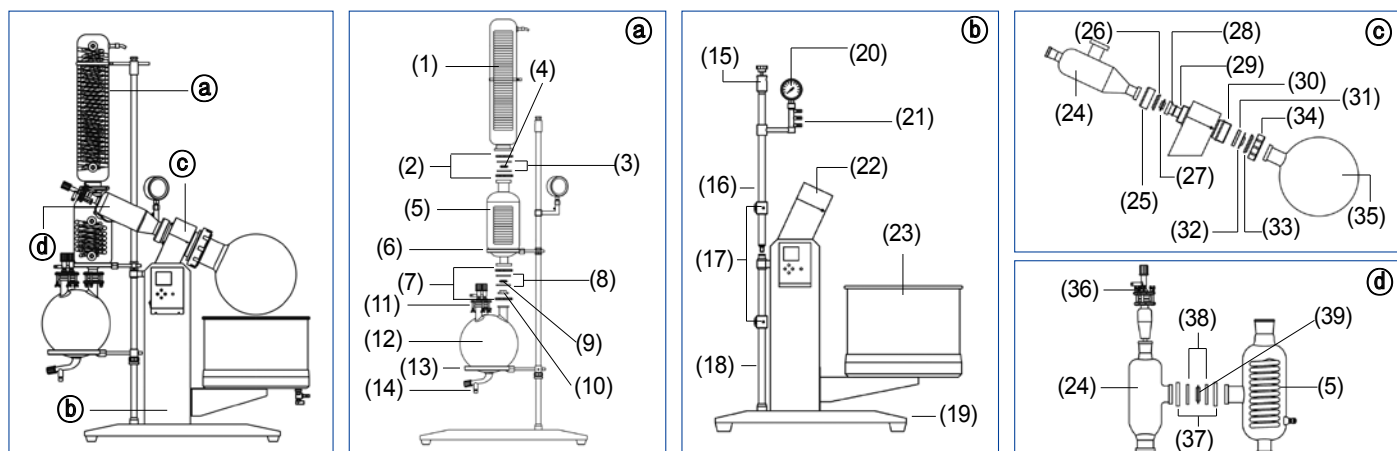
The Details of Spare Parts : Please See the Just Next Page

<Continued On Next Page>



<Continued from...DAIHAN-brand® 10-/20-Lit Digital Rotary Evaporator “WEV-1010” & “WEV-1020”>

### The Details of Spare Parts for 10-/20-Lit Digital Rotary Evaporator “WEV-1010” & “WEV-1020” models



Seq. No.	Cat. No.	Description	Ea.	Price, W
(1)	DH.Ev1010.A01	Glass Condenser(Main), $\phi 120 \times 575$ mm, for “Ev-1010”		
(1)	DH.Ev1020.A01	Glass Condenser(Main), $\phi 135 \times 738$ mm, for “Ev-1020”		
(2)	DH.Ev1010.A02	Connection Flange Set(60#), $\phi 90 \times 12$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(2)	DH.Ev1020.A02	Connection Flange Set(80#), Aluminum, $\phi 110 \times 15$ mm, for “Ev-1020”, “Ev-1050”		
(3)	DH.Ev1010.A03	Flange Retaining Ring(60#), EPDM, $\phi 70 \times 10$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(3)	DH.Ev1020.A03	Flange Retaining Ring(80#), EPDM, $\phi 86.5 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(4)	DH.Ev1010.A04	Flange Gasket(60#), PTFE, $\phi 55 \times 12.5$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(4)	DH.Ev1020.A04	Flange Gasket(80#), PTFE, $\phi 75 \times 12.5$ mm, for “Ev-1020”, “Ev-1050”		
(5)	DH.Ev1010.A05	Auxiliary Glass Condenser, $\phi 134 \times 400$ mm, for “Ev-1010”		
(5)	DH.Ev1020.A05	Auxiliary Glass Condenser, $\phi 165 \times 575$ mm, for “Ev-1020”		
(6)	DH.Ev1010.A06	Auxiliary Glass Condenser Tray, EPDM, $\phi 116$ mm, for “Ev-1010”		
(6)	DH.Ev1020.A06	Auxiliary Glass Condenser Tray, EPDM, $\phi 150$ mm, for “Ev-1020”		
(7)	DH.Ev1005.A02	Connection Flange Set(50#), Aluminum, $\phi 82 \times 10$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(8)	DH.Ev1005.A03	Flange Retaining Ring(50#), EPDM, $\phi 60 \times 6$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(9)	DH.Ev1005.A04	Flange Gasket(50#), PTFE, $\phi 45 \times 12$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”		
(10)	DH.Ev1010.A10	Automatic Switching Valve, $\phi 31 \times 23$ mm, for “Ev-1010”, “Ev-1020”		
(11)	DH.Ev1005.A10	Glass Bleed Valve(35#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(12)	DH.GL22097	DURAN glass Receiving Flask, 5Lit., for “Ev-1010”		
(12)	DH.GL22098	DURAN glass Receiving Flask, 10Lit., for “Ev-1020”		
(13)	DH.Ev1010.A13	Glass Receiving Flask Tray, $\phi 227$ mm, for “Ev-1010”, “Ev-1020”		
(14)	DH.Ev1005.A12	Discharge Valve, PTFE, $\phi 56 \times 120$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(15)	DH.Ev1010.A15	Condenser Clamp, SUS304, 113-140, for “Ev-1010”, “Ev-1020”		
(16)	DH.Ev1010.A16	Stand Pole, SUS304, $\phi 25 \times 697$ mm, for “Ev-1010”, “Ev-1020”		
(17)	DH.Ev1010.A17	Stand Folder, SUS304, $\phi 25 \times \phi 12$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(18)	DH.Ev1010.A18	Under Stand Pole, SUS304, $\phi 25 \times 704$ mm, for “Ev-1010”, “Ev-1020”		
(19)	DH.Ev1010.A19	Stand Base, Carbon Steel, 680 $\times$ 337mm, for “Ev-1010”		
(19)	DH.Ev1020.A19	Stand Base, Carbon Steel, 451 $\times$ 850mm, for “Ev-1020”		
(20)	DH.Ev1010.A20	Vacuum Gauge, $\phi 100$ , for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(21)	DH.Ev1010.A21	Vacuum Gauge Holder, Copper, 137 $\times$ 120 $\times$ 35mm, for “Ev-1010”, “Ev-1020”		
(22)	DH.Ev1010.A22	Machine Head Capsule, Aluminum, 130 $\times$ 214 $\times$ 100mm, for “Ev-1010”		
(22)	DH.Ev1020.A22	Machine Head Capsule, Aluminum, 290 $\times$ 137 $\times$ 50mm, for “Ev-1020”		
(23)	DH.Ev1010.A23	Water Bath, SUS304, $\phi 345 \times 215$ mm, for “Ev-1010”		
(23)	DH.Ev1020.A23	Water Bath, SUS304, $\phi 450 \times 255$ mm, for “Ev-1020”		
(24)	DH.Ev1010.A24	3-way Glass Flask, $\phi 100 \times 338$ mm, for “Ev-1010”, “Ev-1020”		
(25)	DH.Ev1010.A25	Fixed Nut, for 3-way Glass Flask, Aluminum, $\phi 90 \times 29$ mm, for “Ev-1010”		
(25)	DH.Ev1050.A25	Fixed Nut, for 3-way Glass Flask, Aluminum, $\phi 105 \times 31$ mm, for “Ev-1020”, “Ev-1050”		
(26)	DH.Ev1010.A26	Fixed Nut Retainer Ring, 3-way Glass Flask, PA, $\phi 65 \times 10$ mm, for “Ev-1010”, “Ev-1020”		
(27)	DH.Ev1010.A27	Flange Seals, PTFE, $\phi 55 \times 12.5$ mm, for “Ev-1010”, “Ev-1020”		
(28)	DH.Ev1010.A28	Rotation Glass Axis, $\phi 60 \times 185$ mm, for “Ev-1010”		
(28)	DH.Ev1020.A28	Rotation Glass Axis, $\phi 60 \times 195$ mm, for “Ev-1020”		
(29)	DH.Ev1010.A29	O-ring, EPDM, $\phi 38 \times 3.1$ mm, for “Ev-1010”		
(29)	DH.Ev1050.A29	O-ring, EPDM, $\phi 55 \times 3$ mm, for “Ev-1020”, “Ev-1050”		
(30)	DH.Ev1010.A30	Couplings, SUS304, $\phi 116 \times 45$ mm, for “Ev-1010”, “Ev-1020”		
(31)	DH.Ev1010.A31	Main Vacuum Seal, $\phi 96 \times 10$ mm, PTFE, for “Ev-1010”		
(31)	DH.Ev1050.A31	Main Vacuum Seal, PTFE, $\phi 125 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(32)	DH.Ev1010.A32	Deputy Vacuum Seal, PTFE, $\phi 96 \times 10$ mm, for “Ev-1010”		
(32)	DH.Ev1050.A32	Deputy Vacuum Seal, PTFE, $\phi 125 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(33)	DH.Ev1010.A33	Retaining Ring, PA, $\phi 107 \times 15$ mm, for “Ev-1010”, “Ev-1020”		
(34)	DH.Ev1010.A34	Rotating Shaft Nut, PA, $\phi 78 \times 29$ mm, for “Ev-1010”		
(34)	DH.Ev1050.A34	Rotating Shaft Nut, PA, $\phi 175 \times 45$ mm, for “Ev-1020”, “Ev-1050”		
(35)	DH.GL220893	DURAN glass Evaporating Flask, 10Lit., for “Ev-1010”		
(35)	DH.GL220894	DURAN glass Evaporating Flask, 20Lit., for “Ev-1020”		
(36)	DH.Ev1005.A24	Glass Feeding Valve(40#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(37)	DH.Ev1010.A02	Connection Flange Set(60#), $\phi 90 \times 12$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(38)	DH.Ev1010.A03	Flange Retaining Ring(60#), EPDM, $\phi 70 \times 10$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(39)	DH.Ev1010.A04	Flange Gasket(60#), PTFE, $\phi 55 \times 12.5$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		

DAIHAN-brand® 50 Lit Digital Rotary Evaporator “WEV-1050”, Large Capacity, Vertical Type, with Electric & Manual Lift Bath with Digital Controlled Stainless-steel Bath 99℃, 20~110 rpm, 19 Lit/h, Cooling Surface 14,500 cm<sup>2</sup>, **대용량 회전식 증발 농축기**



**2-Year Warranty**

Digital Rotary Evaporator, Large Capa.  
“WEV-1050”, 50 Lit.

- **Cooling Surface : 14,500 cm<sup>2</sup>**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Ideal for Distilling (Mixed) Solvent, Condensation Solution and Suspension, Concentrating Liquid, Re-crystallization Dry Powder and Granulate, Synthesizing Chemical, Soxhlet Extraction, etc.**
- **Large Capacity & Diameter Rotary Evaporator Flask - 50Lit.**
- **Teflon (PTFE) and Fluorine Rubber Dual Rotating Seal, Patented Technology to Ensure High Vacuum.**
- **Stainless-steel Water Bath - Electric & Manual Lift, Easy to Use**
- \* The Introduction of Foreign Advanced Frequency Control System, Temperature Control System, Accurate and Reliable.
- \* A Vacuum Switching Valve, without Affecting the System Vacuum Distillation of the Situation and the Solution can be Continuously Collected.
- \* Water Bath Electric Lift and Manual Lift Support, Easy to Use.
- \* PTFE Discharge Valve, Corrosion Resistance, Pollution-free.
- \* This Rotary Evaporator could Set with Circulation Aspirator Pump (P.61)

**Specifications & Ordering information**

Spec.	Model	“WEV-1050”
Evaporating Flask		50 Lit, Flange Opening $\phi$ 125 mm
Receiving Flask		20 Lit.
Condenser		Standing, Main & Auxiliary Cooling and Highly Efficient 3 Circulating Cold Trap
Temp. Range & Rotary Speed		0℃ ~ 99℃, 20 ~ 110 rpm
Evaporating Capability		Water : 9 Lit./h, Alcohol : 19 Lit./h
Cooling Surface		Main Condenser 9,500 cm <sup>2</sup> Auxiliary Condenser 5,000 cm <sup>2</sup>
Achievable Vacuum		399.9Pa(below 3mmHg)
Functional of Lifting Table & Stroke		Electric & Manual, 0 ~ 180 mm
Vacuum Sealing		PTFE and Fluorine Rubber Dual Rotating Seal
Motor		250 W, Phase DC Induction Motor
Heating Boiler		Stainless-steel Water Bath
Display		Digital display
Dimension (mm)		1345 × 770 × h2140
Electrical Reqts.		6.3 kW, 3Phase 380V, 50Hz
Cat. No.		<b>DH.WEV01050</b>
Price, Each. ₩		

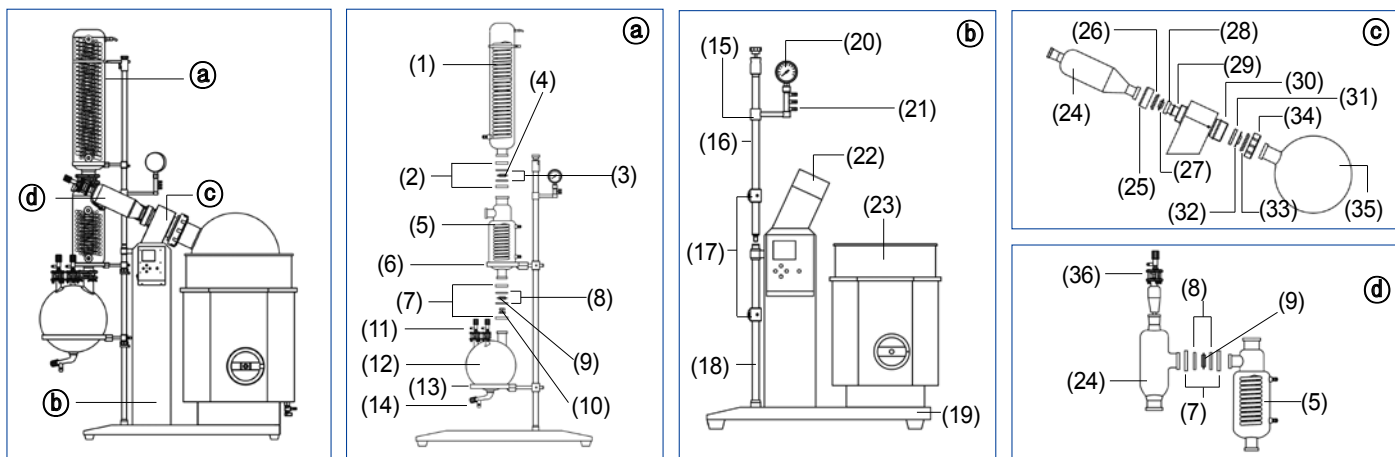
※ 운임 약 ₩ 9,000 별도!

The Details of Spare Parts : Please See the Just Next Page

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<Continued from...DAIHAN-brand® 50 Lit Digital Rotary Evaporator “WEV-1050”>

### The Details of Spare Parts for 50 Lit. Digital Rotary Evaporator “WEV-1050” models



### Ordering Information

Seq. No.	Cat. No.	Description	Ea.	Price, W
(1)	DH.Ev1050.A01	Glass Condenser(Main), $\phi 165 \times 830$ mm, for “Ev-1050”		
(2)	DH.Ev1020.A02	Connection Flange Set(80#), Aluminum, $\phi 110 \times 15$ mm, for “Ev-1020”, “Ev-1050”		
(3)	DH.Ev1020.A03	Flange Retaining Ring(80#), EPDM, $\phi 86.5 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(4)	DH.Ev1020.A04	Flange Gasket(80#), PTFE, $\phi 75 \times 12.5$ mm, for “Ev-1020”, “Ev-1050”		
(5)	DH.Ev1050.A05	Auxiliary Glass Condenser, $\phi 165 \times 585$ mm, for “Ev-1050”		
(6)	DH.Ev1050.A06	Auxiliary Glass Condenser Tray, EPDM, $\phi 167$ mm, for “Ev-1050”		
(7)	DH.Ev1010.A02	Connection Flange Set(60#), Aluminum, $\phi 90 \times 12$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(8)	DH.Ev1010.A03	Flange Retaining Ring(60#), EPDM, $\phi 70 \times 10$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(9)	DH.Ev1010.A04	Flange Gasket(60#), PTFE, $\phi 55 \times 12.5$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(10)	DH.Ev1050.A10	Automatic Switching Valve, $\phi 40 \times 24$ mm, for “Ev-1050”		
(11)	DH.Ev1005.A10	Glass Bleed Valve(35#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(12)	DH.GL22099	DURAN glass Receiving Flask, 20Lit., for “Ev-1050”		
(13)	DH.Ev1050.A13	Glass Receiving Flask Tray, $\phi 332$ mm, for “Ev-1050”		
(14)	DH.Ev1005.A12	Discharge Valve, PTFE, $\phi 56 \times 120$ mm, for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		
(15)	DH.Ev1050.A15	Condenser Clamp, SUS304, 150-220, for “Ev-1050”		
(16)	DH.Ev1050.A16	Stand Pole, SUS304, $\phi 25 \times 1017$ mm, for “Ev-1050”		
(17)	DH.Ev1010.A17	Stand Folder, SUS304, $\phi 25 \times \phi 12$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(18)	DH.Ev1050.A18	Under Stand Pole, SUS304, $\phi 25 \times 1024$ mm, for “Ev-1050”		
(19)	DH.Ev1050.A19	Stand Base, Carbon Steel, $1022 \times 486$ mm, for “Ev-1050”		
(20)	DH.Ev1010.A20	Vacuum Gauge, $\phi 100$ mm, for “Ev-1010”, “Ev-1020”, “Ev-1050”		
(21)	DH.Ev1050.A21	Vacuum Gauge Holder, Copper, $\phi 25 \times \phi 12$ mm, for “Ev-1050”		
(22)	DH.Ev1050.A22	Machine Head Capsule, Aluminum, $300 \times 100 \times 230$ mm, for “Ev-1050”		
(23)	DH.Ev1050.A23	Water Bath, SUS304, for “Ev-1050”		
(24)	DH.Ev1050.A24	3-way Glass Flask, $\phi 100 \times 358$ mm, for “Ev-1050”		
(25)	DH.Ev1050.A25	Fixed Nut, for 3-way Glass Flask, Aluminum, $\phi 105 \times 31$ mm, for “Ev-1020”, “Ev-1050”		
(26)	DH.Ev1050.A26	Fixed Nut Retainer Ring, PA, $\phi 90 \times 11$ mm, for “Ev-1050”		
(27)	DH.Ev1050.A27	Flange Seals, PTFE, $\phi 65 \times 12.5$ mm, for “Ev-1050”		
(28)	DH.Ev1050.A28	Rotation Glass Axis, $\phi 69 \times 210$ mm, for “Ev-1050”		
(29)	DH.Ev1050.A29	O-ring, EPDM, $\phi 55 \times 3$ mm, for “Ev-1020”, “Ev-1050”		
(30)	DH.Ev1050.A30	Couplings, SUS304, $\phi 144 \times 42$ mm, for “Ev-1050”		
(31)	DH.Ev1050.A31	Main Vacuum Seal, PTFE, $\phi 125 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(32)	DH.Ev1050.A32	Deputy Vacuum Seal, FTFE, $\phi 125 \times 10$ mm, for “Ev-1020”, “Ev-1050”		
(33)	DH.Ev1050.A33	Retaining Ring, PA, $\phi 134 \times 16$ mm, for “Ev-1020”, “Ev-1050”		
(34)	DH.Ev1050.A34	Rotating Shaft Nut, PA, $\phi 175 \times 45$ mm, for “Ev-1020”, “Ev-1050”		
(35)	DH.GL220895	DURAN glass Evaporating Flask, 50Lit., for “Ev-1050”		
(36)	DH.Ev1005.A24	Glass Feeding Valve(40#), for “Ev-1005”, “Ev-1010”, “Ev-1020”, “Ev-1050”		

DAIHAN-brand® Chiller,  $-20^{\circ}\text{C} + 40^{\circ}\text{C}$  Heavy-duty Refrigerated External Circulator "MaXircu™ Chi", Flow 20-/30-Lit/min  
Ideal for 1~50Lit Evaporators, Cooling Line, etc. Lift 8-/27-m, Cooling Capa 0.87-/1.3-/3.0-kW, 다용도 냉각 써클레터/질러



**2-Year Warranty**

Chiller,  $-20^{\circ}\text{C} + 40^{\circ}\text{C}$   
Heavy-duty Refrigerated External Circulator  
"MaXircu™ Chi-30"



Assembly-type Safety Connection Ports/Pipe  
for Fluid In/Out-let ;  
ISO RC 1/2" Thread, Located On Rear-Upper Panel

- Made in Korea
  - PL(Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Ideal for Wide-range Reaction System and Evaporator.
  - Max. Lift 8-/27-m
  - Assembly-type Safety Connection Ports/Pipe for Fluid In/Out-let : ISO RC 1/2" Thread, Stainless-steel.
  - Digital PID Control System Implementing Superior Temperature Accuracy.
  - Embedded External Nozzle Part for the Prevention of Nozzle Damaged.
  - Stainless-steel Internal Bath for Prevention of Corrosion.
- \* Wide-range Filling Volume 17Lit. / 29Lit. / 47Lit.      \* Effective Cooling Capacity  
\* Useful for 1~50Lit. Various Reactors and Evaporators.      \* Emergency Stop Button for safety.  
\* High Quality Circulation Pump : 20-/30-Lit/min Max Flow Rate and 1.0-/3.3-bar Max. Pressure.  
\* Built in Pump Pressure Gauge and Compressor Pressure Gauge.

### Specifications & Ordering information

Spec.	Model	"MaXircu™ Chi-20"	"MaXircu™ Chi-30"	"MaXircu™ Chi-50"
Temp. Range & Stability		$-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$ -Range, $\pm 0.2^{\circ}\text{C}$ (at $15^{\circ}\text{C}$ )-Stability		
Cool-Fluid. Filling Volume		17 Lit. max	29 Lit. max	47 Lit. max
Useful for 1~50Lit Evaporators, etc.		for 1~20Lit Evaporator	for 10~30Lit Evaporator	for 20~50Lit Evaporator
Refrigerator Capacity(HP)		1/2 HP	1 HP	2 HP
Lid & Top Opening Dia.		$\phi 100$ mm		
Fluid In/Out-let Connector		ISO RC 1/2" (English System AG 1/2") Thread, Stainless-steel		
Pump Power, Lift Height, m	Max. Flow Rate	20 Lit/min	30 Lit/min	
	Max. Pressure & Lift	1.0 bar Max. Lift : 8m	3.3 bar Max. Lift : 27m	
Cooling Capacity	at $+20^{\circ}\text{C}$	1.7 kW	2.8 kW	6.5 kW
	at $0^{\circ}\text{C}$	0.87 kW	1.3 kW	3.0 kW
	at $-20^{\circ}\text{C}$	0.32 kW	0.45 kW	1.2 kW
External Dimension		450×630×h650 mm	550×830×h975 mm	605×975×h1265 mm
Material		Stainless steel-Internal, Powder Coated steel-External		
Electrical Reqts.		1 Phase 230V, 50 / 60 Hz or 3Phase 380V		
Cat. No.	230V	DH.Chi0020	DH.Chi0030	-
	3 Phase	-	-	DH.Chi0050
Price, Each. ₩				

\* Other Specifications are available upon Customer' s Request.

※ 운임 약 ₩ 20,000 별도!

- ▶ Thermanol D12® Cooling / Heating Transfer Fluid, Clear / Harmless : See page 84
- ▶ Insulated External Circulating Tubing : See page 83



▶ Figure : One of the Applications in the Large Volume Evaporator Line.

Cat. No	Description	Articles
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**DAIHAN-brand® Multiuse Water Circulating Vacuum Pump/Aspirator “WEV”, 0.098MPa/20mbar**  
 Ideal for Evaporators 1~50-Lit, etc. with Multi-Taps/Safety Valve, Bath 15 & 57-Lit, **다용도 아스피레이터, 워터순환식 진공펌프**



**2-Year Warranty**

(1) “WEV-003S” ideal for 1~5Lit. Evaporator

- Resist Corrosion by Acid, Alkali and Solvents.
- Cyclically use Water, Save the Precious Water Resources.
- Good for Evaporation, Distillation, Crystallization, Drying, Sublimation, Filtration, etc.
- Fluorine Rubber Sealing, the inner of which can't be Intruded by Corrosive Gas.
- Need to Replace the Water in the Flume Regularly to ensure the Purity of Water Quality, the Vacuum Degree and to Avoid Dirt Stains.

**(1) For 1~5Lit Evaporator, 180W-Pump Power “WEV-003S”**

- \* Save more than 35% of Electricity than Other type of Vacuum Pump.
- \* Double-tap, Double-display, can be used alone or in Parallel.
- \* The Fluid Muffler Purpose-made can Reduce the Gas in Water and make the Vacuum Degree Higher and more Stable Reduce the Friction between Gas and Fluid, Reduce the Noise.

**(2) For 5~50Lit Evaporator, 550W-Pump Power “WEV-0095”**

- \* Compared with the Desk-top type Pump, the Bleed Air Flow is more, which Applies to the Vacuum demand with Large Bleed Air Flow
- \* Stainless-steel(#304) Body, Copper Ejector, Tee Junction, PP Back Valve, Stainless-steel Impeller
- \* Five-taps can be used alone or in Parallel. The Bleed Air Flow is Large with Five-way Pipe in Parallel, which can meet the Demand of Large Scale Rotary Evaporator or Reaction Kettle.



**2-Year Warranty**

(2) “WEV-0095” ideal for 5~50Lit. Evaporator

**Specifications & Ordering information**

Spec.	Model	(1) “WEV-003S”	(2) “WEV-0095”
Max. Vacuum Degree		0.098 MPa (20mbar)	
Pump Power(Capacity)		180 W	550 W
Water Bath Volume(Lit.)		15 Lit.	57 Lit.
Useful for Evaporator Capacity		for 1~5 Lit.	for 5~50 Lit.
Flow Rate		80 Lit/min	100 Lit/min
Taps & Air Sucking Amount		2Taps, 10 Lit/min(1Tap)	5Taps, 10 Lit/min(1Tap)
External Circulation Nozzle		id. 5 / od. 10mm (id. 8 / od. 11 mm Silicon tube Connected for Circulation)	
Safety Function		Safety Check Valve	
Drain Pipe		Drain Pipe(id. 15mm)	Drain Pipe(id. 24.3mm)
Material of Water Tank / Body		PP / PP	PE / Stainless-steel(#304)
Dimension & Net Weight		385×280×h420 mm / 11 kg	450×350×h820 mm / 36 kg
Electric Reqts.		230V, 50/60Hz	
Cat. No.		DH.WEV003S	DH.WEV0095
Price, Each. ₩			

**DAIHAN-brand® -35℃~+150℃ Digital Precise Refrigerated/Heating Bath Circulator “MaXircu™ CL”, ±0.2℃**  
 with 1×Flat Lid/Digital Fuzzy Control/CFC-free/Certi. & Traceability, Flow 25Lit/min, Lift 4m, 8-/12-/22-/30-Lit.  
 Ideal for Evaporators, etc., with External/Internal Circulating Connect - od.12/id.10mm, **정밀 냉동/가열 배스 겸용 써클레이터**



-35℃~150℃  
**2-Year Warranty**

-35℃ ~ +150℃ Refrigerated / Heating Bath Circulators

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance

**Specifications & Ordering information**

Spec.	Model	MaXircu™ CL-8	MaXircu™ CL-12	MaXircu™ CL-22	MaXircu™ CL-30
Temp. Range & Accuracy		-35℃~+150℃, ±0.1℃			
Temp. Resolution		0.1℃ - Display, 0.1℃-Control			
Temp. Uniformity & Probe		±0.2℃ at -20℃, PT100			
Pump		Max Flow Rate : 25Lit./min(Controlled 5 Steps Flow Rate Speed), Max Pressure : 7.5 psi, Max Lift : 4m			
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Cat. No.	230V	DH.WCL00408	DH.WCL00412	DH.WCL00422	DH.WCL00430
	120V	DH.WCL00508	DH.WCL00512	DH.WCL00522	DH.WCL00530
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 16,000 별도!

※ See the Bath Circulators-section  
for the Details

# DAIHAN Scientific

## Freeze Dry System “UniFreez™ FD”

### Lab Scale Bench-top Freeze Dryer

Patented Jog-Dial & Touch-Button Control

Compact-size Lab Scale Bench-top Type

Fastest Freezing Time

#### Ergonomic & Compact Body

- Lab Scale, Bench-top Type Model
- Compact size for all laboratory table
- Ergonomic Design

Company	DAIHAN	Competitor
Chamber Capacity	8 Lit.	8 Lit.
External Dimension (mm)	w400×d530×h415	w500×d646×h976

#### Intuitive User Interface

- Patented Jog-Dial Controller(Turn and Push)
- Capacitive Touch Button for user convenience
- Precise control by microprocessor
- Digital Back-Light LCD



#### Various Installing Accessories

- Used with 12-port Manifold or 8-port Dry Chamber, Various Size Flasks, Flask Top, Vacuum Valve, Vacuum Pumps, Table Cart etc.



12-port T-type Manifold



8-port Acrylic Dry Chamber

#### Fastest Freezing System

- DAIHAN Freezing System realizes Quick Freezing and Quick Defrosting Function

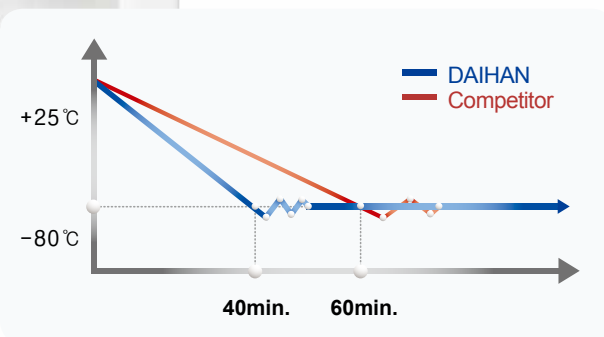


Freezing System

#### Others

- High Sublimation Rate : 3Lit/24hr
- Manual Defrost Function : Hot Gas Defrost Function for quick next cycle turn-around
- Automatic or Manual Process Control
- Controllable temperature, vacuum and timer at Automatic Mode
- LED Indication Light On in case of suitable temperature and vacuum
- Can be Used with Various Accessories

#### Freezing speed comparison with Competing Product



DAIHAN-brand® Freeze Dry System, Lab Scale Benchtop-type “UniFreez™ FD-8”, 8 Lit, 3Lit/24hr, Cold Trap Max. -90℃ with Automatic & Manual Process, Used with 12-port T-type Manifold or 8-port Acrylic Drying Chamber, 실험실용 동결 건조기



Optional  
12-port T-type  
Manifold

**2-Year Warranty**

“UniFreez™ FD-8” Freeze Dry System,  
with Optional 12-port T-type Manifold  
and 12ea Vacuum Handle Valves

- Made in Korea ■ Patented Jog-Dial & Touch Button Control System
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System ■ PL(Product Liability) Insurance
- Ideal for Wide Range from Pharmaceuticals, Biology, Food Industry to Petro-Chemistry and Semiconductor Industry, etc.

- \* Ergonomic Design and Compact Body Size for All Laboratory Tables
- \* Allows Automatic or Manual Process Control
- \* LCD Indicates Temperature and Vacuum
- \* Rapid Integrated Hot Gas Defrost Function for Quick Next Cycle Turn-around
- \* LED Indication Light On in Case of Suitable Temperature and Vacuum
- \* Can be Controlled Temperature and Timer at Automatic Mode
- \* Homogeneous Temperature Distribution across all Shelves in Dry Chamber

### Specifications & Ordering information

Spec.	Model	“UniFreez™ FD-8”
Chamber & Max Condenser Capa.		Chamber : 8 Lit., Max Condenser : 10 Lit.
Sublimation Rate(Lit/day)		3 Lit/day
Max. Temperature		Cold Trap : -90℃, Condenser : -40℃
Set Temperature Range		-60℃ ~ -90℃
Compressor & Defrost-type		Compressor : 1/2 HP, Defrost-type : Manual
Controller		Digital Fuzzy Control with Jog-Dial(Turn & Push) & Touch Button
Display		Digital LCD with Back-Light Function
Material		Stainless-steel(SUS304)
Dimension(mm) & Weight		Exterior : w400×d530×h415, Condenser : φ 300×h150mm, Net Weight : 55 kg
		Packing Dimension : w560×d760×h675, Gross Weight : 60kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
Cat. No.	230V	DH.Frd00208
	120V	DH.Frd00108
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

### Optional Accessories for Freeze Dryer



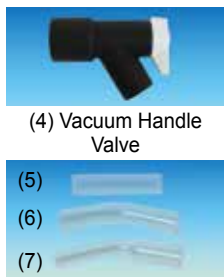
(1) 12-port T-type  
Manifold



(2) 8-port Acrylic  
Dry Chamber



(3) 3-stage Shelf,  
Stainless-steel



(4) Vacuum Handle  
Valve



(5) Tube Adapters  
for Connecting Flask Top



(8) Flask Top, Silicone



(9) Glass Flasks



(10) Vacuum Pump



(11) 2-stage Table Cart

### Optional 12-port T-type Manifold / 8-port Acrylic Dry Chamber / 3-stage Shelf

- DH.Frd01034 (1) T-type Manifold, 12-port, for Connecting 3/4" Vacuum Handle Valve, with Silicon Stopper
- DH.Frd02010 (2) Acrylic Dry Chamber, 8-port, for Connecting 3/4" Vacuum Handle Valve, with Silicon Stopper
- DH.Frd02020 (3) 3-stage Shelf, Stainless-steel(STS), for Acrylic Dry Chamber

Ea.	Price, ₩

### Optional Vacuum Handle Valve-/Tube Adapters-for Connecting Flask

- DH.Frd03010 (4) 3/4" Vacuum Handle Valve, Neoprene Rubber & PP, for Connecting Flask
- DH.GL28091 (5) 3/4" Glass Tube Adapter, φ 19/1.8t×L80mm for Connecting Middle & Large-size Flask Top
- DH.GL28092 (6) 3/4" Glass Bend-type Tube Adapter, φ 19/1.8t×L80mm, for Connecting Middle & Large-size Flask Top
- DH.Frd04010 (7) 3/4" PP Tube Adapter, φ 19/1.8t×L80mm, for Connecting Small-size Flask Top

Ea.	Price, ₩

### Optional DURAN® Borosilicate α 3.3 Glass Flasks / Silicone Flask Top

- DH.Frd05010 (8) Flask Top, Silicone, 3/4" Small-size Flask Top, for 40-/80-ml Flask
- DH.Frd05020 3/4" Middle-size Flask Top, for 200-/300-ml Flask
- DH.Frd05030 3/4" Large-size Flask Top, for 500-/700-/1000-ml Flask
- DH.GL12041 (9) Glass Flask, DURAN® Glass α 3.3, 40ml, φ 40/2.3t×h80mm
- DH.GL12042 , 80ml, φ 40/2.3t×h120mm
- DH.GL12043 , 200ml, φ 65/2.2t×h100mm
- DH.GL12044 , 300ml, φ 65/2.2t×h140mm
- DH.GL12045 , 500ml, φ 90/2.5t×h125mm
- DH.GL12046 , 700ml, φ 90/2.5t×h165mm
- DH.GL12047 , 1000ml, φ 90/2.5t×h225mm

Ea.	Price, ₩

### Optional Vacuum Pumps / 2-stage Table Cart for Vacuum Pump

- V3.VOP100 (10) Vacuum Pump, “VOP-100”, 100/120Lit./min, 50/60Hz, 220V
- V3.VOP150 , “VOP-150”, 150/180Lit./min, 50/60Hz, 220V
- DH.Frd06025 NW25 Vacuum Pump Connection-set, Tube / O-ring / Clamp
- DH.Frd06016 NW16 Vacuum Pump Connection-set, Tube / O-ring / Clamp / Adapter
- DH.Ca1002 (11) 2-stage Table Cart for Freeze Dryer & Vacuum Pump, with Stop-on Caster and Vacuum Pump Oil Tray, w504×d604×h780mm

Ea.	Price, ₩

DAIHAN Scientific

# Fume Hood

**Ductless - Clean Bench, Laminar Flow** ..... P. 66  
**Ducted - Premium Fume Hood**..... P. 67  
 - **PVC Fume Hood** ..... P. 68  
 - **PVC Wet Scrubber Fume Hood** ..... P. 69



**Ductless Clean Bench, Laminar Flow**  
"MaXtream™ V12"



**Ducted Premium Fume Hood**  
"HD-1500G"



**Ducted PVC Fume Hood**  
"HD-1500"



**Ducted PVC Wet Scrubber Fume Hood**  
"HD-1500S"



# Fume Hoods, Clean Bench-Ductless

Maximum Convenience by Advanced Digital Technology

## DAIHAN NEW Generation Fume Hoods, Laminar Flow Clean Bench

### Innovative Upgrade **MaXtream™**



The newly developed Laminar Flow Clean Bench from DAIHAN Scientific provides reliable protection for samples and work processes against particulate contamination. The air from above the cabinet vertically goes through a **Pre-filter and a Class 100 HEPA Filter** of efficiency up to 99.97% & 0.3 micron size and is exhausted to the front opening for maintenance of Contamination-Free in the cabinet. Also **UV Lamp** installed in the cabinet contributes to sterilize a source of contamination.

The Controller, fully optimized for convenience in the practical use of Clean Bench, offers intuitive monitoring and easy controlling of UV Lamp, Fluorescent light, Filter Fan and air flow speed.

Added to the Unique User Convenient features of DAIHAN, Laminar Flow & Cleanliness, the core performance of Laminar Flow Clean Bench is innovated to be a new Design. Experiencing the **Max Convenience** and Cleanliness, **MaXtream™** Clean Bench is necessary to have but no more.

#### » Key Features

- All New Design with the consideration of Safety, Convenience and Functionality
- Class 100 HEPA Filter with Pre-filter & Vertical Air Flow : Efficiency up to 99.97% Filtration for 0.3 micron sized particle
- Easy to change HEPA filter design, even without servicing.
- Tempered Glass with Sash Door & Double Door Closing Detection : Perfect Safety against UV (Automatic turn-off of UV lamp when door opens)
- 8 Step Control of Air Flow Speed and Timer function
- 2 × Internal Electrical Outlet, 2 × Valve for External Gas Connection, Fluorescent Lamp

#### » Class 100 HEPA Filter

Efficiency up to 99.97% filtration for 0.3 micron sized particle.  
Easy to change HEPA filter design, even without servicing.

#### » UV Lamp

Built-in UV Lamp Contributes to sterilize a source of contamination in the cabinet. Automatic turn-off of Fluorescent lamps while UV lamps on: Prevention from an accident (damage on samples or a burn) by performing experiment while UV lamps on.

#### » Convenience to operate

2 × Internal Electrical Outlet for other electrical devices connection (220 Voltage)  
2 × Valve for External Gas Connection.

#### » Capacitive Touch-Button Controller

Intuitive Touch-Button Controller for user convenience.  
Precise Control by Microprocessor and 8 Step Control of Air Flow Speed by simple Touch. Timer for UV Lamp operation.

#### » Various Product Size

Various Sized Laminar Flow Clean Bench : 1200-/1500-/1800mm



DAIHAN-brand® Vertical Clean Bench and Filtered PCR Cabinet “MaXtream™”, Class 100 HEPA filter with 8 Steps Air Velocity Control, Touch-type Controller, Dual UV Lamp and Florescent Lamp, Air and Gas Cock, Built-in Electrical Outlet  
 크린벤치 & PCR케비닛, 수직 기류형, 터치식 컨트롤러, 8 단계 풍속 조절, UV 프로텍션 시스템



**2-Year Warranty**

Vertical Clean Bench and Filtered PCR Cabinet  
 “MaXtream™ V12”

- Made in Korea
- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Class 100 HEPA Filter of efficiency up to 99.97% & 0.3 micron size
- Mesh Guard for HEPA Filter Protection
- Easy to Exchange HEPA Filter
- 8 Steps Air Velocity Control
- Safety UV Protection System :  
 UV Lamp is only activated once safety Glass Door is Completely closed
- High performance of Touch Controller-Easy to use
- Microprocessor Digital Controller and Back Light LCD
- UV and Florescent Lamp, External Gas Connection Valve, Internal Electrical outlet
- \* High-Quality Back-Light LCD
- \* 99hr 59min Timer
- \* Silence and Vibration-Free Blower
- \* Tempered Safety Glass Sliding Door for Protection from Against UV
- \* Optimized Air Flow System for Uniform Air Flow/Velocity
- \* Corrosion Resistant 304 Stainless-steel Working table
- \* Air Flow-type : Vertical Air Flow-type

**Specifications & Ordering information**

Spec.	Model	“MaXtream™ V12”	“MaXtream™ V15”	“MaXtream™ V18”
Air Flow-type		Vertical Air Flow-type		
Dimension (w×d×h)	Interior	1,200×660×610	1,500×660×610	1,800×660×610
	Exterior	1,280×735×1,895	1,580×735×1,895	1,880×735×1,895
Air Volume		1,350 m <sup>2</sup> /h	1,700 m <sup>2</sup> /h	2,020 m <sup>2</sup> /h
Air Flow Velocity		8 Steps, 0.3 ~ 0.6 m/s		
HEPA Filter		Class 100, 0.3µm Particle Removal 99.97%		
Prefilter		3~30µm Particle Removal		
Display		Back Light LCD		
Controller		Microprocessor Digital Controller with Touch UI		
Lamp		1×UV 20W, 1×FL 36W	1×UV 30W, 1×FL 55W	
Noise Level		Under 65dBA		
Door Type		Tempered Safety Glass Sliding Door		
Utility Device		1×Air Cock, 1×Gas Cock, 2×220V Outlet		
Material		Internal : Stainless-steel(# 304), External : Powder Coated steel		
Electric Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz		



Vertical Air Flow of “MaXtream™ V model”

Cat. No.	230V	DH.WLCV1200	DH.WLCV1500	DH.WLCV1800
	120V		DH.WLCV1201	DH.WLCV1501
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

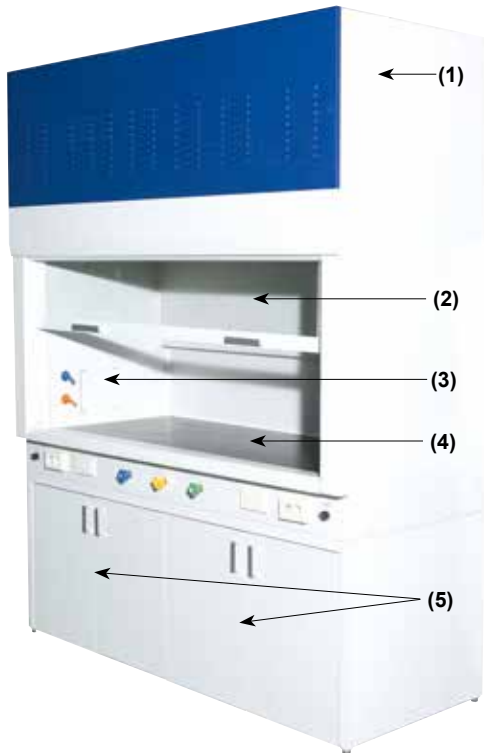
※ 운임 약 ₩ 95,000 별도!



High-performance Digital Touch-type Controller, Easy to Use

Cat. No	Description	Articles
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DAIHAN-brand® Premium Ducted Fume Hood, (A) Bypass or (B) Air Curtain-Type, 1200-/1500-/1800-/2400-mm with Phenol Work Top, Penol Plate Interior, Air-/Gas-/Water-Cock, Cup Sink, Drain, and Explosion Proof Lamp  
 닥트형 흡후드, Phenol 재질의 작업대, 우수한 내습/내구성, 일반 배기형 or 에어커튼형의 선택성



Premium Ducted Fume Hood "HD-1500G"

- Made in Korea
- Durable, Hazardous Chemical Gas Remove.
- Slide Type Sash Door with Tempered Safety Glass.
- Sash-type Tempered Safety Glass Window.

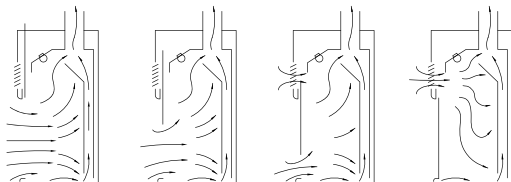
- \* General Chemical Gas Hood with High Thermal, Chemical Resistance, Various Material for User selection.
- \* With Air-/Gas-/Water-Cock, Cup Sink, Drain, Explosion Proof Lamp, Receptacle, Multi-purpose Cabinet.
- \* **By Pass Air Flow-type** : After the Suction Forcing the Indoor Air to Discharge the Gas to the Outside
- \* **Air Curtain Air Flow-type** : The Outdoor Air Sucked Form the Air Curtain to the Front Chamber, and the Exhaust Gas Back to Suction the Air
- \* Discharging the Polluted Air and Toxic Gas Generated during the Experiment in a Laboratory to the Outside through the Duct Structure
- \* Process Pipe & Duct Silicon Sealing to Completely Block the Gas Leakage to the Outside
- \* The Mechanical Design is Manufactured with Superior Workability

Specification

Models & Air Flow-type	"HD-1200G"	"HD-1500G"	"HD-1800G"	"HD-2400G"
	(A) By-Pass Air Flow-type			
	"HD-C1200G"	"HD-C1500G"	"HD-C1800G"	"HD-C2400G"
(B) Air Curtain Air Flow-type				
Duct Size	φ 200mm		φ 250mm	
Material*	(3) Internal : Penol Plate, (1) External : Powder Coated Steel, (4) Work Top : Penol Plate			
Sash Frame & Window	PVC Sheet Frame, (2) Tempered Safety Glass Sash Window			
Cabinet	(5) Built in Multi-purpose Cabinet			
Lamp	LED Lamp(1ea × 20 W)			
Cock	1ea × Air-/Gas-/Water-Cock			
Receptacle	2ea 220V Conccent and 2ea 110V Conccent			
Dimension (w × d × h) (mm)	1200 × 800 × 2350	1500 × 800 × 2350	1800 × 800 × 2350	2400 × 800 × 2350
Power Supply *	1 Phase, AC 220V / 60Hz			

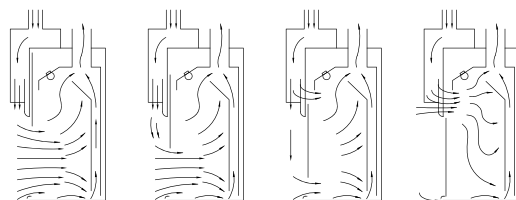
\* Other Specifications are available upon Customer's Request.

Diagram of Air Flow Depending on the Safety Window Opening



Opening → Closing

(a) By-Pass Air Flow-type



Opening → Closing

(b) Air Curtain Air Flow-type

Welcome! Custom-Made Fume Hoods!!

We can Offer DAIHAN Custom Fume Hood, for which you can Specify the Specification

Selectable Material of Custom-Made Fume Hood

	Material			
	Exterior	Steel	Stainless	P.P
Interior	Penol	Stainless	P.E	
Work Top	Penol	Stainless	P.E	Granite

Ordering Information

(A) By-Pass Air Flow-type Ducted Fume Hood

- |             |   |
|-------------|---|
| DH.WHD02312 | Fume Hood, 230V, 1200 × 800 × h2350mm, "HD-1200G" |
| DH.WHD02315 | , 1500 × 800 × h2350mm, "HD-1500G"                |
| DH.WHD02318 | , 1800 × 800 × h2350mm, "HD-1800G"                |
| DH.WHD02324 | , 2400 × 800 × h2350mm, "HD-2400G"                |
| DH.WHD01312 | Fume Hood, 120V, 1200 × 800 × h2350mm, "HD-1200G" |
| DH.WHD01315 | , 1500 × 800 × h2350mm, "HD-1500G"                |
| DH.WHD01318 | , 1800 × 800 × h2350mm, "HD-1800G"                |
| DH.WHD01324 | , 2400 × 800 × h2350mm, "HD-2400G"                |

(B) Air Curtain Air Flow-type Ducted Fume Hood

- |             |  |
|-------------|--|
| DH.WHD02412 | Fume Hood, 230V, 1200 × 800 × h2350mm, "HD-C1200G" |
| DH.WHD02415 | , 1500 × 800 × h2350mm, "HD-C1500G"                |
| DH.WHD02418 | , 1800 × 800 × h2350mm, "HD-C1800G"                |
| DH.WHD02424 | , 2400 × 800 × h2350mm, "HD-C2400G"                |
| DH.WHD01412 | Fume Hood, 120V, 1200 × 800 × h2350mm, "HD-C1200G" |
| DH.WHD01415 | , 1500 × 800 × h2350mm, "HD-C1500G"                |
| DH.WHD01418 | , 1800 × 800 × h2350mm, "HD-C1800G"                |
| DH.WHD01424 | , 2400 × 800 × h2350mm, "HD-C2400G"                |

Optional Blowers

- |             |                               |
|-------------|-------------------------------|
| DH.WHD10020 | Integrated Blower, "HDBL0020" |
| DH.WHD10021 | External Blower, "HDBL0021"   |

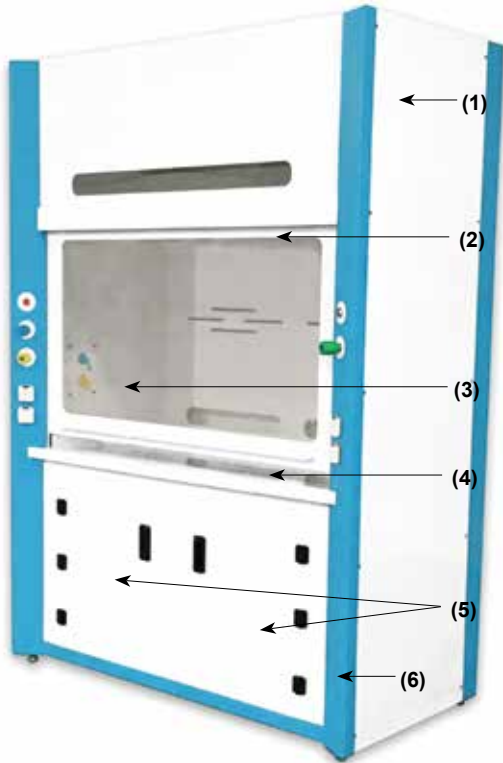
- ※ Custom-Made Fume Hood : Wide Variety of Material for User Selection.
- ※ Note! Freight and Installation Charges Separately.

Ea. Price, ₩

Ea. Price, ₩

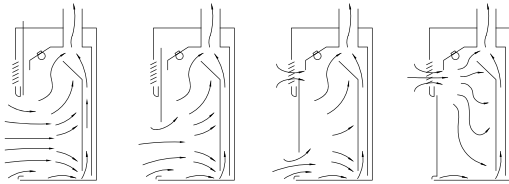
Ea. Price, ₩

DAIHAN-brand® All PVC Ducted Fume Hood for Acid / Chemical Resistance, 1200-/1500-/1800-/2400-mm  
 (A) Bypass or (B) Air Curtain-Type, with Air-/Gas-/Water-Cock, Cup Sink, Drain, and Explosion Proof Lamp  
 내산 / 내약품용 PVC 덕트형 흡후드, PVC 재질의 외부/내부/작업대, 일반 배기형 or 에어커튼형의 선택성

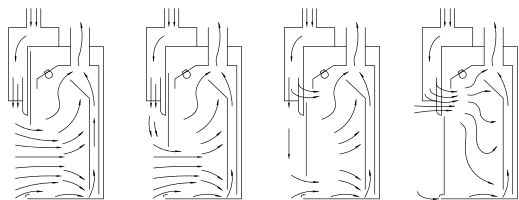


Ducted PVC Fume Hood "HD-1500"

Diagram of Air Flow Depending on the Safety Window Opening



Opening → Closing  
 (A) By-Pass Air Flow-type



Opening → Closing  
 (B) Air Curtain Air Flow-type

Welcome! Custom-Made Fume Hoods!!

We can Offer DAIHAN Custom Fume Hood, for which you can Specify the Specification

Selectable Material of Custom-Made Fume Hood

	Material			
	PVC	P.P	ABS	
Exterior	PVC	P.P	ABS	
Interior	PVC	P.P	P.E	ABS
Work Top	PVC	P.P	P.E	ABS

- Made in Korea    ■ Durable, Hazardous Chemical Gas Remove.
- All PVC(PolyVinyl Chloride) Material for Excellent Resistance of Acid / Chemicals
- \* General Chemical Gas Hood with High Thermal, Chemical Resistance, Various Material for User selection.
- \* With Air-/Gas-/Water-Cock, Cup Sink, Drain, Explosion Proof Lamp, Receptacle, Multi-purpose Cabinet.
- \* Acid resistance, alkali resistance Excellent
- \* **By Pass Air Flow-type** : After the Suction Forcing the Indoor Air to Discharge the Gas to the Outside
- \* **Air Curtain Air Flow-type** : The Outdoor Air Sucked Form the Air Curtain to the Front Chamber, and the Exhaust Gas Back to Suction the Air
- \* Discharging the Polluted Air and Toxic Gas Generated during the Experiment in a Laboratory to the Outside through the Duct Structure
- \* Process Pipe & Duct Silicon Sealing to Completely Block the Gas Leakage to the Outside
- \* The Mechanical Design is Manufactured with Superior Workability

Specification

Models & Air Flow-type	"HD-1200"	"HD-1500"	"HD-1800"	"HD-2400"
	(A) By-Pass Air Flow-type			
	"HD-C1200"	"HD-C1500"	"HD-C1800"	"HD-C2400"
(B) Air Curtain Air Flow-type				
Duct Size	φ 200mm	φ 250mm		
Material*	(3) Internal : PVC, (1) External : PVC, (4) Work Top : PVC, (6) Column : PVC			
Sash Frame & Window	PVC Sheet Frame, (2) Clear PVC			
Cabinet	(5) Built in Multi-purpose Cabinet			
Lamp	LED Lamp(1ea × 35 W)			
Cock	1ea × Air-/Gas-/Water-Cock			
Receptacle	2ea 220V Concent and 2ea 110V Concent			
Dimension (w × d × h) (mm)	1200 × 800 × 2200	1500 × 800 × 2200	1800 × 800 × 2200	2400 × 800 × 2200
Power Supply *	1 Phase, AC 220V / 60Hz			

\* Other Specifications are available upon Customer's Request.

Ordering Information

(A) By-Pass Air Flow-type Ducted PVC Fume Hood

	Ea. Price, ₩
DH.WHD02112 Fume Hood, 230V, 1200 × 800 × h2200mm, "HD-1200"	
DH.WHD02115 , 1500 × 800 × h2200mm, "HD-1500"	
DH.WHD02118 , 1800 × 800 × h2200mm, "HD-1800"	
DH.WHD02124 , 2400 × 800 × h2200mm, "HD-2400"	
DH.WHD01112 Fume Hood, 120V, 1200 × 800 × h2200mm, "HD-1200"	
DH.WHD01115 , 1500 × 800 × h2200mm, "HD-1500"	
DH.WHD01118 , 1800 × 800 × h2200mm, "HD-1800"	
DH.WHD01124 , 2400 × 800 × h2200mm, "HD-2400"	

(B) Air Curtain Air Flow-type Ducted PVC Fume Hood

	Ea. Price, ₩
DH.WHD02212 Fume Hood, 230V, 1200 × 800 × h2200mm, "HD-C1200"	
DH.WHD02215 , 1500 × 800 × h2200mm, "HD-C1500"	
DH.WHD02218 , 1800 × 800 × h2200mm, "HD-C1800"	
DH.WHD02224 , 2400 × 800 × h2200mm, "HD-C2400"	
DH.WHD01212 Fume Hood, 120V, 1200 × 800 × h2200mm, "HD-C1200"	
DH.WHD01215 , 1500 × 800 × h2200mm, "HD-C1500"	
DH.WHD01218 , 1800 × 800 × h2200mm, "HD-C1800"	
DH.WHD01224 , 2400 × 800 × h2200mm, "HD-C2400"	

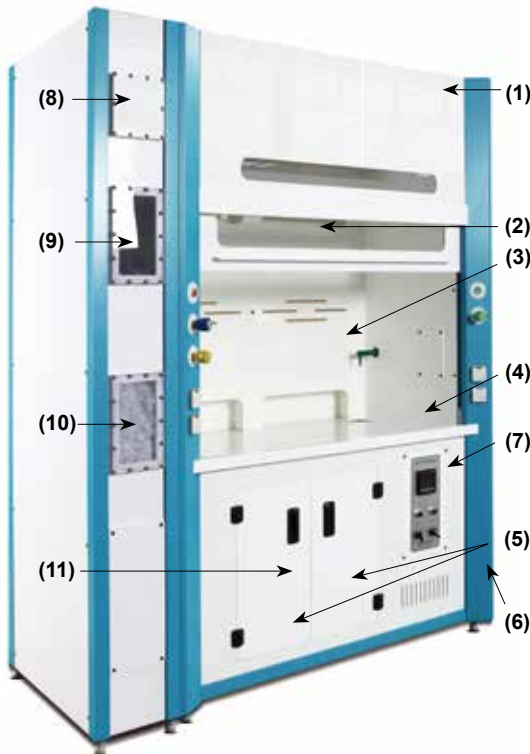
Optional Blowers

	Ea. Price, ₩
DH.WHD10010 Integrated Blower, "HDBL0010"	
DH.WHD10011 External Blower, "HDBL0011"	

- ※ Custom-Made Fume Hood : Wide Variety of Material for User Selection.
- ※ Note! Freight and Installation Charges Separately.

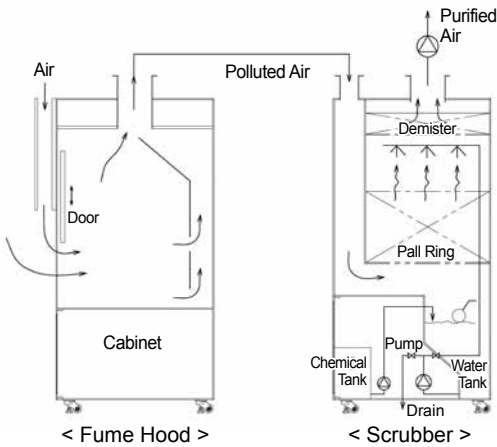
Cat. No	Description	Articles
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**DAIHAN-brand® All PVC Wet Scrubber Ducted Fume Hood for Acid/Chemical Resistance, 1500-/1800-/2100-/2400-mm (A) Bypass or (B) Air Curtain-Type, Circulation Pump, PP Pall Ring Filter, Demister, Air-/Gas-/Water-Cock, Cup Sink, and Drain 내산 / 내약품용 PVC 덕트형 스크리버 흡후드, PVC 재질의 외부/내부/작업대, 내화학성, 대기오염방지형**



Ducted PVC Wet Scrubber Hood "HD-1500S"

**Diagram of Air Flow Depending on the Safety Window Opening**



Ducted PVC Wet Scrubber Hood - Air Flow

**Welcome! Custom-Made Fume Hoods!!**

We can Offer DAIHAN Custom Fume Hood, for which you can Specify the Specification

**Selectable Material of Custom-Made Fume Hood**

	Material			
Exterior	PVC	P.P	ABS	
Interior	PVC	P.P	P.E	ABS
Work Top	PVC	P.P	P.E	ABS

- Made in Korea ■ Durable, Hazardous Chemical Gas Remove.
- All PVC(PolyVinyl Chloride) Material for Excellent Resistance of Acid / Chemicals

- \* General Chemical Gas Hood with High Thermal, Chemical Resistance, Various Material for User selection.
- \* with Air-/Gas-/Water-Cock, Cup Sink, Drain, Explosion Proof Lamp, Receptacle, Multi-purpose Cabinet.
- \* Built-in Wet Scrubber : with Circulation Pump, Water Level Gauge, Water Storage Tank, PP Pall-ring Filter, Demister, Water Spray Nozzle, pH Indicator/Control Panel
- \* By Pass Air Flow-type : After the Suction Forcing the Indoor Air to Discharge the Gas to the Outside
- \* Air Curtain Air Flow-type : The Outdoor Air Sucked Form the Air Curtain to the Front Chamber, and the Exhaust Gas Back to Suction the Air
- \* Moving the Experiment Polluted Air and Toxic Gases Generated in the Laboratory of the Scrubber through Duct Structure, and only the Purified Air Discharged to the Atmosphere after the Contaminants have been Removed
- \* An Acidified Water drained to Neutralize \* Required Equipment for Air Pollution Prevention
- \* Through a pH Meter Display can Check the Current pH Level of the Water Storage Tank
- \* Process Pipe & Duct Silicon Sealing to Completely Block the Gas Leakage to the Outside
- \* The Mechanical Design is Manufactured with Superior Workability

**Specification**

Models & Air Flow-type	"HD-1500S"	"HD-1800S"	"HD-2100S"	"HD-2400S"
	(A) By-Pass Air Flow-type			
	"HD-C1500S"	"HD-C1800S"	"HD-C2100S"	"HD-C2400S"
	(B) Air Curtain Air Flow-type			
Duct Size	φ 200mm		φ 250mm	
Material*	(3) Internal : PVC, (1) External : PVC, (4) Work Top : PVC, (6) Column : PVC (7) pH Indicator/Control Panel, (8) Demister : PP, (9) Window : Clear PVC, (10) Pall Ring : PP			
Sash Frame & Window	PVC Sheet Frame, (2) Clear PVC			
Cabinet	(5) Built in Multi-purpose Cabinet			
Lamp	Explosion Proof Lamp(2ea × 20 W)			
Cock	1ea × Air-/Gas-/Water-Cock			
Receptacle	220V Conccent(2ea) and 110V Conccent(2ea)			
Circulation Pump	(11) Built in Magnetic Pump, 1 Phase, AC 220V, 1/3HP			
Water Level Gauge	Clear PVC			
Filter	(10) PP Pall Ring			
Demister	(8) PP Made (Mesh-type)			
Water Spray Nozzle	6mm PVC Nozzle			
Water Drain Line	PVC Pipe			
Dimension (w × d × h) (mm)	1500 × 800 × 2200	1800 × 800 × 2200	2100 × 800 × 2200	2400 × 800 × 2200
Power Supply *	1 Phase, AC 220V / 60Hz			

\* Other Specifications are available upon Customer's Request.

**Ordering Information**

**(A) By-Pass Air Flow-type, PVC Wet Scrubber Fume Hood**

Model	Specs	Ea. Price, ₩
DH.WHD02515	Fume Hood, 230V, 1500 × 800 × h2200mm, "HD-1500S"	
DH.WHD02518	, 1800 × 800 × h2200mm, "HD-1800S"	
DH.WHD02521	, 2100 × 800 × h2200mm, "HD-2100S"	
DH.WHD02524	, 2400 × 800 × h2200mm, "HD-2400S"	

**(B) Air Curtain Air Flow-type, PVC Wet Scrubber Fume Hood**

Model	Specs	Ea. Price, ₩
DH.WHD02615	Fume Hood, 230V, 1500 × 800 × h2200mm, "HD-C1500S"	
DH.WHD02618	, 1800 × 800 × h2200mm, "HD-C1800S"	
DH.WHD02621	, 2100 × 800 × h2200mm, "HD-C2100S"	
DH.WHD02624	, 2400 × 800 × h2200mm, "HD-C2400S"	

**Optional Blowers**

Model	Specs	Ea. Price, ₩
DH.WHD10011	External Blower, "HDBL0011"	

- ※ Custom-Made Fume Hood : Wide Variety of Material for User Selection.
- ※ Note! Freight and Installation Charges Separately.

# Furnace

<b>Furnaces, Muffle, 1000 °C</b> .....	P. 71
<b>, Muffle, 1200 °C</b> .....	P. 72
<b>, Muffle, High Temperature, 1450 °C</b> .....	P. 73
<b>, Muffle, High Temperature, 1650 °C</b> .....	P. 74
<b>, Tube, 1000 °C</b> .....	P. 75
<b>, Zirconia Sintering, 1600-/1550-/1500-/1450- °C</b> ...	P. 75



1000 °C Muffle Furnace, "FX-14"



1,600-/1,550-/1,500-/1,450- °C  
Zirconia Furnace, "FH-Z2"



1450 °C High-Temp. Muffle Furnace,  
"FSC-2"



1450 °C High-Temp. Muffle Furnace,  
"FSC-5", "FSC-11", "FSC-22"



1000 °C Tube Furnace, "FT-860"

Cat. No	Description	Articles
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DAIHAN-brand® 1,000 °C Programmable Digital Muffle Furnaces “FX”, Exposed Heating Elements-type with Digital PID Control, Short Heat-up Time, Ceramic Fiber, 4-Side Heating, with Ceramic Fiber Plate, 3~63 Lit  
 디지털 전기로, 디지털 PID 컨트롤 시스템, 4면 가열 방식, 히터 노출형



2-Year Warranty

1000 °C Digital Muffle Furnace, Exposed Heating Elements-type “FX-14”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- Digital PID Programmable Controller : 4 Patterns with 10 Segments
- \* Designed for Ash-Determinations, Enameling, Fusions, Precipitate Drying
- \* User's Self-Compensation Function for Temperature (± 50 °C)    \* Resolution : 1 °C, 1min
- \* Safety Switch for Door Opening    \* Ceramic Fiber exposed Heating Wire, 4-Side Heating

Specifications & Ordering information

Spec.	Model	“FX-03”	“FX-05”	“FX-12”	“FX-14”	“FX-27”	“FX-63”
Temp. Range		300 °C ~ 1000 °C					
Capacity		3 Lit.	4.5 Lit.	12 Lit.	14 Lit.	27 Lit.	63 Lit.
Heater		Kanthal A1, Expose Wire Heating Elements, 4-Side Heating					
Thermocouple		K-type Thermocouple					
Heating Power		1.6 kW	1.7 kW	3.3 kW	4.0 kW	4.6 kW	9 kW
Required time to be reached 800 °C		16 min		20 min		23 min	
Timer & Alarm		99hr 59min (Continuous run), Error status & Timer-end					
Display		Digital LCD with Back-Light Function					
Controller		Digital PID Controller with Jog-Dial Switch (Turn+Push)					
Program Function		4 Patterns with 10 Segments					
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection Safety Switch for Door Opening					
Material		Ceramic Fiber with Heating Wire-Internal, Powder Coated steel-External Ceramic Fiber-Insulation					
Dimension (w × d × h)	Internal (cm)	13 × 25 × 9	15 × 30 × 10	20 × 30 × 20	25 × 35 × 16	30 × 30 × 30	40 × 40 × 40
	External (cm)	41 × 48 × 53	44 × 53 × 55	50 × 55 × 66	55 × 59 × 62	60 × 59 × 76	100 × 75 × 95
Packing Size (w × d × h) (cm)		63 × 54 × 77	68 × 57 × 78	70 × 63 × 89	74 × 68 × 85	74 × 73 × 99	116 × 90 × 110
Gross Weight		47 kg	54 kg	59 kg	73 kg	83 kg	225 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz		1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase			

Cat. No.	230V	DH.WF21.03	DH.WF21.05	DH.WF21.12	DH.WF21.14	DH.WF21.27	DH.WF21.63
	120V	DH.WF20.03	DH.WF20.05	DH.WF20.12	DH.WF20.14	DH.WF20.27	DH.WF20.63
	3Phase	-	-	DH.WF23.12	DH.WF23.14	DH.WF23.27	DH.WF23.63

Price, Each. ₩    \* Other Specifications are available upon Customer's Request.    ※ 운임 약 ₩ 20,000 별도!



2-Year Warranty

1000 °C Digital Muffle Furnace, Exposed Heating Elements-type “FX-63”

Spare Ceramic Fiber Plates

- DH.WF211.03 (1) Ceramic Fiber Plate, 120×215mm, “FS1103” for 3Lit.
- DH.WF211.05 , 140×265mm, “FS1105” for 4.5Lit.
- DH.WF211.12 , 190×265mm, “FS1112” for 12Lit.
- DH.WF211.14 , 240×310mm, “FS1114” for 14Lit.
- DH.WF211.27 , 280×280mm, “FS1127” for 27Lit.
- DH.WF211.63 , 400×400mm, “FS1163” for 63Lit.

Ea. Price, ₩

Optional Gloves

- AS1.7896.01 (2) Gloves, Heat Resistant, 1000 °C, 1Pair, L450 mm
- AS1.7896.02 , L350 mm

Ea. Price, ₩



Inner Chamber of Exposed Heating Elements-type



(1) Ceramic Fiber Plate (Included)



(2) Heat-resistant Gloves

DAIHAN-brand® 1,200°C Programmable Digital Muffle Furnaces “FHX”, Exposed Heating Elements-type with Digital PID Control, Short Heat-up Time, Ceramic Fiber, 4-Side Heating, with Ceramic Fiber Plate, 3~63 Lit 디지털 전기로, 디지털 PID 컨트롤 시스템, 4면 가열 방식, 히터 노출형



Jog-Shuttle with Push Button

2-Year Warranty

1200°C Digital Muffle Furnace, Exposed Heating Elements-type “FHX-14”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Jog-Dial Control System and Digital LCD with Back-Light Function
- Digital PID Programmable Controller : 4 Patterns with 10 Segments

- \* Digital Jog-Dial Control System
- \* Ceramic Fiber Exposed Heating Wire, 4-Side Heating
- \* User's Self-Compensation Function for Temperature (± 50°C)
- \* Included Ceramic Fiber Plate
- \* Safety Switch for Door Opening
- \* Resolution : 1°C, 1min

Specifications & Ordering information

Spec.	Model	“FHX-03”	“FHX-05”	“FHX-12”	“FHX-14”	“FHX-27”	“FHX-63”
Temp. Range		300°C ~ 1200°C					
Capacity		3 Lit.	4.5 Lit.	12 Lit.	14 Lit.	27 Lit.	63 Lit.
Heater		Kanthal A1, Expose Wire Heating Elements, 4-Side Heating					
Thermocouple		K-type Thermocouple					
Heating Power		1.6 kW	1.7 kW	3.3 kW	4.0 kW	4.6 kW	9 kW
Required time to be reached 800°C		16 min		20 min		23 min	
Timer & Alarm		99hr 59min (Continuous run), Error status & Timer-end					
Display		Digital LCD with Back-Light Function					
Controller		Digital PID Controller with Jog-Dial Switch (Turn+Push)					
Program Function		4 Patterns with 10 Segments					
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection Safety Switch for Door Opening					
Material		Ceramic Fiber with Heating Wire-Internal, Powder Coated steel-External Ceramic Fiber-Insulation					
Dimension (w×d×h)	Internal (cm)	13×25×9	15×30×10	20×30×20	25×35×16	30×30×30	40×40×40
	External (cm)	41×48×53	44×53×55	50×55×66	55×59×62	60×59×76	100×75×95
Packing Size(w×d×h) (cm)		63×54×77	68×57×78	70×63×89	74×68×85	74×73×99	116×90×110
Gross Weight		47 kg	54 kg	59 kg	73 kg	83 kg	225 kg
Electrical Reqt.s.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz		1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase			
Cat. No.	230V	DH.WFH22.03	DH.WFH22.05	DH.WFH22.12	DH.WFH22.14	DH.WFH22.27	DH.WFH22.63
	120V	DH.WFH20.03	DH.WFH20.05	DH.WFH20.12	DH.WFH20.14	DH.WFH20.27	DH.WFH20.63
	3Phase	-	-	DH.WFH23.12	DH.WFH23.14	DH.WFH23.27	DH.WFH23.63
Price, Each. ₩							

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 20,000 별도!



2-Year Warranty

1200°C Digital Muffle Furnace, Exposed Heating Elements-type “FHX-63”

Spare Ceramic Fiber Plates

- DH.WF211.03 (1) Ceramic Fiber Plate, 120×215mm, “FS1103” for 3Lit.
- DH.WF211.05 , 140×265mm, “FS1105” for 4.5Lit.
- DH.WF211.12 , 190×265mm, “FS1112” for 12Lit.
- DH.WF211.14 , 240×310mm, “FS1114” for 14Lit.
- DH.WF211.27 , 280×280mm, “FS1127” for 27Lit.
- DH.WF211.63 , 400×400mm, “FS1163” for 63Lit.

Ea. Price, ₩

Optional Gloves

- AS1.7896.01 (2) Gloves, Heat Resistant, 1000°C, 1Pair, L450 mm
- AS1.7896.02 , L350 mm

Ea. Price, ₩



Inner Chamber of Exposed Heating Elements-type



(1) Ceramic Fiber Plate (Included)



(2) Heat-resistant Gloves



Cat. No	Description	Articles
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**“WiseTherm® FSC” 1,450°C Programmable High-Temp. Muffle Furnaces, Exposed Heating Elements-type** with SIC Heater, Digital PID Control, Short Heat-up Time, 2-Side Heating, without Ceramic Fiber Plate, 1.9~22 Lit  
 고온 디지털 전기로, 디지털 PID 컨트롤 시스템, 2면 가열 방식



**2-Year Warranty**

1450°C Programmable High Temp. Muffle Furnace, 1.9Lit, “WiseTherm® FSC-2”



**2-Year Warranty**

1450°C Programmable High Temp. Muffle Furnace, “WiseTherm® FSC-5”, “WiseTherm® FSC-11”, “WiseTherm® FSC-22”



Inner Chamber of Exposed Heating Elements-type

- Made in Korea    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital PID Programmable Controller : 2 Patterns with 10 Segments
- Digital LCD Display    ■ High Quality Insulation : Ceramic Fiber Board
- SIC(Silicon Carbide) Heater

- \* Safety Door Lock System
- \* Ceramic Fiber Exposed Heating Wire, 2-Side Heating
- \* Excluding Ceramic Fiber Plate
- \* Safety Switch for Door Opening

**Specifications & Ordering information**

Spec.	Model	WiseTherm® FSC-2	WiseTherm® FSC-5	WiseTherm® FSC-11	WiseTherm® FSC-22
Temp. Range		500°C ~ 1450°C			
Capacity		1.9 Lit.	4.5 Lit.	11 Lit.	22 Lit.
Heater		SIC Heater, 2-Side Heating			
Thermocouple		R-type Thermocouple			
Heating Power		2 kW	3.3 kW	7.7 kW	9.6 kW
Required time to be reached 800°C		30 min			
Timer & Alarm		99hr 59min or Continuous run			
Display		Digital LCD Display			
Controller		Digital PID Controller, UP35A, SCR Power Controller with Push Button			
Program Function		2 Patterns with 10 Segments			
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection, Safety Switch for Door Opening		Over-Temp./-Current protection, Sensor Error Detection	
	Material	Ceramic Fiber board with SIC Heater-Internal, Powder Coated steel-External, Ceramic Fiber-Insulation			
Dimension (w × d × h)	Internal (mm)	120 × 130 × 120	150 × 200 × 150	200 × 270 × 200	250 × 350 × 250
	External (mm)	440 × 482 × 700	820 × 555 × 655	870 × 625 × 715	920 × 705 × 785
Packing Size(w × d × h) (cm)		680 × 540 × 940	1350 × 600 × 890	1400 × 770 × 950	1450 × 900 × 1100
Gross Weight		57 kg	70 kg	102 kg	132 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz, without Cord and Plug			
Cat. No.	230V	DH.FSC02002	DH.FSC02005	DH.FSC02011	DH.FSC02022
	120V	DH.FSC01002	DH.FSC01005	DH.FSC01011	DH.FSC01022
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 20,000 별도!

**Optional Ceramic Fiber Plates**

- DH.FSC2002 (1) Ceramic Fiber Plate, w110 × d120mm, for 1.9Lit.
- DH.FSC2005 , w140 × d180mm, for 4.5Lit.
- DH.FSC2011 , w190 × d250mm, for 11Lit.
- DH.FSC2022 , w240 × d330mm, for 22Lit.

Ea. Price, ₩

**Optional Gloves**

- AS1.7896.01 (2) Gloves, Heat Resistant, 1000°C, 1Pair, L450 mm
- AS1.7896.02 , L350 mm

Ea. Price, ₩



(1) Ceramic Fiber Plate



(2) Heat-resistant Gloves

**“WiseTherm® FSK” 1,650°C Programmable High-Temp. Muffle Furnaces, Exposed Heating Elements-type**  
 with MoSi2 Heater, Digital PID Control, Short Heat-up Time, 2-Side Heating, without Ceramic Fiber Plate, 1.9~11 Lit  
 고온 디지털 전기로, 디지털 PID 컨트롤 시스템, 2면 가열 방식



**2-Year Warranty**

1650°C Programmable High Temp. Muffle Furnace, 1.9Lit, “WiseTherm® FSK-2”



**2-Year Warranty**

1650°C Programmable High Temp. Muffle Furnace, “WiseTherm® FSK-5”, “WiseTherm® FSK-11”

- Made in Korea      ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital PID Programmable Controller : 2 Patterns with 10 Segments
- Digital LCD Display      ■ High Quality Insulation : Ceramic Fiber Board
- \* Safety Door Lock System      \* Excluding Ceramic Fiber Plate
- \* Ceramic Fiber Exposed Heating Wire, 2-Side Heating      \* Safety Switch for Door Opening

**Specifications & Ordering information**

Spec.	Model	WiseTherm® FSK-2	WiseTherm® FSK-5	WiseTherm® FSK-11
Temp. Range		600°C ~ 1650°C		
Capacity		1.9 Lit.	4.5 Lit.	11 Lit.
Heater		MoSi2 Heater, 2-Side Heating		
Thermocouple		B-type Thermocouple		
Heating Power		1.3 kW	2.9 kW	6.6 kW
Required time to be reached 800°C		40 min		
Timer & Alarm		99hr 59min or Continuous run		
Display		Digital LCD Display		
Controller		Digital PID Controller, UP35A, SCR Power Controller with Push Button		
Program Function		2 Patterns with 10 Segments		
Safety Circuit		Over-Temp./-Current protection, Sensor Error Detection, Safety Switch for Door Opening	Over-Temp./-Current protection, Sensor Error Detection	
Material		Ceramic Fiber board with MOSi2 Heater-Internal, Powder Coated steel-External, Ceramic Fiber-Insulation		
Dimension (w×d×h)	Internal (mm)	120×130×120	150×200×150	200×270×200
	External (mm)	440×482×700	900×600×695	980×670×765
Packing Size(w×d×h) (cm)		680×540×940	1430×640×930	1510×810×1000
Gross Weight		72 kg	150 kg	186 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz, without Cord and Plug		
Cat. No.	230V	DH.FSK02002	DH.FSK02005	DH.FSK02011
	120V	DH.FSK01002	DH.FSK01005	DH.FSK01011
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.      ※ 운임 약 ₩ 20,000 별도!

**Optional Ceramic Fiber Plates**

- DH.FSK2002 (1) Ceramic Fiber Plate, w110×d120mm, for 1.9Lit.
- DH.FSK2005 , w140×d180mm, for 4.5Lit.
- DH.FSK2011 , w190×d250mm, for 11Lit.

Ea. Price, ₩

**Optional Gloves**

- AS1.7896.01 (2) Gloves, Heat Resistant, 1000°C, 1Pair, L450 mm
- AS1.7896.02 , L350 mm

Ea. Price, ₩



Inner Chamber of Exposed Heating Elements-type



(1) Ceramic Fiber Plate



(2) Heat-resistant Gloves

Cat. No	Description	Articles
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DAIHAN-brand® Programmable Tube Furnaces “FT-series”, Embedded Heating Elements-type, 1000 °C with Digital PID Programmable Control, 1- or 3-Heating Zone,  $\phi 3 \sim \phi 14$ cm Tubes, 1,000 °C 프로그램식 튜브 전기로



(1) Programmable Tube Furnace, 1 Heating Zone “FT-860”



Side Figure of “FT-860”



(a) 1000 °C Heat-resistant Gloves (Optional)

- Made in Korea ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System

\* Digital PID Programmable Controller : 3 Patterns with 16 Segments \* Resolution : 1 °C, 1min  
 \* Designed for Ash-Determinations, Horizontal Application, Protective Gas Atmosphere  
 \* Programmable Timer : 99hr 59min \* Available Order Various Size Tubes, Without Working Tube

Specifications & Ordering information

Model	“FT-series” 1- or 3-Heating Zone						
Temp. Range & Heater	300 °C ~ 1000 °C, Kantal A1, Embedded Wire Heating Elements						
Thermocouple & Display	K-type Thermocouple, LED						
Safety Circuit	Over-Temp./-Current protection, Sensor Error Detection						
Material	Ceramic Fiber with Heating Wire-Internal, Powder Coated steel-External						
(1) 1Heating Zone Models	“FT-830”	“FT-860”	“FT-1230”	“FT-1260”	“FT-1630”	“FT-1660”	
Heating Zone	1 × Heating Zone						
Available Tube Size(cm)	$\phi 8 \times L30$	$\phi 8 \times L60$	$\phi 12 \times L30$	$\phi 12 \times L60$	$\phi 16 \times L30$	$\phi 16 \times L60$	
Heating Power	1.8 kW	3.2 kW	2.2 kW	4.5 kW	3.2 kW	6.2 kW	
Heat-up Time(to 800 °C)	17 min	20 min	18 min	22 min	20 min	25 min	
Dimension (w × d × h cm)	40 × 28 × 44	70 × 28 × 44	40 × 34 × 50	70 × 34 × 50	40 × 40 × 56	70 × 40 × 56	
Controller	1 × Programmable PID Controller : 3 Patterns 16 Segments						
Cat. No.	230V	DH.WFT12.0830	DH.WFT12.0860	DH.WFT12.1230	DH.WFT12.1260	DH.WFT12.1630	DH.WFT12.1660
	120V	DH.WFT11.0830	DH.WFT11.0860	DH.WFT11.1230	DH.WFT11.1260	DH.WFT11.1630	DH.WFT11.1660
Price, Each. ₩							
(2) 3Heating Zone Models	“FT-3860”		“FT-31260”		“FT-31660”		
Heating Zone	3 × Heating Zone						
Available Tube Size(cm)	$\phi 8 \times (3 \times L20)$ cm		$\phi 12 \times (3 \times L20)$ cm		$\phi 16 \times (3 \times L20)$ cm		
Heating Power	3.3 kW		4.8 kW		6.6 kW		
Heat-up Time(to 800 °C)	20 min		22 min		25 min		
Dimension (w × d × h cm)	70 × 28 × h44 cm		70 × 34 × h50 cm		70 × 40 × h56 cm		
Controller	Independent 3 × Programmable PID Controller : 3 Patterns 16 Segments						
Cat. No.	230V	DH.WFT12.860.3		DH.WFT12.1260.3		DH.WFT12.1660.3	
	120V	DH.WFT11.860.3		DH.WFT11.1260.3		DH.WFT11.1660.3	
Price, Each. ₩							

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 20,000 별도!  
 \* Tubes Size & Other Specifications are available upon Customer's Request

Optional Gloves

- AS1.7896.01 (a) Gloves, Heat Resistant, 1000 °C, 1Pair, L450 mm
- AS1.7896.02 , L350 mm

Ea. Price, ₩

DAIHAN-brand® Zirconia Sintering Furnace “FH-Z2”, 1,600-/1,550-/1,500-/1,450-°C, 5-/10-/14-hours, 2Lit with PID Control, LCD display, 2 Trays, Heating Elements 4-pieces, 지르코니아 소결 전기로, 개별 분리형



Zirconia Furnace “FH-Z2”

- Made in Korea ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System

\* Independently Super Kanthal Heating Elements \* Durability Superior Burning Chamber  
 \* Built in Automatic Voltage Regulator(AVR)

Model	“FH-Z2”
Temperature Range	1,600-/1,550-/1,500-/1,450- °C
Capacity	2Lit.(2 Trays)
Timer	5-/10-/14-Hours
Heating Elements / Temp. Sensor	Independently 4-Pieces(Mos12) / B-type Temp. Sensor
Material / Insulation	Powder-coated Steel / Ceramic & BTU-board
Dimension / Weight	380 × 510 × 943 mm / 80 kg
Electric Reqts. / Power Consumption	1 Phase AC 230V, 50/60Hz / 2 kW
Cat. No.	230V
Price, Each. ₩	DH.FurZ0002

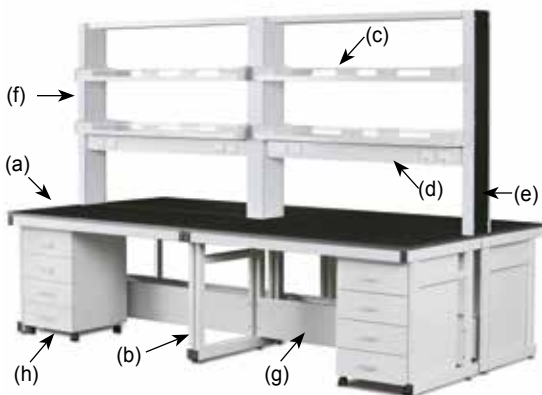
\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 20,000 별도!

**DAIHAN-brand® Laboratory Assembly Furniture, High Quality Steel-Frame/-Side Panel and Phenol Work Top, SUS Bolted Joint with Transfer Cabinet, Utility Box, 실험실용 조립식 실험대, 고품질 스틸 프레임, 내열성/내충격성/내화학성 페놀 상판, 볼트식 결합 **NEW****

- **Made in Korea**
- **Easy to Assemble with Stainless-steel(SUS 304) Bolts and Stable**
- **Phenol Work Top : Good for Heat-/Shock-Resistant, Excellent Chemical-Resistant(Acetic Acid, Alcohol, Hydrochloric Acid, Sulfuric Acid, Organic Chemicals, Base, Biological Stains, Salt, Solvent, etc.)**
- **High Quality Steel-Frame(60×40 & 50×30mm), Side-/Back-Steel Panel(t1.6mm)**
- **The Work Top are made of Melamine, Granite, Phenol(Color Choices Available : Black or Gray)**
- **You can Choose the Materials of the Work Top according to Usage and Change the Height of Table.**

**Features of Work Top Materials**

- \* Phenol(Phenolic Laminate) : Excellent for Heat-/ Chemical-/ Shock-Resistance, Strong Plate Consist of Melamine-resin and Phenolic-resin, Surface Strengthening through Chemical and Chemical Treatment, Good for All Purpose Laboratory.
- \* Melamine : Good for Chemical and Heat-Resistance. The Surface is Resistant against Scratches and Abrasion. Suitable for Analytical Laboratory.
- \* Granite : Excellent for Heat and Shock-Resistance. Suitable for Special Laboratory like Instrumental Analysis Laboratory.



**Structures and Features of Assembly Furniture**

- \* (a) Phenol Work Top : Good for Heat-/Shock-Resistant Phenolic Laminate(t20mm), Excellent Chemical-Resistant (Acetic Acid, Alcohol, Hydrochloric Acid, Sulfuric Acid, Organic Chemicals, Base, Biological Stains, Salt, Solvent, etc.), Color Choices Available : Black or Gray
- \* (b) Frame : The Most Stable Steel Under Construction, Suitable for Long-term Loading of Heavy Analysis Equipment, High Quality Steel, 60×40mm & 50×30mm
- \* (c) Shelves : Shelf Fall Prevention Design, Movable Up and Down, Aluminum Frame, PVC Shelf Plate(t8mm), Epoxy Powder Coating Steel Shelf Supporter(t1.6mm)
- \* (d) Utility Box : Electrical safety design, Attachment Emergency Breaker and Switch Box for Each Line, Steel Plate(t1.6mm), Cover type Power Outlet(220V)
- \* (e) Reagent Structure : Al Frame & Steel Plate(1.6mm), Columns bend(Edge Rounding) to Secure LAN Line, Electricity, Gas, Water etc., Maintenance and Safety Enhancement
- \* (f) Reagent Front / Rear Frame : Anodizing and Electro-deposition Treatment on Environmentally Friendly Aluminum Surface to Enhance Strength, Abrasion-Resistance, Corrosion-Resistance and Electrical insulation
- \* (g) Modular System Back Panel
  - Easily Removable and Easy to Follow and Check (Scalability)
  - Eco-friendly Epoxy Powder Coating to Prevent Scratches and Corrosion
  - Using Steel Plate t1.6mm
- \* (h) Transfer Cabinet : Particle Board Plate(t15/18mm) / Al-handle / Brake Caster / 450×500×h700mm, Basic 4-stage(2-/3-stage possible)
- \* Attach Inner Support : Use of Steel Pipe for Loaded Area and Flexural Reinforcement
- \* Sink Tables : We can Offer DAIHAN Custom Sink Table, for which you can Specify the Specification

**※ Sequence of Assemble the Table**

Package : Total 4 Box including Transfer Cabinet (Work Top / Frame / Panel / Transfer Cabinet)

1. Connect the Work Top Frame and Right Leg Frame with SUS Bolts using a Screwdriver
2. Connect the Work Top Frame and Left Leg Frame with SUS Bolts using a Screwdriver
3. Connect the Bottom Panel and the Left Leg Frame with SUS Bolts using a Screwdriver
4. Connect the Bottom Panel and the Right Leg Frame with SUS Bolts using a Screwdriver
5. Place the Work Top on the Completed Lower Frame
6. Finished Assembly
7. Place the Complete Assembly Transfer Cabinet in the desired location

WFE401 Series, w1800mm

Cat. No	Description	Articles
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**DAIHAN-brand® Laboratory Assembly Center Tables, High Quality Steel-Frame/-Side Panel and Phenol Work Top, SUS Bolted Joint with Transfer Cabinet, Utility Box, 실험실용 조립식 중앙 실험대, 고품질 스틸 프레임, 내열성/내충격성/내화학성 페놀 상판, 볼트식 결합 NEW**

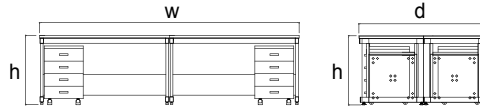
- **Made in Korea**
- **Easy to Assemble with Stainless-steel(SUS 304) Bolts and Stable**
- **Phenol Work Top : Good for Heat-/Shock-Resistant, Excellent Chemical-Resistant(Acetic Acid, Alcohol, Hydrochloric Acid, Sulfuric Acid, Organic Chemicals, Base, Biological Stains, Salt, Solvent, etc.)**
- **High Quality Steel-Frame(60×40 & 50×30mm), Side-/Back-Steel Panel(t1.6mm)**
- \* The Most Stable Steel Under Construction, Suitable for Long-term Loading of Heavy Analysis Equipment (60×40 & 50×30mm)
- \* Chemical-resistance Phenolic Laminate Work Top, t20mm (Color Choices Available : Black or Gray)
- \* Could be Change the Work Top, Height of Table on User Applications. Please Call to specify the Work Top.

**Assembly Basic Center Tables, with Transfer Cabinet, Steel-Frame/-Side Panel & Phenol Work Top**

- \* Work Top : Phenol Plate, t20mm
- \* Back Panel : Steel Plate, t1.6mm
- \* Frame : Steel, 60×40 & 50×30mm



(1) WFE301 Series, w2400mm



- DH.WFE3011 (1) Center Table, 1500×1500×h800mm, with Cabinet(2ea)
- DH.WFE3012 , 1800×1500×h800mm, with Cabinet(2ea)
- DH.WFE3013 , 2100×1500×h800mm, with Cabinet(4ea)
- DH.WFE3014 , 2400×1500×h800mm, with Cabinet(4ea)
- DH.WFE3015 , 3000×1500×h800mm, with Cabinet(4ea)
- DH.WFE3016 , 3600×1500×h800mm, with Cabinet(4ea)

- ※ Assembly Details : See Page 76
- ※ **Note! Freight and Installation Charges Separately.**

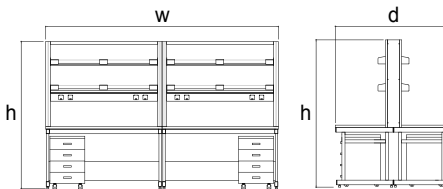
Ea.	Price, ₩

**Assembly Shelf-type Center Tables, with Transfer Cabinet/Shelves, Steel-Frame/-Side Panel & Phenol Work Top**

- \* Work Top : Phenol Plate, t20mm
- \* Back Panel : Steel Plate, t1.6mm
- \* Frame : Steel, 60×40 & 50×30mm
- \* Size : d1500×h800/1900mm



(2) WFE302 Series, w2400mm



- DH.WFE3021 (2) Center Table, w1500×h800/1900mm, with Cabinet(2ea) / Shelves
- DH.WFE3022 , w1800×h800/1900mm, with Cabinet(2ea) / Shelves
- DH.WFE3023 , w2100×h800/1900mm, with Cabinet(4ea) / Shelves
- DH.WFE3024 , w2400×h800/1900mm, with Cabinet(4ea) / Shelves
- DH.WFE3025 , w3000×h800/1900mm, with Cabinet(4ea) / Shelves
- DH.WFE3026 , w3600×h800/1900mm, with Cabinet(4ea) / Shelves

- ※ Assembly Details : See Page 76
- ※ **Note! Freight and Installation Charges Separately.**

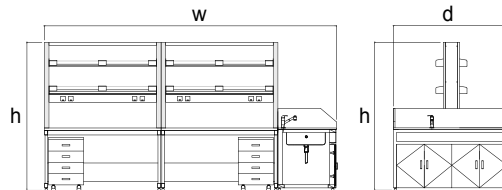
Ea.	Price, ₩

**Assembly Comprehensive Center Tables, with Cabinet/Sink Table/Shelves, Steel-Frame/-Side Panel & Phenol Work Top**

- \* Work Top : Phenol Plate, t20mm
- \* Sink Top : Phenol Plate, t20mm
- \* Back Panel : Steel Plate, t1.6mm
- \* Water Guard : 3-sided Tempered Glass
- \* Frame : Steel, 60×40 & 50×30mm
- \* with Cabinet(4ea) / Shelves / Sink Table
- \* Size : d1500×h800/2000mm
- \* Sink Bowl : PP(Polypropylene)



(3) WFE303 Series, w3150mm



- DH.WFE3031 (3) Center Table, w2250×h1900mm, with Shelves / Sink Table
- DH.WFE3032 , w2550×h1900mm, with Shelves / Sink Table
- DH.WFE3033 , w2850×h1900mm, with Shelves / Sink Table
- DH.WFE3034 , w3150×h1900mm, with Shelves / Sink Table
- DH.WFE3035 , w3750×h1900mm, with Shelves / Sink Table
- DH.WFE3036 , w4350×h1900mm, with Shelves / Sink Table

- ※ Assembly Details : See Page 76
- ※ **Note! Freight and Installation Charges Separately.**

Ea.	Price, ₩

DAIHAN-brand® Laboratory Assembly Side Tables, High Quality Steel-Frame/-Side Panel and Phenol Work Top, SUS Bolted Joint with Transfer Cabinet, Utility Box, 실험실용 조립식 벽면 실험대, 고품질 스틸 프레임, 내열성/내충격성/내화학성 페놀 상판, 볼트식 결합 **NEW**

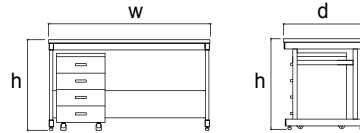
- Made in Korea
- Easy to Assemble with Stainless-steel(SUS 304) Bolts and Stable
- Phenol Work Top : Good for Heat-/Shock-Resistant, Excellent Chemical-Resistant(Acetic Acid, Alcohol, Hydrochloric Acid, Sulfuric Acid, Organic Chemicals, Base, Biological Stains, Salt, Solvent, etc.)
- High Quality Steel-Frame, Side-/Back-Steel Panel(t1.6mm)
- \* The Most Stable Steel Under Construction, Suitable for Long-term Loading of Heavy Analysis Equipment (60×40mm & 50×30mm)
- \* Chemical-Resistance Phenolic Laminate Work Top, t20mm (Black or Gray)
- \* Could be Change the Work Top, Height of Table on User Applications.

Assembly Basic Side Tables, with Transfer Cabinet, Steel-Frame/-Side Panel & Phenol Work Top

- \* Work Top : Phenol Plate, t20mm
- \* Back Panel : Steel Plate, t1.6mm
- \* Frame : Steel, 60×40 & 50×30mm



(1) WFE401 Series, w1800mm



- DH.WFE4011 (1) Side Table, 1200×750×h800mm, with Cabinet(1ea)
- DH.WFE4012 , 1500×750×h800mm, with Cabinet(1ea)
- DH.WFE4013 , 1800×750×h800mm, with Cabinet(1ea)
- DH.WFE4014 , 2100×750×h800mm, with Cabinet(2ea)
- DH.WFE4015 , 2400×750×h800mm, with Cabinet(2ea)

- \* Assembly Details : See Page 76
- \* **Note! Freight and Installation Charges Separately.**

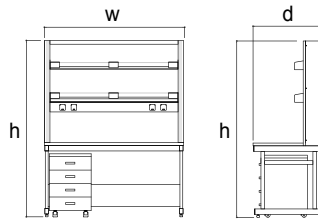
Ea.	Price, ₩

Assembly Shelf-type Side Tables, with Transfer Cabinet/Shelves, Steel-Frame/-Side Panel & Phenol Work Top

- \* Work Top : Phenol Plate, t20mm
- \* Back Panel : Steel Plate, t1.6mm
- \* Shelves : PVC Shelf Plate(t8mm) & Steel Shelf Supporter(t1.6mm)



(2) WFE402 Series, w1800mm



- DH.WFE4021 (2) Side Table, 1200×750×h800/1900mm, with Cabinet / Shelves
- DH.WFE4022 , 1500×750×h800/1900mm, with Cabinet / Shelves
- DH.WFE4023 , 1800×750×h800/1900mm, with Cabinet / Shelves
- DH.WFE4024 , 2100×750×h800/1900mm, with Cabinet / Shelves
- DH.WFE4025 , 2400×750×h800/1900mm, with Cabinet / Shelves

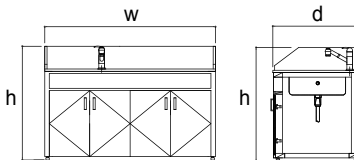
- \* Assembly Details : See Page 76
- \* **Note! Freight and Installation Charges Separately.**

Ea.	Price, ₩

DAIHAN-brand® Laboratory Sink Tables, High Quality Steel-Frame/-Side Panel, Phenol Sink Top, PP Sink Bowl, Glass Water Guard with ① Cold & Hot Water Mixed Faucet or ② 3-mouth Chemical Faucet, 실험실용 싱크대, 3면 강화유리, 재질 변경 가능 **NEW**



- \* Available to Select the Faucet (① Cold & Hot Water Mixed Faucet or ② 3-mouth Chemical Faucet)
- \* Sink Top : Chemical-resistance Phenolic Laminate t20mm
- \* Sink Bowl : PP(Selectable Material)
- \* Water Guard : Composed of 3-sided Tempered Glass t8mm(Selectable Material)



- DH.WFE4031 Sink Table, Laboratory, 900×750×h1050mm
- DH.WFE4032 , 1200×750×h1050mm
- DH.WFE4033 , 1500×750×h1050mm
- DH.WFE4034 , 1800×750×h1050mm

Selectable Material of Custom-Made Sink Table

	Material			
(a) Sink Top	Phenol	P.P	PVC	SUS
(b) Sink Bowl	-	P.P	PVC	SUS
(c) Water Guard	Glass	P.C	PVC	PVC

Ea.	Price, ₩

Welcome! Custom-Made Sink Table!!

We can Offer DAIHAN Custom Sink Table, for which you can Specify the Specification

Optional Eye-washer

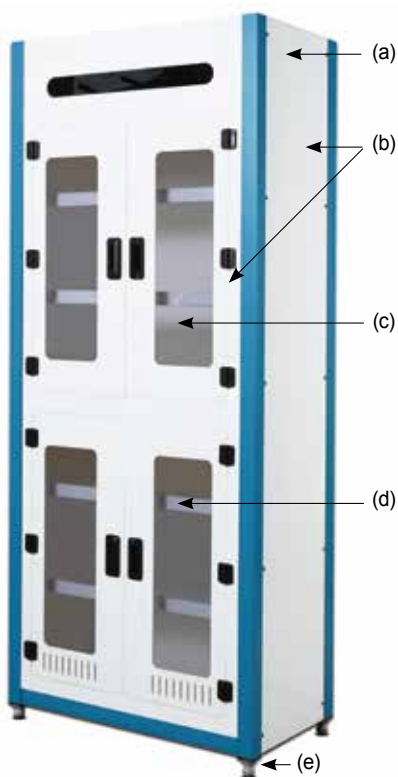
- DH.WFE4040 (d) Option ; Eye-washer, Single Nozzle, Table Mounted, L1.4m

- \* **Note! Freight and Installation Charges Separately.**

Ea.	Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® Ducted Safety Cabinets, with Clear PVC-/Safety Glass-Door Window, Built-in PVC/Al-buttruss with Internal & External PVC/Steel Plate, Duct & Pipe Silicon Sealing, Gas Leak Completely Blocked, 닥트형 약품기구 보관장, 환기형**



(1) PVC Safety Cabinets, "FGC-2001"

- Made in Korea      ■ Durable, Hazardous Chemical Gas Remove.
- Internal/External PVC Sheet/Steel Plate Good Resistance of Chemicals & Acid.
- Clear PVC-/Tempered Safety Glass-Window  
(Custom-Made Safety Cabinet : Wide Variety of Material for User Selection)

- \* Discharging Toxic Gas Generated During Storage Various Reagents to the Outside through the Duct Structure
- \* Effective in Maintaining a Comfortable indoor to Prevent the Laboratory Room Air being Polluted.
- \* It may Create a Space to Treat the Harmful Substances in the Human Body Safely and Comfortably
- \* Process Pipe & Duct Silicon Sealing to Completely Block the Gas Leakage to the Outside
- \* Optional Blower User Selection : External-model(Stainless steel-/ Steel-/ PVC-/ PP-Blower) & Internal-model(Steel-/ PVC-/ PP-Blower)
- \* Optional 24-hour Timer : Automatically Adjustable Exhaust attached to a Safety Cabinet

**(1) Ducted PVC Safety Cabinet, Clear PVC Door Window**

- Internal/External PVC Material Resistance of Chemicals and Acids
- Built-in PVC-buttruss      ■ 1-Room, 4-Doors, 5-Shelfs

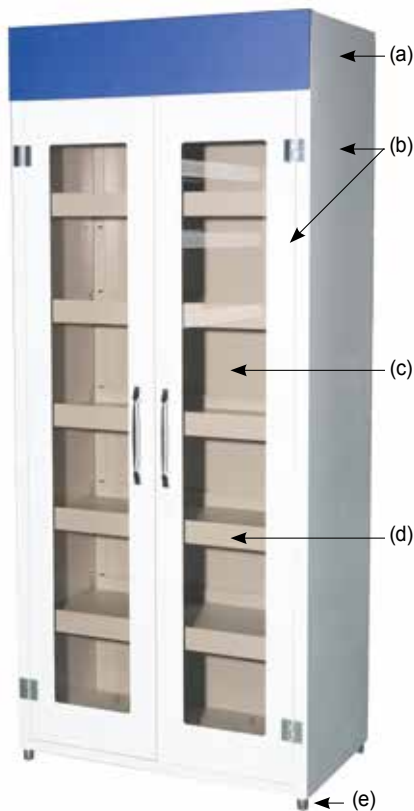
- \* Safe Storage of Chemicals and Acids
- \* Door Window : Use the Clear PVC Transparency and Protect the Experimenter Against the Risk of Explosion.
- \* Basic Materials of Construction : Internal(PVC), External(PVC), 5-stage a Fixed Shelf(PVC)

**Specifications & Ordering information**

Spec.	Model	"FGC-2001"	"FGC-2003"	"FGC-2005"
(a) Duct size		φ 100mm / φ 150mm		
(b) Body & Door Material		PVC(Extrusion Moulding)		
(c) Door Window Material		Clear PVC		
(d) Shelf Material		PVC (5 Fixed-type)		
(e) Foot Material		PVC(Height Adjustable up to 30mm)		
Dimension(w × d × h)		900 × 500 × h2100mm	1200 × 500 × h2100mm	1500 × 500 × h2100mm
Power Supply		220V / 60Hz		
Cat. No.		DH.FGC2001	DH.FGC2003	DH.FGC2005
Price, Ea. ₩				

\* Other Specifications are available upon Customer's Request.

※ Note! Freight and Installation Charges Separately.



(2) Steel Safety Cabinets, "FGC-900"

**(2) Ducted Steel Safety Cabinet, Tempered Safety Glass Door Window**

- Internal/External Steel plate with Powder finished for Resistance of Chemicals
- Built-in Particle Board-plate & Al-buttruss      ■ 1-Room, 2-Doors, 5-Shelfs

- \* Safe Storage of Chemicals
- \* Use Tempered Safety Glass Protects the Experimenter Against the Risk of Explosion.
- \* Basic Materials of Construction : Internal(Steel), External(Steel), 5-stage a Fixed Shelf(PB & Al)

**Specifications & Ordering information**

Spec.	Model	"FGC-900"	"FGC-1200"	"FGC-1500"
(a) Duct size		φ 100mm / φ 150mm		
(b) Body & Door Material		Steel(with Powder Finished)		
(c) Door Window Material		Tempered Safety Glass		
(d) Shelf Material		PB(Particle Board) Plate + Aluminum Buttruss (5 Fixed-type)		
(e) Foot Material		Stainless-steel(Height Adjustable up to 30mm)		
Dimension(w × d × h)		900 × 500 × h2100mm	1200 × 500 × h2100mm	1500 × 500 × h2100mm
Power Supply		220V / 60Hz		
Cat. No.		DH.FGC0900	DH.FGC1200	DH.FGC1500
Price, Ea. ₩				

\* Other Specifications are available upon Customer's Request.

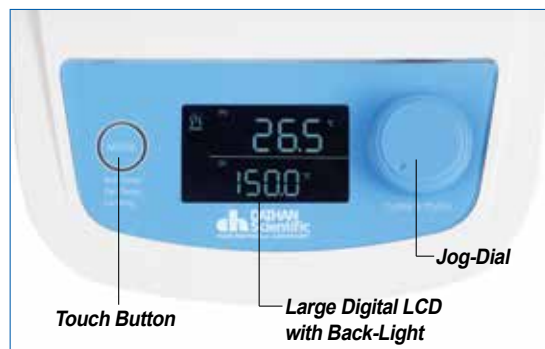
※ Note! Freight and Installation Charges Separately.

DAIHAN-brand® **New-generation Compact-size Heating Block/Dry Bath Incubator “MaXtable™ H20”** **NEW** with Large LCD display, Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, up to 150°C, ±0.1°C 히팅 블록, 디지털 퍼지 컨트롤 시스템, 터치버튼식 조절기, 일체형 주물 히터, 블록 교체 가능, 블록 추출용 공구 포함



Heating Block/Dry Bath “MaXtable™ H20-set”

- Made in Korea
  - PL (Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Designed for Multi-functional Dry Block Heater
  - Ergonomic Design
  - Patented Jog-Dial and Main Touch Button - Best Durability, Best Mobility, Best Convenient to Operate. with Large Back-Light LCD
  - With a Screw-type Block Removal Tool ; Convenient Handling
- \* High-performance Molded Heater ensures Best Temperature Accuracy.
  - \* Internal Bath Material(PPS) ensures Best Heat Insulation
  - \* Rapid heat up time.
  - \* Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
  - \* Precise Temperature Control : ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C
  - \* User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0°C)
  - \* Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
  - \* Storage Function of Temperature and Timer setting values
  - \* Convenient integral timer for time-sensitive incubations
  - \* Alarm Function : Error Status and Timer-end
  - \* Easy to Read, Wide LCD Screen
  - \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)
  - \* Easily calibrated for accurate temperature control and display



New Generation Controller of “MaXtable™ H20”

### Specifications & Ordering information

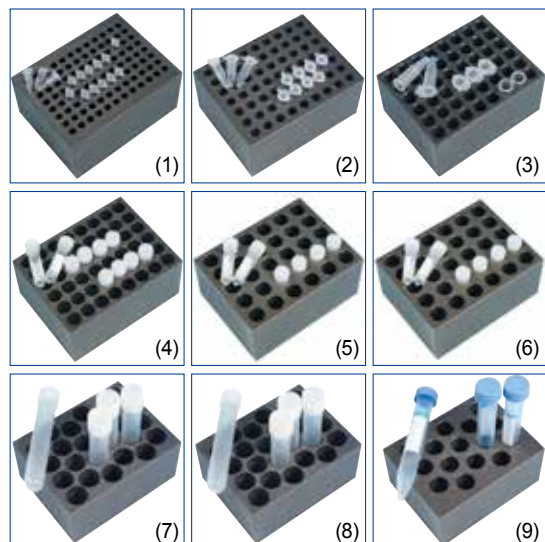
Spec.	Model	“MaXtable™ H20” (Only Unit)	“MaXtable™ H20-set” (included Standard Block)
Controller		Single Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	48 holes×for 1.5/2ml Centri. Tube
Heater		Molded Heater(300W)	
Dimension(mm) & Weight(kg)		Unit : 178×226×h138, Block : 90×120×h60	
Temp. Range & Accuracy		Ambient +5°C to 150°C, ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C	
Heat-Up Speed & Sensor		Approx. 5°C/min, PT100	
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material		Unit : PPS & BAS(HF380), Block : Anodized Aluminum	
Included Standard Acce.		Block Extraction Tool	
Packing Size & Gross Weight		230×290×h245 mm, 2.2 kg	230×355×h245 mm, 3.5 kg
Power Consumption		300 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB02000	DH.WHB02100
	120V	DH.WHB02001	DH.WHB02101
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.



Included Block (3) “BLC 548” 48holes for 1.5/2ml & Removal Tool

### Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)



- DH.WHB510596 (1) for 0.2ml PCR Tube, (φ6×h16mm)×96 holes, “BLC596”
- DH.WHB510570 (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, “BLC570”
- DH.WHB511548 (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, “BLC548” (\* included in the “H20-Set”)
- DH.WHB521248 (4) for φ 12mm Test Tube, (φ 12×h35mm)×48 holes, “BLT248”
- DH.WHB521335 (5) for φ 13mm Test Tube, (φ 13×h47mm)×30 holes, “BLT335”
- DH.WHB521535 (6) for φ 15mm Test Tube, (φ 15×h47mm)×30 holes, “BLT535”
- DH.WHB521628 (7) for φ 16.5mm Test Tube, (φ 16.5×h47mm)×24 holes, “BLT628”
- DH.WHB521828 (8) for φ 18mm Test Tube, (φ 18×h47mm)×24 holes, “BLT828”
- DH.WHB531515 (9) for 15ml Conical Tube, (φ 16×h47mm)×15 holes, “BLC515”
- DH.WHB535008 (10) for 50ml Conical Tube, (φ 28.7×h47mm)×8 holes, “BLC008”
- DH.WHB500102 (11) Spare ; Block Removal Tool, Easy Handling

Ea. Price, ₩



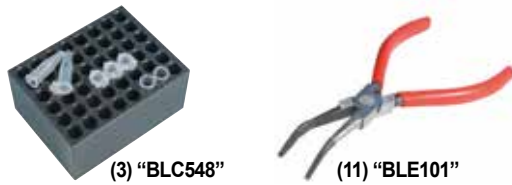
Cat. No	Description	Articles
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**DAIHAN-brand® High-performance Heating Block/Dry Bath Incubator “HB-96D”, Heating, Dual-type with Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, Acrylic Lid, Touch-button Controller, up to 150°C, ±0.1°C**  
**히팅 블록, 디지털 퍼지 컨트롤 시스템, 듀얼 조절기/블럭, 일체형 주물 히터, 블럭 교체 가능, 아크릴 리드/ 블럭용 집게 포함**



**2-Year Warranty**

Heating Block/Dry Bath, Dual Control System  
“HB-96D-set”



Included Anodized Aluminum Block & Tong

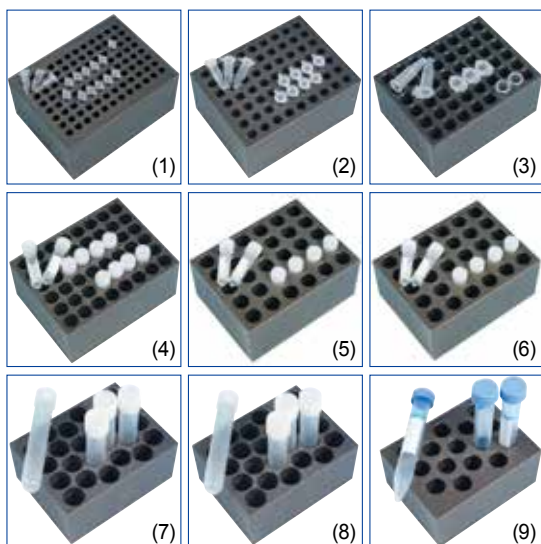
- **Made in Korea**    ■ **CE Certified**    ■ **PL (Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Designed for Multi-functional Dry Block Heater**
- **Dual Controller & Block**
- **Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function**
- \* Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
- \* Precise Temperature Control : ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C
- \* User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0°C)
- \* Over Temperature & Over Current Protection and Sensor Error Detection
- \* Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
- \* Storage Function of Temperature and Timer setting values      \* Modular Block
- \* Alarm Function : Error Status and Timer-end      \* Various kind of Blocks are offered (Optional)
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* The Block Extraction Tongs and Included for Easy Handling

### Specifications & Ordering information

Spec.	Model	“HB-96D” (Only Unit)	“HB-96D-set” (included Standard Block)
Controller		Dual Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	2×48 holes×for 1.5/2ml Centri. Tube
Heater		Molded Heater(300W)×2ea	
Dimension(mm)		Unit : 285×250×h155, Block : (90×120×h60)×2ea	
Temp. Range, & Accuracy		Ambient +5°C to 150°C, ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C	
Heat-Up Speed & Sensor		Approx. 5°C/min, PT100	
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material		Unit : Stainless-steel (# 304) & Powder Coated steel, Block : Anodized Aluminum	
Included Standard Acce.		Block Tongs “BLE101” and Block Cover	
Packing Size & Gross Weight		400×270×h200 mm, 6 kg	
Power Consumption		600 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB00198	DH.WHB00199
	120V	DH.WHB02198	DH.WHB02199
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

### Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)



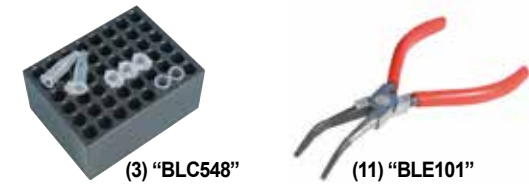
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|---------------------|--|
| <b>DH.WHB510596</b> | (1) for 0.2ml PCR Tube, (φ6×h16mm)×96 holes, “BLC596”  |
| <b>DH.WHB510570</b> | (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, “BLC570”                                    |
| <b>DH.WHB511548</b> | (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, “BLC548”<br>(* included in the “HB-96D-Set”) |
| <b>DH.WHB521248</b> | (4) for φ12mm Test Tube, (φ12×h35mm)×48 holes, “BLT248”  |
| <b>DH.WHB521335</b> | (5) for φ13mm Test Tube, (φ13×h47mm)×30 holes, “BLT335”  |
| <b>DH.WHB521535</b> | (6) for φ15mm Test Tube, (φ15×h47mm)×30 holes, “BLT535”  |
| <b>DH.WHB521628</b> | (7) for φ16.5mm Test Tube, (φ16.5×h47mm)×24 holes, “BLT628”                                      |
| <b>DH.WHB521828</b> | (8) for φ18mm Test Tube, (φ18×h47mm)×24 holes, “BLT828”  |
| <b>DH.WHB531515</b> | (9) for 15ml Conical Tube, (φ16×h47mm)×15 holes, “BLC515”  |
| <b>DH.WHB535008</b> | (10) for 50ml Conical Tube, (φ28.7×h47mm)×8 holes, “BLC008”                                      |
| <b>DH.WHB500101</b> | (11) Spare ; Block Extraction Tongs, “BLE101”  |

Ea.	Price, ₩

DAIHAN-brand® High-performance Heating Block/Dry Bath Incubator-Heating & Cooling “HB-R48” with Digital PID Control, Acrylic Lid, Precise Temperature Control, Modular Anodized Aluminum Block,  $-5^{\circ}\text{C} \sim 95^{\circ}\text{C}$ ,  $\pm 0.1^{\circ}\text{C}$  Peltier Cooling System, Digital Timer & PID Control System, Interchangeable Blocks, 히팅 / 쿨링 블록, 블록 교체 가능, 아크릴 리드 포함



“HB-R48-Set”  
with Block “BLC548” for 1.5/2ml Centrifuge Tube × 48 holes



Included Anodized Aluminum Block & Tong

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-Function : Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures.
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* User Self-Compensation Function to offset between Actual and Displayed Temperature. ( $\pm 10.0^{\circ}\text{C}$ )
- \* Storage Function of Temperature and Timer setting values
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

### Specifications & Ordering information

Spec.	Model	“HB-R48” (Only Unit)	“HB-R48-set” (included Standard Block)
Controller		Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	48 holes × for 1.5/2ml Centri. Tube
Dimension : Unit & Block		185×230×h220mm, and 90×120×h60mm	
Cooling		Two Peltier Modules	
Cool-Down Speed		2.3°C/min. between 95°C to 25°C, 0.5°C/min. between 25°C to -5°C	
Heater and Sensor		300W (Molded Heater), PT100	
Temp. Range, & Accuracy		$-5^{\circ}\text{C}$ to $95^{\circ}\text{C}$ , and $\pm 0.1^{\circ}\text{C}$ at $37^{\circ}\text{C}$ , $\pm 0.2^{\circ}\text{C}$ at $90^{\circ}\text{C}$	
Heat-Up Speed		Approx. 5°C/min	
Safety Device		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material	Internal & External Block	Stainless steel (#304), and Powder Coated steel	
		Anodized Aluminum	
Included Standard Acce.		Block Tongs “BLE101” and Block Cover	
Packing Size, Gross Weight		350×220×h310mm, 9 kg	
Power Consumption		450 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB00248	DH.WHB00249
	120V	DH.WHB02248	DH.WHB02249
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

### Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)

		Ea. Price, ₩
	DH.WHB510596 (1) for 0.2ml PCR Tube, ( $\phi 6 \times h16\text{mm}$ ) × 96 holes, “BLC596”	
	DH.WHB510570 (2) for 0.5ml Centri. Tube, ( $\phi 7.7 \times h29.5\text{mm}$ ) × 63 holes, “BLC570”	
	DH.WHB511548 (3) for 1.5/2ml Centri. Tube, ( $\phi 11 \times h35\text{mm}$ ) × 48 holes, “BLC548” (* included in the “HB-R48-Set”)	
	DH.WHB521248 (4) for $\phi 12\text{mm}$ Test Tube, ( $\phi 12 \times h35\text{mm}$ ) × 48 holes, “BLT248”	
	DH.WHB521335 (5) for $\phi 13\text{mm}$ Test Tube, ( $\phi 13 \times h47\text{mm}$ ) × 30 holes, “BLT335”	
	DH.WHB521535 (6) for $\phi 15\text{mm}$ Test Tube, ( $\phi 15 \times h47\text{mm}$ ) × 30 holes, “BLT535”	
	DH.WHB521628 (7) for $\phi 16.5\text{mm}$ Test Tube, ( $\phi 16.5 \times h47\text{mm}$ ) × 24 holes, “BLT628”	
	DH.WHB521828 (8) for $\phi 18\text{mm}$ Test Tube, ( $\phi 18 \times h47\text{mm}$ ) × 24 holes, “BLT828”	
	DH.WHB531515 (9) for 15ml Conical Tube, ( $\phi 16 \times h47\text{mm}$ ) × 15 holes, “BLC515”	
	DH.WHB535008 (10) for 50ml Conical Tube, ( $\phi 28.7 \times h47\text{mm}$ ) × 8 holes, “BLC008”	
	DH.WHB500101 (11) Spare ; Block Extraction Tongs, “BLE101”	

Cat. No	Description	Articles
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**DAIHAN-brand® Precise High-temp Bath Circulator “MaXircu™ CH”, to 250°C, ±0.1°C, 8-/12-/22-/30- Lit with 1×Stainless-steel Flat Lid/Digital Fuzzy Control System/Certi. & Traceability, Flow 16 Lit./min, Lift 2.8m**  
 Ideal for Reactors, etc., External Circulating Connect - od.12.5/id.10.5mm, 정밀 고온 배스겸용 고온 써클레이터



High Temp. Bath Circulators : “CH-8” & “CH-12”

- **Made in Korea.**     ■ **CE Certified.**     ■ **PL(Product Liability) Insurance.**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.**
- **Advanced Heating System Ensures Temperature Performance.**
- **Digital Fuzzy Control System Implementing Superior Temperature Accuracy.**
- **Innovated Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 16 Lit./min.).**
- **Controlled 5 Steps Circulation speed(Flow Rate).**
- **Patented Jog-Dial Control System and Capacitive Touch Button.**

- \* 304 Stainless-steel Bath and Lid for Superior Durability and High Thermal Efficiency.
- \* Compensation Function to Control Difference between Real Temp. and Indicated Temp.
- \* Digital Timer Function : 'Delay Time' and 'Operation Time' can be Controlled.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled).

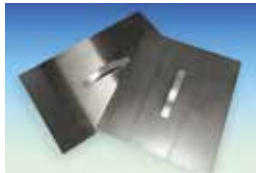
### Specifications & Ordering information

Spec.	Model	MaXircu™ CH-8	MaXircu™ CH-12	MaXircu™ CH-22	MaXircu™ CH-30
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Pump	Max Flow Rate : 16 Lit./min, (Controlled 5 Steps Flow Rate Speed), Max Pressure : 5 psi, Max Lift : 2.8m				
Temp. Range & Accuracy	Room Temp +5°C ~ 250°C, ±0.1°C				
Temp. Resolution	0.1°C-Display, 0.5°C-Control				
Temp. Uniformity & Probe	±0.2°C, PT100				
Heating Power		1.0 kW	1.5 kW	2.2 kW	2.5 kW
Heat-up Time	50 min. to 100°C				
External Circulation Nozzle	id.10.5 / od.12.5 mm				
Timer & Alarm	99hr 59min (Delay & Continuous run), Error status & Timer-end				
Display	Digital LCD with Back-Light Function				
Controller	Digital Fuzzy Controller with Jog - Dial Knob (Turn+Push)				
Safety Circuit	Over-Temp./-Current protection, Sensor Error & Low Level Detection				
Material	Stainless steel (#304)-Internal, Powder Coated steel-External, 50mm Thickness Ceramic Fiber-Insulation				
Lid & Drain Valve	included Stainless-steel Flat Lid, Ball Valve, Optional Dome Lid,				
Dimension (w×d×h)	Effective Space	180×130×h155	250×130×h155	340×250×h155	340×250×h200
	Mounted	180×320×h155	250×320×h155	340×440×h155	340×440×h200
	External	303×443×h569	373×443×h569	463×563×h569	463×563×h614
Packing Size (mm) & Gross Weight(kg)		470×400×h500	470×400×h500	600×490×h500	600×490×h500
		19 kg	21 kg	23 kg	37 kg
Electrical Reqts.	1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz				
Cat. No.	230V	DH.WCH00408	DH.WCH00412	DH.WCH00422	DH.WCH00430
	120V	DH.WCH00508	DH.WCH00512	DH.WCH00522	DH.WCH00530
Price, Each. ₩					

\* Other Specifications are available upon Customer' s Request.     ※ **운임 약 ₩ 9,000 별도!**



External Circulating Nozzle



Flat Lid, Included



Ex. Multi-use High Temp. Bath Circulator with Modular Reactor System



(1) & (2)



(3)

### Insulated Silicone & Teflon PFA Circulation Hose, Id $\phi$ 10 ~ 19mm, L1/1.5m

- **Supplied by SciLab Korea**     \*  $\phi$  37mm Black NBR Foam Insulated Silicone or PFA-Hose
- \* Silicone Vacu-Hose : id 10×od 13mm, id 15×od 20mm, id 18×od 24mm, 220°C     \* SL.Tub4031 & SL.Tub4032 : PFA Hose
- \* PFA Hose : id 10×od 12mm / PTFE Hose : id 15×od 16mm, id 19×od 21mm, -100 + 260°C

#### (1) Insulated Silicone Hose, 220°C

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4021	Sili-hose, id 10mm, L1m	1m	
SL.Tub4022	, L1.5m	1.5m	
SL.Tub4023	, id 15mm, L1m	1m	
SL.Tub4024	, L1.5m	1.5m	
SL.Tub4025	, id 18mm, L1m	1m	
SL.Tub4026	, L1.5m	1.5m	

#### (2) Insulated PFA Hose, 260°C

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4031	PFA-hose, id 10mm, L1m	1m	
SL.Tub4032	, L1.5m	1.5m	
SL.Tub4033	PTFE-hose, id 15mm, L1m	1m	
SL.Tub4034	, L1.5m	1.5m	
SL.Tub4035	, id 19mm, L1m	1m	
SL.Tub4036	, L1.5m	1.5m	

#### (3) Best Insulatedly & Flexible Stainless-steel Circulation Hose, Id $\phi$ 17mm, L1m, 360°C

SL.Tub	Material	Length	Ea. Price, ₩
SL.Tub7021	Flexible Stainless-steel Circulation Hose, id 17×od 60mm, L1m	L1m	

DAIHAN-brand® -30°C +200°C Precise Refrigerated Heating External Circulators "MaXircu™ WHR", Lift 38m, ±0.2°C  
 Ideal for 5~100 Lit Reactors, Heating Line, etc., with Pre-Cooling Sys, Can be used with External Direct Contact K-type Temp. Probe(Optional)  
 with High Quality Magnetic Pump, Flow 20-/40-/60-Lit/min, 정밀 고온/냉동 겸용 외부 써클레이터



-30°C ~ +200°C Refrigerated / Heating External Circulator, "MaXircu™ WHR-50"



Assembly-type Safety Connection Ports/Pipe, for Fluid In/Out-let ; ISO RC 1" Thread, Located On Rear-Upper Panel



▶ Figure ; One of the Applications in the Reactor System.

- Made in Korea
- PL(Product Liability) Insurance
- Max. Lift : 38m
- Ideal for Various Size Reactor-system.
- Built in Magnetic Pump ensures Long-life Time.
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Can be used with External Direct Contact K-type Temp. Probe(Optional)
- Innovated Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 20-/40-/60-Lit./min.)
- Assembly-type Safety Connection Ports/Pipe (for Fluid In/Out-let : ISO RC 1" Screw Stainless-steel.)
- Patented Jog-Dial Control System and Digital LCD with Back-Light Function.
- With High Quality Shock-proof Caster for Convenient and Safe Moving.
- Independently 3-systems : Refrigerating System, Heating System, Pre-Cooling System.
- Embedded External Nozzle Part for the Prevention of Nozzle Damaged.
- Stainless-steel Internal Bath for Prevention of Corrosion.

- \* Urethane Foam Insulation
- \* Warning and Auto-Stop Function in case of Liquid Shortage.
- \* More Faster Cool-down and Heat-up Time
- \* Connection with Evaporator or Viscometer is applicable.
- \* Wide-range Filling Volume 10Lit./18Lit./25Lit.
- \* Useful for 5~100Lit. Various Reactors and Evaporators.
- \* High Quality Magnetic Pump : Max Flow Rate 20-/40-/60-Lit/min and Max. Pressure 4 bar

### Specifications & Ordering information

Spec.	Model	"MaXircu™ WHR-20"	"MaXircu™ WHR-50"	"MaXircu™ WHR-100"
Temp. Range & Stability		-30°C~ +200°C-Range, ±0.2°C(at 15°C)-Stability		
Heat-Fluid Filling Volume		10 Lit. max	18 Lit. max	25 Lit. max
Useful for 5~100Lit Reactors, etc.		for 5~20Lit Reactor, etc.	for 20~50Lit Reactor, etc.	for 50~100Lit Reactor, etc.
Refrigerator Capacity		4.5 kW	7.5 kW	18 kW
Heater		2.5 kW	6.0 kW	12 kW
Lid & Top Opening Dia.		φ80 mm		
Fluid In/Out-let Connector		ISO RC 1" (English System AG 1") Thread, Stainless-steel		
Pump Power, Max. Flow Rate		20 Lit/min	40 Lit/min	60 Lit/min
Lift Height, m Max. Pressure & Lift		Max Pressure : 4 bar, Max. Lift : 38m		
Cooling Capacity	at +15°C	8.1 kW	13.1 kW	22.7 kW
	at 0°C	4.3 kW	7.3 kW	12.6 kW
	at -25°C	1.4 kW	3.1 kW	5.45 kW
External Dimension		550×630×h1060 mm	700×790×h1270 mm	770×1100×h1500 mm
Optional External Temp. Sensor K-type Probe		Can be used with External Direct Contact K-type Temp. Probe. (Optional)		
Material		Stainless steel-Internal, Powder Coated steel-External		
Electrical Reqts.		3Phase 380V		
Cat. No.		DH.WHR0020	DH.WHR0050	DH.WHR0100
Price, Each. ₩				

\* Other Specifications are available upon Customer' s Request.

※ 운임 약 ₩ 20,000 별도!

Therminol D12® -85+230°C Best COOL-/HEAT-ing Transfer Fluid, Synthetic Hydrocarbon Mixture  
 for Low/High-Temp Baths, Clearly Harmless Liquid, Low Odor FDA Grade, 4/18/200Lit, 냉매/열매 겸용 합성 탄화수소혼합물(액체)



(1) 4Lit

(2) 18Lit

- Supplied by "Eastman" USA
- Clear, Water white Liquid / Non-Toxic / Low-Smell, FDA-Grade.
- The Best Circulation Properties / Thermal Stability.
- The Lowest Viscosity, cP ▶ (1) -50°C : 12cP, (2) 100°C : 0.46cP, (3) 200°C : 0.19cP, (4) 230°C : 0.16cP
- \* Specific Gravity : 0.759 at 25°C
- \* Autoignition Temp : 247°C
- \* Flash Point : 62°C
- \* Freezing Point : -94°C
- \* Boiling Point(90%) : 204°C
- \* Package : (1) 4Lit. and (2) 18Lit. PE Square Bottle / Subdivision, Original-200Lit. Steel Drum / 155kg

SL.CirD12.1 (1) "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 4 Lit.

4ℓ .dh pk ₩

4Lit

SL.CirD12.2 (2) "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 18Lit.

18ℓ .dh pk ₩

18Lit

※ 운임 약 ₩ 25,000 별도!

SL.CirD12 "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 200Lit./Drum

Drum Price, ₩

200Lit

# Heating Mantle

For Beaker - Basic-type .....	P. 86
- Stirring-type .....	P. 86
For Flask - Basic-type .....	P. 87
- Stirring-type .....	P. 87
- Remote Control .....	P. 88~89
Fabric Housing .....	P. 89
Reaction Vessel - Basic-type .....	P. 90
- Stirring-type .....	P. 90
- Remote Control .....	P. 91
Heating Tape and Custom Made .....	P. 93
Heating Product Controller .....	P. 94
Soxhlet/Extraction .....	P. 92



**Beaker Basic-type**  
"WHM12146"



**Beaker Stirring-type**  
"WHM121606"



**Flask Basic-type**  
"WHM12014"



**Flask Stirring-type**  
"WHM12034"



**Flask High Temp-type**  
"WHM12094"



**Fabric Housing**  
"WHM12114"



**Fabric Housing**  
"WHM121303"

**Analog Compact Controller**  
"WHM-C10A"



**Digital Feedback Controller**  
"WHM-C10D"



**Reaction Flask**  
"WHM8224"



**Reaction Vessel**  
"WHM8153"



**Reaction Vessel**  
"WHM8180"



**Analog 6 places Heating Mantle**  
"WHM12293"

DAIHAN-brand<sup>®</sup> Aluminum-case Beaker Heating Mantles, (1) Basic & (2) Stirring-type, 450°C, 100~5,000ml with Built-in Temp Controller, with/without Mag-stir Speed Control, with Certi. & Traceability  
 비이커용 히팅맨틀, 온도 조절기 내장, “기본형” 및 “자석교반형”, Ni-Cr열선 내장

- Made in Korea
- Ideal for All type Beakers
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Built-in Temp-Controller. Nickel-Chrome Heating Element “Coil-type” : Acid Resistant & Long Life Time.



(1) Basic-type Beaker Mantle with Controller

(1) Basic-type Beaker Mantles, Built-in Temp. Controller

\* With a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.

Beakers, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
100ml, $\phi$ 50~52	80 W	40 mm	$\phi$ 145 $\times$ H140	DH.WHM12141	DH.WHM12151	
250ml, $\phi$ 68~70	140 W	65 mm	$\phi$ 145 $\times$ H140	DH.WHM12142	DH.WHM12152	
400ml, $\phi$ 79~81	240 W	70 mm	$\phi$ 145 $\times$ H140	DH.WHM12143	DH.WHM12153	
600ml, $\phi$ 88~90	240 W	75 mm	$\phi$ 145 $\times$ H140	DH.WHM12144	DH.WHM12154	
800ml, $\phi$ 98~100	300 W	90 mm	$\phi$ 190 $\times$ H165	DH.WHM12145	DH.WHM12155	
1,000ml, $\phi$ 105~108	350 W	90 mm	$\phi$ 190 $\times$ H165	DH.WHM12146	DH.WHM12156	
2,000ml, $\phi$ 130~132	450 W	125 mm	$\phi$ 199 $\times$ H190	DH.WHM12147	DH.WHM12157	
3,000ml, $\phi$ 151~153	550 W	160 mm	$\phi$ 270 $\times$ H235	DH.WHM12148	DH.WHM12158	
4,000ml, $\phi$ 160~162	700 W	160 mm	$\phi$ 270 $\times$ H235	DH.WHM121481	DH.WHM121581	
5,000ml, $\phi$ 169~171	800 W	160 mm	$\phi$ 270 $\times$ H235	DH.WHM12149	DH.WHM12159	

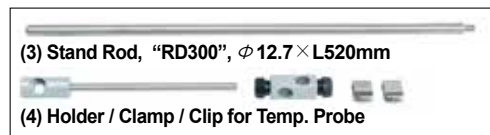


(2) Stirring-type Beaker Mantle with a Stir-Bar

(2) Stirring-type Beaker Mantles, Built-in 50~75rpm Mag-stir Speed & Temp. Controller

- \* With a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.
- \* With 1ea  $\times$  PTFE Octagonal Magnetic Stirrer Bar, L38mm

Beakers, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
100ml, $\phi$ 50~52	80 W	45 mm	$\phi$ 145 $\times$ H140	DH.WHM121601	DH.WHM121611	
250ml, $\phi$ 68~70	140 W	70 mm	$\phi$ 190 $\times$ H165	DH.WHM121602	DH.WHM121612	
400ml, $\phi$ 79~81	240 W	70 mm	$\phi$ 190 $\times$ H165	DH.WHM121603	DH.WHM121613	
600ml, $\phi$ 88~90	240 W	72 mm	$\phi$ 190 $\times$ H165	DH.WHM121605	DH.WHM121615	
1,000ml, $\phi$ 105~108	350 W	105 mm	$\phi$ 190 $\times$ H190	DH.WHM121606	DH.WHM121616	
2,000ml, $\phi$ 130~132	450 W	140 mm	$\phi$ 270 $\times$ H235	DH.WHM121607	DH.WHM121617	
3,000ml, $\phi$ 151~153	550 W	140 mm	$\phi$ 270 $\times$ H235	DH.WHM121608	DH.WHM121618	
4,000ml, $\phi$ 160~162	700 W	170 mm	$\phi$ 325 $\times$ H270	DH.WHM121609	DH.WHM121619	
5,000ml, $\phi$ 169~171	800 W	170 mm	$\phi$ 325 $\times$ H270	DH.WHM121610	DH.WHM121620	



Optional Stainless-steel Rod, Holder & Clamp

- DH.WHP503037 (3) Stand Rod,  $\phi$  12.7  $\times$  L520mm, “RD300”, for Heating Mantles
- DH.WHP503012 (4) Holder & Clamp, “CL220”, for Temp. Sensor

Ea. Price, ₩

Cat. No	Description	Articles
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DAIHAN-brand® Aluminium-case Flask Heating Mantles, (1) Basic & (2) Stirring-type, 450°C, 50~20,000ml with Built-in Temp Controller, with/without Mag-stir Speed Control, with Certi. & Traceability 라인드플라스크용 히팅맨틀, 온도 조절기 내장, “기본형” 및 “자석교반형”, Ni-Cr열선 내장

- Made in Korea
- Ideal for All type Round Flask
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Built-in Temp-Controller. Nickel-Chrome Heating Element “Coil-type” : Acid Resistant & Long Life Time.
- With Powder-coated Steel-case : 10-/20-Lit.



(1) Basic-type Flask Mantle with Controller



(2) Stirring-type Flask Mantle with a Stir-Bar

(1) Basic-type Flask Mantles, Built-in Temp. Controller

\* Heating Mantles for 50ml~6,000ml Flask are with a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
50ml, $\phi$ 49 ~ 52	90 W	30 mm	$\phi$ 145 $\times$ H140	DH.WHM12010	DH.WHM12020	
100ml, $\phi$ 63 ~ 66	90 W	50 mm	$\phi$ 145 $\times$ H140	DH.WHM12011	DH.WHM12021	
250ml, $\phi$ 83 ~ 86	160 W	55 mm	$\phi$ 145 $\times$ H140	DH.WHM12012	DH.WHM12022	
500ml, $\phi$ 102 ~ 105	250 W	70 mm	$\phi$ 190 $\times$ H165	DH.WHM12013	DH.WHM12023	
1,000ml, $\phi$ 130 ~ 133	350 W	85 mm	$\phi$ 190 $\times$ H165	DH.WHM12014	DH.WHM12024	
2,000ml, $\phi$ 165 ~ 169	490 W	100 mm	$\phi$ 270 $\times$ H200	DH.WHM12015	DH.WHM12025	
3,000ml, $\phi$ 184 ~ 187	600 W	110 mm	$\phi$ 270 $\times$ H200	DH.WHM12016	DH.WHM12026	
4,000ml, $\phi$ 206 ~ 208	750 W	140 mm	$\phi$ 325 $\times$ H226	DH.WHM8037	DH.WHM8037.1	
5,000ml, $\phi$ 221 ~ 225	850 W	130 mm	$\phi$ 325 $\times$ H226	DH.WHM12017	DH.WHM12027	
6,000ml, $\phi$ 234 ~ 237	850 W	130 mm	$\phi$ 325 $\times$ H226	DH.WHM12018	DH.WHM12028	
10Lit, $\phi$ 278 ~ 282	1,500 W	205 mm	$\phi$ 400 $\times$ H260	DH.WHM12019	DH.WHM12029	
20Lit, $\phi$ 344 ~ 350	2,000 W	220 mm	$\phi$ 460 $\times$ H280	DH.WHM12070	DH.WHM12071	

(2) Stirring-type Flask Mantles, Built-in 50~75rpm Mag-stir Speed & Temp. Controller

- \* Heating Mantles for 50ml~6,000ml Flask are with a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.
- \* 10-/20-Lit. models Square-type Outside Shape.
- \* With 1ea  $\times$  PTFE Oval-type Magnetic Stirrer Bar, L25mm.

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
50ml, $\phi$ 49 ~ 52	90 W	45 mm	$\phi$ 145 $\times$ H140	DH.WHM12030	DH.WHM12040	
100ml, $\phi$ 63 ~ 66	90 W	45 mm	$\phi$ 145 $\times$ H140	DH.WHM12031	DH.WHM12041	
250ml, $\phi$ 83 ~ 86	160 W	45 mm	$\phi$ 145 $\times$ H140	DH.WHM12032	DH.WHM12042	
500ml, $\phi$ 102 ~ 105	250 W	70 mm	$\phi$ 190 $\times$ H165	DH.WHM12033	DH.WHM12043	
1,000ml, $\phi$ 130 ~ 133	350 W	90 mm	$\phi$ 190 $\times$ H190	DH.WHM12034	DH.WHM12044	
2,000ml, $\phi$ 165 ~ 169	490 W	105 mm	$\phi$ 270 $\times$ H200	DH.WHM12035	DH.WHM12045	
3,000ml, $\phi$ 184 ~ 187	600 W	105 mm	$\phi$ 270 $\times$ H200	DH.WHM12036	DH.WHM12046	
4,000ml, $\phi$ 206 ~ 208	750 W	135 mm	$\phi$ 325 $\times$ H226	DH.WHM8057	DH.WHM8057.1	
5,000ml, $\phi$ 221 ~ 224	850 W	130 mm	$\phi$ 325 $\times$ H226	DH.WHM12037	DH.WHM12047	
6,000ml, $\phi$ 234 ~ 237	850 W	130 mm	$\phi$ 325 $\times$ H226	DH.WHM12038	DH.WHM12048	
10Lit, $\phi$ 278 ~ 282	1,500 W	210 mm	440 $\times$ 510 $\times$ h310	DH.WHM8060	DH.WHM8060.1	
20Lit, $\phi$ 344 ~ 348	2,000 W	230 mm	440 $\times$ 550 $\times$ h330	DH.WHM8061	DH.WHM8061.1	

Optional Stainless-steel Rod, Holder & Clamp

- DH.WHP503037 (3) Stand Rod,  $\phi$  12.7  $\times$  L520mm, “RD300”, for Heating Mantles
- DH.WHP503012 (4) Holder & Clamp, “CL220”, for Temp. Sensor

Ea. Price, ₩



DAIHAN-brand® Remotecontrolled Flask Heating Mantles, (1) 450°C Basic & (2) 650°C High Temp-type, 50ml~100Lit. for Spherical Flask, with Nickel Chrome Heating Element, K-type Thermo-Sensor Integrated, with Certi. & Traceability, Option-Controller 라운드플라스크용 히팅맨틀, K-type 온도센서, Ni-Cr열선 내장, 자력교반기와 사용가능, 조절기 별도

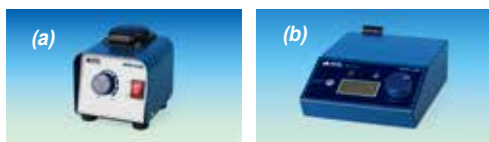
- Made in Korea
- Ideal for All type Round Flask and Use with Magnetic Stirrer
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optional Remote Thermo Controller, K-type Thermo-Sensor, and Nickel-Chrome Heating Element "Coil-type" : Acid Resistant & Long Life Time.
- Heating Mantles for 50ml~6,000ml Flask are with a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.



(1) 450°C Basic-type



(2) 650°C High Temp.-type



(3) Stand Rod, "RD300",  $\phi$  12.7×L520mm

(4) Holder / Clamp / Clip for Temp. Probe

(1) 450°C Basic-type, 50ml~100Lit.

- ① with Aluminum-case, 50~6000ml    ② with Powder-coated Steel-case, 10~100Lit.

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(mm)	with 230V	with 120V	
50ml, $\phi$ 49 ~ 52	90 W	30 mm	$\phi$ 145 × H75	DH.WHM12050	DH.WHM12060	
100ml, $\phi$ 63 ~ 66	90 W	50 mm	$\phi$ 145 × H75	DH.WHM12051	DH.WHM12061	
250ml, $\phi$ 83 ~ 86	160 W	50 mm	$\phi$ 145 × H75	DH.WHM12052	DH.WHM12062	
500ml, $\phi$ 102 ~ 105	250 W	55 mm	$\phi$ 190 × H80	DH.WHM12053	DH.WHM12063	
1,000ml, $\phi$ 130 ~ 133	350 W	85 mm	$\phi$ 190 × H110	DH.WHM12054	DH.WHM12064	
2,000ml, $\phi$ 165 ~ 169	490 W	105 mm	$\phi$ 270 × H135	DH.WHM12055	DH.WHM12065	
3,000ml, $\phi$ 184 ~ 187	600 W	110 mm	$\phi$ 270 × H135	DH.WHM12056	DH.WHM12066	
4,000ml, $\phi$ 206 ~ 208	750 W	135 mm	$\phi$ 325 × H165	DH.WHM8078	DH.WHM8078.1	
5,000ml, $\phi$ 221 ~ 224	850 W	130 mm	$\phi$ 325 × H165	DH.WHM12057	DH.WHM12067	
6,000ml, $\phi$ 234 ~ 237	850 W	130 mm	$\phi$ 325 × H165	DH.WHM12058	DH.WHM12068	
10Lit, $\phi$ 278 ~ 282	1,500 W	205 mm	$\phi$ 390 × H240	DH.WHM12073	DH.WHM12083	
20Lit, $\phi$ 344 ~ 348	2,000 W	220 mm	$\phi$ 460 × H280	DH.WHM12074	DH.WHM12084	
50Lit, $\phi$ 489 ~ 494	4,000 W	310 mm	$\phi$ 610 × H390	DH.WHM12075	DH.WHM12085	
100Lit, $\phi$ 609 ~ 614	6,000 W	370 mm	$\phi$ 740 × H450	DH.WHM8084	DH.WHM8084.1	

(2) 650°C High Temp-type, 100ml~10Lit.

- ① with Aluminum-case, 100~6000ml    ② with Powder-coated Steel-case, 10Lit.

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(mm)	with 230V	with 120V	
100ml, $\phi$ 63 ~ 66	160 W	50 mm	$\phi$ 145 × H75	DH.WHM12091	DH.WHM12101	
250ml, $\phi$ 83 ~ 86	250 W	50 mm	$\phi$ 145 × H75	DH.WHM12092	DH.WHM12102	
500ml, $\phi$ 102 ~ 105	350 W	55 mm	$\phi$ 190 × H80	DH.WHM12093	DH.WHM12103	
1,000ml, $\phi$ 130 ~ 133	490 W	85 mm	$\phi$ 190 × H110	DH.WHM12094	DH.WHM12104	
2,000ml, $\phi$ 165 ~ 169	600 W	105 mm	$\phi$ 270 × H135	DH.WHM12095	DH.WHM12105	
3,000ml, $\phi$ 184 ~ 187	750 W	105 mm	$\phi$ 270 × H135	DH.WHM12096	DH.WHM12106	
4,000ml, $\phi$ 206 ~ 208	850 W	125 mm	$\phi$ 325 × H165	DH.WHM8097	DH.WHM8097.1	
5,000ml, $\phi$ 221 ~ 224	1,500 W	130 mm	$\phi$ 325 × H165	DH.WHM12097	DH.WHM12107	
6,000ml, $\phi$ 234 ~ 237	1,500 W	130 mm	$\phi$ 325 × H165	DH.WHM12098	DH.WHM12108	
10Lit, $\phi$ 278 ~ 282	2,000 W	160 mm	$\phi$ 400 × H260	DH.WHM8100	DH.WHM8100.1	

### Optional Remote Controller

(a) Analog Remote Controller, 5~100% of Rated Voltage, Up to 1.2kW

(b) Digital Remote Controller, Ambient +5 ~ 700°C,  $\pm$ 1°C Uniformity at Set Temp.

Cat. No		Ea. Price, ₩
with 230V	with 120V	
DH.WHM13500	DH.WHM23500	
DH.WHM12500	DH.WHM22500	

### Optional Temp. Probes & Stand Rod, Holder, Clamp for Digital Temp. Remote Controller

DH.WHP503040 Direct Contact Temp. Probe, K-type, "SS300", L250 ×  $\phi$  4.8 mm

DH.WHP503050 Direct Contact Temp. Probe, K-type, "SS400", L380 ×  $\phi$  4.8 mm

DH.WHP503041 Direct Contact Temp. Probe, K-type, "SS310", Teflon Coated, L250 ×  $\phi$  5 mm

DH.WHP503051 Direct Contact Temp. Probe, K-type, "SS410", Teflon Coated, L380 ×  $\phi$  5 mm

DH.WHP503037 (3) Stand Rod,  $\phi$  12.7 × L520mm, "RD300", for Heating Mantles

DH.WHP503012 (4) Holder & Clamp, "CL220", for Temp. Sensor

Ea. Price, ₩



Cat. No	Description	Articles
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DAIHAN-brand® Remotecontrolled Reaction Flasks Heating Mantle, Bottom Outlet-type, 450°C, 2,000ml~50Lit. with Nickel Chrome Heating Element, K-type Thermo-sensor Integrated, with Certi. & Traceability, Option-Controller  
 반응조용 히팅맨틀, 반응조 라운드 플라스크용, K-type 온도센서, Ni-Cr열선 내장, 조절기 별도



- Made in Korea
- Ideal for All type Reaction Flasks
- Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Nickel-Chrome Heating Element "Coil-type" : Acid Resistant & Long Life Time.
- With a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.
- Optional Remote Thermo Controller, K-type Thermo-Sensor

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
2,000ml, $\phi$ 165 ~ 169	550 W	110 mm	$\phi$ 270 $\times$ H135	DH.WHM8222	DH.WHM8222.1	
3,000ml, $\phi$ 184 ~ 186	550 W	195 mm	$\phi$ 270 $\times$ H220	DH.WHM8232	DH.WHM8232.1	
5,000ml, $\phi$ 224 ~ 226	800 W	215 mm	$\phi$ 325 $\times$ H240	DH.WHM8233	DH.WHM8233.1	
10Lit, $\phi$ 278 ~ 282	1400 W	200 mm	$\phi$ 400 $\times$ H250	DH.WHM8226	DH.WHM8226.1	
20Lit, $\phi$ 348 ~ 352	2000 W	230 mm	$\phi$ 440 $\times$ H290	DH.WHM8227	DH.WHM8227.1	
50Lit, $\phi$ 480 ~ 484	4000 W	300 mm	$\phi$ 625 $\times$ H360	DH.WHM8228	DH.WHM8228.1	

DAIHAN-brand® Fabric-Housed Heating Mantles, (1) Self Standing-base & (2) Top Cover, 450°C, 50ml~100Lit. for Spherical Flask, with Nickel Chrome Heating Element, Option-Controller, with Certi. & Traceability  
 직물케이스 히팅맨틀, Ni-Cr열선 내장, 자력교반기와 사용가능, 조절기 별도

- Made in Korea
- Ideal for All type Round Flask and Use with Magnetic Stirrer
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Built-in Temp-Controller. Nickel-Chrome Heating Element "Coil-type" : Acid Resistant & Long Life Time.



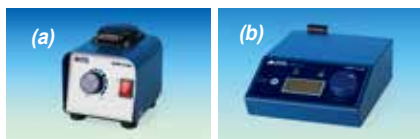
(1) Self Standing-base Mantle

Flasks, ml Dia. $\phi$ mm	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi \times H$ (mm)	with 230V	with 120V	
50ml, $\phi$ 49 ~ 52	90 W	30 mm	$\phi$ 100 $\times$ H50	DH.WHM12110	DH.WHM12120	
100ml, $\phi$ 63 ~ 66	90 W	50 mm	$\phi$ 120 $\times$ H70	DH.WHM12111	DH.WHM12121	
250ml, $\phi$ 83 ~ 86	160 W	55 mm	$\phi$ 150 $\times$ H80	DH.WHM12112	DH.WHM12122	
500ml, $\phi$ 102 ~ 105	250 W	75 mm	$\phi$ 180 $\times$ H100	DH.WHM12113	DH.WHM12123	
1,000ml, $\phi$ 130 ~ 133	350 W	90 mm	$\phi$ 210 $\times$ H115	DH.WHM12114	DH.WHM12124	
2,000ml, $\phi$ 165 ~ 169	490 W	105 mm	$\phi$ 250 $\times$ H130	DH.WHM12115	DH.WHM12125	
3,000ml, $\phi$ 184 ~ 187	600 W	115 mm	$\phi$ 270 $\times$ H140	DH.WHM12116	DH.WHM12126	
4,000ml, $\phi$ 206 ~ 208	750 W	120 mm	$\phi$ 310 $\times$ H160	DH.WHM8108	DH.WHM8108.1	
5,000ml, $\phi$ 221 ~ 224	850 W	135 mm	$\phi$ 310 $\times$ H160	DH.WHM12117	DH.WHM12127	
6,000ml, $\phi$ 234 ~ 237	850 W	135 mm	$\phi$ 310 $\times$ H160	DH.WHM12118	DH.WHM12128	
10Lit, $\phi$ 278 ~ 282	1,500 W	205 mm	$\phi$ 390 $\times$ H260	DH.WHM12119	DH.WHM12129	



(2) Top Cover only

Flasks, ml Dia. $\phi$ mm	Mantle		Catalog No.		Ea. Price, ₩
	Watts (W)	Outside $\phi \times H$ (mm)	with 230V	with 120V	
250ml, $\phi$ 83 ~ 86	90 W	$\phi$ 136 $\times$ H70	DH.WHM121301	DH.WHM121311	
500ml, $\phi$ 102 ~ 105	160 W	$\phi$ 160 $\times$ H77	DH.WHM121302	DH.WHM121312	
1,000ml, $\phi$ 130 ~ 133	250 W	$\phi$ 183 $\times$ H90	DH.WHM121303	DH.WHM121313	
2,000ml, $\phi$ 165 ~ 169	350 W	$\phi$ 220 $\times$ H107	DH.WHM121304	DH.WHM121314	
3,000ml, $\phi$ 184 ~ 187	490 W	$\phi$ 236 $\times$ H210	DH.WHM121305	DH.WHM121315	
4,000ml, $\phi$ 206 ~ 208	490 W	$\phi$ 260 $\times$ H130	DH.WHM8117	DH.WHM8117.1	
5,000ml, $\phi$ 221 ~ 224	600 W	$\phi$ 280 $\times$ H140	DH.WHM121306	DH.WHM121316	
10Lit, $\phi$ 278 ~ 282	850 W	$\phi$ 350 $\times$ H170	DH.WHM121307	DH.WHM121317	
20Lit, $\phi$ 344 ~ 348	1,500 W	$\phi$ 420 $\times$ H210	DH.WHM121308	DH.WHM121318	
50Lit, $\phi$ 489 ~ 494	2,000 W	$\phi$ 590 $\times$ H290	DH.WHM8121	DH.WHM8121.1	
100Lit, $\phi$ 609 ~ 614	2,000 W	$\phi$ 700 $\times$ H340	DH.WHM8122	DH.WHM8122.1	



Optional Remote Controller

- (a) Analog Remote Controller, 5~100% of Rated Voltage, Up to 1.2kW
- (b) Digital Remote Controller, Ambient +5 ~ 700°C,  $\pm$  1°C Uniformity at Set Temp.

Cat. No.		Ea. Price, ₩
with 230V	with 120V	
DH.WHM13500	DH.WHM23500	
DH.WHM12500	DH.WHM22500	

DAIHAN-brand® Reaction Vessel Heating Mantles, (1) Basic & (2) Stirring-type, 450°C, 100ml~100Lit.  
 with Built-in Temp Controller, with/without Mag-stir Speed Control, with Certi. & Traceability  
 반응조용 히팅맨틀, 온도 조절기 내장, “기본형” 및 “자석교반형”, Ni-Cr열선 내장

- Made in Korea
- Powder-coated Steel Housing
- Ideal for All type Reaction Vessel
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Built-in Temp-Controller. Nickel-Chrome Heating Element “Coil-type” : Acid Resistant & Long Life Time.
- Heating Mantles for 50ml~6,000ml Flask are with a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.



(1) Basic-type Reaction Vessel Mantle with Temp. Controller

(1) Basic-type Reaction Vessel Mantles, Built-in Temp. Controller

① with Aluminum-case, 100~500ml    ② with Powder-coated Steel-case, 1000ml ~ 100Lit.

Vessels, ml Dia. $\phi$ × H(cm)	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(cm)	with 230V	with 120V	
100ml, $\phi$ 7 × H9	80 W	6.5 cm	$\phi$ 14.5 × H14.0	DH.WHM8130	DH.WHM8130.1	
250ml, $\phi$ 7 × H13	140 W	9.0 cm	$\phi$ 19.0 × H16.5	DH.WHM8131	DH.WHM8131.1	
500ml, $\phi$ 11 × H12	350 W	9.0 cm	$\phi$ 19.0 × H16.5	DH.WHM12146	DH.WHM12156	
1,000ml, $\phi$ 11 × H20	350 W	16.0 cm	$\phi$ 19.0 × H26.0	DH.WHM8133	DH.WHM8133.1	
2,000ml, $\phi$ 13 × H24	450 W	18.5 cm	$\phi$ 19.0 × H26.0	DH.WHM8134	DH.WHM8134.1	
2,000ml, $\phi$ 14 × H27	550 W	24.5 cm	$\phi$ 20.6 × H30.0	DH.WHM8135	DH.WHM8135.1	
3,000ml, $\phi$ 13 × H32	550 W	24.5 cm	$\phi$ 19.0 × H32.0	DH.WHM8136	DH.WHM8136.1	
4,000ml, $\phi$ 20 × H29	800 W	23.5 cm	$\phi$ 32.5 × H30.0	DH.WHM8138	DH.WHM8138.1	
5,000ml, $\phi$ 20 × H29	800 W	23.5 cm	$\phi$ 32.5 × H30.0			
6,000ml, $\phi$ 21.5 × H32	800 W	23.5 cm	$\phi$ 32.5 × H30.0	DH.WHM8139	DH.WHM8139.1	
10Lit, $\phi$ 21.5 × H45	1,400 W	35.0 cm	$\phi$ 35.0 × H40.0	DH.WHM8140	DH.WHM8140.1	
10Lit, $\phi$ 24 × H41	1,400 W	33.0 cm	$\phi$ 35.0 × H36.0	DH.WHM8141	DH.WHM8141.1	
20Lit, $\phi$ 25 × H47	2,000 W	40.0 cm	$\phi$ 35.0 × H45.0	DH.WHM8142	DH.WHM8142.1	
20Lit, $\phi$ 27 × H45	2,000 W	35.0 cm	$\phi$ 40.0 × H40.0	DH.WHM8143	DH.WHM8143.1	
20Lit, $\phi$ 29 × H42	2,000 W	35.0 cm	$\phi$ 40.0 × H40.0	DH.WHM8144	DH.WHM8144.1	
50Lit, $\phi$ 31.5 × H81	4,000 W	67.0 cm	$\phi$ 44.0 × H75.0	DH.WHM8145	DH.WHM8145.1	
100Lit, $\phi$ 41.5 × H91	6,000 W	75.0 cm	$\phi$ 55.0 × H83.0	DH.WHM8146	DH.WHM8146.1	



(2) Stirring-type Reaction Vessel Mantle with Temp./Stirring-Controller and 1 × Mag Stir bar

(2) Stirring-type Reaction Vessel Mantles, Built-in 50~75rpm Mag-stir Speed & Temp. Controller

\* With 1ea × PTFE Oval-type Magnetic Stirrer Bar, L25mm.

\* 10-/20-Lit. models Square-type Outside Shape.

① with Aluminum-case, 100~500ml    ② with Powder-coated Steel-case, 1000ml ~ 20Lit.

Vessels, ml Dia. $\phi$ × H(cm)	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(cm)	with 230V	with 120V	
100ml, $\phi$ 7 × H9	80 W	7.0 cm	$\phi$ 14.5 × H16.5	DH.WHM8150	DH.WHM8150.1	
250ml, $\phi$ 7 × H13	140 W	9.0 cm	$\phi$ 14.5 × H18.5	DH.WHM8151	DH.WHM8151.1	
500ml, $\phi$ 11 × H12	240 W	9.5 cm	$\phi$ 19.0 × H19.0	DH.WHM8152	DH.WHM8152.1	
1,000ml, $\phi$ 11 × H20	350 W	16.5 cm	$\phi$ 19.0 × H26.0	DH.WHM8153	DH.WHM8153.1	
2,000ml, $\phi$ 13 × H24	450 W	16.5 cm	$\phi$ 19.0 × H26.0	DH.WHM8154	DH.WHM8154.1	
2,000ml, $\phi$ 14 × H27	550 W	22.5 cm	$\phi$ 20.6 × H30.0	DH.WHM8155	DH.WHM8155.1	
3,000ml, $\phi$ 13 × H32	550 W	22.5 cm	$\phi$ 19.0 × H32.0	DH.WHM8156	DH.WHM8156.1	
4,000ml, $\phi$ 20 × H29	800 W	23.5 cm	$\phi$ 32.5 × H30.0	DH.WHM8158	DH.WHM8158.1	
5,000ml, $\phi$ 20 × H29	800 W	23.5 cm	$\phi$ 32.5 × H30.0			
6,000ml, $\phi$ 21.5 × H32	800 W	23.5 cm	$\phi$ 32.5 × H30.0	DH.WHM8159	DH.WHM8159.1	
10Lit, $\phi$ 21.5 × H45	1400 W	40.0 cm	35 × 46 × h48	DH.WHM8160	DH.WHM8160.1	
10Lit, $\phi$ 24 × H41	1400 W	37.0 cm	35 × 46 × h39.5	DH.WHM8161	DH.WHM8161.1	
20Lit, $\phi$ 25 × H47	2000 W	48.5 cm	35 × 46 × h56.5	DH.WHM8162	DH.WHM8162.1	



Optional Stainless-steel Rod, Holder & Clamp

- DH.WHP503037 (3) Stand Rod,  $\phi$  12.7 × L520mm, “RD300”, for Heating Mantles
- DH.WHP503012 (4) Holder & Clamp, “CL220”, for Temp. Sensor

Ea. Price, ₩

Cat. No	Description	Articles
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DAIHAN-brand® Remotecontrolled Reaction Vessel Heating Mantles, (1)Plain Bottom & (2)Bottom Outlet-type, 450°C, 100ml~100Lit. with Nickel Chrome Heating Element, K-type Thermo-Sensor Integrated,with Certi. & Traceability, Option-Controller  
 반응조용 히팅맨틀, K-type 온도센서, Ni-Cr열선 내장, 자력교반기와 사용가능, 조절기 별도

- Made in Korea      ■ Powder-coated Steel Housing.
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optional Remote Thermo Controller, K-type Thermo-Sensor, and Nickel-Chrome Heating Element "Coil-type" : Acid Resistant & Long Life Time.
- Heating Mantles for 50ml~6,000ml Flask are with a Device\* for Holding a Optional Stainless-steel Rod  $\phi$  12.7 mm for Article Support.



(1) Plain Bottom-type Remotecontrolled Reaction Vessel Heating Mantle

(1) Plain Bottom-type

Vessels, ml Dia. $\phi$ × H(cm)	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(cm)	with 230V	with 120V	
100ml, $\phi$ 7 × H9	80 W	6.5cm	$\phi$ 14.5 × 11.0	DH.WHM8170	DH.WHM8170.1	
250ml, $\phi$ 7 × H13	140 W	10.5cm	$\phi$ 14.5 × 14.0	DH.WHM8171	DH.WHM8171.1	
500ml, $\phi$ 11 × H12	240 W	9.0cm	$\phi$ 19.0 × 13.5	DH.WHM8172	DH.WHM8172.1	
1,000ml, $\phi$ 11 × H20	350 W	14.0cm	$\phi$ 19.0 × 16.5	DH.WHM8173	DH.WHM8173.1	
2,000ml, $\phi$ 13 × H24	450 W	16.5cm	$\phi$ 19.0 × 19.0	DH.WHM8174	DH.WHM8174.1	
2,000ml, $\phi$ 14 × H27	550 W	20.5cm	$\phi$ 20.6 × 22.0	DH.WHM8175	DH.WHM8175.1	
3,000ml, $\phi$ 13 × H32	550 W	26.5cm	$\phi$ 19.0 × 29.0	DH.WHM8176	DH.WHM8176.1	
4,000ml, $\phi$ 20 × H29	800 W	21.0cm	$\phi$ 27.0 × 22.5	DH.WHM8178	DH.WHM8178.1	
5,000ml, $\phi$ 20 × H29	800 W	21.0cm	$\phi$ 27.0 × 22.5	DH.WHM8178	DH.WHM8178.1	
6,000ml, $\phi$ 21.5 × H32	800 W	24.5cm	$\phi$ 32.5 × 23.5	DH.WHM8179	DH.WHM8179.1	
10Lit, $\phi$ 21.5 × H45	1400 W	32.0cm	$\phi$ 32.5 × 35.0	DH.WHM8180	DH.WHM8180.1	
10Lit, $\phi$ 24 × H41	1400 W	32.0cm	$\phi$ 32.5 × 35.0	DH.WHM8181	DH.WHM8181.1	
20Lit, $\phi$ 25 × H47	2000 W	40.0cm	$\phi$ 40.0 × 45.0	DH.WHM8182	DH.WHM8182.1	
20Lit, $\phi$ 27 × H45	2000 W	35.0cm	$\phi$ 40.0 × 40.0	DH.WHM8183	DH.WHM8183.1	
20Lit, $\phi$ 29 × H42	2000 W	35.0cm	$\phi$ 40.0 × 40.0	DH.WHM8184	DH.WHM8184.1	
50Lit, $\phi$ 31.5 × H81	4000 W	70.0cm	$\phi$ 44.0 × 75.0	DH.WHM8185	DH.WHM8185.1	
100Lit, $\phi$ 41.5 × H91	6000 W	75.5cm	$\phi$ 55.0 × 83.0	DH.WHM8186	DH.WHM8186.1	

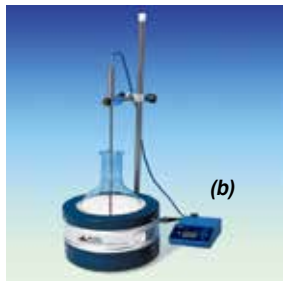


(2) Bottom Outlet-type Remotecontrolled Reaction Vessel Heating Mantle

(2) Bottom Outlet-type / with Bottom Drain Valve PTFE

\* Bottom Outlet Hole Size : L7.2 × W4.0cm(500~2,000ml) or L12.0 × W7.0cm(3,000ml~100Lit.)

Vessels, ml Dia. $\phi$ × H(cm)	Mantle			Catalog No.		Ea. Price, ₩
	Watts (W)	Inside Depth	Outside $\phi$ × H(cm)	with 230V	with 120V	
500ml, $\phi$ 11 × H12	240 W	8.5cm	$\phi$ 19.0 × 11.0	DH.WHM8190	DH.WHM8190.1	
1,000ml, $\phi$ 11 × H20	350 W	14.0cm	$\phi$ 19.0 × 16.5	DH.WHM8191	DH.WHM8191.1	
2,000ml, $\phi$ 13 × H24	450 W	16.5cm	$\phi$ 19.0 × 19.0	DH.WHM8192	DH.WHM8192.1	
2,000ml, $\phi$ 14 × H27	550 W	16.5cm	$\phi$ 20.6 × 22.0	DH.WHM8193	DH.WHM8193.1	
3,000ml, $\phi$ 13 × H32	550 W	26.5cm	$\phi$ 19.0 × 29.0	DH.WHM8194	DH.WHM8194.1	
4,000ml, $\phi$ 20 × H29	800 W	21.0cm	$\phi$ 27.0 × 22.5	DH.WHM8196	DH.WHM8196.1	
5,000ml, $\phi$ 20 × H29	800 W	21.0cm	$\phi$ 27.0 × 22.5	DH.WHM8196	DH.WHM8196.1	
6,000ml, $\phi$ 21.5 × H32	800 W	24.5cm	$\phi$ 32.5 × 23.5	DH.WHM8197	DH.WHM8197.1	
10Lit, $\phi$ 21.5 × H45	1400 W	31.0cm	$\phi$ 32.5 × 35.0	DH.WHM8198	DH.WHM8198.1	
10Lit, $\phi$ 24 × H41	1400 W	31.0cm	$\phi$ 32.5 × 35.0	DH.WHM8199	DH.WHM8199.1	
20Lit, $\phi$ 25 × H47	2000 W	41.0cm	$\phi$ 40.0 × 45.0	DH.WHM8200	DH.WHM8200.1	
20Lit, $\phi$ 27 × H45	2000 W	35.0cm	$\phi$ 40.0 × 40.0	DH.WHM8201	DH.WHM8201.1	
20Lit, $\phi$ 29 × H42	2000 W	35.0cm	$\phi$ 40.0 × 40.0	DH.WHM8202	DH.WHM8202.1	
50Lit, $\phi$ 31.5 × H81	4000 W	70.0cm	$\phi$ 44.0 × 75.0	DH.WHM8203	DH.WHM8203.1	
100Lit, $\phi$ 41.5 × H91	6000 W	78.0cm	$\phi$ 55.0 × 83.0	DH.WHM8204	DH.WHM8204.1	



<Ex.> Heating Mantle Set with Temp. Probe and the Digital Feedback Temp. Controller "WHM - C10D"

Optional Remote Controller

- (a) Analog Remote Controller, 5~100% of Rated Voltage, Up to 1.2kW
- (b) Digital Remote Controller, Ambient +5 ~ 700°C,  $\pm$  1°C Uniformity at Set Temp.

Cat. No		Ea. Price, ₩
with 230V	with 120V	
DH.WHM13500	DH.WHM23500	
DH.WHM12500	DH.WHM22500	

Optional Temp. Probes & Stand Rod, Holder, Clamp for Digital Temp. Remote Controller

- (3) Stand Rod, "RD300",  $\phi$  12.7 × L520mm
- (4) Holder / Clamp / Clip for Temp. Probe

- DH.WHP503040 Direct Contact Temp. Probe, K-type, "SS300", L250 ×  $\phi$  4.8 mm
- DH.WHP503050 Direct Contact Temp. Probe, K-type, "SS400", L380 ×  $\phi$  4.8 mm
- DH.WHP503041 Direct Contact Temp. Probe, K-type, "SS310", Teflon Coated, L250 ×  $\phi$  5 mm
- DH.WHP503051 Direct Contact Temp. Probe, K-type, "SS410", Teflon Coated, L380 ×  $\phi$  5 mm
- DH.WHP503037 (3) Stand Rod,  $\phi$  12.7 × L520mm, "RD300", for Heating Mantles
- DH.WHP503012 (4) Holder & Clamp, "CL220", for Temp. Sensor

Ea. Price, ₩

DAIHAN-brand® Analog Aluminum-case Multi Heating Mantles “WHM”, with 3 & 6 Places, 450°C, with Certi. & Traceability with Glassware Supporting Rod & Clamp, Ideal for Extraction · Reflux · Distillation Applications, Lower Profile, 250~1,000ml  
 3 & 6구 멀티 히팅맨틀, 추출/증류용에 적합, 조절기 내장

- Made in Korea
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Lower Profile for Space-saving Convenience
- Ideal for Repetitive Extraction (Kjeldahl, Soxhlet and other Extraction Procedure), Reflux and Distillation Laboratory Applications
- Analog Controller Built-in System
- Rods and Clamps for Rods Connection
- Ideal for DURAN / Kimax / Pyrex & Iwaki-brand Round Flasks
- Highly-processed Aluminum Case Offers Robust Standing, Easy Handling
- Nickel Chrome Heating Element - Coil Type : Acid-Resistant, Long Life Time
- without Clamp & Clamp Holder for Glassware ; Order Separately



(1) Analog 6 places Heating Mantles (WHM12293)

## Premium Analog Multi Heating Mantles

Highly-processed Aluminum Case  
 Nickel Chrome Heating Element



(2) Analog 3 places Heating Mantles (WHM12391)

(1) 6 places Analog Multi Heating Mantle, 250ml, 300ml & 500ml, 450°C

Catalog No.		Flask Capacity (ml)	Flask		Watts(W)	Inside Depth (mm)	Dimension W×D×H (mm)	Ea. Price, ₩
with 230V	with 120V		Max. Dia. φ (mm)	Bottom				
DH.WHM12291	DH.WHM12292	250/300	83 ~ 86	Flat	840	50	800×240×110	
DH.WHM12293	DH.WHM12294	250/300	83 ~ 86	Round	840	50	800×240×110	
DH.WHM12295	DH.WHM12296	500	102 ~ 105	Round	1440	65	950×270×130	

(2) 3 places Analog Multi Heating Mantle, 500ml & 1,000ml, 450°C

Catalog No.		Flask Capacity (ml)	Flask		Watts(W)	Inside Depth (mm)	Dimension W×D×H (mm)	Ea. Price, ₩
with 230V	with 120V		Max. Dia. φ (mm)	Bottom				
DH.WHM12391	DH.WHM12392	500	102 ~ 105	Round	720	65	550×270×130	
DH.WHM12393	DH.WHM12394	1,000	130 ~ 133	Round	1050	75	690×340×170	

※ Remarks : DU. : DURAN Ki. : Kimax Iw. : Iwaki Py. : Pyrex

### Spare Support Rod & Clamp Set

- DH.WHM30500 Support Rod & Clamp Set, “MHR01”, for 3Places 500ml, 2×750-1×500-mm Rod and 2×Clamp for Rod
- DH.WHM31000 , “MHR02”, for 3Places 1000ml, 2×750-1×600-mm Rod and 2×Clamp for Rod
- DH.WHM60250 , “MHR03”, for 6Places 250-300-ml, 2×750-1×900-mm Rod and 2×Clamp for Rod
- DH.WHM60500 , “MHR04”, for 6Places 500ml, 2×750-1×940-mm Rod and 2×Clamp for Rod

Ea. Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® Heating Tapes “WHM”, Standard-type, 250°C, 13 & 25mm**



**Heating Tapes**

\* For Glass Tubes Metal Pipet

Catalog No.	13mm Width × Length(m)	Watts & Volt	Ea. Price, ₩
DH.WHM12311	13mm × 0.6m	200W, 230V	
DH.WHM12312	× 1.0m	200W, 230V	
DH.WHM12313	× 1.5m	250W, 230V	
DH.WHM12314	× 2.0m	300W, 230V	
DH.WHM12315	× 2.5m	350W, 230V	
DH.WHM12316	× 3.0m	400W, 230V	
Catalog No.	25mm Width × Length(m)	Watts & Volt	Ea. Price, ₩
DH.WHM12321	25mm × 0.6m	200W, 230V	
DH.WHM12322	× 1.0m	200W, 230V	
DH.WHM12323	× 1.5m	250W, 230V	
DH.WHM12324	× 2.0m	300W, 230V	
DH.WHM12325	× 2.5m	350W, 230V	
DH.WHM12326	× 3.0m	400W, 230V	
DH.WHM12327	× 4.0m	550W, 230V	
DH.WHM12328	× 6.0m	700W, 230V	

**DAIHAN-brand® Custom-Made Heating Mantles & Insulation**

Ideal for Bottom Valved Vessels or General-use, “WHM”, Up to 450°C~650°C, 고객 주문 사양 히팅맨틀 및 단열/보온재

We can Offer DAIHAN Custom Heating Mantles, for which you can Specify the Outside Diameter of the Vessel, Length of Mantle, Voltage, Number of Circuits and Length of Each Heating Zone, Ambient Temperature, Unusual Ambient Conditions, Size & Location of Holes for View Ports, and Tubulations.

Please Submit a Sketch for Complicated Applications and Contact our International Sales Team or our Distributor in your Country.

- Provides Uniform Heating and Insulation for Scrubbing and Fractionating Columns.

- Closes with a Zipper, with Eyelets and laces or Hooks and laces.

- Internal Operating Temperature is up to 450°C or 650°C

**Examples for Customized Heating Mantles**



Welcome! Custom-Made Heating Mantles!!

## DAIHAN-brand® Analog Compact Temp. Controller “WHM-C10A”, up to 1.2kW, for All-Purpose Heating Instruments with Solid State, Proportional Voltage Power Control (5~100%), **아날로그 온도 조절기**

■ Made in Korea ■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System



Analog Compact Temp. Controller “WHM-C10A”



<Ex.>  
Heating Mantle Set with the Analog Compact Temp. Controller “WHM-C10A”

- PL (Product Liability) Insurance
- Small Footprint, Compact Analog Temperature Controller
- Precise Manual Control of Heating Mantles, Tapes, Cords and Other Resistive Loads up to 1.2 kW

\* Safe and Durable Design  
\* Solid state, Proportional Voltage Power Control (5~100% or Rated Voltage)

### Specifications & Ordering information

Spec.	Model	“WHM-C10A”
Control Range & Capacity		5~100% of Rated Voltage, Up to 1.2 kW
Dimension & Weight		95×98×h106mm, 1 kg
Packing Size & Gross Weight		190×160×h130mm, 2 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
Cat. No.	230V	DH.WHM13500
	120V	DH.WHM23500
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

## DAIHAN-brand® Digital Feedback Temp. Controller “WHM-C10D”, up to 700°C, ±0.1°C, with Back-Light LCD for All-purpose Heating Instruments, Available K-type External Direct Contact Thermocouple(Optional), **디지털 온도 조절기**

■ Made in Korea ■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System



Digital Feedback Temp. Controller “WHM-C10D”



<Ex.>  
Heating Mantle Set with Temp. Probe and the Digital Feedback Temp. Controller “WHM-C10D”

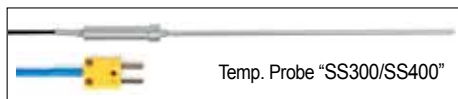
- PL (Product Liability) Insurance
- User's Self-compensation Function to Control Difference between Real Temp. and Indicated Temp. (±50°C)
- Patented Jog-Shuttle Control System

\* Digital Feedback Control by High-Performance Microprocessor  
\* Digital LCD with Back-Light Function \* Small Footprint and User-Friendly Design.  
\* Storage function, Timer, Alarm & Locking Mode  
\* Heating Instruments can be controlled up to 2kW.  
\* Accurate Temp. Control of the Liquid in the Vessel using Optional Direct K-type Sensor

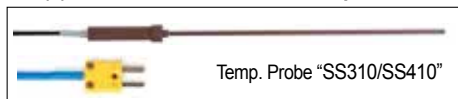
### Specifications & Ordering information

Spec.	Model	“WHM-C10D”
Temp. Range & Accuracy		Ambient +5 ~ 700°C, ±1°C at Set Temperature
Temp. Resolution		1°C-Display, 1°C-Control
Timer & Alarm		99hr 59min (Continuous run), Error status & Timer-end
Display		Digital LCD with Back Light Function (Temp., Timer)
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)
Control Capacity		up to 2 kW for 230V, 1.5kw for 120V
Dimension & Weight		145×185×h68mm, 2.8 kg
Packing Size & Gross Weight		280×250×h110mm, 4 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
Cat. No.	230V	DH.WHM12500
	120V	DH.WHM22500
Price, Each. ₩		

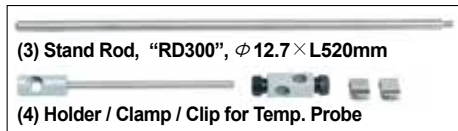
\* Other Specifications are available upon Customer's Request.



(1) External/Direct Contact Temp. Probe



(2) External/Direct Contact Temp. Probe, Teflon Coated



(3) Stand Rod, “RD300”, φ 12.7×L520mm

(4) Holder / Clamp / Clip for Temp. Probe

### Optional Temp. Probes & Stand Rod, Holder, Clamp

- |              |   |              |
|--------------|---|--------------|
| DH.WHP503040 | (1) Direct Contact Temp. Probe, K-type, “SS300”, L250×φ 4.8 mm              | Ea. Price, ₩ |
| DH.WHP503050 | (1) Direct Contact Temp. Probe, K-type, “SS400”, L380×φ 4.8 mm              |              |
| DH.WHP503041 | (2) Direct Contact Temp. Probe, K-type, “SS310”, Teflon Coated, L250×φ 5 mm |              |
| DH.WHP503051 | (2) Direct Contact Temp. Probe, K-type, “SS410”, Teflon Coated, L380×φ 5 mm |              |
| DH.WHP503037 | (3) Stand Rod, φ 12.7×L520mm, “RD300”, for Heating Mantles                  |              |
| DH.WHP503012 | (4) Holder & Clamp, “CL220”, for Temp. Sensor                               |              |

# Homogenizers

<b>Homogenizers, with Direct Controller</b> .....	P. 96
, with Remote Digital Controller .....	P. 97
, Accessories .....	P. 98
<b>Homogenizing Stirrer for Tissue Grinder</b> .....	P. 99
<b>Homogenizing Tissue Grinder</b> .....	P. 99



● **Homogenizer with Direct Controller**  
**"HG-15A"**  
27,000 rpm

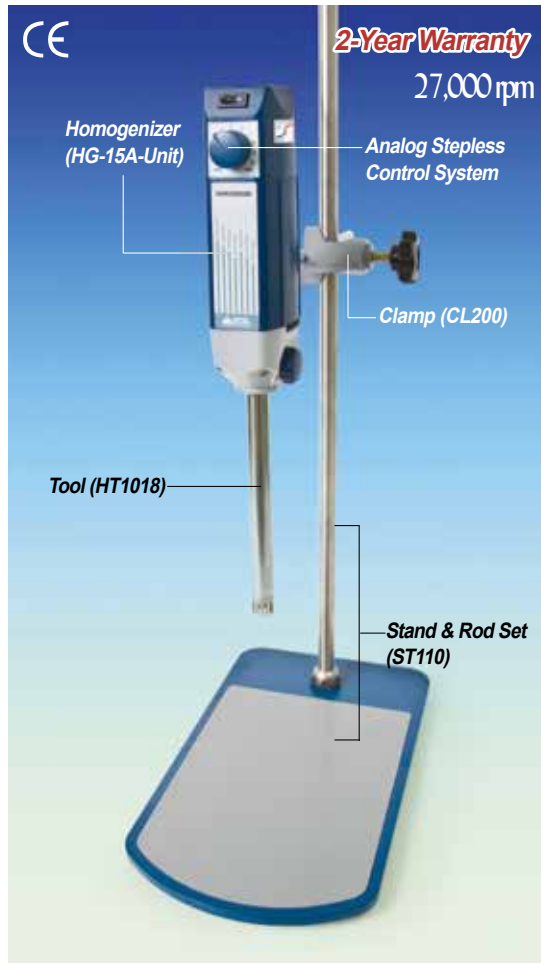


● **Digital Homogenizer with Remote Controller**  
**"HG-15D"**  
2,000~27,000 rpm



● **Homogenizer Stirrer**  
**"HS-30E"**  
200~5,000 rpm

DAIHAN-brand® Homogenizer with Direct Controller “HG-15A”, up to 27,000 rpm, 1~2,500ml  
 with Analog Stepless Control System, High Efficiency Dispersing Tools, High-Speed · High-Quality · Low Noise  
 균질기 / 호모게나이저, 아날로그 컨트롤러 내장, 초고속/저소음 모터



(a) Homogenizer Package-set “HG-15A-Set-A”

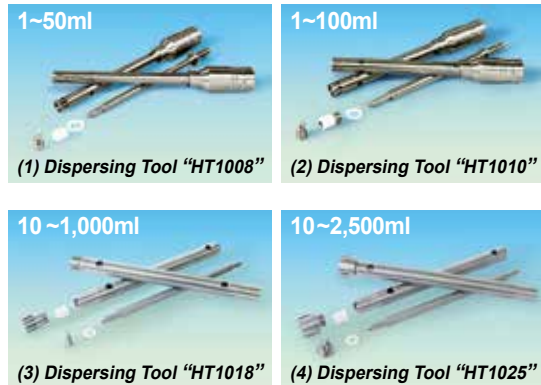
- Made in Korea
  - PL (Product Liability) Insurance
  - CE Certified
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Useful for All Dispersing and Homogenizing Applications
  - Over Heat Protection
- \* Designed for Liquid and Tissue Samples
  - \* Useful for All Dispersing and Homogenizing Applications
  - \* High Speed / High Quality / Low Noise : Max. 27,000 RPM (without load)
  - \* Speed & Power Control Optimized for a Sample
  - \* High Efficiency Dispersing Tool made of Stainless steel and PTFE

### Specifications & Ordering information

Spec.	Model	(a) “HG-15A-Set-A”	(b) “HG-15A-Set-B”	(c) “HG-15A” (Unit Only)
Speed Range & Adjustment		Max. 27,000 rpm (without load), Stepless		
Working Range		1 ~ 2,500ml		
Motor Rating (Input / Output)		Input : 300W , Output : 160 W		
Controller		Analog Phase Controller		
Standard Component Acc.		“HT1018” Dispersing Tool, “CL200” Clamp, “ST110” Stand	“HT1025” Dispersing Tool, “CL200” Clamp, “ST110” Stand	Unit Only
Safety Device		Over Heat Protector		
Usable Dispersing Tool		φ 8mm Stator “HT1008”, φ 10mm Stator “HT1010”, φ 18mm Stator “HT1018”, φ 25mm Stator “HT1025”		
Material		Aluminum Die-casting and ABS-Unit, Stainless steel (# 304)-Tool		
Permissible Temp. & Moisture		Ambient +5 ~ 50℃, 85%		
Extension Arm Size		φ 12.7 × L250mm		
Dimension & Weight		60 × 75 × h215mm, 2.5kg		
Packing Size & Gross Weight		320 × 300 × h190mm, 5 kg		
Power Consumption		160W		
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		
Cat. No.	230V	DH.WHG02016	DH.WHG02017	DH.WHG02015
	120V	DH.WHG01016	DH.WHG01017	DH.WHG01015
Price, Each. ₩				

\* Other Specifications are available upon Customer’s Request.

### Spare Dispersing Tools & Clamp & Plate Stand



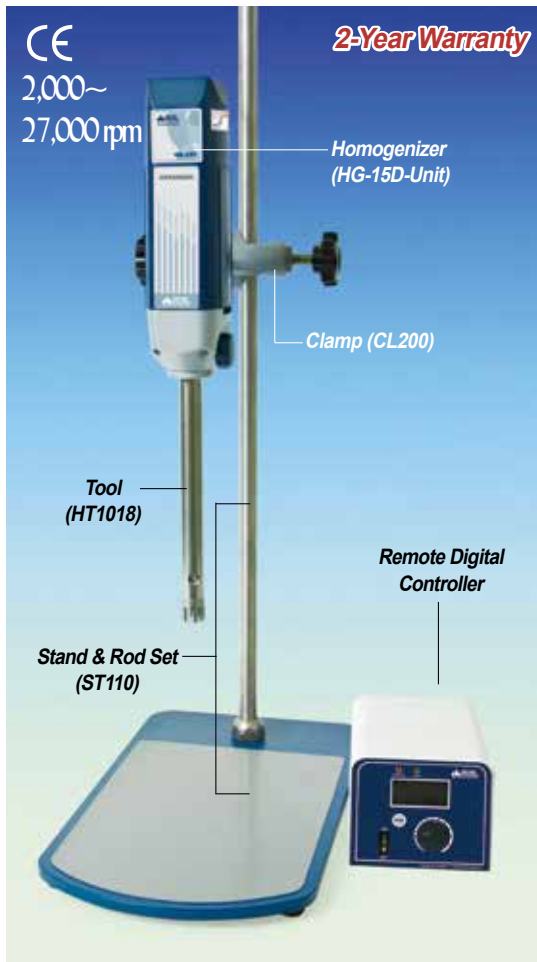
		Ea. Price, ₩
DH.WHG02108	(1) Dispersing Tool, “HT1008”, Rotor φ 6, Stator φ 8mm, 1~50ml	
DH.WHG02110	(2) Dispersing Tool, “HT1010”, Rotor φ 7.96, Stator φ 10mm, 1~100ml	
DH.WHG02118	(3) Dispersing Tool, “HT1018”, Rotor φ 12.8, Stator φ 18mm, 10~1000ml	
DH.WHG02125	(4) Dispersing Tool, “HT1025”, Rotor φ 20, Stator φ 25mm, 50~2500ml	
SL.Cla8011	Clamp, “CL200”, for Stirrer or Homogenizer, Cast Aluminum, Grip Capacity φ 23mm for Stand/Rod	
DH.WOS501510	Standard Plate Stand, “ST110”, for Stirrer or Homogenizer, φ 16 × h800 mm Rod, w20 × d35 cm Plate, with Silicone Pad	
DH.WOS501515	Wide Plate Stand, “ST120”, for Stirrer or Homogenizer, φ 23 × h1000 mm Rod, w30 × d40 cm Plate, with Silicone Pad	

\* See page 98 for the Specifications of Dispersing Tools and Accessories.



Cat. No	Description	Articles
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**DAIHAN-brand® Homogenizer with Remote Digital Controller “HG-15D”, 2,000~27,000rpm with Microprocessor Digital-Control, High-Efficiency Dispersing Tools, Back Light LCD, 1~2,500ml**  
**디지털 균질기 / 호모게나이저, 분리형 리모트 컨트롤러, 초고속/저소음 모터**



(a) Homogenizer with Remote Digital Controller “HG-15D-SET-A”

- Made in Korea    ■ PL(Product Liability) Insurance    ■ CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Jog-Shuttle Control System

- \* Useful for All Dispersing and Homogenizing Applications
- \* Designed for Liquid and Tissue Samples
- \* High Speed / High Quality / Low Noise : Max. 27,000 RPM (without load)
- \* Remote Digital Controller : Fully Digital Controlled by Using Microprocessor
- \* Speed & Power Control Optimized for a Sample
- \* LCD of Speed(RPM) and Power Bar Graph
- \* High Efficiency Dispersing Tool made of Stainless steel and PTFE

### Specifications & Ordering information

Spec.	Model	(a) “HG- 15D-Set-A”	(b) “HG- 15D-Set-B”	(c) “HG-15D” (Unit Only)
Speed Range & Resolution		2,000 ~ 27,000rpm (without load), 10 rpm-Control		
Working Range		1 ~ 2,500ml		
Motor Rating (Input / Output)		Input : 300W , Output : 160 W		
Timer & Alarm		10sec ~ 15min, Timer-end Alarm		
Display		Digital LCD with Back-Light Function		
Controller		Digital Feedback Controller (Remote Type)		
Standard Component Acc.		“HT1018” Dispersing Tool, “CL200”Clamp, “ST110”Stand	“HT1025” Dispersing Tool, “CL200”Clamp, “ST110”Stand	Unit Only
Safety Device		Over Load & Over Heat Protector		
Usable Dispersing Tool		φ 8mm Stator “HT1008”, φ 10mm Stator “HT1010”, φ 18mm Stator “HT1018”, φ 25mm Stator “HT1025”		
Material		Aluminum Die-casting and ABS-Unit, Stainless steel (# 304)-Tool		
Permissible Temp. & Moisture		Ambient +5 ~ 50℃, 85%		
Extension Arm Size		φ 12.7 × L250mm		
Dimension & Weight		60 × 75 × h215mm, 2.5kg		
Packing Size & Gross Weight		580 × 340 × h230mm, 6 kg		
Power Consumption		160W		
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		

Cat. No.	230V	DH.WHG02019	DH.WHG02020	DH.WHG02018
	120V	DH.WHG01019	DH.WHG01020	DH.WHG01018
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.



### Spare Dispersing Tools & Clamp & Plate Stand

Cat. No.	Description	Ea. Price, ₩
DH.WHG02108	(1) Dispersing Tool, “HT1008”, Rotor φ6, Stator φ8mm , 1~50ml	
DH.WHG02110	(2) Dispersing Tool, “HT1010”, Rotor φ7.96, Stator φ10mm, 1~100ml	
DH.WHG02118	(3) Dispersing Tool, “HT1018”, Rotor φ12.8, Stator φ18mm, 10~1000ml	
DH.WHG02125	(4) Dispersing Tool, “HT1025”, Rotor φ20 , Stator φ25mm, 50~2500ml	
SL.Cla8011	Clamp, “CL200”, for Stirrer or Homogenizer, Cast Aluminum, Grip Capacity φ23mm for Stand/Rod	
DH.WOS501510	Standard Plate Stand, “ST110”, for Stirrer or Homogenizer, φ16 × h800 mm Rod, w20 × d35 cm Plate, with Silicone Pad	
DH.WOS501515	Wide Plate Stand, “ST120”, for Stirrer or Homogenizer, φ23 × h1000 mm Rod, w30 × d40 cm Plate, with Silicone Pad	

\* See page 98 for the Specifications of Dispersing Tools and Accessories.

Articles

Cat. No

Description

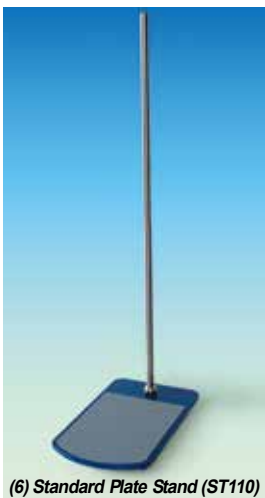


## Homogenizer Accessories, Dispersing Tools & Plate Stand for Homogenizer

- Accurate Stator & Rotor made of Stainless steel
- High Efficiency Dispersing Tool made of Stainless steel and PTFE
- Low Cost & High Efficiency

Model	(1)"HT1008"	(2)"HT1010"	(3)"HT1018"	(4)"HT1025"
Working Range	1 ~ 50ml	1 ~ 100ml	10 ~ 1,000ml	50 ~ 2,500ml
Stator Diameter	φ8 mm	φ10 mm	φ18 mm	φ25 mm
Rotor Diameter	φ6 mm	φ7.96 mm	φ12.8mm	φ20 mm
Gap between Rotor & Stator	0.25 mm	0.2 mm	0.25 mm	0.35 mm
Allowable Max. Speed	27,000 rpm		20,000 rpm	15,000 rpm
Immersion Depth Min.	35 mm		60 mm	
Immersion Depth Max	70 mm		130 mm	
Shaft Length	138 mm		225 mm	
Bearing Material	PTFE			
Suitable for Solvent	Yes			
Max. Temperature	180°C			
Sterilization Method	All Methods			
Suspensions & Emulsions	Suspension : 10 ~ 50 $\mu$ m, Emulsion : 1 ~ 10 $\mu$ m			

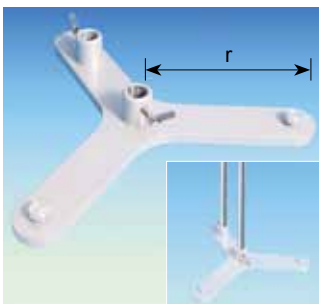
\* Test Condition : 1.8 liters of water in the 2 liters capacity beaker.



### Spare Dispersing Tool & Clamp & Plate Stand

- DH.WHG02108** (1) Dispersing Tool, "HT1008", Rotor φ6, Stator φ8mm, 1~50ml
- DH.WHG02110** (2) Dispersing Tool, "HT1010", Rotor φ7.96, Stator φ10mm, 1~100ml
- DH.WHG02118** (3) Dispersing Tool, "HT1018", Rotor φ12.8, Stator φ18mm, 10~1000ml
- DH.WHG02125** (4) Dispersing Tool, "HT1025", Rotor φ20, Stator φ25mm, 50~2500ml
- SL.Cla8011** (5) Clamp, "CL200", for Stirrer or Homogenizer, L135mm, Cast Aluminum, Grip Capacity φ23mm for Stand/Rod
- DH.WOS501510** (6) Standard Plate Stand, "ST110", for Stirrer or Homogenizer, φ16×h800 mm Rod, w20×d35 cm Plate, with Silicone Pad
- DH.WOS501515** (7) Wide Plate Stand, "ST120", for Stirrer or Homogenizer, φ23×h1000 mm Rod, w30×d40 cm Plate, with Silicone Pad

Ea. Price, ₩



### Steel Retort Base Duo Stand, up to φ16mm Rods, for 2 Rods with Hinged Screw M6, Nonskid Feet equipped, Rod Excluded

\* Can Fix Rods up to 2ea (Below φ16mm) \* Stand Thickness : 8mm

#### Retort Stand, Only Stand Base

\* Supplied by Usbeck® in Germany

- US.2040** Stand, "US2040", r = 150mm
- US.2041** , "US2041", r = 185mm

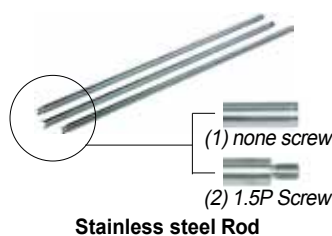
#### Optional Stainless steel Rod

- DH.WOS502001** Stainless-steel Rod, "RD501", φ16×h800mm, Non-screw
- DH.WOS502002** , "RD502", φ16×h1000mm, Non-screw
- DH.WOS502003** , "RD503", φ16×h1200mm, Non-screw

Ea. Price, ₩

Ea. Price, ₩

### DAIHAN-brand® High-Quality Stainless-steel (#304) Rod. for Plate Stand, φ16/23 mm



#### (1) Plain-type φ16mm Rod, without Screw

- DH.WOS502001** Stainless-steel Rod, "RD501", φ16×h800mm, Non-screw
- DH.WOS502002** , "RD502", φ16×h1000mm, Non-screw
- DH.WOS502003** , "RD503", φ16×h1200mm, Non-screw
- DH.WOS502031** , "RD531", φ23×h800mm, Non-screw
- DH.WOS502033** , "RD533", φ23×h1200mm, Non-screw

Ea. Price, ₩

#### (2) 1.5P Screw-type φ16 & 23mm Rod

- DH.WOS502011** Stainless-steel Rod, "RD511", φ16×h800mm, 1.5P Screw
- DH.WOS502012** , "RD512", φ16×h1000mm, 1.5P Screw
- DH.WOS502013** , "RD513", φ16×h1200mm, 1.5P Screw
- DH.WOS502021** , "RD521", φ23×h800mm, 1.5P Screw
- DH.WOS502022** , "RD522", φ23×h1000mm, 1.5P Screw
- DH.WOS502023** , "RD523", φ23×h1200mm, 1.5P Screw

Ea. Price, ₩

Cat. No	Description	Articles
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## DAIHAN-brand® Homogenizing Stirrer “HS-30E”, for Tissue Grinder, 200~5,000rpm for Tissue Grinders, Analog Phase Control, without Tissue Grinder, with Certi. & Traceability, 호모케나이저 스티러



Homogenizing Stirrer Package-Set “HS-30E”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for usage with Tissue Grinders

\* Designed for most Laboratory Applications such as Homogenizing or Mixing  
\* Compact Unit with Solid State Speed Control

### Specifications & Ordering information

Spec.	Model	“HS-30E”
Speed Range & Max. Torque		200 ~ 5,000 rpm, 85 Ncm
Stirring Capacity		Max. 10 Lit.
Motor Rating		Input : 83 W, Output : 75 W, 1/10 HP
Safety Device		Over Heat Protector
Controller		Analog Phase Controller
Dimension & Weight		90 × 145 × h180mm, 3.5 kg
Packing Size & Gross Weight		320 × 300 × h190mm, 5 kg
Power Consumption		75W
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz
Cat. No.	230V	DH.WOS01010
	120V	DH.WOS02010
Price, Each. ₩		
Component of Package-set		included “CL200” Clamp and “ST110” Stand-set(Rod, Plate)
Cat. No.	230V	DH.WOS01011
	120V	DH.WOS02011
Price, Each. ₩		

\* Other Specifications are available upon Customer's Request.

\* **Note! The Package does not include a Tissue Grinder**

## Cowie® Tissue Grinders, with PTFE Pestle Head · Borosilicate Glass Mortar, 2~50ml, Separately

Good for Chemical/Heat Resistance, Standard- / Serrated-type PTFE Head Pestles, STS Pestle Rod is Perfect for Motor Drive, 티슈 그라인더



(3) Serrated-type Pestle

### ■ Supplied by Cowie® in U.K

- \* Use for the Controlled Reduction of Particle Size and Homogenisation for a Variety of Substances, especially Biological Material.
- \* The pestle head is pure PTFE and pestle rod Stainless-steel,  $\phi$  6.5mm
- \* Pestle Length : 230~270mm      \* The Mortar is precision borosilicate glass.

#### (1) Glass Mortar, Borosilicate, 2~50ml

CW.011.102	Mortar, 2ml, $\phi$ 8 × l 120mm
CW.011.105	, 5ml, $\phi$ 12 × l 135mm
CW.011.110	, 10ml, $\phi$ 15 × l 150mm
CW.011.115	, 15ml, $\phi$ 19 × l 155mm
CW.011.130	, 30ml, $\phi$ 25 × l 175mm
CW.011.150	, 50ml, $\phi$ 32 × l 195mm

Ea. Price, ₩

#### (2) Standard-type Pestles

CW.011.202	Pestle, Standard-type, for 2ml, l 230mm
CW.011.205	, for 5ml, l 235mm
CW.011.210	, for 10ml, l 270mm
CW.011.215	, for 15ml, l 270mm
CW.011.230	, for 30ml, l 270mm
CW.011.250	, for 50ml, l 270mm

Ea. Price, ₩

#### (3) Serrated-type Pestles

CW.011.302	Pestle, Serrated-type, for 2ml, l 230mm
CW.011.305	, for 5ml, l 235mm
CW.011.310	, for 10ml, l 270mm
CW.011.315	, for 15ml, l 270mm
CW.011.330	, for 30ml, l 270mm
CW.011.350	, for 50ml, l 270mm

Ea. Price, ₩

**Hotplates & Hotplate Stirrers**

**Hotplates**, 380°C, Analog ..... P. 104  
 , 380°C, Digital ..... P. 103  
 , 500°C, Solid Ceramic Glass Plate **New** ..... P. 102  
 , Large Plate, 350°C ..... P. 105

**Hotplate Stirrers**, 380°C, Analog ..... P. 108  
 , 380°C, Digital ..... P. 107  
 , 500°C, Solid Ceramic Glass Plate **New** ... P. 106  
 , Systematic Multi-plate, 350°C ..... P. 109



**500°C Hi-temp. Digital Hotplate Stirrers**  
"MaXtir™ MSH500"



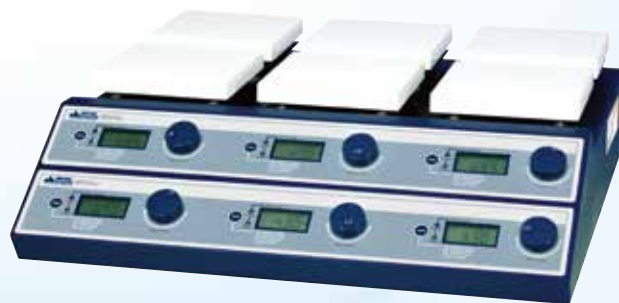
**Analog Premium Hotplate Stirrers**  
"MSH-20A"



**Digital Hotplate Stirrers**  
"MSH-20D"



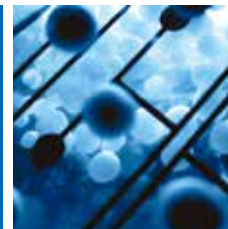
**Large Plate Digital Hotplate**  
"HPLP-C-P"



**Systematic Multi-Hotplate Stirrers**  
"SMHS-6"

Maximum Convenience by Advanced Digital Technology

# DAIHAN New Generation 500°C High Temp. Hotplates, Solid Ceramic Glass Plate



## » High-quality Ceramic Glass Plate

Achieved the maximum temperature of 500°C by using High-quality Ceramic Glass Plate which can resist up to 700°C Superior Heat-/Acid-/Chemical-resistant and Easy-to-Clean Plate



## » Hot-top Indicator for User Safety

The Indicator Lamp illuminates while temperature on the Plate Surface is over 50°C regardless power on/off. Prevention from a fire or a burn caused by operation at high temperature



## » 2× Independent Internal Temp. Sensor

Two Independent Internal Temp. Sensors : Accurate Temp. Control and Over-temp. Protection.  
1× Temp Control Sensor: Achieved Accurate Temp. Control at High Temp.  
1× Over-Temp. Protection Sensor: Prevention from malfunction or danger caused by Over-temperature.



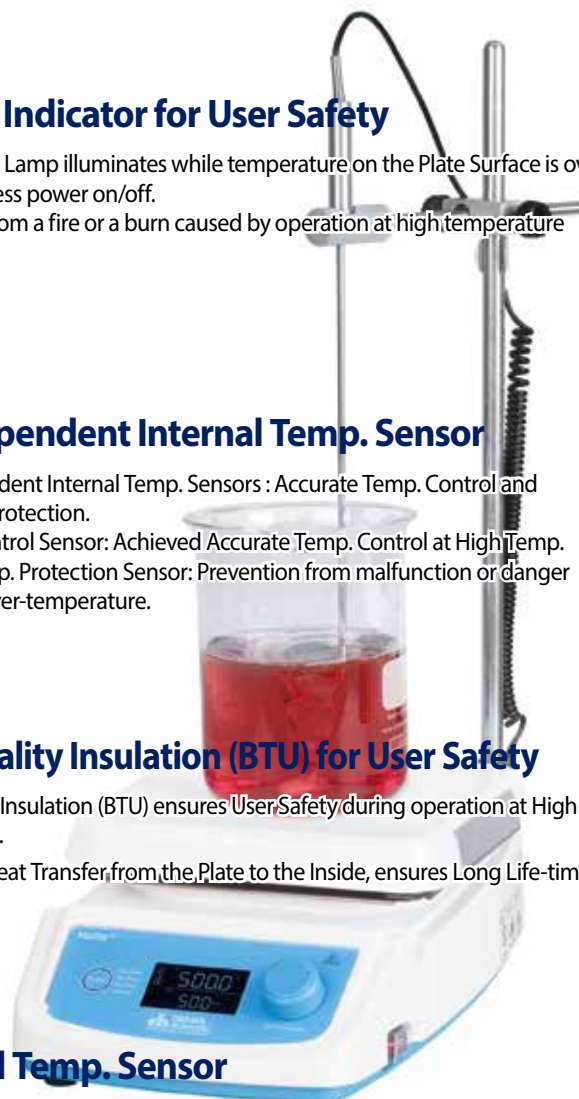
## » High-quality Insulation (BTU) for User Safety

High-quality Insulation (BTU) ensures User Safety during operation at High Temperature.  
Minimized Heat Transfer, from the Plate to the Inside, ensures Long Life-time.



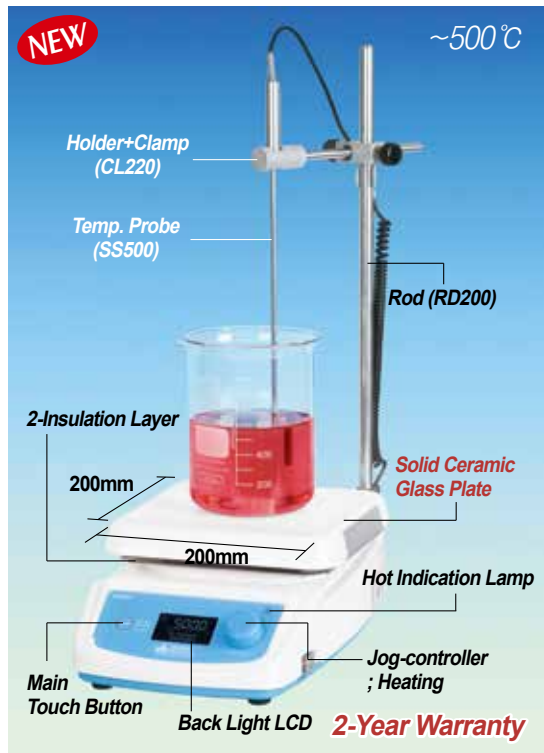
## » External Temp. Sensor

External Temp. Sensor achieves even more Accurate Temp Control by measuring Temp. of Sample. (Optional)



<Continued On Next Page>

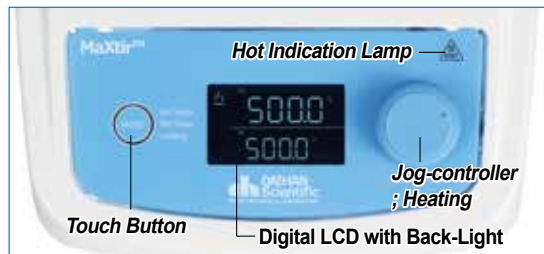
DAIHAN-brand® **New** 500°C Hi-Temp. Hotplates “MaXtir™ HP500”, Solid Ceramic Glass Plate, 200×200mm **NEW** with Large LCD, Optimum Insulation Layer. Accurate Temp. Control, Touch-button Controller, Hot-Top Indicator, Max. 500°C, Accu. ±0.3°C 고온용 디지털 가열판, PID 온도 제어, 최적의 방열구조, 내열성/내화학성/내산성 슬리드 세라믹 글라스 플레이트



(a) “MaXtir™ HP500” Package-set



(b) “MaXtir™ HP500” Unit only



New Generation Controller of “MaXtir™ HP500”



(1) Plug for Temp. Probe “SS500”  
External/Direct Contact Temp. Probe



(2) Plug for Temp. Probe “SS510”  
External/Direct Contact Temp. Probe, Teflon Coated



(3) Stand Rod, “RD200”, φ 12×L450mm

(4) Holder / Clamp / Clip for Temp. Probe

- Made in Korea
  - PL (Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - High-quality Solid Ceramic Glass Plate : Heat-/Chemical-/Acid-Resistance and Easy to Clean
  - Optimum Insulation Fourfold Layers : BTU + Ceramic Paper + 2×SUS Insulation Layers
  - Maximum Temperature of 500°C
  - Ergonomic Design
  - Microprocessor PID control
  - Patented Controller “Jog-Dial” and Main Touch Button - Best Durability, Best Mobility, Best Convenient to Operate with Back-Light Function
  - 2×Internal K-type Temp. Sensor Operating Independently : 1×Temp. Control Sensor for Temperature Accuracy and 1×Over Temp. Detection Sensor for User Safety
  - Hot Top Indicator LED Lamp : Hot Surface(Over 50°C) Warning Lamp for User Safety
- \* Excellent for Sample Drying and most General Lab Heating Applications  
 \* User’s Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)  
 \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)  
 \* Storage Function for the set Values : Temp. and Timer  
 \* Minimization of Noise and Improved the Product Life  
 \* Use of the Special Advanced Insulation for the safety of the Body Temp.  
 \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)

### Specifications & Ordering information

Spec.		Model	(a) “MaXtir™ HP500” (Package-set)	(b) “MaXtir™ HP500” (Unit Only)
Material	Body Plate		Powder Coated Aluminum	
			Solid Ceramic Glass Plate, 200×200mm	
Stirring Capa.			Max. 20 Lit.	
Temp. Range & Accuracy			Max. 500°C, ±0.3°C at Set Temperature	
Temp. Resolution			0.1°C-Display, 0.5°C-Control	
Temp. Uniformity			Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power / Consumption			850W	
Timer & Alarm			99hr 59min (with Continuous run.), Error status & Timer-end	
Display			Digital LCD with Back-Light Function	
Controller			Digital Feedback Controller with Jog Dial (Turn+Push) and Touch button.	
Safety Circuit			Over Temp. Protection Hot Top Indicator LED Lamp	
Included Standard Acc.		Unit, * External Temp Probe-set	Unit Only	
Permissible Temp. & RH %			Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight			220×332×h114mm, 3.8kg	
Electrical Reqts.			1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V		DH.WHP01500	DH.WHP00500
	120V		DH.WHP01501	DH.WHP00501
Price, Each. ₩				

\* Other Specifications are available upon Customer’s Request.

### Component of Package-set

- \* External Temp Probe-set : ① Hotplate Unit ② “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe with stir Bar

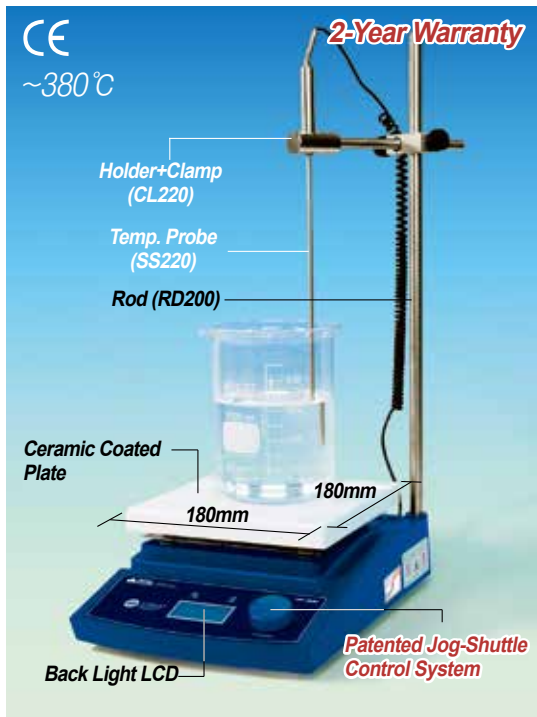
### Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ4×L250mm, Cable L190mm  
 DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ4×L250mm, Cable L190mm  
 DH.WHP503036 (3) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm, Screw, for “MaXtir™ HP500”, “MaXtir™ MSH500”  
 DH.WHP503012 (4) Holder/Clamp/Clip, “CL220”, for Temp. Probe

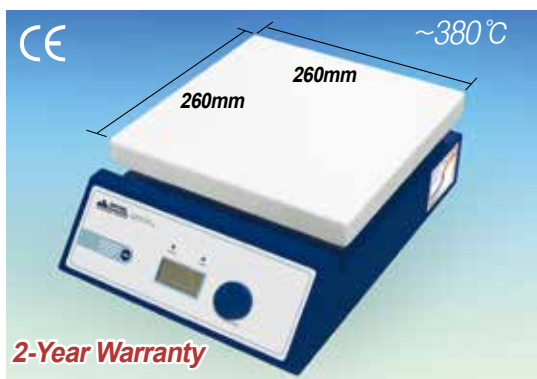
Ea.	Price, ₩

Cat. No	Description	Articles
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DAIHAN-brand® 380°C Digital Precise Hotplate “HP-D”, Ceramic-Coated Plate, ±0.3°C with Digital Feedback Control System, Back Light LCD, 180×180mm- or 260×260mm-Plate, with Certi. & Traceability  
 디지털 정밀 가열판, 디지털 피드백 온도 제어, 세라믹 코팅 플레이트



(a) 180×180mm Plate-type Digital Precise Hotplate “HP-20D” Package-set



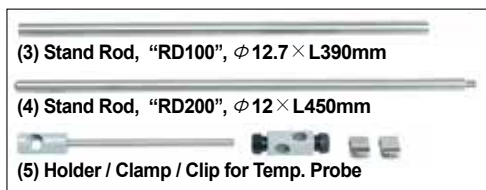
(b) 180×180mm Plate-type Digital Precise Hotplate “HP-30D” Unit only



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



- Made in Korea ■ CE Certified ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Jog-Shuttle Control System
- \* Digital Feedback Control by High-Performance Microprocessor
- \* Smart Design of Body made by Aluminum Die-Casting (HP-20D)
- \* Ceramic Coated Plate-Chemical/Acid Resistance \* Digital LCD with Back-Light Function
- \* Superior Temperature Uniformity : less than 10% on the Plate at Ambient Temperature
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Locking Mode for Experimental Safety Supported (Input to Jog Shuttle can be disabled)
- \* User's Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)

Specifications & Ordering information

Spec.	Model	(a) “HP-20D”	(b) “HP-30D”
Plate Size(mm)		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Temp. Range & Accuracy		Max. 380°C, ±0.3°C at Set Temperature	
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		600 W	1.2 kW
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)	
Safety Circuit		Over Temp. Protection	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 2.8kg	286×387×h99mm, 3.2kg
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×h200mm, 5 kg
Electrical Rqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Unit Only			
Cat. No.	230V	DH.WHP03020	DH.WHP03022
	120V	DH.WHP02020	DH.WHP02022
Price, Each. ₩			

* External Temp. Probe Package-set			
Cat. No.	230V	DH.WHP03021	DH.WHP03023
	120V	DH.WHP02021	DH.WHP02023
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

Component of Package-set

- \* “HP-20D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220”Holder+Clamp for External Temp. Probe
- \* “HP-30D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD100” Stainless steel Support Rod φ 12×L450mm ④ “CL220”Holder+Clamp for External Temp. Probe

Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503011 (3) Stand Rod, “RD100”, Stainless steel, φ 12.7×L450mm for “HP-30A/30D”, “MSH-30A/30D”, Non-screw
- DH.WHP503036 (4) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”, Screw
- DH.WHP503012 (5) Holder/ Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩

DAIHAN-brand® 380°C Analog Premium Hotplate “HP-20A” & “HP-30A”, Ceramic-Coated Plate  
 Built-in Linearity PWM Controller, High Temp. Uniformity, 180×180- or 260×260-mm Plate, CE Certified, with Certi. & Traceability  
 아날로그 정밀 가열판, 우수한 온도균일성 & 경제성, 세라믹 코팅 플레이트



(a) 180×180mm Plate-type Hotplate “HP-20A”



(b) 260×260mm Plate-type Hotplate “HP-30A”

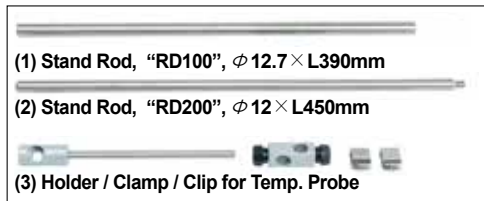
- Made in Korea
- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Excellent for Sample Drying and Most General Lab Heating Applications
- Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature

- \* Excellent for Sample Drying and most General lab Heating Applications
- \* Smart Design of Body made by Aluminum Die-Casting (HP-20A)
- \* Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- \* Superior Linearity for Temperature Control by Specially Designed Control Circuitry (PWM control)
- \* Ceramic Coated Plate - Chemical / Acid Resistance

### Specifications & Ordering information

Spec.	Model	(a) “HP-20A”	(b) “HP-30A”
Plate Size(mm)		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Temp. Range & Uniformity		Max. 380°C Temp., High Uniformity : Difference 10% less	
Heating Power/Consumption		600 W	1.2 kW
Controller		Superior Linearity PWM Controller	
Permissible Temp. & RH %		R/T +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 2.8kg	286×387×h99mm, 3.3kg
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×200hmm, 5 kg
Electrical Rqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WHP03120	DH.WHP03121
	120V	DH.WHP02120	DH.WHP02121
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

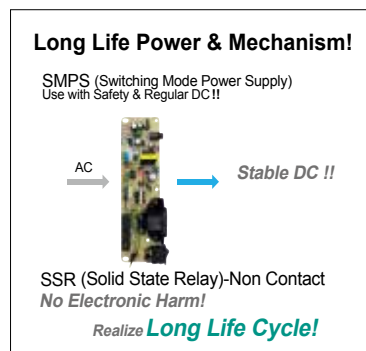
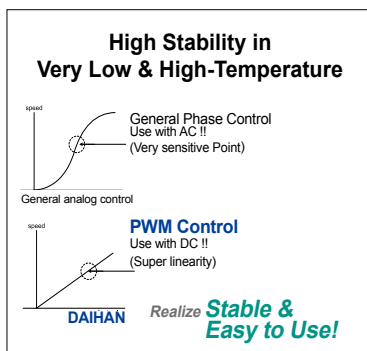


### Optional Stand Rod & Holder/Clamp

- DH.WHP503011 (1) Stand Rod, “RD100”, Stainless steel, Non-screw  $\phi 12.7 \times L390$ mm, for “HP-30A/30D”, “MSH-30A/30D”
- DH.WHP503036 (2) Stand Rod, “RD200”, Stainless steel, 1.5p screw  $\phi 12 \times L450$ mm, for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”
- DH.WHP503012 (3) Holder / Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩

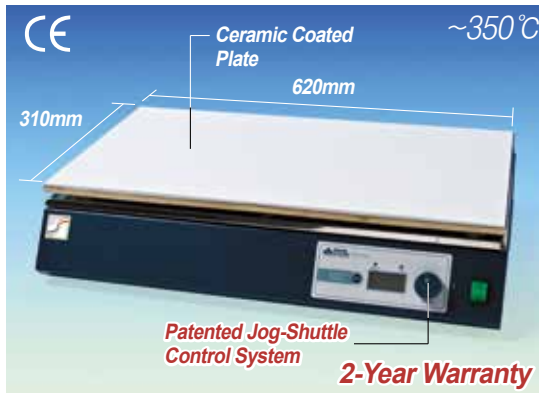
### Specialized Features



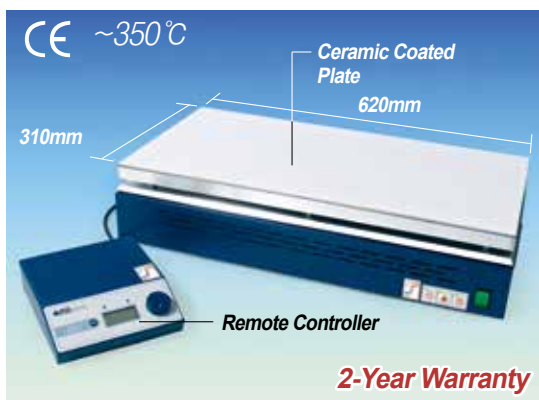


Cat. No	Description	Articles
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DAIHAN-brand® 350°C Large Plate Digital Hotplate “HPLP”, Ceramic-Coated Plate, Superior Temp. Uniformity Built-in Digital PID Controller or Digital Remote Controller, Ceramic-Coated Plate, Back Light LCD, 310×620mm Plate  
 디지털 대형 정밀 가열판, 디지털 피드백 온도 제어, 디지털 PID 조절기 / 디지털 원격 조절기, 백색 세라믹 코팅판



(1) Large Digital Hotplate, with Built-in Digital PID Controller, Ceramic-Coated Plate-type “HPLP-C-P”



(2) Large Digital Hotplate, Digital Remote Controller, Ceramic-Coated Plate-type “HPLP-C-R”

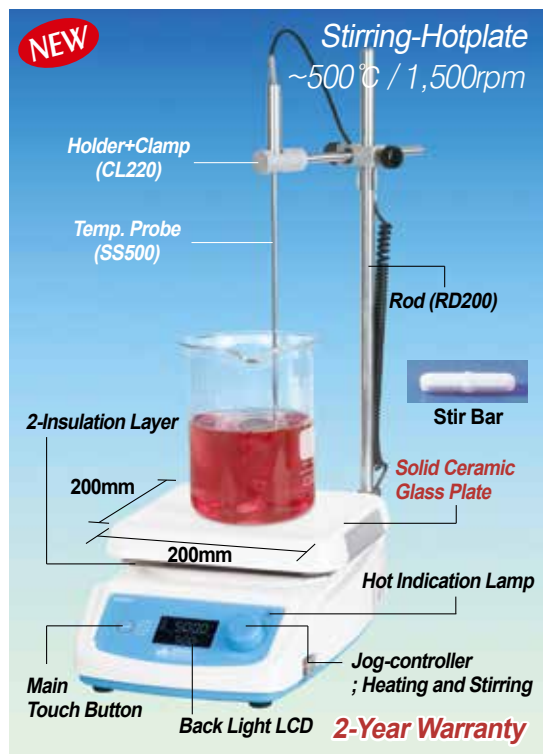
- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- 2-Years Warranty
- Max Temp : 350°C
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- Digital PID Controller
- Patented Jog-Shuttle Control System and Back-Light LCD
- \* Excellent for Sample Drying and most General lab Heating Applications
- \* Large Heating Area : Ideal for TLC Plate Heating and Surface Heating in Electronic Industries
- \* Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- \* Ceramic Coated Plate -Chemical / Acid Prevention

Specifications & Ordering information

Spec.	Models	(1) “HPLP-C-P”	(2) “HPLP-C-R”
Controller		Built-in Digital PID Controller	Digital Remote Controller
Plate Surface		Ceramic-coated	
Plate Size		310×620mm	
Temp. Range & Accuracy		Max. 350°C, ±0.3°C at Set Temperature	
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		2 kW	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		670×360×h150mm, 16kg	
Packing Size & Gross Weight		750×430×h220mm, 18 kg	
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WHP03024	DH.WHP03025
	120V	DH.WHP02024	DH.WHP02025
Price, Each. ₩			

\* Other Specifications are available upon Customer’s Request.

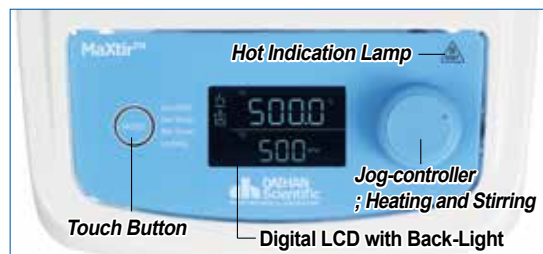
DAIHAN-brand® **New** 500°C Hi-Temp. Hotplate Stirrers “MaXtir™ MSH500”, Solid Ceramic Glass Plate, 200×200mm with Large LCD, Optimum Insulation Layer. Accurate Temp. Control, Touch-button Controller, Hot-Top Indicator, Max. 500°C, Accu. ±0.3°C 고온용 디지털 가열 자력 교반기, 최적의 방열구조, 디지털 피드백 온도 제어, 내열성/내화학성/내산성 솔리드 세라믹 글라스 플레이트 **NEW**



(a) “MaXtir™ MSH500” Package-set



(b) “MaXtir™ MSH500” Unit only



New Generation Controller of “MaXtir™ MSH500” model



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



- Made in Korea ■ PL(Product Liability) Insurance ■ Ergonomic Design
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- High-quality Solid Ceramic Glass Plate : Heat-/Chemical-/Acid-Resistance and Easy to Clean
- Optimum Insulation Fourfold Layers : BTU + Ceramic Paper + 2×SUS Insulation Layers
- Brushless Shade Motor & Powerful Magnet ensures Powerful Stirring and Precise Speed Control, Minimization Noise
- Maximum Temperature of 500°C ■ Microprocessor PID control
- Patented Controller “Jog-Dial” and Main Touch Button - Best Durability, Best Mobility, Best Convenient to Operate with Back-Light Function
- 2×Internal K-type Temp. Sensor Operating Independently : 1×Temp. Control Sensor for Temperature Accuracy and 1×Over Temp. Detection Sensor for User Safety
- Hot Top Indicator LED Lamp : Hot Surface(Over 50°C) Warning Lamp for User Safety
- \* Excellent for Sample Drying and most General Lab Heating Applications
- \* User’s Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Storage Function for the set Values : Temp. and Timer
- \* Minimization of Noise and Improved the Product Life
- \* Use of the Special Advanced Insulation for the safety of the Body Temp.
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)

### Specifications & Ordering information

Spec.		Model	(a) “MaXtir™ MSH500” (Package-set)	(b) “MaXtir™ MSH500” (Unit Only)
Material	Body		Powder Coated Aluminum	
	Plate		Solid Ceramic Glass Plate, 200×200mm	
Stirring Capa.			Max. 20 Lit.	
Speed & Control Resolution			80 ~ 1,500 rpm, 5 rpm	
Temp. Range & Accuracy			Max. 500°C, ±0.3°C at Set Temperature	
Temp. Resolution			0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity			Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power / Consumption			850W	
Timer & Alarm			99hr 59min (with Continuous run.), Error status & Timer-end	
Display			Digital LCD with Back-Light Function	
Controller			Digital Feedback Controller with Jog Dial (Turn+Push) and Touch button.	
Stirring Bar			3cm bar-included, Usable : up to 5cm bar	
Safety Circuit			Over Temp. Protection, Hot Top Indicator LED Lamp	
included Standard Acc.			Unit, *External Temp Probe-set, with 1ea Stir Bar	Unit with 1ea Stir Bar
Permissible Temp. & RH %			Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight			220×332×h114mm, 3.8kg	
Electrical Reqt.s.			1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz, with Cord/Plug	
Cat. No.	230V		DH.WMH00500	DH.WMH01500
	120V		DH.WMH00501	DH.WMH01501
Price, Each. ₩				

\* Other Specifications are available upon Customer’s Request.

### Component of Package-set

- \* Package-set : ① Hotplate Unit ② “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe

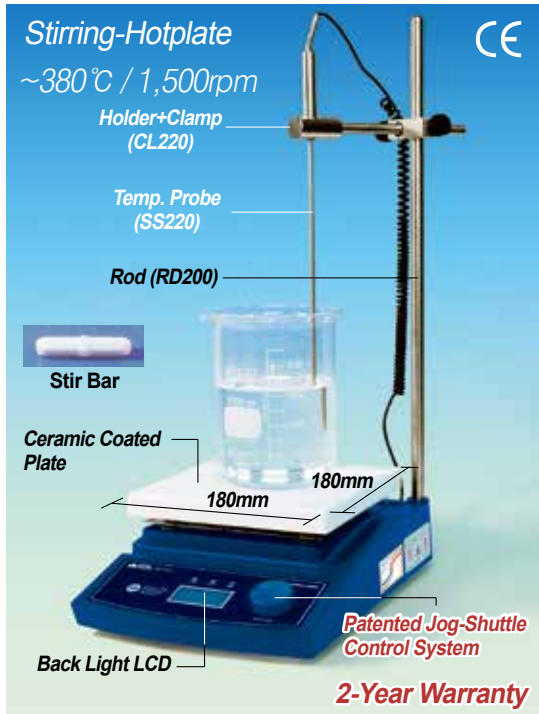
### Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ 4×L250mm, Cable L190mm,
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ 4×L250mm, Cable L190mm,
- DH.WHP503036 (3) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm, Screw, for “MaXtir™ HP500”, “MaXtir™ MSH500”
- DH.WHP503012 (4) Holder/Clamp/Clip, “CL220”, for Temp. Probe

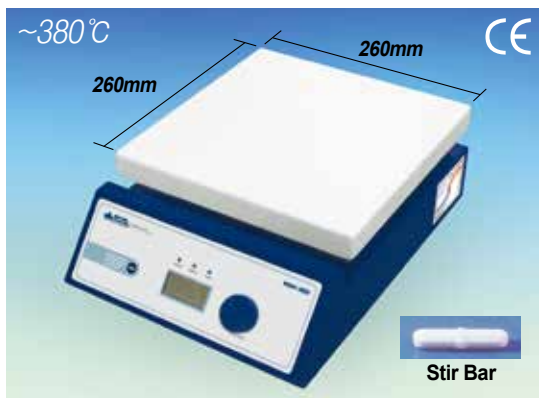
Ea. Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® 380°C Digital Hotplate Stirrer “MSH-D”, Ceramic-Coated Plate, ±0.3°C, with Certi. & Traceability with Digital Feedback Control, Accurate Temp. Control, 180×180mm- or 260×260mm-Plate, 80 ~ 1,500 rpm**  
**디지털 가열 자력 교반기, 디지털 피드백 온도 제어, 우수한 온도균일성, 세라믹 코팅 플레이트**



(a) 180×180mm Plate-type Digital Precise Hotplate “MSH-20D” Package-set



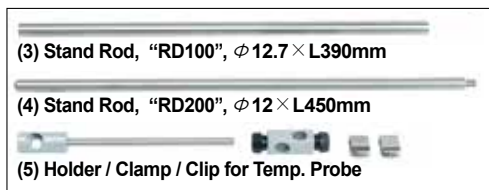
(b) 180×180mm Plate-type Digital Precise Hotplate “MSH-30D” Unit only



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



- Made in Korea ■ CE Certified ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Feedback Control by High-Performance Microprocessor
- Patented Jog-Shuttle Control System

- \* User’s Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Storage Function for the set Values : Temp. and Timer
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Superior Temperature Uniformity : less than 10% on the Plate at Ambient Temperature

### Specifications & Ordering information

Spec.	Model	(a) “MSH-20D”	(b) “MSH-30D”
Plate Size(mm)		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Stirring Capa. & Motor Rating		Max. 20 Lit., 9 / 4 W	
Speed & Control Resolution		80 ~ 1,500 rpm, 5 rpm	
Temp. Range & Accuracy		Max. 380°C, ±0.3°C at Set Temperature	
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		600W	1.2 kW
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Safety Circuit		Over Temp. Protection	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 3.3kg	286×387×h99mm, 3.5kg
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×h200mm, 5 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Unit only			
Cat. No.	230V	DH.WMH03020	DH.WMH03022
	120V	DH.WMH02020	DH.WMH02022
Price, Each. ₩			

* External Temp. Probe Package-set			
Cat. No.	230V	DH.WMH03021	DH.WMH03023
	120V	DH.WMH02021	DH.WMH02023
Price, Each. ₩			

\* Other Specifications are available upon Customer’s Request.

### Component of Package-set

- \* “MSH-20D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe
- \* “MSH-30D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD100” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe

### Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503011 (3) Stand Rod, “RD100”, Stainless steel, φ 12.7×L450mm for “HP-30A/30D”, “MSH-30A/30D”, Non-screw
- DH.WHP503036 (4) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”, Screw
- DH.WHP503012 (5) Holder/ Clamp / Clip, “CL220”, for Temp. Probe

Ea.	Price, ₩

DAIHAN-brand® 380°C Analog Premium Hotplate Stirrer “MSH-A”, Ceramic-Coated Plate, 1,500 rpm, with Certi. & Traceability Built-in Linearity PWM Controller, Superior Temperature Uniformity, Precise Control of Temp. & RPM, 180×180mm or 260×260mm  
 아날로그 가열 자력 교반기, 우수한 온도균일성, 세라믹 코팅 플레이트



(a) 180×180mm Plate-type Hotplate Stirrer “MSH-20A”



(b) 260×260mm Plate-type Hotplate Stirrer “MSH-30A”

- Made in Korea
- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- Superior Linearity for Temperature Control & Stirring Speed
- Ceramic Coated Plate-Chemical / Acid Resistance
- \* Excellent for Sample Drying and most General Lab Heating Applications
- \* Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- \* Superior Linearity for Temperature Control & Stirring Speed by Specially Designed Control Circuitry.(PWM Control)
- \* Smart Design of Body made by Aluminum Die-Casting (MSH-20A)
- \* Ceramic Coated Plate-Chemical/Acid Resistance
- \* Maximum Temperature of 380°C

### Specifications & Ordering information

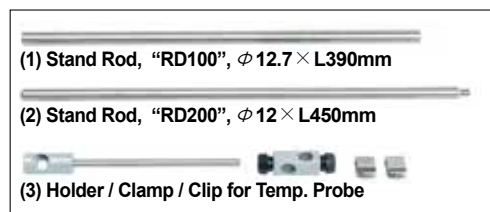
Spec.	Model	(a) “MSH-20A”	(b) “MSH-30A”
Plate Size		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Stirring Capa. & Motor Rating		Max. 20 Lit., 9 / 4 W	
Speed Range		Max. 1,500 rpm	
Temp. Range		Max. 380°C	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		600W	1.2 kW
Controller		Superior Linearity PWM Controller	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 2.8kg	286×387×h99mm, 3.3kg
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×h200mm, 5 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WMH03120	DH.WMH03121
	120V	DH.WMH02120	DH.WMH02121
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

### Optional Stand Rod & Holder/Clamp

- DH.WHP503011 (1) Stand Rod, “RD100”, Stainless steel, Non-screw  $\phi 12.7 \times L390\text{mm}$ , for “HP-30A/30D”, “MSH-30A/30D”
- DH.WHP503036 (2) Stand Rod, “RD200”, Stainless steel, 1.5p screw,  $\phi 12 \times L450\text{mm}$ , for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”
- DH.WHP503012 (3) Holder / Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩



### Specialized Features

**High Stability in Very Low & High-Temperature**

General Phase Control  
Use with AC !!  
(Very sensitive Point)

General analog control

PWM Control  
Use with DC !!  
(Super linearity)

DAIHAN Realize **Stable & Easy to Use!**

**Long Life Power & Mechanism!**

SMPS (Switching Mode Power Supply)  
Use with Safety & Regular DC !!

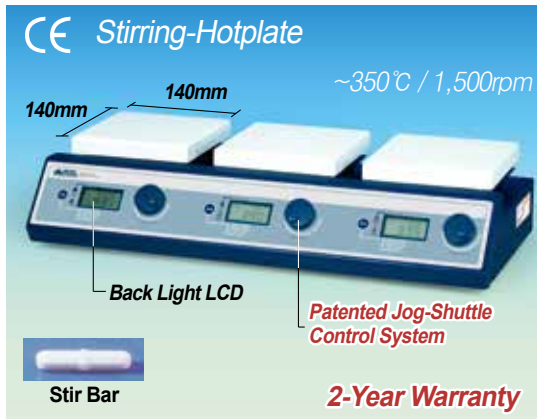
AC → Stable DC !!

SSR (Solid State Relay)-Non Contact  
No Electronic Harm!

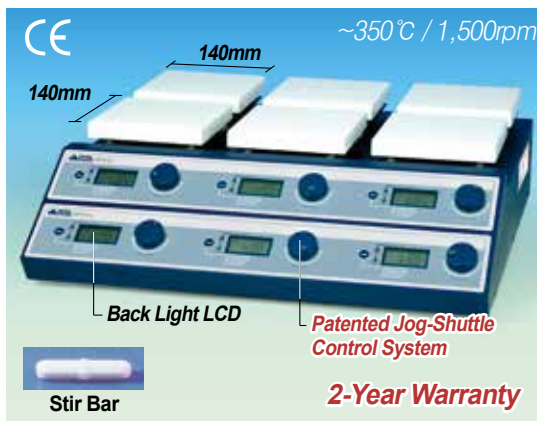
Realize **Long Life Cycle!**

Cat. No	Description	Articles
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DAIHAN-brand® 350°C Systematic Multi-Hotplate Stirrers “SMHS”, 3- or 6-Places, Ceramic-Coated Plates with Digital Feedback Control, Independent Heating & Stirring Control, up to 350°C, 80~1,500 rpm  
 멀티 가열 자력 교반기, 우수한 온도균일성, 3- or 6- 구 개별 조절 가능



(a) 3 × 1 Plates-type Multi-Hotplate Stirrer “SMHS-3”



(b) 3 × 2 Plates-type Multi-Hotplate Stirrer “SMHS-6”

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Excellent for Multi-use and wide range Sample Testing
- Patented Jog-Shuttle Control System
- \* Systemized 3- and 6-Hotplate Stirrer
- \* Independent Heating and Stirring Control
- \* Digital Feedback Control by High-Performance Microprocessor
- \* Ceramic Coated Plate-Chemical/Acid Resistance
- \* Maximum Temperature of 350°C with ±0.3°C Control Accuracy
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Digital LCD with Back-Light Function
- \* Digital Timer Function Included : 99 hr 59 min
- \* Storage Function for the Set Values : Temperature, RPM and Timer
- \* Locking Mode for Experimental Safety Supported

Specifications & Ordering information

Spec.	Model	(a) “SMHS-3”	(b) “SMHS-6”
Plate-type		3×1 Plates-type	3×2 Plates-type
Material		Plate : Ceramic Coated Aluminum, Body : Powder Coated steel	
Plate Size(mm)		140×140	
Stirring Capa. & Motor Rating		Max. 20 Lit.(H <sub>2</sub> O), 9/4W×3	Max. 20 Lit.(H <sub>2</sub> O), 9/4W×6
Speed & Control Resolution		80 ~ 1,500 rpm, 5 rpm	
Temp. Range & Accuracy		Max. 350°C, ±0.3°C at Set Temp.	
Temp. Resolution		0.1°C-Display, 0.5°C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		400 W × 3 Plates	400 W × 6 Plates
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Temp. & RH %		Room Temp. +5 ~ 50°C, 85% RH	
Dimension & Weight		510×240×h100mm, 10kg	510×410×h180mm, 18kg
Packing Size & Gross Weight		540×330×h170mm, 10kg	570×540×h230mm, 18kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WMH03503	DH.WMH03506
	120V	DH.WMH02503	DH.WMH02506
Price, Each. ₩			

\* Other Specifications are available upon Customer’s Request.

※ 3 Rear Hotplate Stirrer SMHS-6 have 3 Ports available to connect External Temp. Probe.

※ 운임 약 ₩ 9.000 별도!

Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ4×L250mm, Cable L190mm
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ4×L250mm, Cable L190mm
- DH.WHP503036 (3) Stand Rod, “RD200”, Stainless-steel, φ12×L450mm for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”, 1.5p Screw
- DH.WHP503012 (4) Holder / Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



# Incubators

**General Purpose, General-purpose, Forced-air** ..... P. 112~115  
**, Gravity-air** ..... P. 116~119  
**, Multi-room, Forced-air** ..... P. 120~121

**Heating Block/Dry Bath Incubator** ..... P. 122~125

**Humidity/Temp. Test Chamber** ..... P. 126~129

**Low Temp.(B.O.D), General-type** ..... P. 130~131  
**, SMART-type**..... P. 132~133

**Plant Growth Chamber, SMART-type** ..... P. 134~135

**Shaking, Bench Top-type** ..... P. 138~139  
**, Front Door-type** ..... P. 136~137  
**, Multi-stack, Refrigerated** ..... P. 142~143  
**, Top Door-type** ..... P. 140~141



**B.O.D Incubators**  
"ThermoStable™ IR-250"



**Incubators, Gravity-air**  
"ThermoStable™ SIG-105"



**Incubators, Forced-air**  
"ThermoStable™ IF-105"



**Multi-room Incubators**  
"WIM-4"



**Shaking Incubators**  
"ThermoStable™ IS-30"

Maximum Convenience by Advanced Digital Technology

## Features of DAIHAN Incubators



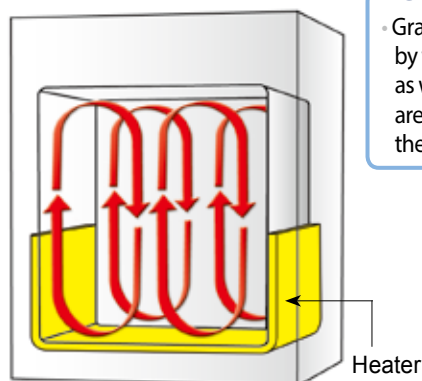
### High Performance Heating Mechanism of DAIHAN accomplishing world's best temperature accuracy and uniformity

The new types of Incubator of DAIHAN are outfitted with high performance heating mechanism that is optimized respectively for capacity of chamber, power of heating element and air circulation type (Gravity Convection or Forced Convection).

The temperature displayed on the controller is accurately consistent with the actual temperature in the very center of the chamber or the average temperature in the entire area of the chamber, which maintains precisely within fluctuation specification. In addition, the temperature in the entire area of the chamber shows a very high stability keeping within a very slight variation specification in terms of temperature uniformity. Simultaneously, through the optimization of Fuzzy-PID controller, the 'heat-up time' to reach the Set Temperature after operating and the 'recovery time' to get back to the set temperature after opening and closing of the door are very short.

The newly developed high performance heating mechanism has achieved high degree of temperature accuracy and uniformity in the chamber. This is achieved by the heating elements installed on three sides - that is, the left, right and bottom parts of a chamber - which directly heat the stainless-steel chamber. This either enhances its material thermal conductivity to maximum (in case of the Incubator) or the heated air from the pre-heating zone in air-jacket type that is built in the three sides outside a chamber circulates first (in case of the Oven).

#### » Incubators

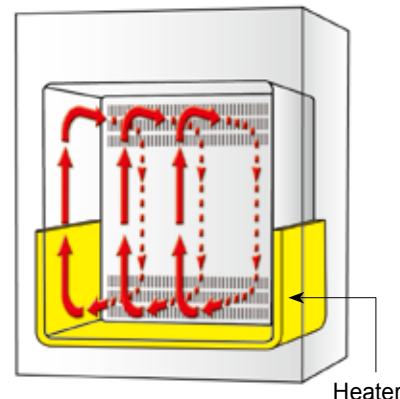


##### Gravity-air

- Gravity convection is to be supplemented and maximized by way of forming radiant and conductive heat on the bottom as well as both sides of the chamber, while heating elements are fitted closely to the three sides outside the chamber by the steel structure of 1.5mm in thickness.

##### Forced-air

- The same heating structure as Gravity Air-Flow model.
- Installs an air-flow room with a fan built in the back side of the chamber to achieve effective forced convection.
- Achieves high temperature uniformity and minimizes mutual contamination between samples by maintaining air flow in forced convection to top.



## ■ High Performance Heating Mechanism

The world's best performance and quality coming true via innovative heating mechanism !!

#### » Minimum

##### Fluctuation !

Minimization of Fluctuation in Temperature

##### Variation !

Minimization of spatial variation in temperature inside the chamber

##### Heat-up Time !

Minimization of reaching the set temperature

##### Overshoot !

Minimization of overshooting at the time of reaching the set temperature

DAIHAN-brand® Forced-air Incubators “ThermoStable™ IF”, 3-Side Heating Zone, 50-/105-/155 Lit.

With 2 × Wire Shelves/Digital PID Control/Jog-Dial & Push Button/Digital LCD/Backlight/Certi. & Traceability, up to 70°C, ±0.2°C  
 강제 순환식 배양기/인큐베이터, 디지털 퍼지 컨트롤, 우수한 온도균일성



“ThermoStable™ IF-105”, Forced-air Incubator

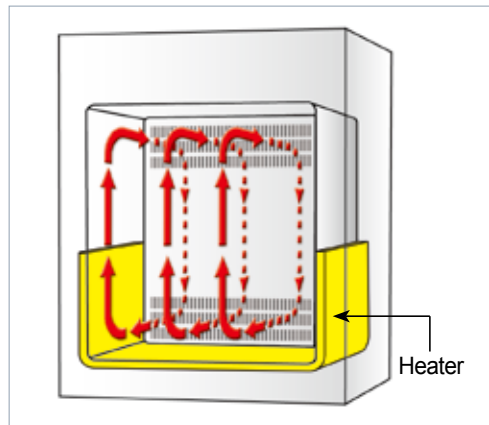
- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Flow by Forced-air Mechanism
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Patented Jog-Dial Control System
- GD(Good Design)-mark
- PL(Product Liability) Insurance

- \* Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- \* Optimized Air Flow by Forced-air Mechanism
- \* Digital PID Control System Implementing Superior Temperature Accuracy
- \* New Jog-Dial with Push Button
- \* Compact New Body Design
- \* 2 ea of PE-coated steel Wire Shelves Included
- \* Alarm Function : Error status and Timer-end
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Ambient to 70°C of Temp. Range, Fluctuation of ± 0.2°C at 37°C, ± 0.3°C at 50°C
- \* Storage Function of Temperature and Timer setting values
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
- \* Corrosion Resistant 304 Stainless-steel Chamber
- \* Incubator Temperature & Incubator Current Protection, Sensor Error Detection

Specification

Spec.	Model	ThermoStable™ IF-50	ThermoStable™ IF-105	ThermoStable™ IF-155
Capacity		50 Lit.	105 Lit.	155 Lit.
Dimension (w×d×h)	Interior (mm)	370×350×419	485×410×533	550×475×600
	Exterior (mm)	518×637×700	635×695×841	700×760×906
Heater Power		200W	300W	400W
Temp.	Range	Room Temp. +5°C to 70°C		
	Fluctuation	± 0.2°C at 37°C, ± 0.3°C at 50°C		
	Variation	± 0.5°C at 37°C, ± 0.9°C at 50°C	± 0.4°C at 37°C, ± 0.7°C at 50°C	
	Sensor	PT 100		
Control Resolution		±0.1°C		
Heat-up Time		17 min. to 37°C, 28 min. to 50°C	17 min. to 37°C, 30 min. to 50°C	
Recovery Time (Door open 30sec)		3 min. to 37°C, 4 min. to 50°C		
Controller		Digital PID Control by Advanced Microprocessor Jog-Dial with Push Button		
RS232 Port		Available to connect with PC		
Display		Digital LCD with Back Light		
Timer		99hr 59 min (delay/continuous function)		
Material	Internal	Stainless-steel (#304)		
	External	Powder Coated steel		
	Inner Door	Inner Tempered Glass Door		
Shelves		2ea of PE-coated steel Wire Shelves included, Load per Shelf : 16 kg		
Ventilation		1ea of Ventilation hole with Stainless steel Cap, Hole Diameter 40mm		
Circulation		Forced-air Type		
Safety device		Over Temp. and Over Current Protector, Sensor Error Detector		
Others		UL/CUL Certified, CE Certified, GD-mark Storage Function(Temp. and Time) Locking Mode(Jog-Dial Input Disabled) Alarm (Error Status and Timer-end)		
Net Weight (kg)		46	66	81
Packing Size (w×d×h) (mm)		628×752×775	710×731×1,018	731×810×1,018
Shipping Weight (kg)		58	74	92
Power Consumption		216.3 W	302.9 W	438.1 W
Energy Consumption, at 37°C, at 50°C		28 Wh	43 Wh	58 Wh
		84 Wh	129 Wh	145 Wh
Electrical Reqts.		120V, 60Hz or 230V, 50/60Hz		

\* Other Specifications are available upon Customer's Request.



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Forced-air Incubators “ThermoStable™ IF”>

※ 운임 약 ₩ 25,000 별도!

**Ordering Information**

DH.WIF03050	Incubator, Forced, 230V, 50 Lit, “ThermoStable IF-50”	Ea.	Price, ₩
DH.WIF03105	, 105 Lit, “ThermoStable IF-105”		
DH.WIF03155	, 155 Lit, “ThermoStable IF-155”		
DH.WIF04050	Incubator, Forced, 120V, 50 Lit, “ThermoStable IF-50”		
DH.WIF04105	, 105 Lit, “ThermoStable IF-105”		
DH.WIF04155	, 155 Lit, “ThermoStable IF-155”		

**Spare PE-coated Steel Wire Shelves**

DH.WIG11050	Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, “IGS050”, w340 × d310mm	Ea.	Price, ₩
DH.WIG11105	Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, “IGS105”, w455 × d375mm		
DH.WIG11155	Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, “IGS155”, w520 × d440mm		

**Optional Stainless-steel Wire Shelves**

DH.WON11050	Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, “ONS050”, w340 × d310mm	Ea.	Price, ₩
DH.WON11105	Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, “ONS105”, w455 × d375mm		
DH.WON11155	Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, “ONS155”, w520 × d440mm		

**Forced Convection Incubator with Validation (IQ, OQ) Service**

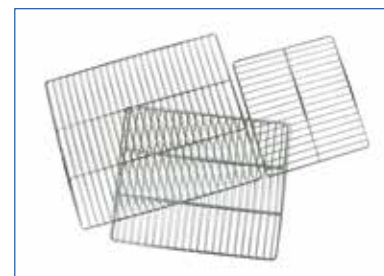
DH.WIF31050	Validation Service(IQ, OQ), with “ThermoStable IF-50”, “IFV050”	Ea.	Price, ₩
DH.WIF31105	, with “ThermoStable IF-105”, “IFV105”		
DH.WIF31155	, with “ThermoStable IF-155”, “IFV155”		



“ThermoStable IF-105”, Forced-air Incubator



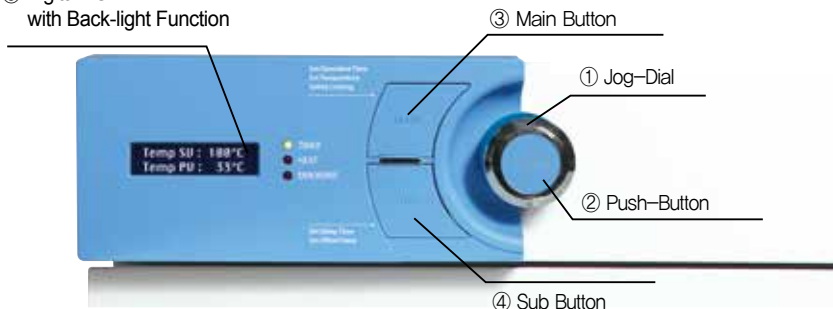
Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)

» **New Jog-Dial Controller**

⑤ Digital LCD with Back-light Function



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.



**WiseRemote Control Software :**

Connection of Temperature Devices with Interface RS232C to a PC  
Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall

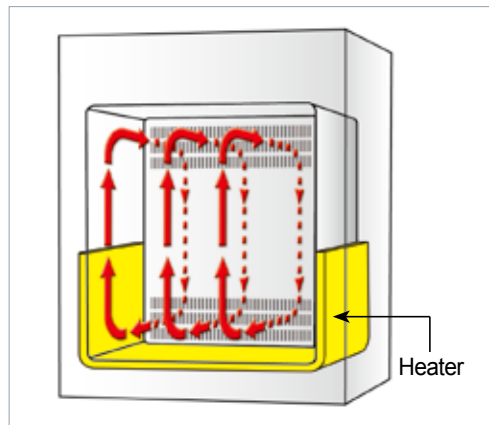
DAIHAN-brand<sup>®</sup> SMART Forced-air Incubators “ThermoStable™ SIF”, 50-/105-/155 Lit, 3-Side Heating Zone with Smart-Lab™ Controller/4” Full Touch Screen/Fuzzy-PID Control/2 × Wire Shelves/Certi. & Traceability, up to 70 °C, ±0.2 °C 스마트 강제 순환식 배양기/인큐베이터, 우수한 온도균일성, WiRe™서비스, 4인치 풀터치스크린 조절기



“ThermoStable™ SIF-105”, SMART Forced-air Incubator

- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Flow by Forced-air Mechanism
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Smart-Lab™ Controller
- GD(Good Design)-mark
- PL(Product Liability) Insurance

- \* Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp, Germination, and so on
- \* Optimized Air Flow by Forced-air Mechanism
- \* Ergonomic Design 4” Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- \* WiRe™ App Service.
- \* Automatic Data Recording
- \* Self-Diagnostic Function
- \* Internet Connectivity with WiFi
- \* Variable Program Setting for Multiple Patterns with Multiple Segments
- \* The Recorded Data Could be transferred to PC by USB memory
- \* Compact New Body Design
- \* Controller SW can be upgraded through USB port.
- \* 2ea of PE-coated steel Wire Shelves Included
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Ambient to 70 °C of Temp. Range, Fluctuation of ±0.2 °C at 37 °C, ±0.3 °C at 50 °C
- \* Corrosion Resistant 304 Stainless-steel Chamber
- \* Incubator Temperature & Incubator Current Protection, Sensor Error Detection



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.



Display of Smart-Lab™ Controller

Specification

Spec.	Model	ThermoStable™ SIF-50	ThermoStable™ SIF-105	ThermoStable™ SIF-155
Capacity		50 Lit.	105 Lit.	155 Lit.
Dimension (w×d×h)	Interior (mm)	370×350×419	485×410×533	550×475×600
	Exterior (mm)	518×637×700	635×695×841	700×760×906
Heater Power		200W	300W	400W
Temp.	Range	Room Temp. +5°C to 70 °C		
	Fluctuation	± 0.2 °C at 37 °C, ± 0.3 °C at 50 °C		
	Variation	± 0.5 °C at 37 °C, ± 0.9 °C at 50 °C	± 0.4 °C at 37 °C, ± 0.7 °C at 50 °C	
	Sensor	PT 100		
Control Resolution		±0.1 °C		
Heat-up Time		17 min. to 37 °C, 28 min. to 50 °C	17 min. to 37 °C, 30 min. to 50 °C	
Recovery Time (Door open 30sec)		3 min. to 37 °C, 4 min. to 50 °C		
Controller		Smart-Lab™ Controller		
RS232		Port Available to connect with PC		
Display		4”Full Touch Screen TFT LCD		
Timer		99hr 59 min (delay/continuous function)		
Material	Internal	Stainless-steel (#304)		
	External	Powder Coated steel		
	Inner Door	Inner Tempered Glass Door		
Shelves		2ea of PE-coated steel Wire Shelves included, Load per Shelf : 16 kg		
Ventilation		1ea of Ventilation hole with Stainless steel Cap, Hole Diameter 40mm		
Circulation		Forced-air Type		
Safety device		Over Temp. and Over Current Protector, Sensor Error Detector		
Others		UL/CUL Certified, CE Certified, GD-mark		
		Storage Function (Temp. and Time)		
		Alarm (Error Status and Timer-end)		
Net Weight (kg)		46	66	81
Packing Size (w×d×h) (mm)		628×752×775	710×731×1,018	731×810×1,018
Shipping Weight (kg)		58	74	92
Power Consumption		216.3 W	302.9 W	438.1 W
Energy Consumption, at 37 °C, at 50 °C		28 Wh	43 Wh	58 Wh
		84 Wh	129 Wh	145 Wh
Electrical Reqts.		120V, 60Hz or 230V, 50/60Hz		

\* Other Specifications are available upon Customer's Request.

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® SMART Forced-air Incubators “ThermoStable™ SIF”>

※ 운임 약 ₩ 25,000 별도!

**Ordering Information**

		Ea. Price, ₩
DH.SWIF03050	Incubator, Forced, 230V, 50 Lit, “ThermoStable SIF-50”	
DH.SWIF03105	, 105 Lit, “ThermoStable SIF-105”	
DH.SWIF03155	, 155 Lit, “ThermoStable SIF-155”	
DH.SWIF04050	Incubator, Forced, 120V, 50 Lit, “ThermoStable SIF-50”	
DH.SWIF04105	, 105 Lit, “ThermoStable SIF-105”	
DH.SWIF04155	, 155 Lit, “ThermoStable SIF-155”	

**Spare PE-coated Steel Wire Shelves**

		Ea. Price, ₩
DH.WIG11050	Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, “IGS050”, w340×d310mm	
DH.WIG11105	Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, “IGS105”, w455×d375mm	
DH.WIG11155	Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, “IGS155”, w520×d440mm	

**Optional Stainless-steel Wire Shelves**

		Ea. Price, ₩
DH.WON11050	Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, “ONS050”, w340×d310mm	
DH.WON11105	Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, “ONS105”, w455×d375mm	
DH.WON11155	Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, “ONS155”, w520×d440mm	

**SMART Incubator with Validation (IQ, OQ) Service**

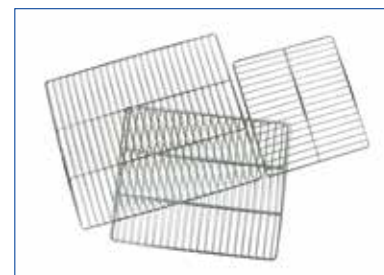
		Ea. Price, ₩
DH.SWIF31050	Validation Service(IQ, OQ), with “SIF-50”, “SIFV050”	
DH.SWIF31105	, with “SIF-105”, “SIFV105”	
DH.SWIF31155	, with “SIF-155”, “SIFV155”	



“ThermoStable SIF-105”, SMART Forced-air Incubator



Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)

» DAIHAN WiRe™ App Service



4" Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

**Controlled by Smart-Phone**

DAIHAN-brand® Gravity-air Incubators “ThermoStable™ IG”, 3-Side Heating Zone, 32-/50-/105-/155 Lit. with 2 × Wire Shelves/Digital PID Control, Jog-Dial & Push Button/Digital LCD & Backlight/Certi. & Traceability, up to 70°C, ±0.2°C  
 자연 대류식 배양기/인큐베이터, 디지털 퍼지 컨트롤, 우수한 온도 균일도와 정확도



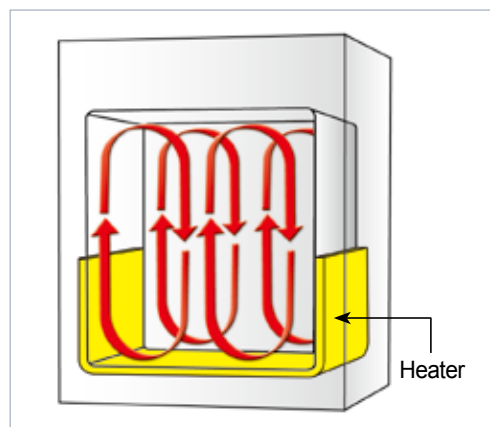
“ThermoStable™ IG-105”, Gravity-air Incubator

- Made in Korea
  - UL / CUL Certified
  - CE Certified
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Optimized Air Circulation by Gravity-air preventing Cross Contamination of Samples
  - 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
  - Patented Jog-Dial Control System
  - GD(Good Design)-mark
  - PL(Product Liability) Insurance
- \* Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- \* Optimized Air Circulation by Gravity-air preventing Cross Contamination of Samples
- \* Digital PID Control System Implementing Superior Temperature Accuracy
- \* New Jog-Dial with Push Button
- \* Compact New Body Design
- \* 2 ea of PE-coated Steel Wire Shelves included
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Ambient to 70°C of Temp. Range, Fluctuation of ±0.2°C at 37°C, ±0.3°C at 50°C
- \* Alarm Function : Error status and Timer-end
- \* Storage Function of Temperature and Timer setting values
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
- \* Corrosion Resistant 304 Stainless-steel Chamber
- \* Incubator Temperature & Incubator Current Protection, Sensor Error Detection

Specification

Spec.	Model	ThermoStable™ IG-32	ThermoStable™ IG-50	ThermoStable™ IG-105	ThermoStable™ IG-155
Capacity		32 Lit.	50 Lit.	105 Lit.	155 Lit.
Dimension (w×d×h)	Interior (mm)	312×290×360	370×350×420	485×410×535	550×475×600
	Exterior (mm)	458×477×624	518×537×701	635×595×841	700×660×906
Heater Power		150W	200W	300W	400W
Temp.	Range	Range Room Temp. +5°C to 70°C			
	Fluctuation	± 0.2°C at 37°C, ± 0.3°C at 50°C			
	Variation	± 0.6°C at 37°C, ± 1.0°C at 50°C			
	Sensor	PT 100			
Control Resolution		±0.1°C			
Heat-up Time		25 min. to 37°C, 40 min. to 50°C		30 min. to 37°C, 40 min. to 50°C	
Recovery Time (Door open 30sec)		8 min. to 37°C		10 min. to 37°C	
		12 min. to 50°C		15 min. to 50°C	
Controller		Digital PID Control by Advanced Microprocessor Jog-Dial with Push Button			
RS232		Available to connect with PC			
Display		Digital LCD with Back Light			
Timer		99hr 59 min (delay/continuous function)			
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel			
	Inner Door	Inner Tempered Glass Door			
Shelves		2ea of PE-coated Steel Wire Shelves included, Load per Shelf : 16 kg			
Ventilation		1ea of Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm			
Circulation		Gravity-air Type			
Safety device		Over Temp. and Over Current Protector, Sensor Error Detector			
Others		UL/CUL Certified, CE Certified, GD-mark Storage Function (Temp. and Time) Locking Mode (Jog-Dial Input Disabled) Alarm (Error Status and Timer-end)			
Net Weight (kg)		32	40	59	71
Packing Size (w×d×h) (mm)		568×592×698	628×652×775	731×710×1,018	796×775×1,083
Shipping Weight (kg)		39	53	67	78
Power Consumption		159 W	169.9 W	292.9 W	420.5 W
Energy Consumption, at 37°C, at 50°C		34 Wh	41 Wh	63 Wh	99 Wh
		81 Wh	103 Wh	152 Wh	212 Wh
Electrical Reqts.		120V, 60Hz or 230V, 50/60Hz			

\* Other Specifications are available upon Customer's Request.



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Gravity-air Incubators “ThermoStable™ IG”>

※ 운임 약 ₩ 25,000 별도!

**Ordering Information**

DH.WIG03032 Incubator, Gravity, 230V, 32 Lit, “ThermoSatble IG-32”	Ea. Price, ₩
DH.WIG03050 , 50 Lit, “ThermoSatble IG-50”	
DH.WIG03105 , 105 Lit, “ThermoSatble IG-105”	
DH.WIG03155 , 155 Lit, “ThermoSatble IG-155”	
DH.WIG04032 Incubator, Gravity, 120V, 32 Lit, “ThermoSatble IG-32”	
DH.WIG04050 , 50 Lit, “ThermoSatble IG-50”	
DH.WIG04105 , 105 Lit, “ThermoSatble IG-105”	
DH.WIG04155 , 155 Lit, “ThermoSatble IG-155”	

**Spare PE-coated Steel Wire Shelves**

DH.WIG11032 Wire Shelf, PE-coated Steel, with 2 Brackets, for 32 Lit, “IGS032”, w280 × d260mm	Ea. Price, ₩
DH.WIG11050 Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, “IGS050”, w340 × d310mm	
DH.WIG11105 Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, “IGS105”, w455 × d375mm	
DH.WIG11155 Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, “IGS155”, w520 × d440mm	

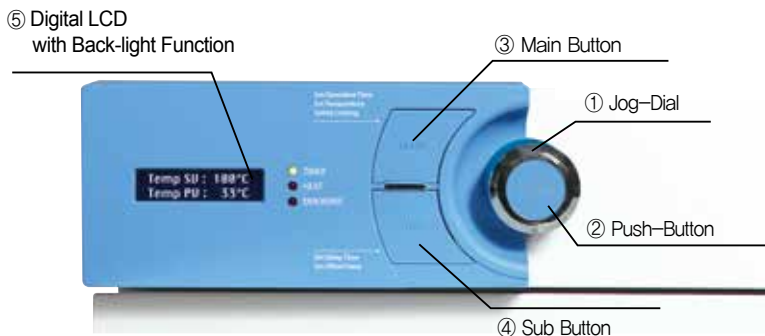
**Optional Stainless-steel Wire Shelves**

DH.WIG12032 Wire Shelf, Stainless-steel, with 2 Brackets, for 32 Lit, “IGSN032”, w280 × d260mm	Ea. Price, ₩
DH.WON11050 Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, “ONS050”, w340 × d310mm	
DH.WON11105 Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, “ONS105”, w455 × d375mm	
DH.WON11155 Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, “ONS155”, w520 × d440mm	

**Gravity Convection Incubator with Validation (IQ, OQ) Service**

DH.WIG31032 Validation Service(IQ, OQ), with “ThermoSatble IG-32”, “IGV032”	Ea. Price, ₩
DH.WIG31050 , with “ThermoSatble IG-50”, “IGV050”	
DH.WIG31105 , with “ThermoSatble IG-105”, “IGV105”	
DH.WIG31155 , with “ThermoSatble IG-155”, “IGV155”	

» **New Jog-Dial Controller**



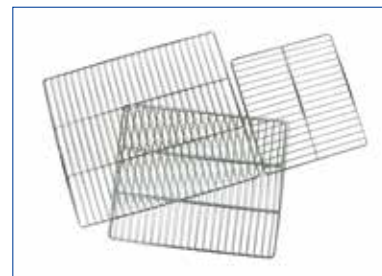
- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.



“ThermoStable IG-105”, Gravity-air Incubator



Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)



**WiseRemote Control Software :**

Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall

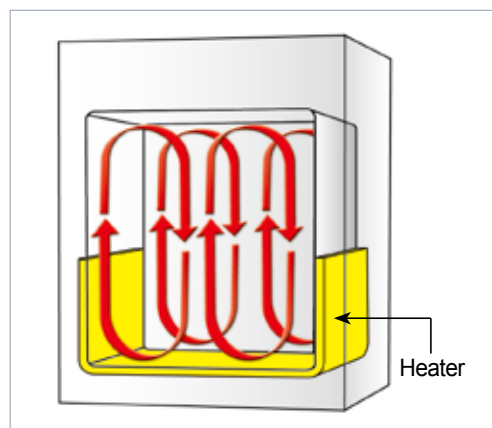
DAIHAN-brand® SMART Gravity-air Incubators “ThermoStable™ SIG”, 3-Side Heating Zone, 32-/50-/105-/155 Lit. with Smart-Lab™ Controller/4” Full Touch Screen/Fuzzy-PID Control/2 × Wire Shelves/Certi. & Traceability, up to 70°C, ±0.2°C 스마트 자연 대류식 배양기/인큐베이터, 우수한 온도 균일도와 정확도, WiRe™서비스, 4인치 풀터치스크린 조절기



“ThermoStable™ SIG-105”, SMART Gravity-air Incubator

- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Circulation by Natural Flow preventing Cross Contamination of Samples
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Smart-Lab™ Controller
- GD(Good Design)-mark
- PL(Product Liability) Insurance

- \* Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- \* Optimized Air Circulation by Natural Flow preventing Cross Contamination of Samples
- \* Ergonomic Design 4” Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- \* WiRe™ App Service.
- \* Automatic Data Recording
- \* Self-Diagnostic Function
- \* 2 ea of PE-coated steel Wire Shelves Included
- \* Variable Program Setting for Multiple Patterns with Multiple Segments
- \* The Recorded Data could be transferred to PC by USB memory
- \* Controller SW can be upgraded through USB port.
- \* Internet Connectivity with WiFi
- \* Compact New Body Design
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Ambient to 70°C of Temp. Range, Fluctuation of ±0.2°C at 37°C, ±0.3°C at 50°C
- \* Corrosion Resistant 304 Stainless-steel Chamber
- \* Over Temperature & Over Current Protection, Sensor Error Detection



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.

Specification

Spec.		Model	ThermoStable™ SIG-32	ThermoStable™ SIG-50	ThermoStable™ SIG-105	ThermoStable™ SIG-155
Capacity			32 Lit.	50 Lit.	105 Lit.	155 Lit.
Dimension (w×d×h)	Interior (mm)		312×290×360	370×350×420	485×410×535	550×475×600
	Exterior (mm)		458×477×624	518×537×701	635×595×841	700×660×906
Heater Power			150W	200W	300W	400W
Temp.	Range	Room Temp. +5°C to 70°C				
	Fluctuation	± 0.2°C at 37°C, ± 0.3°C at 50°C				
	Variation	± 0.6°C at 37°C, ± 1.0°C at 50°C				
	Sensor	PT 100				
Control Resolution			±0.1°C			
Heat-up Time			25 min. to 37°C, 40 min. to 50°C		30 min. to 37°C, 40 min. to 50°C	
Recovery Time (Door open 30sec)			8 min. to 37°C 12 min. to 50°C		10 min. to 37°C 15 min. to 50°C	
Controller			Smart-Lab™ Controller			
RS232			Available to connect with PC			
Display			4”Full Touch Screen TFT LCD			
Timer			99hr 59 min (delay/continuous function)			
Material	Internal		Stainless-steel (#304)			
	External		Powder Coated steel			
	Inner Door		Inner Tempered Glass Door			
Shelves			2ea of PE-coated steel Wire Shelves included, Load per Shelf : 16 kg			
Ventilation			1ea of Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm			
Circulation			Gravity-air Type			
Safety device			Over Temp. and Over Current Protector, Sensor Error Detector			
Others			UL/CUL Certified, CE Certified, GD-mark Storage Function (Temp. and Time) Alarm (Error Status and Timer-end)			
Net Weight (kg)			32	40	59	71
Packing Size (w×d×h) (mm)			568×592×698	628×652×775	731×710×1,018	796×775×1,083
Shipping Weight (kg)			39	53	67	78
Power Consumption			159 W	169.9 W	292.9 W	420.5 W
Energy Consumption, at 37°C			34 Wh	41 Wh	63 Wh	99 Wh
, at 50°C			81 Wh	103 Wh	152 Wh	212 Wh
Electrical Reqts.			120V, 60Hz or 230V, 50/60Hz			

\* Other Specifications are available upon Customer's Request.



Display of Smart-Lab™ Controller

<Continued On Next Page>

Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® SMART Gravity-air Incubators “ThermoStable™ SIG”>

※ 운임 약 ₩ 25,000 별도!

**Ordering Information**

		Ea. Price, ₩
DH.SWIG03032	Incubator, Gravity, 230V, 32 Lit, “ThermoStable SIG-32”	
DH.SWIG03050	, 50 Lit, “ThermoStable SIG-50”	
DH.SWIG03105	, 105 Lit, “ThermoStable SIG-105”	
DH.SWIG03155	, 155 Lit, “ThermoStable SIG-155”	
DH.SWIG04032	Incubator, Gravity, 120V, 32 Lit, “ThermoStable SIG-32”	
DH.SWIG04050	, 50 Lit, “ThermoStable SIG-50”	
DH.SWIG04105	, 105 Lit, “ThermoStable SIG-105”	
DH.SWIG04155	, 155 Lit, “ThermoStable SIG-155”	

**Spare PE-coated Steel Wire Shelves**

		Ea. Price, ₩
DH.WIG11032	Wire Shelf, PE-coated Steel, with 2 Brackets, for 32 Lit, “IGS032”, w280 × d260mm	
DH.WIG11050	Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, “IGS050”, w340 × d310mm	
DH.WIG11105	Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, “IGS105”, w455 × d375mm	
DH.WIG11155	Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, “IGS155”, w520 × d440mm	

**Optional Stainless-steel Wire Shelves**

		Ea. Price, ₩
DH.WIG12032	Wire Shelf, Stainless-steel, with 2 Brackets, for 32 Lit, “IGSN032”, w280 × d260mm	
DH.WON11050	Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, “ONS050”, w340 × d310mm	
DH.WON11105	Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, “ONS105”, w455 × d375mm	
DH.WON11155	Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, “ONS155”, w520 × d440mm	

**SMART Incubator with Validation (IQ, OQ) Service**

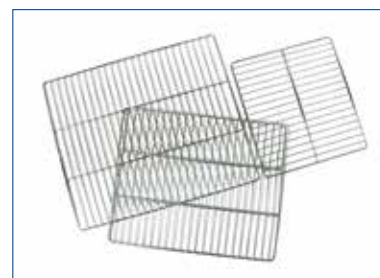
		Ea. Price, ₩
DH.SWIG31032	Validation Service(IQ, OQ), with “SIG-32”, “SIGV032”	
DH.SWIG31050	, with “SIG-50”, “SIGV050”	
DH.SWIG31105	, with “SIG-105”, “SIGV105”	
DH.SWIG31155	, with “SIG-155”, “SIGV155”	



“ThermoStable SIG-105”, SMART Gravity-air Incubator



Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)

» DAIHAN WiRe™ App Service



4” Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

**Controlled by Smart-Phone**

DAIHAN-brand® Multi-Room Incubator “WIM”, Forced-air, 125 Lit × 4 Rooms, with Certi. & Traceability with 8 × Wire Shelves, Digital Fuzzy Control, Independent Chamber Control, Max. Temp. Uniformity & Accuracy, up to 70°C  
 4-룸 배양기/인큐베이터, 강제 순환식, 디지털 퍼지 제어, 개별 컨트롤러 장착



(1) Multi-Room Incubator, Forced-air, “WIM-R4”

- Made in Korea      ■ UL/CUL Certified      ■ CE Certified
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - 4 × 125Lit Rooms : Each Chamber has an Independent Fuzzy Controller for Different Temperature and Time Control
  - Patented Jog-Shuttle Control System      ■ PL (Product Liability) Insurance
- \* Variable Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temperature and Germination
  - \* Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
  - \* High-Quality LCD with Back-Light Function
  - \* Forced-air Flow by Silent Fan Motor Implements the Highest Uniformity of Temperature in Each Chamber
  - \* Stainless-steel Chamber and PE-coated Shelves (2ea for Each Chamber) - Corrosion Resistance
  - \* Inner Tempered Glass Door Enables an User to Observe the Samples without Interruption of Incubation
  - \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
  - \* Storage Function for Set Values of Temperature and Time
  - \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

Specification

Spec.	Model	(1) “WIM-4”	(2) “WIM-R4”	(3) “WIM-RL4” with illumination
Temp. Range		R/T +5°C~ 70°C	0°C to 70°C	0°C to 70°C
Circulation		Forced-air(Blower FAN)		
Capacity		125 Lit. × 4 Rooms		
Illumination		None	FRL 36W × 2 (× 4 Rooms)	
Temp.	Accuracy	± 0.2°C at 37°C		
	Uniformity	± 0.3°C at 37°C, ± 0.7°C at 50°C	± 0.5°C at 37°C	
	Sensor	PT100		
Heat-up Time		15 min. to 37°C 30 min. to 50°C	20 min. to 37°C 30 min. to 50°C	
Recovery Time (Door open 30sec)		8 min. to 37°C 10 min. to 50°C	10 min. to 50°C 12 min. to 50°C	
Heating Power/Consumption		500 W × 4ea	650 W × 4ea	
Compressor		None	1/4 HP (× 4 Rooms)	
Timer & Alarm		99hr 59min (with delay / Continuous run.), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn & Push)		
Inner Door		with 4ea of Inner Tempered Glass Door		
Shelves		Included 8ea of PE-coated steel Shelves (2ea × 4 Chambers)		
Permitted Total Load		Total Load 128 kg (16kg × 8 Shelves)		
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector		
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel		
Dimension (w × d × h)	Interior (mm)	500 × 500 × h500 mm (× 4 Rooms)		
	Exterior (mm)	1,655 × 845 × h1,710 mm		
Net Weight		343kg	350kg	
Packing Size (w × d × h) (mm)		1,900 × 1,050 × 1,950		
Gross Weight		441 kg	450 kg	
Power Consumption		2.6 kW	4.5 kW	4.8 kW
Power Supply*		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz	1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase	

\* Other Specifications are available upon Customer's Request.

<Continued On Next Page>



Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Multi-Room Incubator “WIM”>

**Ordering Information**

※ 운임 약 ₩ 95,000 별도!

**(1) “WIM-4” with 125 Lit × 4 Rooms, Ambient +5°C ~ 70°C**

DH.WIM04125	Multi-Room Incubator, 230V, “WIM-4”	Ea. Price, ₩
DH.WIM05125	, 120V, “WIM-4”	

**(2) “WIM-R4” with 125 Lit × 4 Rooms, 0~70°C**

DH.WIM14125	Multi-Room Incubator, 230V, “WIM-R4”	Ea. Price, ₩
DH.WIM15125	, 120V, “WIM-R4”	
DH.WIM16125	, 3Phase, “WIM-R4”	

**(3) “WIM-RL4” with 125 Lit × 4 Rooms & Illumination, 0~70°C**

DH.WIM24125	Multi-Room Incubator, 230V, “WIM-RL4”	Ea. Price, ₩
DH.WIM25125	, 120V, “WIM-RL4”	
DH.WIM26125	, 3Phase, “WIM-RL4”	

**Spare PE-coated Steel Wire Shelves**

DH.WIM34125	Wire Shelf, PE-coated steel, with 2 Brackets, “IMS125” w470 × d480mm, for “WIM” 4-Room Incubators	Ea. Price, ₩
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**Optional Stainless-steel Wire Shelves**

DH.WIM34126	Wire Shelf, Stainless-steel, with 2 Brackets, “IMS126”, w470 × d480mm, for “WIM” 4-Room Incubators	Ea. Price, ₩
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**Multi-Room Incubator with Validation (IQ, OQ) Service**

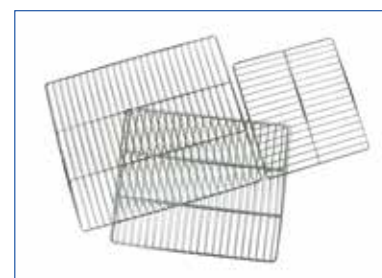
DH.WIM54125	Validation Service(IQ, OQ), with “WIM-4”, “IMV525”	Ea. Price, ₩
DH.WIM64125	, with “WIM-R4”, “IMV625”	
DH.WIM74125	, with “WIM-RL4”, “IMV725”	



Multi-Room Incubator, Forced Convection Type “WIM-R4”



Wire Shelves, PE-coated steel (Included)



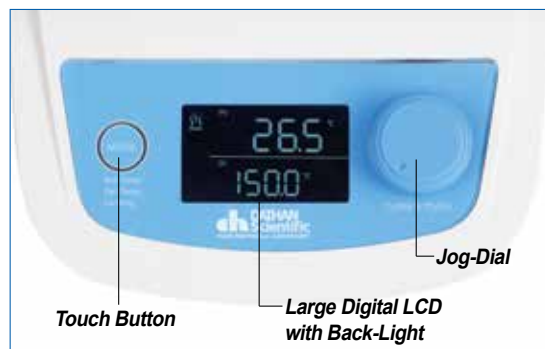
Wire Shelves, Stainless-steel (Optional)

DAIHAN-brand® **New-generation Compact-size Heating Block/Dry Bath Incubator “MaXtable™ H20”** **NEW**  
 with Large LCD display, Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, up to 150°C, ±0.1°C  
 히팅 블록, 디지털 퍼지 컨트롤 시스템, 터치버튼식 조절기, 일체형 주물 히터, 블록 교체 가능, 블록 추출용 공구 포함



Heating Block/Dry Bath “MaXtable™ H20-set”

- **Made in Korea**
- **PL (Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Designed for Multi-functional Dry Block Heater**
- **Ergonomic Design**
- **Patented Jog-Dial and Main Touch Button - Best Durability, Best Mobility, Best Convenient to Operate. with Large Back-Light LCD**
- **With a Screw-type Block Removal Tool ; Convenient Handling**
- \* High-performance Molded Heater ensures Best Temperature Accuracy.
- \* Internal Bath Material(PPS) ensures Best Heat Insulation
- \* Rapid heat up time.
- \* Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
- \* Precise Temperature Control : ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C
- \* User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0°C)
- \* Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
- \* Storage Function of Temperature and Timer setting values
- \* Convenient integral timer for time-sensitive incubations
- \* Alarm Function : Error Status and Timer-end
- \* Easy to Read, Wide LCD Screen
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)
- \* Easily calibrated for accurate temperature control and display



New Generation Controller of “MaXtable™ H20”

Specifications & Ordering information

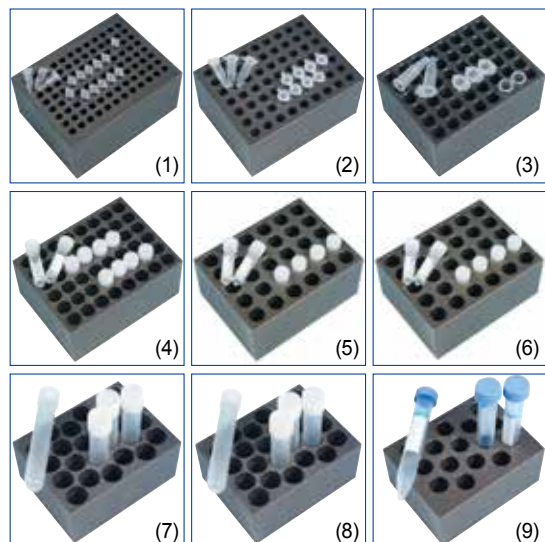
Spec.	Model	“MaXtable™ H20” (Only Unit)	“MaXtable™ H20-set” (included Standard Block)
Controller		Single Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	48 holes×for 1.5/ 2ml Centri. Tube
Heater		Molded Heater(300W)	
Dimension(mm) & Weight(kg)		Unit : 178×226×h138, Block : 90×120×h60	
Temp. Range & Accuracy		Ambient +5°C to 150°C, ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C	
Heat-Up Speed & Sensor		Approx. 5°C/min, PT100	
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material		Unit : PPS & BAS(HF380), Block : Anodized Aluminum	
Included Standard Acce.		Block Extraction Tool	
Packing Size & Gross Weight		230×290×h245 mm, 2.2 kg	230×355×h245 mm, 3.5 kg
Power Consumption		300 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB02000	DH.WHB02100
	120V	DH.WHB02001	DH.WHB02101
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.



Included Block (3) “BLC 548” 48holes for 1.5/2ml & Removal Tool

Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)



- DH.WHB510596 (1) for 0.2ml PCR Tube, (φ6×h16mm)×96 holes, “BLC596”
- DH.WHB510570 (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, “BLC570”
- DH.WHB511548 (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, “BLC548” (\* included in the “H20-Set”)
- DH.WHB521248 (4) for φ 12mm Test Tube, (φ 12×h35mm)×48 holes, “BLT248”
- DH.WHB521335 (5) for φ 13mm Test Tube, (φ 13×h47mm)×30 holes, “BLT335”
- DH.WHB521535 (6) for φ 15mm Test Tube, (φ 15×h47mm)×30 holes, “BLT535”
- DH.WHB521628 (7) for φ 16.5mm Test Tube, (φ 16.5×h47mm)×24 holes, “BLT628”
- DH.WHB521828 (8) for φ 18mm Test Tube, (φ 18×h47mm)×24 holes, “BLT828”
- DH.WHB531515 (9) for 15ml Conical Tube, (φ 16×h47mm)×15 holes, “BLC515”
- DH.WHB535008 (10) for 50ml Conical Tube, (φ 28.7×h47mm)×8 holes, “BLC008”
- DH.WHB500102 (11) Spare ; Block Removal Tool, Easy Handling

Ea. Price, ₩

Cat. No	Description	Articles
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DAIHAN-brand® High-performance Heating Block/Dry Bath Incubator “HB-96D”, Heating, Dual-type with Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, Acrylic Lid, Touch-button Controller, up to 150°C, ±0.1°C 히팅 블록, 디지털 퍼지 컨트롤 시스템, 듀얼 조절기/블럭, 일체형 주물 히터, 블럭 교체 가능, 아크릴 리드/ 블럭용 집게 포함



2-Year Warranty

Heating Block/Dry Bath, Dual Control System “HB-96D-set”



(3) “BLC548”



(11) “BLE101”

Included Anodized Aluminum Block & Tong

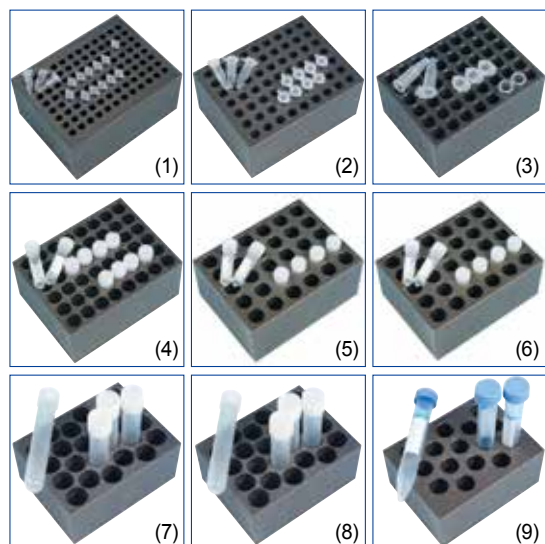
- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-functional Dry Block Heater
- Dual Controller & Block
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
- \* Precise Temperature Control : ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C
- \* User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0°C)
- \* Over Temperature & Over Current Protection and Sensor Error Detection
- \* Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
- \* Storage Function of Temperature and Timer setting values      \* Modular Block
- \* Alarm Function : Error Status and Timer-end      \* Various kind of Blocks are offered (Optional)
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* The Block Extraction Tongs and Included for Easy Handling

Specifications & Ordering information

Spec.	Model	“HB-96D” (Only Unit)	“HB-96D-set” (included Standard Block)
Controller		Dual Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	2×48 holes×for 1.5/2ml Centri. Tube
Heater		Molded Heater(300W)×2ea	
Dimension(mm)		Unit : 285×250×h155, Block : (90×120×h60)×2ea	
Temp. Range, & Accuracy		Ambient +5°C to 150°C, ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135°C	
Heat-Up Speed & Sensor		Approx. 5°C/min, PT100	
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material		Unit : Stainless-steel (# 304) & Powder Coated steel, Block : Anodized Aluminum	
Included Standard Acce.		Block Tongs “BLE101” and Block Cover	
Packing Size & Gross Weight		400×270×h200 mm, 6 kg	
Power Consumption		600 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB00198	DH.WHB00199
	120V	DH.WHB02198	DH.WHB02199
Price, Each. ₩			

\* Other Specifications are available upon Customer’s Request.

Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)



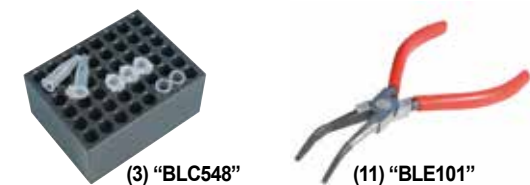
- |              |  |
|--------------|--|
| DH.WHB510596 | (1) for 0.2ml PCR Tube, (φ6×h16mm)×96 holes, “BLC596”  |
| DH.WHB510570 | (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, “BLC570”                                    |
| DH.WHB511548 | (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, “BLC548”<br>(* included in the “HB-96D-Set”) |
| DH.WHB521248 | (4) for φ12mm Test Tube, (φ12×h35mm)×48 holes, “BLT248”  |
| DH.WHB521335 | (5) for φ13mm Test Tube, (φ13×h47mm)×30 holes, “BLT335”  |
| DH.WHB521535 | (6) for φ15mm Test Tube, (φ15×h47mm)×30 holes, “BLT535”  |
| DH.WHB521628 | (7) for φ16.5mm Test Tube, (φ16.5×h47mm)×24 holes, “BLT628”                                      |
| DH.WHB521828 | (8) for φ18mm Test Tube, (φ18×h47mm)×24 holes, “BLT828”  |
| DH.WHB531515 | (9) for 15ml Conical Tube, (φ16×h47mm)×15 holes, “BLC515”  |
| DH.WHB535008 | (10) for 50ml Conical Tube, (φ28.7×h47mm)×8 holes, “BLC008”                                      |
| DH.WHB500101 | (11) Spare ; Block Extraction Tongs, “BLE101”  |

Ea. Price, ₩

DAIHAN-brand® High-performance Heating Block/Dry Bath Incubator-Heating & Cooling “HB-R48” with Digital PID Control, Acrylic Lid, Precise Temperature Control, Modular Anodized Aluminum Block,  $-5^{\circ}\text{C} \sim 95^{\circ}\text{C}$ ,  $\pm 0.1^{\circ}\text{C}$  Peltier Cooling System, Digital Timer & PID Control System, Interchangeable Blocks, 히팅 / 쿨링 블록, 블록 교체 가능, 아크릴 리드 포함



“HB-R48-Set”  
with Block “BLC548” for 1.5/2ml Centrifuge Tube × 48 holes



Included Anodized Aluminum Block & Tong

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-Function : Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures.
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \* User Self-Compensation Function to offset between Actual and Displayed Temperature. ( $\pm 10.0^{\circ}\text{C}$ )
- \* Storage Function of Temperature and Timer setting values
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

Specifications & Ordering information

Spec.	Model	“HB-R48” (Only Unit)	“HB-R48-set” (included Standard Block)
Controller		Digital Fuzzy Controller	
Useful Block		Interchangeable Block(90×120×h60mm) for Various Tubes	
included Standard Block		None(Only Heating Block Unit)	48 holes×for 1.5/2ml Centri. Tube
Dimension : Unit & Block		185×230×h220mm, and 90×120×h60mm	
Cooling		Two Peltier Modules	
Cool-Down Speed		2.3°C/min. between 95°C to 25°C, 0.5°C/min. between 25°C to -5°C	
Heater and Sensor		300W (Molded Heater), PT100	
Temp. Range, & Accuracy		$-5^{\circ}\text{C}$ to $95^{\circ}\text{C}$ , and $\pm 0.1^{\circ}\text{C}$ at $37^{\circ}\text{C}$ , $\pm 0.2^{\circ}\text{C}$ at $90^{\circ}\text{C}$	
Heat-Up Speed		Approx. 5°C/min	
Safety Device		Over Temp. and Over Current Protector, Sensor Error Detector	
Timer with Alarm		99hr 59min, Alarm (Error Status and Timer - end)	
Display		Digital LCD with Back-Light Function	
Material	Internal & External	Stainless steel (#304), and Powder Coated steel	
	Block	Anodized Aluminum	
Included Standard Acce.		Block Tongs “BLE101” and Block Cover	
Packing Size, Gross Weight		350×220×h310mm, 9 kg	
Power Consumption		450 W	
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
Cat. No.	230V	DH.WHB00248	DH.WHB00249
	120V	DH.WHB02248	DH.WHB02249
Price, Each. ₩			

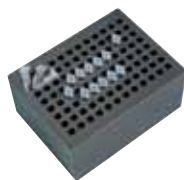
\* Other Specifications are available upon Customer’s Request.

Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)

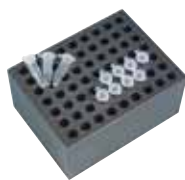
		Ea. Price, ₩
	DH.WHB510596 (1) for 0.2ml PCR Tube, ( $\phi 6 \times h16\text{mm}$ )×96 holes, “BLC596”	
	DH.WHB510570 (2) for 0.5ml Centri. Tube, ( $\phi 7.7 \times h29.5\text{mm}$ )×63 holes, “BLC570”	
	DH.WHB511548 (3) for 1.5/2ml Centri. Tube, ( $\phi 11 \times h35\text{mm}$ )×48 holes, “BLC548” (* included in the “HB-R48-Set”)	
	DH.WHB521248 (4) for $\phi 12\text{mm}$ Test Tube, ( $\phi 12 \times h35\text{mm}$ )×48 holes, “BLT248”	
	DH.WHB521335 (5) for $\phi 13\text{mm}$ Test Tube, ( $\phi 13 \times h47\text{mm}$ )×30 holes, “BLT335”	
	DH.WHB521535 (6) for $\phi 15\text{mm}$ Test Tube, ( $\phi 15 \times h47\text{mm}$ )×30 holes, “BLT535”	
	DH.WHB521628 (7) for $\phi 16.5\text{mm}$ Test Tube, ( $\phi 16.5 \times h47\text{mm}$ )×24 holes, “BLT628”	
	DH.WHB521828 (8) for $\phi 18\text{mm}$ Test Tube, ( $\phi 18 \times h47\text{mm}$ )×24 holes, “BLT828”	
	DH.WHB531515 (9) for 15ml Conical Tube, ( $\phi 16 \times h47\text{mm}$ )×15 holes, “BLC515”	
	DH.WHB535008 (10) for 50ml Conical Tube, ( $\phi 28.7 \times h47\text{mm}$ )×8 holes, “BLC008”	
	DH.WHB500101 (11) Spare ; Block Extraction Tongs, “BLE101”	

Cat. No	Description	Articles
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**DAIHAN-brand® Interchangeable Blocks, for Heating Block/Dry Bath, Anodized Aluminum, 90×120×h60mm**  
 Ideal for Various Tubes, Conical- or Round-Bottom Holes, **히팅블럭/드라이배스용 교체 블럭**



**(1) "BLC596"**  
 For 0.2ml PCR Tube,  
 (φ 6×h16mm)×96 holes,  
 Conical Bottom Holes



**(2) "BLC570"**  
 For 0.5ml Centrifuge Tube.  
 (φ 7.7×h29.5mm)×63 holes  
 Conical Bottom Holes



**(3) "BLC548"**  
 For 1.5/2ml Centrifuge Tube.  
 (φ 11×h36mm)×48 holes,  
 Conical Bottom Holes  
 (Included in the Package-Set)



**(4) "BLT248"**  
 For φ 12mm Tube.  
 (φ 12×h35mm)×48 holes,  
 Round Bottom Holes



**(5) "BLT335"**  
 For φ 13mm Tube.  
 (φ 13×h47mm)×30 holes,  
 Round Bottom Holes



**(6) "BLT535"**  
 For φ 15mm Tube.  
 (φ 15×h47mm)×30 holes,  
 Round Bottom Holes



**(7) "BLT628"**  
 For φ 16.5mm Tube.  
 (φ 16.5×h47mm)×24 holes,  
 Round Bottom Holes



**(8) "BLT828"**  
 For φ 18mm Tube.  
 (φ 18×h47mm)×24 holes,  
 Round Bottom Holes



**(9) "BLC515"**  
 For 15ml Conical Tube.  
 (φ 16×h47mm)×15 holes,  
 Conical Bottom Holes



**(10) "BLC008"**  
 For 50ml Conical Tube.  
 (φ 28.7×h47mm)×8 holes,  
 Conical Bottom Holes

**Ordering Information**

*Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)*

- DH.WHB510596 (1) Block, for 0.2ml PCR Tube, (φ 6×h16mm)×96 holes, "BLC596"
- DH.WHB510570 (2) Block, for 0.5ml Centrifuge Tube, (φ 7.7×h29.5mm)×63 holes, "BLC570"
- DH.WHB511548 (3) , for 1.5/2ml Centrifuge Tube, (φ 11×h35mm)×48 holes, "BLC548"
- DH.WHB521248 (4) Block, for φ 12mm Test Tube, (φ 12×h35mm)×48 holes, "BLT248"
- DH.WHB521335 (5) , for φ 13mm Test Tube, (φ 13×h47mm)×30 holes, "BLT335"
- DH.WHB521535 (6) , for φ 15mm Test Tube, (φ 15×h47mm)×30 holes, "BLT535"
- DH.WHB521628 (7) , for φ 16.5mm Test Tube, (φ 16.5×h47mm)×24 holes, "BLT628"
- DH.WHB521828 (8) , for φ 18mm Test Tube, (φ 18×h47mm)×24 holes, "BLT828"
- DH.WHB531515 (9) Block, for 15ml Conical Tube, (φ 16×h47mm)×15 holes, "BLC515"
- DH.WHB535008 (10) , for 50ml Conical Tube, (φ 28.7×h47mm)×8 holes, "BLC008"

Ea. Price, ₩

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DAIHAN-brand® General Purpose SMART Temp./Humidity Chamber “ThermoStable™ STH-E”, 155-/305-/420-/800-Lit with Smart-Lab™ System, Water Tank, Touch-Screen LCD, CFC-Free, -20℃~80℃ ±0.3℃, up to 95% RH, 스마트 항온항습기



SMART Temp./Humidity Chamber “ThermoStable™ STH-E”

- Made in Korea
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Economical & Practical Type
- CFC Free Refrigerant (R-404A)
- Smart-Lab™ Controller : Controlled by Smart-Phone
  - Ergonomic 7" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
  - WiRe™ App Service.
  - Self-Diagnostic Function
  - Push Alarm Service to Smart Phone : Power-/Temperature-/Door Open-Error Status
  - Built in USB port for Data Download and Program Upgrade
  - Password Protected Setting
  - Digital Calibration(Offset Function)
  - Door Ajar and Power Failure Alarm
  - Internet Connectivity with WiFi
  - Automatic Data Recording
  - Interactive Temperature Graph
  - Min-/Max-Temperature Memory
  - Program Function
- \* Low Water Level Alarm Lamp
- \* Temperature range from -20℃ to 80℃, Relative Humidity from 30% to 95% RH
- \* Inner Tempered Glass Door with Silicon Packing
- \* RS232 Interface for Remote Monitoring and Controlling with PC (Standard)
- \* Temperature & Humidity Recorder(6 Channels & 2Pens) and RS232C Communication Interface (Optional)
- \* The Powerful and Silent Dual Fan Motor Assures Temperature Uniformity by Strong Air Circulation
- \* Over Temperature and Over Current Protection for User Safety

Specifications & Ordering information

Spec.	Model	ThermoStable™ STH-E155	ThermoStable™ STH-E305	ThermoStable™ STH-E420	ThermoStable™ STH-E800
Capacity		155 Lit.	305 Lit.	420 Lit.	800 Lit.
Temp.	Range	-20℃ ~ +80℃			
	Accuracy	± 0.3℃ (Stability ± 1.0℃)			
Humidity	Range	30% ~ 95% RH			
	Accuracy	± 2% (Stability ± 3% RH)			
Dimension (w×d×h)	Interior (mm)	505×505×610	620×620×800	750×660×850	1000×800×1000
	Exterior (mm)	745×920×1645	820×1290×1720	990×1075×1885	1200×1100×1920
Heater	for Temp.	1.5 kW	2.0 kW	2.2 kW	2.5 kW
	for Humi.	2.0 kW	3.0 kW	3.0 kW	3.0 kW
Compressor		7/8HP	1.5 HP	1.5 HP	3 HP
Refrigerant		CFC-Free(R-404A) Refrigeration System			
Controller & Display		Smart-Lab Controller, 7" Full Touch Screen TFT LCD			
Program Function		Multiple Programs(Patterns by multiple Segments) Supported			
Sensor		PT100 & Capacitive Sensor			
Material	Internal	Stainless-steel (# 304)			
	External	Powder Coated steel			
Shelves		3ea of Perforated Stainless steel Shelves of Adjustable Position			
Safety Device		Hi-Low Temp. Protector, Over Current & Leakage Breaker, Water Level Sensor			
Others		PL(Product Liability) Insurance			
Net Weight		290 kg	309 kg	378 kg	558 kg
Packing Dimension (w×d×h) (cm)		99×112×185	122×122×205	128×128×216	149×132×220
Gross Weight		355 kg	369 kg	478 kg	678 kg
Power Consumption		4.4 kW	5.7 kW	6.3 kW	8.2 kW
Electric Reqts.		1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase			
Cat. No.	230V	DH.STHE0155	DH.STHE0305	DH.STHE0420	DH.STHE0800
	120V	DH.STHE4155	DH.STHE4305	DH.STHE4420	DH.STHE4800
	3Phase	DH.STHE5155	DH.STHE5305	DH.STHE5420	DH.STHE5800
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

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Cat. No	Description	Articles
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<Continued From... DAIHAN-brand® General Purpose SMART Temp./Humidity Chamber “ThermoStable™ STH-E”>

**Spare Perforated Stainless-steel Shelves**

- DH.WTH11155** Perforated Shelf, Stainless-steel, “THS1155”, for 155 Lit, w470×d480mm
- DH.WTH11305** , “THS1305”, for 305 Lit, w590×d580mm
- DH.WTH11420** , “THS1420”, for 420 Lit, w720×d640mm
- DH.WTH11800** , “THS1800”, for 800 Lit, w970×d980mm

**Ea. Price, ₩**

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**Optional Temp & Humidity Recorder and Chart Paper**

- DH.WTH05100** Temperature & Humidity Recorder, “WTH5100”
- DH.WTH05105** Chart Paper, “WTH5105”, 33 Days

**Ea. Price, ₩**

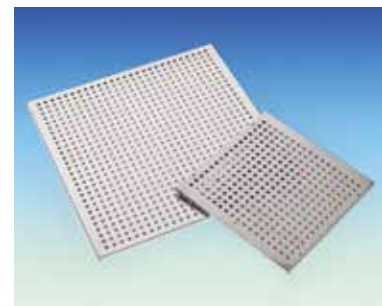
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**Economic Temp./Humidity Chamber with Validation (IQ, OQ) Service**

- DH.STHE3155** Validation Service(IQ, OQ), with “STH-E155”, “STHEV155”
- DH.STHE3305** , with “STH-E305”, “STHEV305”
- DH.STHE3420** , with “STH-E420”, “STHEV420”
- DH.STHE3800** , with “STH-E800”, “STHEV800”

**Ea. Price, ₩**

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**Perforated Stainless-steel Shelves (Included)**



**Temp. & Humidity Recorder 6 Channel 2 Pens (WTH5100) (Optional)**

**» DAIHAN WiRe™ App Service**



**7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)**

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



**WiRe™ App Service**

**Controlled by Smart-Phone**

DAIHAN-brand® SMART Precise Temp./Humidity Chamber “ThermoStable™ STH”, 155-/305-/420-/800-Lit with Smart-Lab™, Auto Supplement Water Tank, Touch-Screen LCD, CFC-Free, -40°C/-20°C to 100°C, up to 98% RH, 스마트 항온항습기



SMART Precise Temp. / Humidity Chamber  
“ThermoStable™ STH-155”

- **Made in Korea**
- **PL(Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **CFC Free Refrigerant (R-404A)**
- **Smart-Lab™ Controller : Controlled by Smart-Phone**
  - Ergonomic 7" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
  - WiRe™ App Service.
  - Self-Diagnostic Function
  - Push Alarm Service to Smart Phone : Power-/Temperature-/Door Open-Error Status
  - Built in USB port for Data Download and Program Upgrade
  - Password Protected Setting
  - Digital Calibration(Offset Function)
  - Door Ajar and Power Failure Alarm
  - Internet Connectivity with WiFi
  - Automatic Data Recording
  - Interactive Temperature Graph
  - Min-/Max-Temperature Memory
  - Program Function
- \* Precise Temperature Control (-40°C/-20°C to 100°C) and Humidity (30% to 98% Relative Humidity)
- \* Electronic Humidity Sensor has Excellent Response Time and Durability.
- \* CFC-Free Refrigerant (R-404A)
- \* Easy and Safety Door Lock
- \* The Powerful and Silent Dual Fan Motor Assures Temperature Uniformity by Strong Air Circulation (2 ~ 4pcs)
- \* Large Clear Viewing Window with Membrane Heating Element (Moisture-Proof)
- \* Sliding Water Supply Tank : Auto Water Supplementing System
- \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking
- \* RS232C Interface for Remote Monitoring and Controlling with PC (Standard)
- \* 6 Channels & 2 Pens Temperature & Humidity Recorder(Optional)

**Specification**

Spec.		Model	ThermoStable™ STH-155	ThermoStable™ STH-305	ThermoStable™ STH-420	ThermoStable™ STH-800
Temp. Range			-20°C to 100°C			
Humidity Range			30% to 98% RH			
Compressor			7/8HP	1.5HP	1.5HP	3HP
Heater	for Temp.		1.5 kW	2.0 kW	2.2 kW	2.5 kW
	for Humi.		2.0 kW	3.0 kW	3.0 kW	3.0 kW
Spec.		Model	ThermoStable™ STH-L155	ThermoStable™ STH-L305	ThermoStable™ STH-L420	ThermoStable™ STH-L800
Temp./Humidity Range			-40°C to 100°C / 30% to 98% RH			
Compressor			1.5HP	2 HP	3HP	4HP
Heater	for Temp.		1.5 kW	2.0 kW	2.2 kW	2.5 kW
	for Humi.		2.0 kW	3.0 kW	3.0 kW	3.0 kW
Dimension (w×d×h)	Interior (mm)		505×505×610	620×620×800	700×700×820	1,000×800×1,000
	Exterior (mm)		1,100×960×1,550	1,310×1,080×1,765	1,390×1,135×1,690	1,570×1,245×2,060
Capacity			155 Lit.	305 Lit.	420 Lit.	800 Lit.
Refrigerant			CFC-Free(R-404A) Refrigeration System			
Temp.	Accuracy		± 0.3°C			
	Stability		± 0.3°C			
Humidity	Accuracy		± 0.3% RH			
	Stability		± 0.3% RH at 70%			
Heat-up Time			35 min (-20°C to 80°C)			
Cool-down Time			45 min (+20°C to -20°C)			
Controller & Display			Smart-Lab Controller, 7" Full Touch Screen TFT LCD			
Program Function			Multiple Programs(Patterns by multiple Segments) Supported			
Sensor			PT100 & Capacitive Sensor			
Material	Internal		Stainless-steel ( # 304)			
	External		Powder Coated steel			
Shelves			3ea of Perforated Stainless steel Shelves of Adjustable Position			
Safety Device			Over Temp. and Over Current Protector, Sensor Error and Low Level Detector, Leakage Breaker			
Others			PL(Product Liability) Insurance			
Packing Dimension (w×d×h) (cm)			134×116×175	152×125×207	160×130×202	178×141×237
Gross Weight			353 kg	369 kg	478 kg	678 kg
Power Consumption			4.7 kW	5.7 kW	6.3 kW	9 kW
			6.2 kW	7.9 kW	9.9 kW	12.7 kW
Electric Reqts.			1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase			

\* Other Specifications are available upon Customer's Request.

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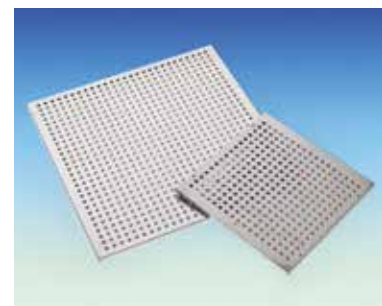
<Continued From... DAIHAN-brand® SMART Precise Temp./Humidity Chamber, "ThermoStable™ STH">

**Ordering Information**

**(1) Programmable Temp./Humidity Chamber, 1 Phase**

DH.STH01155	Temp. / Humidity Chamber, "STH-155", -20°C to 100°C, 155 Lit, <b>230V</b>
DH.STH01305	, "STH-305", -20°C to 100°C, 305 Lit, <b>230V</b>
DH.STH01420	, "STH-420", -20°C to 100°C, 420 Lit, <b>230V</b>
DH.STH01800	, "STH-800", -20°C to 100°C, 800 Lit, <b>230V</b>
DH.STH02155	Temp. / Humidity Chamber, "STH-L155", -40°C to 100°C, 155Lit, <b>230V</b>
DH.STH02305	, "STH-L305", -40°C to 100°C, 305Lit, <b>230V</b>
DH.STH02420	, "STH-L420", -40°C to 100°C, 420Lit, <b>230V</b>
DH.STH02800	, "STH-L800", -40°C to 100°C, 800Lit, <b>230V</b>
DH.STH05155	Temp. / Humidity Chamber, "STH-155", Same as Above, but only <b>120V</b>
DH.STH05305	, "STH-305", Same as Above, but only <b>120V</b>
DH.STH05420	, "STH-420", Same as Above, but only <b>120V</b>
DH.STH05800	, "STH-800", Same as Above, but only <b>120V</b>
DH.STH06155	Temp. / Humidity Chamber, "STH-L155", Same as Above, but only <b>120V</b>
DH.STH06305	, "STH-L305", Same as Above, but only <b>120V</b>
DH.STH06420	, "STH-L420", Same as Above, but only <b>120V</b>
DH.STH06800	, "STH-L800", Same as Above, but only <b>120V</b>

Ea. Price, ₩



**Perforated Stainless-steel Shelves (Included)**



**Auto Water Supplementing System**

**(2) Programmable Temp./Humidity Chamber, 3Phase, for Customizing**

DH.STH07155	Temp. / Humidity Chamber, "STH-155", -20°C to 100°C, 155 Lit.
DH.STH07305	, "STH-305", -20°C to 100°C, 305 Lit.
DH.STH07420	, "STH-420", -20°C to 100°C, 420 Lit.
DH.STH07800	, "STH-800", -20°C to 100°C, 800 Lit.
DH.STH08155	Temp. / Humidity Chamber, "STH-L155", -40°C to 100°C, 155Lit.
DH.STH08305	, "STH-L305", -40°C to 100°C, 305Lit.
DH.STH08420	, "STH-L420", -40°C to 100°C, 420Lit.
DH.STH08800	, "STH-L800", -40°C to 100°C, 800Lit.

Ea. Price, ₩

**Spare Perforated Stainless-steel Shelves**

DH.WTH11155	Perforated Shelf, Stainless-steel, "THS1155", for 155 Lit, w470 × d480mm
DH.WTH11305	, "THS1305", for 305 Lit, w590 × d580mm
DH.WTH11420	, "THS1420", for 420 Lit, w720 × d640mm
DH.WTH11800	, "THS1800", for 800 Lit, w970 × d980mm

Ea. Price, ₩

**Optional Temp & Humidity Recorder and Chart Paper**

DH.WTH05100	Temperature & Humidity Recorder, "WTH5100"
DH.WTH05105	Chart Paper, "WTH5105", 33 Days

Ea. Price, ₩



**Temp. & Humidity Recorder 6 Channel 2 Pens(WTH5100) (Optional)**

**Programmable Temp./Humidity Chamber with Validation (IQ, OQ) Service**

DH.STH31155	Validation Service(IQ, OQ), with "STH-155", "STHV1155"
DH.STH31305	, with "STH-305", "STHV1305"
DH.STH31420	, with "STH-420", "STHV1420"
DH.STH31800	, with "STH-800", "STHV1800"
DH.STH32155	Validation Service(IQ, OQ), with "STH-L155", "STHV2155"
DH.STH32305	, with "STH-L305", "STHV2305"
DH.STH32420	, with "STH-L420", "STHV2420"
DH.STH32800	, with "STH-L800", "STHV2800"

Ea. Price, ₩

**» DAIHAN WiRe™ App Service**



7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)



WiRe™ App Service

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

**Controlled by Smart-Phone**

DAIHAN-brand® Low Temperature(B.O.D) Incubators "ThermoStable™ IR", 150-/250-/420-/700-Lit with 3×Wire Shelves, Digital PID Control, CFC-free Refrigeration(R-404A) System, Forced-air, 0~60℃, ±0.2℃ 저온(B.O.D) 배양기/인큐베이터, 강제 순환식, 우수한 온도정확성, 친환경 냉매 채용, with Certi. & Traceability



Low Temperature(B.O.D) Incubator "ThermoStable™ IR-150"

- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Intelligent Control of Refrigerator for Preventing Overload of Compressor
- CFC-free (R-404A) Refrigeration System
- Digital PID Control System Implementing Superior Temperature Accuracy
- Patented Jog-Dial Control System
- PL(Product Liability) Insurance

- \* Variable Application : Animal & Plant Cell Culture, Constant Temperature, Germination Test, BOD Test, and so on
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Superior Temperature Uniformity by Forced-air
- \* Stainless steel Chamber and PE-coated Shelves
- \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
- \* Storage Function : Alarm & Timer
- \* Back-Light LCD
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)
- \* CFC-free (R-404A) Refrigeration System.
- \* Compact New Body Design

## Specifications & Ordering information

Spec.	Model	ThermoStable™ IR-150	ThermoStable™ IR-250	ThermoStable™ IR-420	ThermoStable™ IR-700
Capacity		150 Lit.	250 Lit.	420 Lit.	700 Lit.
Air Flow-type		Forced-air Type			
Temp. Range & Accuracy		0℃ ~ 60℃, ± 0.2℃ at 37℃			
Temp. Uniformity & Sensor		± 0.5℃ at 37℃, ± 1.4℃ at 50℃, PT100 Sensor			
Heat-up Time		20 min. to 37℃ 20 min. to 50℃		35 min. to 37℃ 35 min. to 50℃	
Recovery Time (Door open 30sec)		10 min. to 37℃ 12 min. to 50℃		12 min. to 37℃ 15 min. to 50℃	
Heating Power/Consumption		700 W	1 kW	1.2 kW	2 kW
Compressor		1/4HP	1/3HP	1/2HP	1/2HP
Compressor Control		Intelligent Control of Refrigerator for preventing Overload of Compressor			
Refrigerant		CFC-Free(R-404A) Refrigeration System			
Timer & Alarm		99hr 59min (with delay / Continuous run.), Error status & Timer-end			
Display		Digital LCD with Back Light			
Controller		Digital PID Controller with Jog-Shuttle Switch (Turn & Push)			
Inner Door		with 1ea of Inner Tempered Glass Door			
Shelves		Included 3ea of PE-coated steel Shelves			
Permitted Total Load		Total Load : 48 kg (16kg×3 Shelves)			
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector			
Material		Internal : Stainless-steel (#304), External : Powder Coated steel			
Dimension (w×d×h)	Interior (mm)	505×505×610	505×505×1,000	705×605×1,000	800×700×1,250
	Exterior (mm)	640×832×1,313	640×832×1,703	840×932×1,753	935×1,027×2,000
Net Weight		118 kg	157 kg	202 kg	234 kg
Packing Size (w×d×h) (mm) & Gross Weight		900×1,000×1,650 191 kg	900×1,000×2,040 217 kg	1,100×1,100×2,140 277 kg	1,220×1,220×2,260 313 kg
	Power Consumption	1.6 kW	1.8 kW	2.3 kW	2.4 kW
Electric Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz			
Cat. No.	230V	DH.WIR03150	DH.WIR03250	DH.WIR03420	DH.WIR03700
	120V	DH.WIR04150	DH.WIR04250	DH.WIR04420	DH.WIR04700
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 50,000 별도!



### WiseRemote Control Software :

Connection of Temperature Devices with Interface RS232C to a PC  
Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at  
DAIHAN-Sci.com Shopping-mall

<Continued On Next Page>

Cat. No	Description	Articles
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<Continued From... DAIHAN-brand® Low Temperature(B.O.D) Incubators “ThermoStable™ IR”>

**Spare PE-coated Steel Wire Shelves**

- DH.WIR11150** Wire Shelf, PE Coated steel, “IRS150”, w470×d480mm, for “IR-150”, “IR-250”
- DH.WIR11420** Wire Shelf, PE Coated steel, “IRS420”, w675×d585mm, for “IR-420”
- DH.WIR11700** , “IRS700”, w770×d680mm, for “IR-700”

Ea. Price, ₩

**Optional Stainless-steel Wire Shelves**

- DH.WIR21150** (1) Wire Shelf, Stainless-steel, “IRU150”, w470×d480mm, for “IR-150”, “IR-250”
- DH.WIR21420** (1) Wire Shelf, Stainless-steel, “IRU420”, w675×d585mm, for “IR-420”
- DH.WIR21700** , “IRU700”, w770×d680mm, for “IR-700”

Ea. Price, ₩

**Low Temp(B.O.D) Incubator with Validation (IQ, OQ) Service**

- DH.WIR31150** Validation Service(IQ, OQ), with “ThermoStable IR-150”, “IRV150”
- DH.WIR31250** , with “ThermoStable IR-250”, “IRV250”
- DH.WIR31420** , with “ThermoStable IR-420”, “IRV420”
- DH.WIR31700** , with “ThermoStable IR-700”, “IRV700”

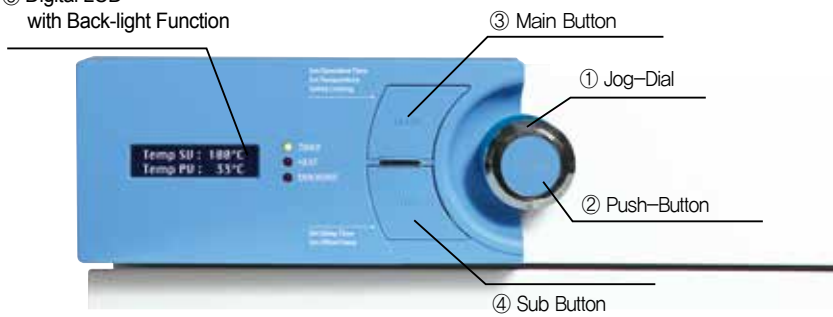
Ea. Price, ₩



Low Temperature(B.O.D) Incubator “ThermoStable IR-150”

**» New Jog-Dial Controller**

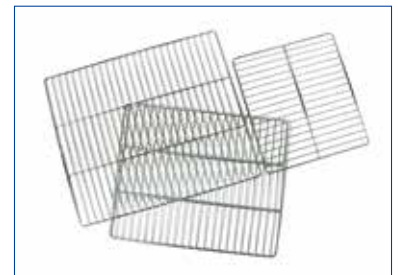
⑤ Digital LCD with Back-light Function



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.



Wire Shelves, PE Coated steel (Included)



(1) Wire Shelves, Stainless-steel (Optional)

DAIHAN-brand® SMART Low Temperature(B.O.D) Incubators “ThermoStable™ SIR”, 150-/250-/420-/700-Lit with Smart-Lab™ Controller, 4" Full Touch Screen, Fuzzy-PID Control, CFC-free(R-404A), 0~60℃, ±0.2℃, with Certi. & Traceability 스마트 저온(B.O.D) 배양기/인큐베이터, 강제 순환식, 우수한 온도정확성, 친환경 냉매 채용, WiRe™서비스, 4인치 풀터치스크린 조절기



SMART Low Temperature(B.O.D) Incubator  
“ThermoStable™ SIR-150”



Display of Smart-Lab™ Controller

- **Made in Korea**
- **UL / CUL Certified**
- **CE Certified**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Intelligent Control of Refrigerator for Preventing Overload of Compressor**
- **CFC-free (R-404A) Refrigeration System**
- **Digital Fuzzy Control System Implementing Superior Temperature Accuracy**
- **Smart-Lab™ Controller**
- **PL(Product Liability) Insurance**
- \* Variable Application : Animal & Plant Cell Culture, Constant Temperature, Germination Test, BOD Test, and so on
- \* Ergonomic Design 4" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- \* WiRe™ App Service.
- \* Automatic Data Recording
- \* Self-Diagnostic Function
- \* Compact New Body Design
- \* Variable Program Setting for Multiple Patterns with Multiple Segments
- \* The Recorded Data could be transferred to PC by USB memory
- \* Controller SW can be upgraded through USB port.
- \* Internet Connectivity with WiFi
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Superior Temperature Uniformity by Forced Convection
- \* Stainless steel Chamber and PE-coated Shelves
- \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
- \* CFC-free (R-404A) Refrigeration System.

Specifications & Ordering information

Spec.	Model	ThermoStable™ SIR-150	ThermoStable™ SIR-250	ThermoStable™ SIR-420	ThermoStable™ SIR-700
Capacity		150 Lit.	250 Lit.	420 Lit.	700 Lit.
Air Flow-type		Forced-air Type			
Temp. Range & Accuracy		0℃ ~ 60℃, ± 0.2℃ at 37℃			
Temp. Uniformity & Sensor		± 0.5℃ at 37℃, ± 1.4℃ at 50℃, PT100 Sensor			
Heat-up Time		20 min. to 37℃ 20 min. to 50℃		35 min. to 37℃ 35 min. to 50℃	
Recovery Time (Door open 30sec)		10 min. to 37℃ 12 min. to 50℃		12 min. to 37℃ 15 min. to 50℃	
Heating Power/Consumption		700 W	1 kW	1.2 kW	2 kW
Compressor		1/4HP	1/3HP	1/2HP	1/2HP
Compressor Control		Intelligent Control of Refrigerator for preventing Overload of Compressor			
Refrigerant		CFC-Free(R-404A) Refrigeration System			
Timer & Alarm		99hr 59min (with delay / Continuous run.), Error status & Timer-end			
Display		4"Full Touch Screen TFT LCD			
Controller		Smart-Lab™ Controller			
Inner Door		with 1ea of Inner Tempered Glass Door			
Shelves		Included 3ea of PE-coated steel Shelves			
Permitted		Total Load Total Load : 48 kg (16kg × 3 Shelves)			
Safety Circuit		Over Temp. and Over Current Protector, Sensor Error Detector			
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel			
Dimension (w×d×h)	Interior (mm)	505×505×610	505×505×1,000	705×605×1,000	800×700×1,250
	Exterior (mm)	640×832×1,313	640×832×1,703	840×932×1,753	935×1,027×2,000
Net Weight		118 kg	157 kg	202 kg	234 kg
Packing Size (w×d×h) (mm) & Gross Weight		900×1,000×1,650	900×1,000×2,040	1,100×1,100×2,140	1,220×1,220×2,260
		191 kg	217 kg	277 kg	313 kg
Power Consumption		1.6 kW	1.8 kW	2.3 kW	2.4 kW
Electric Reqt.s.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz			
Cat. No.	230V	DH.SWIR03150	DH.SWIR03250	DH.SWIR03420	DH.SWIR03700
	120V	DH.SWIR04150	DH.SWIR04250	DH.SWIR04420	DH.SWIR04700
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 50,000 별도!

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Cat. No	Description	Articles
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<Continued From... DAIHAN-brand® SMART Low Temperature(B.O.D) Incubators “ThermoStable™ SIR”>

**Spare PE-coated Steel Wire Shelves**

- DH.WIR11150 Wire Shelf, PE Coated steel, “IRS150”, w470×d480mm, for “SIR-150”, “SIR-250”
- DH.WIR11420 Wire Shelf, PE Coated steel, “IRS420”, w675×d585mm, for “SIR-420”
- DH.WIR11700 Wire Shelf, PE Coated steel, “IRS700”, w770×d680mm, for “SIR-700”

Ea. Price, ₩

**Optional Stainless-steel Wire Shelves**

- DH.WIR21150 (1) Wire Shelf, Stainless-steel, “IRU150”, w470×d480mm, for “SIR-150”, “SIR-250”
- DH.WIR21420 (1) Wire Shelf, Stainless-steel, “IRU420”, w675×d585mm, for “SIR-420”
- DH.WIR21700 (1) Wire Shelf, Stainless-steel, “IRU700”, w770×d680mm, for “SIR-700”

Ea. Price, ₩

**Low Temp(B.O.D) Incubator with Validation (IQ, OQ) Service**

- DH.SWIR31150 Validation Service(IQ, OQ), with “ThermoStable SIR-150”, “SIRV150”
- DH.SWIR31250 , with “ThermoStable SIR-250”, “SIRV250”
- DH.SWIR31420 , with “ThermoStable SIR-420”, “SIRV420”
- DH.SWIR31700 , with “ThermoStable SIR-700”, “SIRV700”

Ea. Price, ₩



SMART Low Temperature(B.O.D) Incubator “ThermoStable SIR-150”

**» DAIHAN WiRe™ App Service**



4” Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

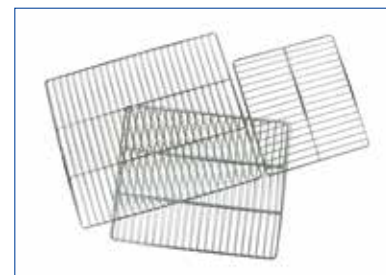


WiRe™ App Service

**Controlled by Smart-Phone**



Wire Shelves, PE Coated steel (Included)



(1) Wire Shelves, Stainless-steel (Optional)

DAIHAN-brand® SMART Plant Growth Chamber “ThermoStable™ GC”, Smart-Lab™ System, 432-/864-Lit. with Smart-Lab™ Controller, CFC-Free, 0~12,000- or 15,000-Lux, 30~95% RH, 10~60℃, with Certi. & Traceability  
 스마트 식물 생장상, 스마트랩 컨트롤러, 정밀한 온도/습도/조도 조절, WiRe™서비스, 7인치 풀터치스크린 스마트랩 조절기



(1) SMART Plant Growth Chamber “ThermoStable™ GC-450”

- Made in Korea      ■ CE Certified      ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Suitable for Plant Growth, Stability, Product Self-life QC Testing
- Ergonomic Screen Design 7" Full Touch Screen TFT LCD (Smart-Lab™ Controller) : Controlled by Smart-Phone
- WiRe™ App Service.      ■ Automatic Data Recording
- Self-Diagnostic Function
- Variable Program Setting for Multiple Patterns with Multiple Segments
- The Recorded Data could be transferred to PC by USB memory
- Controller SW can be upgraded through USB port.
- \* Inner Tempered Glass Door with Silicone Packing offers easy Observation without Door Opening
- \* Humidity Control by Capacitive Humidity Sensor provides Accurate Control from 30 to 95%RH
- \* Smart-Lab™ Controller Provides Precise Temperature, Relative Humidity and Illumination Control - Maintain Uniformity and Accuracy of Growth Circumstance
- \* 3-/4- Side Light Bank System : Intensity of Light is controlled by 8-levels and Displayed on LCD
- \* Over Temperature & Over Current Protection, Sensor Error Detection, Leakage Breaking

Specification

Spec.	Model	(1) “ThermoStable™ GC-450”	(2) “ThermoStable™ GC-1000”
Capacity		432 Lit.	864 Lit.
Temp.	Range & Variation	10℃ ~ 60℃, ± 1℃ at 20℃	
	Fluctuation	± 0.5℃ at 10℃, ± 0.5℃ at 25℃ (0% light intensity) ± 1℃ at 10℃, ± 1℃ at 25℃ (100% light intensity)	
Humidity	Range & Variation	30% ~ 95% RH, ± 3% at 60℃	
	Fluctuation	± 1%	
	Humidifier	Evaporation by Fan with Heater	
Illumination	Range	0 to 12,000 Lux	0 to 15,000 Lux
	Lamp	FPL 55W × 14	FPL 55W × 28
	Bank	3 Side Walls	
Temp. & Humidity Sensor		Temp. : PT100, Humidity : Capacitive Sensor	
Heat-up Time (up to 37℃)		11 min. (0 % illumination) / 9 min. (100 % illumination)	
Cool-down Time (down to 10℃)		13 min. (0 % illumination) / 15 min. (100 % illumination)	
Temp. Recovery (After Door was opened for 30sec)		3 min. at 10℃, 1 min. at 37℃ (0 % illumination)	
		5 min. at 10℃, 1min. at 37℃ (100 % illumination)	
Heating Power /Consumption	for Temp.	1.5 kW	3.0 kW
	for Humi.	1.5 kW	3.0 kW
Compressor		1/2HP	1HP
Refrigerant		CFC-Free(R-404A) Refrigeration System	
Display		7"Full Touch Screen TFT LCD (Smart-Lab™ Controller)	
Controller		Smart-Lab™ Controller	
Program Function		Temperature and Humidity : 120 Patterns, 1,200 Segments Light Bank : 7 steps	
Door	Internal	Tempered Safety Glass with Silicon Packing	
	External	3-Side Magnetic Packing Door with Light Bank	
Shelves		4 × PE-coated Steel Shelves	8 × PE-coated Steel Shelves
Permitted Total Load		64 kg (16kg × 4 Shelves)	128 kg (16kg × 8 Shelves)
Safety Circuit		Over Temp Protector, Over Current & Leakage Breaker	
Material		Internal : Stainless-steel ( # 304), External : Power Coated steel	
Dimension (w × d × h)	Interior (mm)	650 × 700 × 1,050	1,200 × 790 × 1,050
	Exterior (mm)	850 × 1,090 × 1,965	1,400 × 1,150 × 1,965
Packing Size & Gross Weight		1,400 × 1,220 × h2,210mm, 435 kg	1,600 × 1,500 × h2,200mm, 585 kg
Power Consumption		4.8 kW	6.5 kW
Power Supply*		1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase	

\* Other Specifications are available upon Customer's Request.



Main Display of Smart-Lab™ Controller



Graph Display of Smart-Lab™ Controller



Program Set Display of Smart-Lab™ Controller

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® SMART Plant Growth Chamber “ThermoStable™ GC”>

Ordering Information

※ 운임 약 ₩ 90,000 별도!

(1) 432 Lit Plant Growth Chamber “ThermoStable™ GC-450”, 0~12,000 Lux

- DH.SWGC00450\* Plant Growth Chamber, 230V, “ThermoStable GC-450”
- DH.SWGC50450\* , 120V, “ThermoStable GC-450”
- DH.SWGC60450\* , 3 Phase, “ThermoStable GC-450”

Ea. Price, ₩


(2) 864 Lit Plant Growth Chamber “ThermoStable™ GC-1000”, 0~15,000 Lux

- DH.SWGC01000\* Plant Growth Chamber, 230V, “ThermoStable GC-1000”
- DH.SWGC61000\* , 3 Phase, “ThermoStable GC-1000”

Ea. Price, ₩


\*-marks : Included Water Tank(with Silicon Tube) and Lux Meter

Spare Wire Shelves, PE Coated steel

- DH.WGC10450 Wire Shelf, PE Coated, w640×d620mm, “GCS450”, for 432Lit.
- DH.WGC11000 , w580×d620mm, “GCS1000”, for 864Lit.

Ea. Price, ₩


Validation (IQ, OQ) Service

- DH.SWGC30450 Validation Service(IQ, OQ), with “ThermoStable GC-450”, “SGCV450”
- DH.SWGC31000 , with “ThermoStable GC-1000”, “SGCV1000”

Ea. Price, ₩




2-Year Warranty

(1) SMART Plant Growth Chamber “ThermoStable™ GC-450”

» DAIHAN WiRe™ App Service



7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

Controlled by Smart-Phone



Wire Shelves, PE-coated steel (Included)



Water Tank/Silicon Tube/Lux Meter (Included)

DAIHAN-brand® Precise Shaking Incubators “ThermoStable™ IS-30”, Front Door-type, up to 60°C, ±0.2°C with Universal Platform, Fuzzy Control, Orbital Motion, Advanced Shaking Mechanism, Precise Speed Control, 30~250 rpm  
 진탕 배양기/인큐베이터, 전면도어 타입, 고정밀 디지털 퍼지제어, Universal Platform 포함



(a) Room Temp. +5°C ~ +60°C, with Universal Platform “ThermoStable™ IS-30”



(b) +10°C ~ +60°C, with Universal Platform “ThermoStable™ IS-30R”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System

- \* Useful for Biological Cultures under various Temperature
- \* Precise Temperature Control by Digital Fuzzy Controller, up to 60°C
- \* Digital Timer Function : 99 hours 59 minutes
- \* Front Door and Sliding Platform Provides Easy Loading and Handling of Samples
- \* Digital LCD with Back-Light Function
- \* Stabilized Orbital Motion
- \* RS232C Interface for Monitoring and Controlling with PC.
- \* Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- \* Minimum Noise and No Vibration.
- \* Accommodate Flasks up to 1,000ml
- \* Universal Spring Rack for Various Shapes/Size of Flasks (Optional)
- \* Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- \* Over Temperature & Over Current Protection and Leakage Breaking.

Specifications & Ordering information

Spec.	Model	(a) “ThermoStable™ IS-30”	(b) “ThermoStable™ IS-30R”
Temp. Range		Room Temp. +5°C ~ 60°C	10°C ~ 60°C
Temp. Accuracy & Uniformity		Accuracy : ±0.2°C at 37°C, Uniformity : ±0.5°C at 37°C	
Capacity		127Lit.	
Temp. Sensor		PT100 Sensor	
Heater		600 W	800 W
Compressor		None	1/4 HP
Compressor Control		None	Intelligent Control of Refrigerator for preventing Overload of Compressor
Refrigerant		None	CFC-Free(404A) Refrigeration System
Shaking Speed & Stroke		30 ~ 250 rpm, 25mm Orbital Motion	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)	
Platform		Included Universal Platform for Various Shapes & Sizes of Flasks	
Optional Flask Holder		Durable & Flexible Plastic Flask Holder (up to 1000ml)	
Available Max. Capacity of Flask Holder		Available 35 ea Flask Holder, for 50~100ml Flask	
	for 200~300ml	Available 16 ea Flask Holder, for 200~300ml Flask	
	for 500~1,000ml	Available 12 ea Flask Holder, for 500~1,000ml Flask	
Safety Circuit		Over Temp./ Current Protector, Leakage Breaker	
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel	
Dimension		Internal : 570×465×h470mm, External : 916×730×h683mm	
Packing Size (w×d×h) (mm) & Gross Weight		1,050×900×h900mm	
		146 kg	156 kg
Power Consumption		600 W	1.3 kW
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Cat. No.	60Hz	230V	DH.WIS00230	DH.WIS01230
		120V	DH.WIS00130	DH.WIS01130
	50Hz	230V	DH.WIS00530	DH.WIS01530
		120V	DH.WIS00430	DH.WIS01430
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 40,000 별도!

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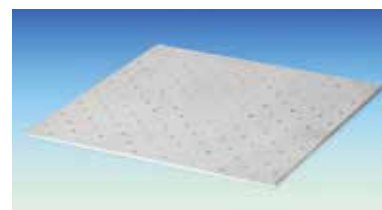


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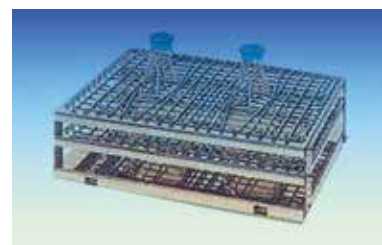
<Continued From...DAIHAN-brand® Precise Shaking Incubators “ThermoStable™ IS-30”>

**Optional Platform/Spring Rack/Flask Holders**

		Ea. Price, ₩
DH.WIS504630	(1) Universal Platform, w485 × h405mm, “SP630”, for “IS-30(R)”	
DH.WIS504530	(2) Universal Spring Rack w498 × d408 × h135mm, “SR530”, for “IS-30(R)”	
DH.WIS504030	(3) ABS Flask Holder, for 50~100ml Flask, “FH100”, for “SHO”, “SHR” and “IS”	
DH.WIS504035	(4) ABS Flask Holder, for 200~300ml Flask, “FH250”, for “SHO”, “SHR” and “IS”	
DH.WIS504040	(5) ABS Flask Holder, for 500~1000ml Flask, “FH500”, for “SHO”, “SHR” and “IS”	
DH.WIS600100	(6) STS Wire Spring Flask Holder, for 100ml Flask, “FHS100”, for “SHO”, “SHR” and “IS”	
DH.WIS600250	(7) STS Wire Spring Flask Holder, for 250ml Flask, “FHS250”, for “SHO”, “SHR” and “IS”	
DH.WIS600500	(8) STS Wire Spring Flask Holder, for 500ml Flask, “FHS500”, for “SHO”, “SHR” and “IS”	
DH.WIS601000	(9) STS Wire Spring Flask Holder, for 1000ml Flask, “FHS1000”, for “SHO”, “SHR” and “IS”	



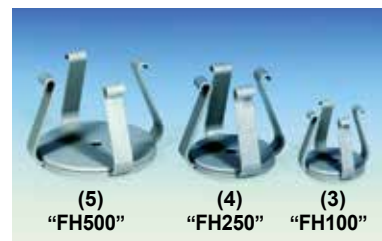
(1) Universal Platform “SP630” (Included)



(2) Universal Spring Rack “SR530” (Optional)

**Shaking Incubator with Validation (IQ, OQ) Service**

		Ea. Price, ₩
DH.WIS33010	Validation Service(IQ, OQ), with “ThermoStable IS-30”, 60Hz, “ISV3010”	
DH.WIS33011	, with “ThermoStable IS-30R”, 60Hz, “ISV3011”	



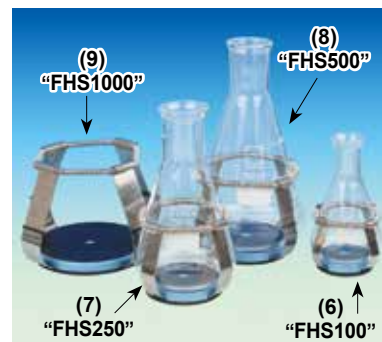
ABS Flask Holders (Optional)



**WiseRemote Control Software :**

Connection of Temperature Devices with Interface RS232C to a PC  
Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall



STS Wire Spring Flask Holder (Optional)

DAIHAN-brand® Precise Shaking Incubators “ThermoStable™ IS-20”, BenchTop-type, up to 60°C, ±0.2°C with Universal Platform, Fuzzy Control, Orbital Motion, Advanced Shaking Mechanism, Precise Speed Control, 30~250 rpm  
 진탕 배양기/인큐베이터, 벤치 탑 타입, 고정밀 디지털 퍼지 제어, Universal Platform 포함



(a) Room Temp. +5°C~ +60°C, with Universal Platform “ThermoStable™ IS-20”



(b) +10°C~+60°C, with Universal Platform “ThermoStable™ IS-20R”

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System

- \* Useful for Biological Cultures under various Temperature
- \* Precise Temperature Control by Digital Fuzzy Controller, up to 60°C
- \* Digital Timer Function : 99 hours 59 minutes
- \* Minimum Noise and No Vibration
- \* Digital LCD with Back-Light Function
- \* Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- \* Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking
- \* Accommodate Flasks up to 1,000ml
- \* Stabilized Orbital Motion
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)

Specifications & Ordering information

Spec.	Model	(a) “ThermoStable™ IS-20”	(b) “ThermoStable™ IS-20R”
Temp. Range		Room Temp. +5°C ~ 60°C	10°C ~ 60°C
Temp. Accuracy & Uniformity		Accuracy : ±0.2°C at 37°C, Uniformity : ±0.5°C at 37°C	
Capacity		101Lit.	
Temp. Sensor		PT100 Sensor	
Heater		500 W	700 W
Compressor		None	1/4 HP
Compressor Control		None	Intelligent Control of Refrigerator for preventing Overload of Compressor
Refrigerant		None	CFC-Free(404A) Refrigeration System
Shaking Speed & Stroke		30 ~ 250 rpm, 25mm Orbital Motion	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)	
Room Lamp		60W Krypton Lamp	
Platform		Included Universal Platform for Various Shapes & Sizes of Flasks	
Optional Flask Holder		Durable & Flexible Plastic Flask Holder (up to 1000ml)	
Available Max. Capacity of Flask Holder	for 50~100ml	Available 32 ea Flask Holder, for 50~100ml Flask	
	for 200~300ml	Available 20 ea Flask Holder, for 200~300ml Flask	
	for 500~1,000ml	Available 16 ea Flask Holder, for 500~1,000ml Flask	
Safety Circuit		Over Temp./ Current Protector, Leakage Breaker, Sensor Error Detector	
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel	
Dimension		Internal : 530×530×h350mm, External : 575×855×h850mm	
Packing Size (w×d×h) (mm)		1,000×800×h1,100mm	
& Gross Weight		147 kg	150 kg
Power Consumption		500 W	1.2 kW
Electrical Reqt.s.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Cat. No.	60Hz	230V	DH.WIS00220	DH.WIS01220
		120V	DH.WIS00120	DH.WIS01120
	50Hz	230V	DH.WIS00520	DH.WIS01520
		120V	DH.WIS00420	DH.WIS01420
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 40,000 별도!

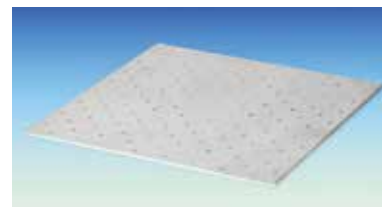
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Cat. No	Description	Articles
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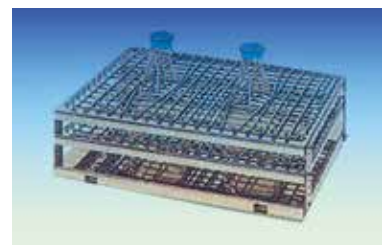
<Continued From...DAIHAN-brand® Precise Shaking Incubators, “ThermoStable™ IS-20”>

**Optional Platform/Spring Rack/Flask Holders**

Cat. No	Description	Ea. Price, ₩
DH.WIS504600	(1) Universal Platform, w478 × h478mm, “SP600”, for “IS-20(R)”	
DH.WIS504500	(2) Universal Spring Rack w483 × d483 × h135mm, “SR500”, for “IS-20(R)”	
DH.WIS504030	(3) ABS Flask Holder, for 50~100ml Flask, “FH100”, for “SHO”, “SHR” and “IS”	
DH.WIS504035	(4) ABS Flask Holder, for 200~300ml Flask, “FH250”, for “SHO”, “SHR” and “IS”	
DH.WIS504040	(5) ABS Flask Holder, for 500~1000ml Flask, “FH500”, for “SHO”, “SHR” and “IS”	
DH.WIS600100	(6) STS Wire Spring Flask Holder, for 100ml Flask, “FHS100”, for “SHO”, “SHR” and “IS”	
DH.WIS600250	(7) STS Wire Spring Flask Holder, for 250ml Flask, “FHS250”, for “SHO”, “SHR” and “IS”	
DH.WIS600500	(8) STS Wire Spring Flask Holder, for 500ml Flask, “FHS500”, for “SHO”, “SHR” and “IS”	
DH.WIS601000	(9) STS Wire Spring Flask Holder, for 1000ml Flask, “FHS1000”, for “SHO”, “SHR” and “IS”	



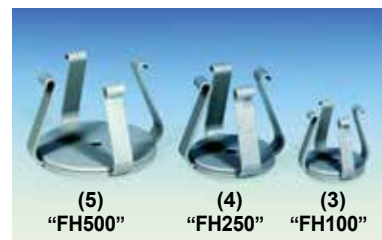
(1) Universal Platform “SP600” (Included)



(2) Universal Spring Rack “SR500” (Optional)

**Shaking Incubator with Validation (IQ, OQ) Service**

Cat. No	Description	Ea. Price, ₩
DH.WIS32010	Validation Service(IQ, OQ), with “ThermoStable IS-20”, 60Hz, “ISV2010”	
DH.WIS32011	, with “ThermoStable IS-20R”, 60Hz, “ISV2011”	



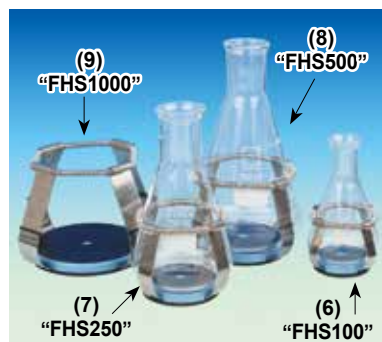
ABS Flask Holders (Optional)



**WiseRemote Control Software :**

Connection of Temperature Devices with Interface RS232C to a PC  
Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall



STS Wire Spring Flask Holder (Optional)

DAIHAN-brand® Precise Shaking Incubators “ThermoStable™ IS-10”, Top Door-type, Orbital Motion with Universal Platform, Fuzzy Control, with or without illuminators & Recorder, up to 60°C, ±0.2°C, 30~250 rpm  
 진탕 배양기/인큐베이터, 탑 도어 타입, 고정밀 디지털 퍼지 제어, Universal Platform 포함, with Certi. & Traceability



(a) Room Temp. +5°C~60°C, With Universal Platform “ThermoStable™ IS-10”



(b) 10°C~60°C, With Universal Platform “ThermoStable™ IS-10R”

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System

- \* Precise Temperature Control by Digital Fuzzy Controller, up to 60°C
- \* Digital LCD with Back-Light Function
- \* Minimum Noise and No Vibration
- \* Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- \* Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- \* Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)
- \* RS232C Interface for Monitoring and Controlling with PC

Specifications & Ordering information

Spec.	Model	(a) ThermoStable™ IS-10	(b) ThermoStable™ IS-10R	(c) ThermoStable™ IS-10RL
Illumination System		None		FPL 55W×4ea
Temp. Range		R/T +5°C ~ 60°C	10°C ~ 60°C	
Temp. Accuracy & Uniformity		Accuracy : ±0.2°C at 37°C, Uniformity : ±0.5°C at 37°C		
Capacity		229Lit.		
Temp. Sensor		PT100 Sensor		
Heater		800 W	1 kW	1.2 kW
Compressor		None	1/3HP	
Compressor Control		None	Intelligent Control of Refrigerator for preventing Overload of Compressor	
Refrigerant		CFC-Free (404A) Refrigeration System		
Shaking Speed & Stroke		30 ~ 250 rpm, 25mm Orbital Motion		
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end		
Display		Digital LCD with Back-Light Function		
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)		
Room Lamp		Krypton Lamp, 60W	None	
Platform		Included Universal Platform for Various Shapes & Sizes of Flasks		
Optional Flask Holder		Durable & Flexible Plastic Flask Holder (up to 1000ml)		
Available Max. Capacity of Flask Holder		for 50~100ml	Available 68 ea Flask Holder, for 50~100ml Flask	
		for 200~300ml	Available 36 ea Flask Holder, for 200~300ml Flask	
		for 500~1,000ml	Available 21 ea Flask Holder, for 500~1,000ml Flask	
Safety Circuit		Over Temp./ Current Protector, Leakage Breaker, Sensor Error Detector		
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel		
Dimension		Internal : 750×720×h400mm, External : 1,065×900×h980mm		
Packing Size (w×d×h) (mm)		1,220×1,060×h1,200mm		
& Gross Weight		231 kg	238 kg	238 kg
Power Consumption		800 W	1.8 kW	2.1 kW
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz		

Cat. No.	60Hz	230V	DH.WIS00210	DH.WIS04210	DH.WIS05210
		120V	DH.WIS00110	DH.WIS04110	DH.WIS05110
	50Hz	230V	DH.WIS00510	DH.WIS04510	DH.WIS05510
		120V	DH.WIS00410	DH.WIS04410	DH.WIS05410

Price, Each. ₩

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 40,000별도!

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Precise Shaking Incubators “ThermoStable™ IS-10”>

**Optional Platform/Spring Rack/Flask Holders/Recorders**

- DH.WIS504510 (1) Universal Spring Rack, w693 × d653 × h135mm, “SR510”, for “IS-10(R/RL)”
- DH.WIS504610 (2) Universal Platform, w688 × h648mm, “SP610”, for “IS-10(R/RL)”
- DH.WIS504030 (3) ABS Flask Holder, for 50~100ml Flask, “FH100”, for “SHO”, “SHR” and “IS”
- DH.WIS504035 (4) ABS Flask Holder, for 200~300ml Flask, “FH250”, for “SHO”, “SHR” and “IS”
- DH.WIS504040 (5) ABS Flask Holder, for 500~1000ml Flask, “FH500”, for “SHO”, “SHR” and “IS”
- DH.WIS600100 (6) STS Wire Spring Flask Holder, for 100ml Flask, “FHS100”, for “SHO”, “SHR” and “IS”
- DH.WIS600250 (7) STS Wire Spring Flask Holder, for 250ml Flask, “FHS250”, for “SHO”, “SHR” and “IS”
- DH.WIS600500 (8) STS Wire Spring Flask Holder, for 500ml Flask, “FHS500”, for “SHO”, “SHR” and “IS”
- DH.WIS601000 (9) STS Wire Spring Flask Holder, for 1000ml Flask, “FHS1000”, for “SHO”, “SHR” and “IS”
- DH.WTH05100 (10) Temperature Recorder, with 6ea Ribbon Cassette & Chart Paper LED, 6ch/10sec, 144 × 144 × h233mm, “WTH5105”
- DH.WTH05108 Ribbon Cassette, 6 Colors, “WTH5108”
- DH.WTH05105 Chart Paper, w100mm × L10m, 33 Days, “WTH5105”

Ea. Price, ₩



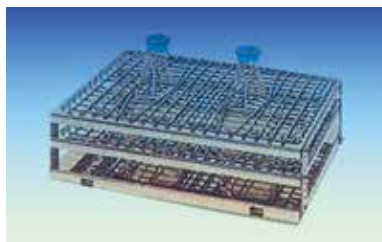
**2-Year Warranty**

(c) 10 °C~60 °C, with Universal Platform & Illumination System “ThermoStable IS-10RL”

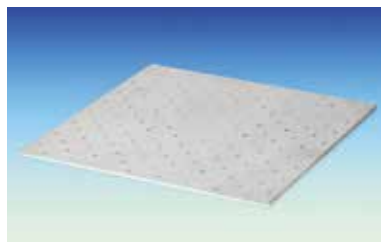
**Shaking Incubator with Validation (IQ, OQ) Service**

- DH.WIS31010 Validation Service(IQ, OQ), with “ThermoStable IS-10”, 60Hz, “ISV1010”
- DH.WIS31011 , with “ThermoStable IS-10R”, 60Hz, “ISV1011”
- DH.WIS31012 , with “ThermoStable IS-10RL”, 60Hz, “ISV1012”

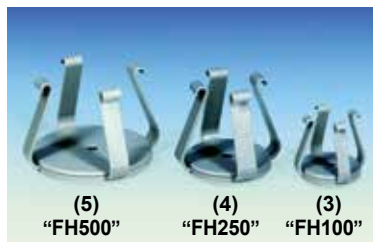
Ea. Price, ₩



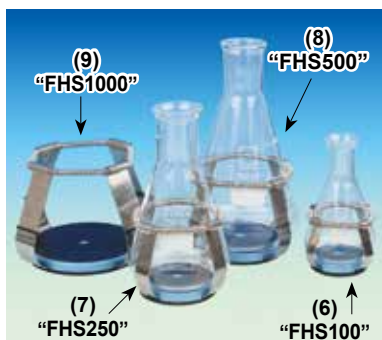
(1) Universal Spring Rack “SR510” (Optional)



(2) Universal Platform “SP610” (Included)



ABS Flask Holders (Optional)



STS Wire Spring Flask Holder (Optional)



(10) Temperature Recorder : with 6ea Ribbon Cassette and Chart Paper



**WiseRemote Control Software :**  
 Connection of Temperature Devices with Interface RS232C to a PC  
 Export Recorded Data(Excel Spreadsheet)  
 \* You can Download this Software at DAIHAN-Sci.com Shopping-mall

DAIHAN-brand® Multi-Stack Refrigerated Shaking Incubator “WIS-ML”, Orbital Motion, with 2-/4-Universal Platform with Universal Platform, Digital Fuzzy Control, 2 or 4 Independent Shaking Speed Control, 10~60°C, 30~250 rpm, 2-/4- Stacks  
 대형 멀티 진탕 배양기, 고정밀 디지털 퍼지 제어, 2-/4-Universal Platform 포함



Multi-Stack Refrigerated Shaking Incubator with 4× Universal Platform “WIS-ML04”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Excellent for Multi-use and wide range of Sample Testing under various Temperature
- Patented Jog-Shuttle Control System
- \* Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- \* Intelligent Control of Refrigerator for Preventing Overload of Compressor
- \* High-Quality LCD with Back-Light Function Used
- \* 10~60°C Range, Accuracy of ±0.1°C
- \* Advanced Shaking Mechanism provides Quiet Shaking and Precise Speed Control
- \* Space Saving Design for Large Quantity Samples with 2 or 4 Independent Shaking Speed Controller
- \* Automatic Stop of Shaking, Heating and Refrigeration when the Door is Opened
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Over Temperature & Over Current Protection and Sensor Error Detection
- \* Including Universal Platform for Various Shapes and Sizes of Flasks
- \* Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)

Specifications & Ordering information

Spec.	Model	(a) “WIS-ML02”	(b) “WIS-ML04”
Shaking Stacks		2 Stacks	4 Stacks
Temp. Range & Accuracy		10°C ~ 60°C, ±0.2°C at 37°C	
Temp. Uniformity & Sensor		±1.0°C at 37°C, PT100 Sensor	
Heater		1.5 kW	1.8 kW
Compressor		1/2HP	3/4HP
Compressor Control		Intelligent Control of Refrigerator for Preventing Overload of Compressor	
Refrigerant		CFC-Free(404A) Refrigeration System	
Shaking Speed & Stroke		30 ~ 250 rpm, 25mm Orbital Motion	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)	
Door		Magnetic Packing Door with Pair Glass	
Plate Size		w700×d600mm	
Platform		Included Universal Platform for Various Shapes & Sizes of Flasks	
Optional Flask Holder		Durable & Flexible Plastic Flask Holder (up to 1000ml)	
Available Max. Capacity of Flask Holder	for 50~100ml	Available 68 ea Flask Holder, for 50~100ml Flask	
	for 200~300ml	Available 36 ea Flask Holder, for 200~300ml Flask	
	for 500~1000ml	Available 21 ea Flask Holder, for 500~1,000ml Flask	
Safety Circuit		Over Temp./ Current Protector, Sensor Error Detector	
Material		Internal : Stainless-steel (#304), External : Powder Coated steel	
Dimension (w×d×h)	Internal (mm)	700×700×1,100	700×700×1,790
	External (mm)	1,290×850×1,445	1,290×850×2,125
Packing Size (w×d×h) (mm) & Gross Weight		1,500×1,200×1,750	1,500×1,200×2,350
		397 kg	555 kg
Power Consumption		2.4 kW	3.2 kW
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz	1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase
Cat. No.	230V	DH.WIS05002	DH.WIS05004
	120V	DH.WIS05102	DH.WIS05104
	3Phase	-	DH.WIS03004
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 95,000별도!

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Multi-Stack Refrigerated Shaking Incubator “WIS-ML”>

**Optional Platform/Spring Rack/Flask Holders**

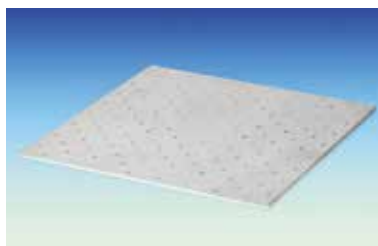
Cat. No	Description	Ea. Price, ₩
DH.WIS504620	(1) Universal Platform, w645×h645mm, “SP620”, for “WIS-ML02/04”	
DH.WIS504520	(2) Universal Spring Rack, w653×d653×h135mm, “SR520”, for “WIS-ML02/04”	
DH.WIS504030	(3) ABS Flask Holder, for 50~100ml Flask, “FH100”, for “SHO”, “SHR” and “IS”	
DH.WIS504035	(4) ABS Flask Holder, for 200~300ml Flask, “FH250”, for “SHO”, “SHR” and “IS”	
DH.WIS504040	(5) ABS Flask Holder, for 500~1000ml Flask, “FH500”, for “SHO”, “SHR” and “IS”	
DH.WIS600100	(6) STS Wire Spring Flask Holder, for 100ml Flask, “FHS100”, for “SHO”, “SHR” and “IS”	
DH.WIS600250	(7) STS Wire Spring Flask Holder, for 250ml Flask, “FHS250”, for “SHO”, “SHR” and “IS”	
DH.WIS600500	(8) STS Wire Spring Flask Holder, for 500ml Flask, “FHS500”, for “SHO”, “SHR” and “IS”	
DH.WIS601000	(9) STS Wire Spring Flask Holder, for 1000ml Flask, “FHS1000”, for “SHO”, “SHR” and “IS”	

**Validation (IQ, OQ) Service**

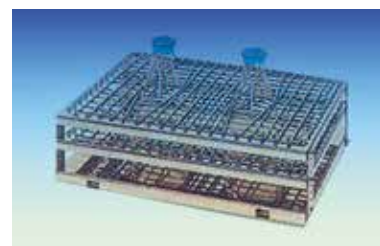
Cat. No	Description	Ea. Price, ₩
DH.WIS35002	Validation Service(IQ, OQ), “ISV5002”, for “WIS-ML02”	
DH.WIS35004	Validation Service(IQ, OQ), “ISV5004”, for “WIS-ML04”	



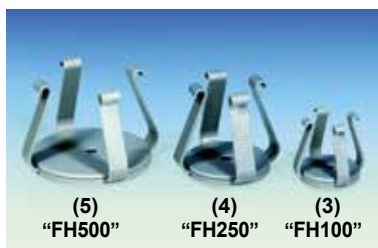
**Multi-Stack Refrigerated Shaking Incubator with 4× Universal Platform “WIS-ML04”**



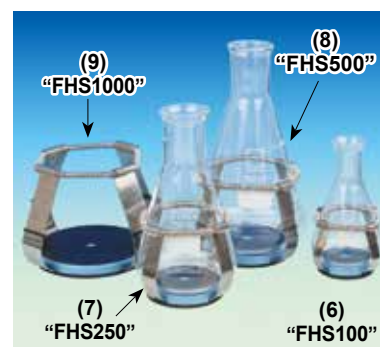
**(1) Universal Platform “SP620” (Included)**



**(2) Universal Spring Rack “SR520” (Optional)**



**Flask Holders (Optional)**



**STS Wire Spring Flask Holder (Optional)**

**WisD Multi-use Light Magnifier "BLM-F" & "BLM-L",  $\phi$  127mm B270 High Clear White Glass Lens, 12W** NEW  
 Base Stand-type, Fluorescent / LED Light,  $\times 5 \cdot \times 8$  Magnification, Flexible Arm, 형광 / LED 조명 확대경



(1) Fluorescent Light Magnifiers "BLM-F"

- Made in Korea
- Ideal for Laboratory, Hospital, Circuit Board Check-Up, etc.
- International Standard  $\phi$  127mm B270 White Glass Lens
- Adjustable Height and Lens Angle Direction
- 2-Stage Spring Flexible Arm
- Base Size : 220 $\times$ 330mm
- Electric Power : AC 220V, 12W

**(1) Fluorescent Light Magnifiers "BLM-F"**

- \* Light illumination : 2,800lx
- \* Light Source : High Brightness Daylight Blue Fluorescent
- \* 20% Energy Saving Ballast Stabilizer Control System
- \* Adjustable Height 300 ~ 500mm

**DH.Mag3105** Magnifier, Fluorescent Light,  $\times 5$ , "BLM-F105"  
**DH.Mag3108** ,  $\times 8$ , "BLM-F108"

Ea.	Price,₩



(2) LED Light Magnifiers "BLM-L"

**(2) LED Light Magnifiers "BLM-L"**

- \* Ultra Bright LED Light : 5,000lx
- \* Light Source : High Brightness White LED Bulbs (36ea)
- \* Scratch and Nick-Resistant PP Lens Cover
- \* Adjustable Height 300 ~ 350

**DH.Mag3205** Magnifier, LED Light,  $\times 5$ , "BLM-L105"  
**DH.Mag3208** ,  $\times 8$ , "BLM-L108"

Ea.	Price,₩



Cat. No	Description	Articles
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**DAIHAN-brand® Pocket Anemometer of Flow/Temp./RH%/Dew-point/Compass, Foldable, IP54 Water Resistance & Shock Proof**  
 1.1~20m/s, -15+50°C, 0~100% RH, Dew-point & Compass 360°, Tripod-stand Mountable, 소형 다기능 아네모메타 **NEW**

**NEW**



Pocket Anemometer for 3×Measuring

- \* Small Pocket Knife Shape & Compact Design. \* IP54 Water Resistant & Shock Proof. \* LCD Size : 16×28mm
- \* Temp. Units °C/°F Selectable. \* Auto Sleep Mode Disable Included. \* Tripod Mountable Receptacle.
- \* Measures 7 Parameters : Air Velocity, Compass, Temperature, Humidity, Windchill, Wet Bulb & Dew Point
- \* 6 Wind Units Selectable : KNT(Knot), BF(Beaufort), FPM(Feet Per Minute), MPH(Mile Per Hour), MPS(Meter Per Second), KPH(Kilometer Per Hour).

**Specifications & Ordering information**

Spec.	Model	DH.Ane5	
<b>3× Measuring Range</b>		(1) Wind Speed : 0.5 ~ 44.7m/h, 60 ~ 3937ft/m, 0.4 ~ 38.8knt, 1.1 ~ 20.0m/s, 0.7 ~ 72.0km/h, 1 ~ 8bf, (2) Temp. : -15°C ~ +50°C, (3) RH% : 0%RH ~ 100%RH	
<b>Accuracy</b>		(1) Wind Speed : ±(3% of Reading +0.2m/s), (2) Temp. : ±1°C, (3) RH% : ±3%RH(at 25°C, 10 ~ 90%RH, other ±5%RH)	
<b>Resolution</b>		(1) Temp. : 0.1°C/°F, (2) RH% : 0.1%RH	
<b>Display</b>		(1) Windchill : -20.0°C ~ 50.0°C, (2) Dew Point : -20.0°C ~ 50.0°C, (3) Wet Bulb : -5.0°C ~ 50.0°C, (4) Compass : 0~360 Degree	
<b>Battery</b>		1×CR2032 Battery	
<b>Dimension &amp; Weight</b>		140×45×h25 mm (90° Folded), 235×45×h25 mm (180° Full Opened) / 90g	
<b>Standard Package</b>		Meter / Battery / Manual / Strap / Paper Box	
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Ane3005</b>		<b>Set</b>
<b>Spare ; DH.Ane3005.1</b>	Mini Fan for Anemometer		<b>Ea</b>

**DAIHAN-brand® Combo-Anemometer of Flow / Temp. / RH% / Dew-point, PC-interface, Datalogging** **NEW**  
 0.5m/s, -20+60°C, 0.1~99.9% RH, -20+59.9°C D-point, & Wet Bulb, with 18mm Vane Probe & Cable, 정밀 아네모메타

**NEW**



Combo - Anemometer Hard Carrying Case

- \* Measures Air Velocity, Volume, Temperature, Humidity, Dew Point & Wet Bulb Temperature.
- \* Thermistor Temp. Sensor and Capacitive Humidity Sensor for Quick and Accurate Measurement.
- \* 18mm Mini Vane Probe with Built-in Temp. & Humidity Sensor. \* 99 Single Point Memories.
- \* Winds Peed Metric and Imperial Units Selectable. \* Up to 12000 Points Auto Datalogging Points.
- \* PC Interface for Data download \* Date and Time Stamp (12-Hour or 24-Hour)

**Specifications & Ordering information**

Spec.	Model	DH.Ane3	
<b>3× Measuring Range</b>		(1) Wind Speed : 0.5 ~ 20M/S, (2) Temp. : -20°C ~ 60°C, (3) RH% : 0.1 ~ 99.9%RH	
<b>Accuracy</b>		(1) Wind Speed : ±(3% of reading + 0.2M/S), (2) Temp. : ±0.6°C, (3) RH% : ±3%RH(at 25°C, 10 ~ 90%RH, other ±5%RH)	
<b>Resolution</b>		(1) Temp. : 0.1°C/°F, (2) RH% : 0.1%RH	
<b>Display</b>		(1) Wet Bulb & Dew Point Temp. : -20°C ~ +59.9°C, (2) Air Volume : 0 to 99999m³/minute	
<b>Battery</b>		4×AAA Battery or 9V DC Adaptor	
<b>Dimension &amp; Weight(g)</b>		180×58×h24.5 mm (LCD Size : 54×37 mm) / 200g	
<b>Standard Package</b>		Meter / Probe / Battery /Manual / Hard Carrying Case / Software Kit	
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Ane3003</b>		<b>Set</b>
<b>Spare ; DH.Ane3003.1</b>	Expanded Vane Probe, 273×18.5mm (1055mm Extended), w/Rubber Holder		<b>Ea</b>

**DAIHAN®-brand Digital Anemometer Set, for Air Velocity & Temperature, Max/Min/Average** **NEW**  
 with 10 Memories Data Storage / Recalling / Clearing, m/s · m/hr · ft/min · knots, and °C/°F

**NEW**

**CE**



Unit Size : 85×175×39 mm

Vane-Probe Size : 76×67×32 mm

Vane-Probe

1Meter Cable  
 Tripod Mounting Hole (Backside of Vane-Probe)

- \* Ideal for Professional in Aviation, Laboratory and Ventilation Systems. \* CE Approval.
- \* Instant Display of the Air Velocity and Temperature. \* Maximum, Minimum and Average Calculation.
- \* Selectable Air Velocity Unit m/s, km/hr, mph, ft/min or Knots. \* Switchable Temperature Unit °C/°F.
- \* 10 Memories Data Storage/Recalling/Clearing. \* 1/4in. 20 UNC Threading for Tripod Mounting.

**Specifications & Ordering information**

Spec.	Model	A1.A9201	
<b>2× Measuring Range</b>		(1) Temp.: -50°C to +70°C or -58°F ~ +158°F, (2) Air Velocity : 0.5 to 45.0m/s · 1.8 to 162.0km/hr · 1.1 to 100.0mph, 98 to 880ft/min · 1.0 to 88.0knots	
<b>Accuracy</b>		(1) Temp.: ±0.5°C(for 0°C~+50°C) or ±0.9°F(for +32°F~122°F), otherwise ±1°C or 1.8°F, (2) Air Velocity : ±2%	
<b>Resolution</b>		(1) Temp.: 0.1 for whole Range, (2) Air Velocity : 0.1	
<b>Color / Ambient Temp.</b>		Grey / 0°C to +50°C or +32°F~+122°F	
<b>Battery / Probe Type</b>		3×1.5V AAA Battery / NTC-Probe : 76×67×32mm (1Meter Cable)	
<b>Dimension / Weight(g)</b>		85×175×h39mm (LCD Size : 54×35 mm) / 200g	
<b>Cat. No. &amp; Price ₩</b>	<b>A1.A9201</b>		<b>Ea</b>

Digital Anemometer Set, for Air Velocity / Temp.

**DAIHAN-brand® Precise 10cm Vane Anemometer of Flow / Temp. / RH% / Dew-point / Wet Bulb / Air Volume**  
 2 Dedicated Flow Funnel Acceptable, 0.2~30m/s, -20+60°C, 0.1~99.9% RH, D-point & 99,999m<sup>3</sup>/min., 정밀 아네모메타 **NEW**



Precise 10cm Vane Anemometer



Round (φ210mm) Square (346×346mm)  
Air Flow Cone Set(Optional)

- \* Measures Air Velocity, Volume, Temperature, Humidity, Dew Point & Wet Bulb Temperature.
- \* Built-in Thermistor Temp. & Capacitive Humidity Sensor for Quick and Accurate Measurement.
- \* Unlimited Points & Time Weighted Average Auto Calculation.
- \* Hold Function Freezes Current Readings
- \* Inlet and Outlet Measurement is Doable
- \* Auto Power off 20mins Inactivity.
- \* Blue Backlight for Dark Area Operation.
- \* Display Max./Min. Value.
- \* Low Battery Indicator

**Specifications & Ordering information**

Spec.	Model	DH.Ane7
<b>3× Measuring Range</b>		(1) Wind Speed : 0.2 ~ 30M/S, (2) Temp. : -20°C ~ 60°C, (3) RH% : 0.1%RH ~ 99.9%RH
<b>Accuracy</b>		(1) Wind Speed : ±(1.5% of Reading +0.3m/s) for under 20m/s, ±(3% of Reading +0.3m/s) for above 20m/s, (2) Temp. : ±0.6°C, (3) RH% : / ±3%RH(at 25°C, 10 ~ 90%RH, other ±5%RH)
<b>Resolution</b>		(1) Temp : 0.1°C/°F, (2) RH% : 0.1%RH
<b>Display</b>		(1) Wet Bulb Temp. : -20°C ~ +59.9°C, (2) Dew Point Temp. : -5°C ~ +59.9°C, (3) Air Volume : 0 to 99999m <sup>3</sup> /minute
<b>Temp. Respond Time</b>		60 second (Typical)
<b>Air RH% Response Time</b>		60 second (Typical)
<b>Battery</b>		4×AAA Battery
<b>Dimension &amp; Weight</b>		269×106×h51 mm (LCD Size : 32.5×54 mm) / 200g
<b>Standard Package</b>		Meter / Manual / Battery / Hard Carrying Case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Ane3007</b>	<b>Set</b>
<b>Option ; DH.Ane3007.1</b>	Air Flow Cone, Round(φ210mm) + Square(346×346mm) Set	<b>Set</b>

**DAIHAN-brand® Digital/Compact Environmental Multi-Meter, with EL Backlight, Rubber Coated** **NEW**  
 For Air Pressure “mb” / Altitude “m” / Temp. “°C” / Direction “°” / Weather Forecasting / Calendar / Alarm Timer  
 with Jumbo LCD Display, 휴대용 디지털 멀티 메타, 기압 / 고도 / 방위 / 일기예보 / 시계 / 달력표시



Digital/Compact Environmental Multi-Meter

- \* CE Approval.
- \* Ideal for All Kind of Environmental Measurements, Laboratory
- \* Simultaneous Display of Air Pressure, Altitude, Temperature and Compass.
- \* Bargraph Display of Air Pressure and Altitude.
- \* Weather Forecasting in Graphic Display.
- \* Calendar and Clock/Timer(with Alarm) Setting.
- \* Easy Operation Via Six Function Keys.
- \* EL Backlight for Use in Dim Light Environment.
- \* Convenient Design with Lanyard for Carrying.

**Specifications & Ordering information**

Spec.	Model	A1.A9202
<b>4× Measuring Range</b>		(1) Air Pressure: 300~1100mb(hPa) or 8.85inHg~32.45inHg, (2) Altitude : -700 ~+9000m or -2296ft~+29520ft, (3) Temp.: -10°C ~+60°C or -14°F~+140°F, (4) Direction : 0~359°
<b>Sensing Time</b>		(1) Air Pressure: 15min, (2) Altitude : 2 sec, (3) Temp.: 1min, (4) Direction : 1sec. for 1min
<b>Resolution</b>		(1) Air Pressure: 1mb/hPa or 0.01inHg, (2) Altitude 0.1m for -500.0m to 999.9m, Otherwise 1m, (3) Temp.: 0.1°C or 0.1°F, (4) Direction : 1°C
<b>Color / Ambient Temp.</b>		Grey / 0°C to +50°C or +32°F~+122°F
<b>Weight (g) / Timer / Color</b>		110g / 23hr 59min 59sec / Yellow-Grey
<b>Battery / Package</b>		2×3 V “CR2032” Size or Equivalent / Standard Color Box
<b>Sensor Type</b>		NTC-Probe, Pressure Sensor and Magnetic Sensor
<b>Dimension / Weight(g)</b>		85×62×24mm(LCD Size : 40×39 mm)
<b>Cat. No. &amp; Price ₩</b>	<b>A1.A9202</b>	<b>Ea</b>

Cat. No	Description	Articles
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**NEW**



**DAIHAN-brand® Methane & Propane Gas Leak Detector, with Alarm, 40~640 ppm **NEW****  
**with 5-Level Leakage Indicator & Auto-Calibration Function, 메탄 & 프로판가스 누출 검지기**

- \* Low Cost Handheld type Detector Checking Methane and Propane Gas Leakage.
- \* Bright 5-Level Leakage LED Indicator.
- \* Quality & Reliable Semi-Conductor Sensor.
- \* Built in Auto-Calibration Function while Meter Powers on.
- \* Long & Flexible Stainless Goose Neck Detect Probe.
- \* Status Ready and Battery Low LED Indicator.
- \* Acoustic Intermittent Beep.
- \* Auto Power off Timeout about 10 mins.
- \* Built in Earphone Jack for Mute Mode Use.

**Specifications & Ordering information**

Spec.	Model	DH.Gas3
<b>Methane / Propane Range</b>		40 ~ 640 ppm
<b>Sensitivity</b>		40 ppm (Methane & Propane)
<b>Response Time &amp; Warm Up</b>		within 10 seconds / within 60 seconds
<b>Battery</b>		4 × AA Battery or 9V Adaptor
<b>Flexible Probe Length</b>		18" (465mm)
<b>Dimension &amp; Weight(g)</b>		175 × 47 × h28 mm / 120g
<b>Standard Package</b>		Meter / Manual / Battery / Carrying Case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3003</b>	<b>Set</b>

**DAIHAN-brand® Pocket type CO Detector, with Dual LCD Display / Alarm, 0~999 ppm **NEW****  
**with Wrist Strap / Soft Carrying Pouch, 핸디 일산화탄소(CO) 디텍터**



- \* Easy to Manually Calibrate at 0 or 500ppm Carbon Monoxide Standard Gas.
- \* Dual LCD Display with Current Carbon Monoxide and Maximum CO Readings.
- \* Long Life and Reliable Electrochemical Carbon Monoxide Sensor.
- \* Warning Carbon Monoxide Audible Alert. Alarm Adjustable, Preset at 25ppm.
- \* Low Battery Indicator.
- \* Backlight Function Works in Dark Area.

**Specifications & Ordering information**

Spec.	Model	DH.Gas5
<b>CO Range &amp; Resolution</b>		0 ~ 999 ppm / 1 ppm
<b>Accuracy (at 20 ± 5 °C, 50 ± 20%RH)</b>		± 20% at 0 ~ 100ppm ; ± 15% at 100 ~ 500ppm
<b>Response Time / Battery</b>		within 60 seconds / 3 × AAA Battery
<b>Dimension &amp; Weight(g)</b>		175 × 47 × h28 mm (LCD Size : 11 × 26 mm) / 120g
<b>Standard Package</b>		Meter / Manual / Battery / Plain Box / Wrist Strap / Soft Carrying Pouch
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3005</b>	<b>Set</b>

**DAIHAN-brand® Combo Air Quality Meter of CO/CO<sub>2</sub>/Temp./RH%/Dew-point/Wet Bulb, PC Data Analysis **NEW****  
**0~1000ppm-CO, 0~9999ppm-CO<sub>2</sub>, -20+60°C, 0.1~99.9% RH, -20+59.9°C-DP, -5+59.9°C-WB, Alarm 콤보 에어테스터**



- \* Manual Calibration is available for CO<sub>2</sub> / CO / RH%
- \* Designed with electrochemical CO Sensor and NDIR(Non-dispersive Infrared) Waveguide Technology CO<sub>2</sub> Sensor
- \* Warning Carbon Monoxide Level Programmable
- \* Max, Min, Average Functions Included
- \* USB Output to PC for Data Analysis
- \* Audible Alarm (~80dh) Threshold Setting
- \* 99 Points Memory Review

**Specifications & Ordering information**

Spec.	Model	DH.Gas7
<b>6 × Measuring Range</b>		(1) CO <sub>2</sub> : 0 ~ 9999 ppm(5001 ~ 9999 ppm out of scale range), (2) CO : 0 ~ 1000 ppm, (3) Temp. : -20 ~ 60 °C(-5 ~ 140 °F), (4) RH : 0.1 ~ 99.9%RH, (5) DP : -20 ~ 59.9 °C, (6) WB : -5 ~ 59.9 °C
<b>Accuracy</b>		(1) CO <sub>2</sub> : ± 30 ppm ± 5% of reading (0 ~ 5000 ppm), Other ranges are not specified, (2) CO : ± 10 ppm for less than 100 ppm / ± 10% of reading for 101 ~ 500 ppm, ± 20% of reading for 501 ppm and above, (3) Temp. : ± 0.6 °C/± 0.9 °F, (4) RH : ± 3%RH(at 25 °C, 10~90%RH), ± 5%RH(at 25 °C, other range)
<b>Resolution</b>		1 ppm, 0.1 °C/°F, 0.1%RH
<b>Response Time</b>		(1) CO <sub>2</sub> : < 30 seconds (90% step change), (2) CO : < 60 seconds (90% step change), (3) Tair : < 2 mins (90% step change), (4) RH : < 10 mins (90% step change)
<b>Power Supply</b>		4 × AA Battery or 9V adaptor (>24hours, Alkaline Battery)
<b>Dimension &amp; Weight(g)</b>		205 × 70 × h56 mm(LCD Size : 26 × 44 mm) / 200g
<b>Standard Package</b>		Meter / Manual / Battery / USB Cable & CD / Carrying case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3007</b>	<b>Set</b>
<b>Option ; DH.Gas3007.1</b>	① Cal. Salt Bottle, for Calibration, 33%, 56ml	<b>Ea</b>
<b>DH.Gas3007.2</b>	② , 75%, 56ml	<b>Ea</b>

**DAIHAN-brand® “Green Life” Indoor Air Monitor of CO<sub>2</sub> / Temp. / RH% and Time Clock, Desktop-model** NEW  
 with CO<sub>2</sub> Alarm, 0~9999ppm with Auto-Background Calibration, -10+60℃, 0.1~99.9%RH, “그린라이프” 룠에어모니터



Indoor Air Monitor

- \* 15 Degree Tilt Angle for Easy to See and Read
- \* Warning Carbon Dioxide Level from 1000~5000 ppm
- \* Display CO<sub>2</sub> Value (with Good, Normal, Poor Air), Year-Month-Date, Hour-Minute, Air Temp. & Relative Humidity
- \* NDIR (Non-dispersive Infrared) Waveguide Technology
- \* CO<sub>2</sub> Auto-Background Calibration, ABC

Spec.	Model	DH.Gas9
<b>3× Measuring Range</b>		(1) CO <sub>2</sub> : 0 ~ 9999 ppm (2001 ~ 9999 ppm out of scale range), (2) Temp. : -10 ~ 60℃ (14 ~ 140°F), (3) RH% : 0.1 ~ 99.9%RH
<b>Resolution</b>		1 ppm, 0.1℃/°F, 0.1%RH
<b>Accuracy</b>		(1) CO <sub>2</sub> : ±50ppm ±5% of reading (0 ~ 2000 ppm), (2) Temp. : ±0.6℃/±0.9°F, (3) RH% : ±5%RH(at 25℃, 20~90%RH), ±7%RH(at 25℃, other range)
<b>Response time</b>		(1) CO <sub>2</sub> : < 2 mins (90% step change), (2) Tair : < 2 mins (90% step change), (3) RH : < 10 mins (90% step change)
<b>Power Supply</b>		5V DC Adaptor(± 10%), >= 500mA
<b>Dimension &amp; Weight(g)</b>		120×80mm(LCD Size : 60×82 mm) / 200g
<b>Standard Package</b>		Meter / Manual / Adaptor / Plain Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3009</b>	<b>Set</b>

**DAIHAN-brand® Air Quality Meter & Monitor of CO<sub>2</sub> / Temp. / RH% / Dew-point / Wet-Bulb, PC Data Analysis** NEW  
 0~9999ppm-CO<sub>2</sub>, -10+60℃, 0.1~99.9% RH, -20+59.9℃-DP, -5+59.9℃-WB, NDIR-Sensor, 다기능 에어 미터/모니터



(1) Air Quality Meter

**(1) Air Quality Meter**

- \* Triple Display 3 Parameters Simultaneously : CO<sub>2</sub>, Temperature and Relative Humidity and Display Air / Dew Point / Wet Bulb Temp. by Selection
- \* Warning Carbon Dioxide Level
- \* Big LCD display with High Resolution
- \* Design with NDIR(Non-Dispersive Infrared) Waveguide Technology CO<sub>2</sub> Sensor
- \* 80dB-Alarm

Spec.	Model	DH.Gas13
<b>5× Measuring Range</b>		(1) CO <sub>2</sub> : 0 ~ 9999 ppm, (2) Temp. : -10 ~ 60℃ (14 ~ 140°F), (3) RH% : 0.1 ~ 99.9%RH, (4) DP : -20.0 ~ 59.9℃, (5) WB : -5.0 ~ 59.9℃
<b>Accuracy</b>		(1) CO <sub>2</sub> : ±50 ppm ±5% of reading (0 ~ 2000 ppm), (2) Temp. : ±0.6℃ / ±0.9°F, (3) RH : ±3% RH(at 25℃, 10 ~ 90%RH)
<b>Resolution</b>		1 ppm, 0.1℃/°F, 0.1%RH
<b>Response Time</b>		(1) CO <sub>2</sub> : <30 sec, (2) Tair : <2 min, (3) RH : <10 min. (90% step change)
<b>Warm-up Time / Battery</b>		30 sec. / 4×AA Battery
<b>Dimension / Weight(g)</b>		205×70×h56mm(LCD Size : 26×44mm) / 200g
<b>Standard Package</b>		Meter / Manual / Battery / Hard Carrying Case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3013</b>	<b>Set</b>



(2) Wallmount Air Quality Monitor

**(2) Wallmount Air Quality Monitor**

- \* Digital Wall mountable / Desktop type
- \* Alarm Output Drive Relay to Control System
- \* Warning Carbon Dioxide Level
- \* with 80dB Alarm
- \* Super Large LCD display CO<sub>2</sub> Value
- \* NDIR(Non-Dispersive Infrared) Waveguide Technology with ABC(Automatic Background Calibration)
- \* PC Output to Computer for on Line Analysis
- \* Long Time Drift Compensation

Spec.	Model	DH.Gas15
<b>5× Measuring Range</b>		(1) CO <sub>2</sub> : 0 ~ 9999 ppm (2001~9999 ppm out of Scale Range), (2) Temp. : -10 ~ 60℃ (14 ~ 140°F), (3) RH : 0.1 ~ 99.9%RH, (4) DP : -20.0 ~ 59.9℃, (5) WB : -5.0 ~ 59.9℃
<b>Accuracy</b>		(1) CO <sub>2</sub> : ±50 ppm ±5% of reading(0 ~ 2000 ppm),(2) Temp. : ±0.6℃ / ±0.9°F, (3) RH : ±3% RH(at 25℃, 10 ~ 90%RH) or ±5% RH(at 25℃, others)
<b>Resolution</b>		1 ppm, 0.1℃/°F, 0.1%RH
<b>Response Time</b>		(1) CO <sub>2</sub> : <30 sec, (2) Tair : <2 min, (3) RH : <10 min. (90% step change)
<b>Warm-up Time</b>		30 sec.
<b>Power Supply</b>		12 VDC Adaptor
<b>Dimension / Weight(g)</b>		130×85×h60mm (LCD Size : 50×65 mm) / 200g
<b>Standard Package</b>		Meter / Manual / 12V Plug Adaptor / Plain Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Gas3015</b>	<b>Set</b>



**Optional Accessories**

- DH.Gas3013.1 ① USB Cable & Software
- DH.Gas3013.2 ② RS232 Cable & Software
- DH.Gas3007.1 ③ Cal. Salt Bottle, for Calibration, 33%, 56ml
- DH.Gas3007.2 ④ , 75%, 56ml

Ea.	Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® Digital Pressure / Vacuum Manometer, 10-Different Units ; psi, mbar, etc** NEW  
 +/- (±) 30psi / 1551mmHg / 2068 mbar, PC Data Analysable, Max-Min / Hold / Record, with 8mm Metal Lug, **디지털 마노메타**

NEW



Digital Pressure / Vacuum Manometer



Hard Carrying Case



- **Portable Digital Gauge ; 10 Differential Units Pressure / Vacuum Meter, with 8mm Metal Connection**
- **PC Interface via Cable and Software to Download Data** \* Over-range Indication with Error Messages
- \* 10 units or 5 units for Selection (Metric, Imperial) \* Connection ; 8mm Metal Lug
- \* Backlight Function works in Dark Area \* Low Battery Indicator \* Real Time Shows in Recording Mode

Spec.	Model	DH.Man3003
<b>Range &amp; Resolution</b>	psi	<b>±30.00 &amp; 0.02</b>
	kPa and mmHg	kPa : ±206.8 & 0.2, and mmHg : ±1551 & 1
	Kg/cm² and mbar	Kg/cm² : ±2.109 & 0.002, and mbar : ±2068 & 2
	bar and inH₂O	Bar : ±2.068 & 0.002, and inH₂O : ±830.4 & 0.5
	cmH₂O and inHg	cmH₂O : ±2101 & 2, and inHg : ±61.08 & 0.04
	ftH₂O and oz/inch²	ftH₂O : ±69.2 & 0.04, and oz/inch² : ±480.0 & 0.3
<b>Accuracy</b>		± 0.3% of Full Scale at 25°C
<b>Response Time</b>		0.5 sec
<b>Compensated Temp. Range</b>		0~50°C
<b>Battery</b>		9V Battery or Adaptor
<b>Dimension / Weight(g)</b>		182×72×30 mm (LCD Size : 29×51mm) / 150g
<b>Standard Package</b>		Meter, Battery, Manual, 2×Connection Hose(50cm), Hard Carry Case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Man3003</b>	<b>Set</b>
<b>Option ; DH.Gas3013.1</b>	① USB Cable & Software	<b>Ea</b>
<b>DH.Gas3013.2</b>	② RS232 Cable & Software	<b>Ea</b>
<b>DH.Man3003.1</b>	③ Tubing for 30psi Pressure / Vacuum and 8mm Lug, 50cm, Black	<b>Ea</b>

※ **Units Conversion** : 1psi×6.8947=kpa , 1psi×68.947=mbar(hpa), 1psi×0.068966=bar, 1psi×51.71433=torr  
 1psi×70.038=cmH₂O, 1psi×51.715=mmHg, 1psi×16=oz/inch², 1psi×6890=pascal(pa)  
 ※ **Note!** : Exceeding Maximum Pressure will cause Permanent Sensor Damage !

NEW



Salinity Pen-type Meter

**DAIHAN-brand® Pocket Dual TEMP. & SALINITY Pen-type Meter, Data Hold** NEW  
 with Large Display LCD for Salinity and Temp, 00.00~70.0ppt / 0~50.0°C, **휴대용 염분 펜**

- \* One Touch Auto-calibration & Calibration Values are Adjustable \* Hold Function to Freeze Current Reading
- \* Large Display LCD for Simultaneous Output of Salinity and Temperature (w18×h30 mm) \* Water Proof (Ip65)
- \* Quick Response & Auto Power off (20min / Disable) \* Built-in NaCl conductivity to TDS Conversion Factor
- \* Auto Temperature Compensation \* Temperature unit °C/°F Selectable

Spec.	Model	DH.Sal3
<b>2× Measuring Range</b>		(1) Salinity : 0.00 ~ 10.0ppt(NaCl), 10.1 ~ 70.0ppt(NaCl), (2) Temp.: 0 ~ 50.0°C
<b>2× Accuracy</b>		(1) Salinity: ±1%F.S ±1digit, for 0 ~ 10.00ppt, ±2%F.S for 10.1 ~ 70.0ppt, (2) Temp.: ±0.5°C
<b>2× Resolution</b>		(1) Salinity : 0.01, for 0 ~ 10.00ppt, 0.1 for 10.1 ~ 70.0ppt, (2) Temp.: 0.1
<b>Sensor life time / Battery</b>		> 6 months (with Good Maintenance) / LR44×4pcs.
<b>Dimension / Weight(g)</b>		165×35×h32 mm (LCD Size : 30×18 mm) / 115g
<b>Standard Package</b>		Meter / Battery(LR44×4pcs) / Manual / Paper Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Sal3003</b>	<b>Set</b>

NEW



Pocket Digital Thermometer "A1.T9233C"

**DAIHAN-brand® Digital SOIL Thermometer, with 0~180° Moving Head** NEW  
 with large LCD Display, Pocket-type, -50°C + 300°C, 0.1°C, **토양 온도계, 180° 무빙헤드**

- \* Unique Moving Head for Different Viewing Angle. \* Large LCD Display with Digit Height 10mm.
- \* Reduced Tip for Stronger Penetration Force. \* Supplied with Protective Probe Cap.
- \* 1 Second Normal Temperature Sensing Time. \* CE Approval.

Spec.	Model	A1.T9233C
<b>Dimension</b>		191×53×53 mm (LCD Size : 37×13 mm)
<b>Measurement Range</b>		-50°C ~ +300°C or -58°F ~ +572°F
<b>Resolution</b>		0.1° for -19.9° ~+199.9°, Otherwise 1°
<b>Accuracy</b>		±1.0°C or ±1.8°F In the Range of -30°C~+250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
<b>Ambient Temperature</b>		0°C~+50°C or +32°F~+122°F
<b>Weight (g) / Color</b>		40 / Black
<b>Battery / Package</b>		1×1.5 Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
<b>Sensor Type</b>		NTC-Probe : od.φ5/3×L120mm
<b>Cat. No. &amp; Price ₩</b>	<b>A1.T9233C</b>	<b>Ea</b>

**DAIHAN-brand® Portable Digital Sound Level Meter, 40~130dB, 0.1dB/1dB Resolution NEW**  
with Digital Display (30×35mm) & Analog Bar Graph, **휴대용 소음계**



Handy Digital Sound Level Meter

- \* Used for Acoustic (sound that travels through air) Measurements, which had been widely used in the HVAC(Heating, Ventilation and Air Conditioning) or Other Industrial Related Application.
- \* The Most Cost-effective Best Selling Meter
- \* with Digital Display (30×35mm) and Analog Bar Graph
- \* Pocket Size Fashion & Rigid Design
- \* Auto / Manual Ranging, 4 Measurement Ranges in 10 Steps.
- \* Fast /Slow Response is selectable.
- \* A/C Weighting is selectable
- \* Tripod Mountable
- \* A weighting enables the meter to respond in the same manner as the human ear.
- \* C weighting is suitable for flat response measurements with no increase or decrease of amplitude over the frequency spectrum.

**Specifications & Ordering information**

Spec.	Model	DH.Sou3
2× Measuring Range		(1) A Weight : 40dB ~ 130dB (2) C Weight : 45dB ~ 130dB
Accuracy at 94dB, 1KHz		±2dB
2× Resolution		(1) Digital Display : 0.1dB, (2) Quasi-Analog Bar : 1dB
Digital / Quasi-Analog Display (4 Range)		40 ~ 70dB, 60 ~ 90dB, 80 ~ 110dB, 100 ~ 130dB
Digital- / Bar Updating Time		160mS / 40mS
Microphone		Dia.6mm Electric Condenser Microphone
Battery / Battery Life Time		AAA×4pcs / 60 Hours Typical
Dimension / Weight(g)		57×230×44mm(LCD Size : 30×35mm) / 130g
Standard Package		Meter / Battery / Manual / Paper Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Sou3003</b>	<b>Set</b>

**DAIHAN-brand® Digital Sound Level Meter, with Deluxe Super Large LCD, IEC60651 type2 Class Certified NEW**  
with Max-Min / Backlight, 30dB~130dB, **세미 아날로그 디지털 소음계**



Digital / Analog Sound Level Meter

- \* Meet IEC60651, type2 Class Standard.
- \* Using the Background Noise Absorber.
- \* Deluxe Super Large LCD Display.
- \* Easy to Calibrate by Standard Calibrator
- \* AC/DC Analog Output
- \* Auto/Manual Ranging, 6 Measurement Ranged in 10 Steps.
- \* Professional and Rigid Design.
- \* Freezing the Maximum Sound Level Reading.
- \* Features w/Digital Display and Analog Bar Graph.
- \* Easy to Replace Battery.
- \* Max./Min. Recording.
- \* A/C Weighting is Selectable.
- \* Backlight Function to Use in Dark Area.
- \* Automatic Shut off.
- \* Tripod Mountable.

**Specifications & Ordering information**

Spec.	Model	DH.Sou5
2× Measuring Range		(1) A Weight : 30dB ~ 130dB (2) C Weight : 35dB ~ 130dB
Accuracy at 94dB, 1KHz		±1.5dB
2× Resolution		(1) Digital Display : 0.1dB, (2) Quasi-Analog Bar : 1dB
Digital / Quasi-Analog Display (6 Range)		30 ~ 80dB, 40 ~ 90dB, 50 ~ 100dB, 60 ~ 110dB, 70 ~ 120dB, 80 ~ 130dB
Digital- / Bar Updating Time		160mS / 40mS
Analog Output		AC 0.707Vrms(at Full Scale) ; DC 10mV/dB
Microphone		Dia.6mm Electric Condenser Microphone
Frequency Range		31.5Hz ~ 8KHz
Battery / Battery Life Time		9V Battery×1pcs. or 9VDC Adaptor / 30 Hours Typical
Dimension & Weight(g)		254×77×h37 mm (LCD Size : 42×62 mm) / 200g
Standard Package		Meter / Battery / Manual / Carry Case
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Sou3005</b>	<b>Set</b>



Hard Carrying Case

- Option ; DH.Gas3013.1 ① USB Cable & Software Ea  
 DH.Gas3013.2 ② RS232 Cable & Software Ea

Cat. No	Description	Articles
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**DAIHAN-brand® Digital Pro-Tachometer, Contact & Non-Contact 2 in 1 Meter** NEW  
 with Red LED-Beam / Non-Contact, Concave / Convex-Contact Tips, 10.0~99,999rpm, **프로급 타코미터, 접촉/비접촉 겸용**



Digital Pro-Tachometer



- \* Non-Contact Measurement by Red Led Beam
- \* Contact Rotation Object via Convex or Concave Contact Tips
- \* Four Rotation Speed Units are Selectable in Contact Mode : rpm, m.min, ft/min, yd/min
- \* Three Steps to Switch Operation Mode
- \* Auto Power Off in 20mins inactivity

**Specifications & Ordering information**

Spec.	Model	DH.Tac3
<b>3× Measuring Range</b>		(1) Rotation (Non-contact) : 10.0 ~ 99999rpm (2) Rotation (Contact) : 10.0 ~ 19999rpm (3) Surface Speed (Contact) : 1.0000 ~ 9999.9M/Min.
<b>Accuracy / Measuring Distance</b>		± (0.1% of rdg. +2digit) / 5 ~ 30cm (Non-contact)
<b>Resolution</b>		rpm : 0.001 / 0.01 / 0.1 / 1, Others : 0.0001 / 0.001 / 0.01 / 0.1
<b>Time Base &amp; Sampling Time</b>		4.0Mhz Quartz Crystal / 1sec.(> 60rpm), > 1sec.(10-60rpm)
<b>Dimension / Weight(g)</b>		165×51×h32mm (LCD Size : 15×33 mm) / 90g
<b>Standard Package</b>		Meter / Battery / Manual / Reflective Tape / Convex Tip / Concave Tip
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Tac3003</b>	<b>Set</b>

- Spare ; DH.Tac3003.1** ① Convex Tip for contact Rotate Speed Use **Ea**  
**DH.Tac3003.2** ② Concave Tip for contact Rotate Speed Use **Ea**  
**DH.Tac3003.3** ③ Reflective Tape for Non-Contact Rotate Speed, 16×600mm **Ea**

**DAIHAN-brand® Digital Pocket Tachometer, Contact or Non-Contact 2-type, 10~99999rpm** NEW  
 Non-Contact type with Red LED-Beam, Contact type with Convex Tip or Concave Tip, **접촉식 or 비접촉식 타코미터**



Non-Contact type (DH.Tac5)



Contact type(DH.TAC7)



- \* Safe and Easy to Get Rotation Speed
- \* Hold Function Freezes Current Reading
- \* Four Rotation Speed Units are Selectable in Contact Mode : RPM, M/Min, Ft/Min, Yd/Min
- \* Contact Type : Straight-line Contact with the Center of the Rotating Body
- \* Non-contact Type : Reflective Tape Affixed to an Object and Measuring the Rotation. (50 to 150mm)
- \* Auto Power off (20min / Disable)

**Specifications & Ordering information**

Spec.	Model	DH.Tac5	DH.Tac7
<b>Measure Range</b>		Rotation(Non-contact) : 10.0 ~ 99999rpm	Rotation(Contact) : 10.0 ~ 19999rpm, Surface Speed(Contact) : 1.000~9999.9M/Min
<b>Accuracy</b>		± (0.1% of rdg. +2digit)	
<b>Resolution</b>		rpm : 0.001 / 0.01 / 0.1 / 1, Others : 0.0001 / 0.001 / 0.01 / 0.1	
<b>Measure Distance</b>		5~30cm	Contact
<b>Power Consumption / Time Base</b>		5uA(Idle), 18mA(Measurement) / 4.0Mhz Quartz Crystal	
<b>Sampling Time / LCD Size</b>		1Second(> 60RPM), > 1Second(10~60RPM) / 33×h15mm	
<b>Battery</b>		1×9V Battery	
<b>Dimension / Weight(g)</b>		124×50×h33mm / ~80g	149×50×h33mm / ~85g
<b>Standard Package</b>		Meter / Battery / Manual / Paper Box / Reflective Tape / Convex Tip / Concave Tip	
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Tac3005</b>	<b>Set</b>	<b>DH.Tac3007</b> <b>Set</b>

- Spare ; DH.Tac3003.1** ① Convex Tip for contact Rotate Speed Use **Ea**  
**DH.Tac3003.2** ② Concave Tip for contact Rotate Speed Use **Ea**  
**DH.Tac3003.3** ③ Reflective Tape for Non-Contact Rotate Speed, 16×600mm **Ea**

**DAIHAN-brand® Handy/Digital Thermo-Hygrometer, Rotary Sensor Protector, °C/°F & R.H%, Max/Min NEW**  
 with Large LCD, Rubber Coated & Black Carrying Case, -50°C ~ +70°C, 20~99.9% R.H, 0.1 Divi., **포켓/디지털 온습도계**



- \* Ideal for Storage Rooms, Pharmaceutical Rooms, Greenhouse, Laboratory etc.
- \* Pocket Size with Large LCD.
- \* Rubber Coated.
- \* Low Battery Indicator.
- \* Rotary Sensor Protector Protects The Sensor when not in Use.
- \* Battery Included.
- \* Easy to Change Battery .
- \* with Black Carrying Case.
- \* CE Approval.

**Specifications & Ordering information**

Spec.	Model	A1.H9237
<b>Measurement Range</b>		-50°C ~ +70°C or -58°F ~ +158°F / 20% ~ 99.9% R.H (No Condensation)
<b>Resolution</b>		0.1° for Whole Range/ 0.1% R.H for Whole Range
<b>Accuracy</b>		±1.0°C or ±1.8°F In the Range of -0°C ~ +50°C or -4°F ~ +122°F, Otherwise more than ±1.0°C or ±1.8°F
<b>Sensor Type</b>		NTC & Humidity
<b>Ambient Temperature</b>		0°C ~ +50°C or +32°F ~ +122°F
<b>Weight (g) / Color</b>		55g / White
<b>Battery / Package</b>		1 × 3 Volts "CR 2032" Size or Equivalent / White Box
<b>Dimension</b>		165 × 37 × 18 mm (LCD Size : 58 × 12 mm)
<b>Cat. No. &amp; Price ₩</b>	<b>A1.H9237</b>	<b>Ea</b>

**DAIHAN-brand® 2 & 3-row Jumbo display Thermo-Hygrometer, for indoor / Outdoor, °C/°F & R.H% NEW**  
 with 3m Cord/Probe, Memory Recalling, -50~+70°C, 20~99.9% R.H, 0.1 Divi., **2 & 3열 실내·외 온습도계**



- \* Ideal for Office, Home, Greenhouse, Laboratory.
- \* (1)Dual or (2)Triple Row Display for Easy Reading.
- \* Comfortable and Uncomfortable Index (Comfort/Warm/Cool).
- \* Jumbo LCD.
- \* 3 Meters Sensor Wire with Probe for Outdoor Temperature Measurement.
- \* (1)Dual or (2)Triple Row Display for Easy Reading.
- \* Temperature Unit °C/°F Selectable.

**(1) With 2-Row Jumbo Display ;** On/Off, °C/°F, Max/Min (°C/°F), Temperature and Humidity, Indoor Humidity Measurement Indoor/Outdoor Temperature Measurement, Memory Recalling.

**Specifications & Ordering information**

Spec.	Model	A1.H9213
<b>Measurement Range</b>		-50°C ~ +70°C or -58°F ~ +158°F / 20% ~ 99.9% R.H (No Condensation)
<b>Resolution</b>		0.1° for Whole Range/ 0.1% R.H for Whole Range
<b>Accuracy</b>		±1.0°C or ±1.8°F In the Range of -20°C ~ +70°C or -4°F ~ +158°F, Otherwise more than ±1.0°C or ±1.8°F
<b>Ambient Temperature</b>		0°C ~ +50°C or +32°F ~ +122°F
<b>Weight (g) / Color</b>		165g / White
<b>Battery / Package</b>		2 × 1.5 Volts "AAA" Size or Equivalent / Sliding Blister with Print Card
<b>Sensor Type</b>		NTC & Humidity External Sensor : 3m Sensor Wire with Probe(L22.5 × φ5.5mm)
<b>Dimension</b>		120 × 110 × 25 mm (LCD Size : 72 × 61 mm)
<b>Cat. No. &amp; Price ₩</b>	<b>A1.H9213</b>	<b>Ea</b>



**(2) With 3-Row Jumbo Display, with Alarm Timer ;** On/Off, °C/°F, Max/Min (°C/°F), Temperature and Humidity Memory Recalling, Clock (HH/MM/SS), Alarm/Snooze Set, 12hr or 24hr Format Selectable, Indoor/Outdoor Temperature Measurement, Indoor Humidity Measurement.

**Specifications & Ordering information**

Spec.	Model	A1.H9216
<b>Measurement Range / Alarm Timer</b>		-50°C ~ +70°C or -58°F ~ +158°F / 20% ~ 99.9% R.H (No Condensation) Alarm Timer Function
<b>Resolution</b>		0.1° for Whole Range/ 0.1% R.H for Whole Range
<b>Accuracy</b>		±1.0°C or ±1.8°F In the Range of -20°C ~ +70°C or -4°F ~ +158°F, Otherwise more than ±1.0°C or ±1.8°F
<b>Ambient Temperature</b>		0°C ~ +50°C or +32°F ~ +122°F
<b>Weight (g) / Color</b>		165g / White
<b>Battery / Package</b>		2 × 1.5 volts "AAA" Size or Equivalent / Sliding Blister with Print Card
<b>Sensor Type</b>		NTC & Humidity External Sensor : 3 Meters Sensor Wire with Probe(L22.5 × φ5.5mm)
<b>Dimension</b>		120 × 110 × 25 mm (LCD Size : 72 × 61 mm)
<b>Cat. No. &amp; Price ₩</b>	<b>A1.H9216</b>	<b>Ea</b>



Cat. No	Description	Articles
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**DAIHAN-brand® Temp °C/°F & RH% USB Datalogger with PDF Report, -30+70°C, 0.1~99.9% RH NEW**  
 Auto-Generate a PDF & Excel Report while Plugged into PC, Programmable by Users, 온습도 측정 및 Data 로거



USB Datalogger

- \* Software & Driver are not required for any operation
- \* Only 3 Steps to Operate : ① Plug to program ② Press Start to Activate ③ Plug again to Generate PDF/Excel report
- \* Completely Programmable by Users for Maximum Flexibility includes : 6 Languages, Sampling Interval, Start Delay, Alarm Delay, Unit, Alarm Range, Alarm Type, Password and User Name
- \* Designed with Comprehensive Usage with Waterproof Function(IP 67)
- \* High Accuracy Thermistor and Capacitive RH Sensor
- \* Maximum / Minimum and Reset function
- \* Temperature unit °C/°F Selectable
- \* Hold function to Freeze current Reading
- \* EN12830 and RoHS Compliance

**Specifications & Ordering information**

Spec.	Model	DH.Thh3	
		Temperature	Humidity
Measure Range		NTC Thermistor, -30~70°C, -22~158°F	Capacitor, 0.1 ~ 99.9%RH
Accuracy		±0.5°C	±3% (at 25°C, 10 ~ 90%), others ±5%
Resolution		0.1°C / 0.1°F	0.1%RH
Battery		2×CR2032( 3.0 V ) Battery	
Dimension / Weight(g)		110×45×h17mm / 80g	
Standard Package		Logger / Manual / Paper Box	
Cat. No. & Price ₩		DH.Thh3003	Set

**DAIHAN-brand® Pocket Dew-point Thermo-Hygrometer of Temp / RH% / DP°C / WB°C, Max/Min, Hold NEW**  
 Optional Ext. Temp Probe(-20+70°C), -20+50°C, 0~100% RH, -78.7+50°C DP, 포켓 다기능 이슬점 온습도계



Rotate Cap to Protect Sensors Design Patent Pending

Pocket Dew-point Thermo-Hygrometer

- \* Designed with Capacitance-type Humidity Sensor to get Accurate and Quick Reading
- \* Simultaneously Triple Display Temp. / RH% / External Probe Temp
- \* External Probe for Checking Food Quality & HVAC/R Applications
- \* Auto Power Off time frame Selectable
- \* Maximum / Minimum and Reset function
- \* Temperature unit °C/°F Selectable
- \* Hold function to Freeze current Reading

**Specifications & Ordering information**

Spec.	Model	DH.Thh5	
		Temperature	Humidity
4× Measuring Range		(1) Temp. : -20 ~ 50°C, (2) Humidity : 0%RH ~ 100%RH, (3) Dew Point : -78.7 ~ 50.0°C, (4) Wet Bulb : -21.6 ~ 50.0°C	
2× Accuracy		(1) Temp. : ±0.6°C, (2) Humidity : ±3%RH (at 25°C, 10 ~ 90%RH, other ±5%RH)	
2× Resolution		(1) Temp. : 0.1°C/°F, (2) Humidity : 0.1%RH	
Battery		2×AAA Battery	
Dimension / Weight(g)		48.4×178.5×h24.7mm(LCD Size : 28×33 mm) / 100g	
Standard Package		Meter / Battery / Manual / Paper Box	
Cat. No. & Price ₩		DH.Thh3005	Set
Option ; DH.Gas3007.1		① Cal. Salt Bottle for Calibration, 33%, 56ml	Ea
DH.Gas3007.2		② , 75%, 56ml	Ea
DH.Thh3005.1		③ External Temp. Probe, 116cm, with Handle	Ea

**DAIHAN-brand® Desktop / Wallmount Dew-point Thermo-Hygrometer of Temp / RH% / DP °C, Max/Min, Hold NEW**  
 Programmable Danger Zone, Alarm 65dB, Time Clock, 0~50°C, 20~90% RH, -20+70°C DP, 탁자 / 벽걸이용 이슬점 온습도계



Desktop / Wallmount Dew-point Thermo-Hygrometer

- \* Simultaneously Displays Temperature and Humidity
- \* Checks Humidity Condense Conditions through Dew Point
- \* Programmable Danger Zone for Warning Purpose
- \* Designed with Capacitance type humidity Sensor to Get Accurate and Quick Reading
- \* Desktop and Wall Mount for Long Time Monitoring
- \* Long Battery Life. One year Via Alkaline Battery
- \* Real Time Display(Hour & Minute, AM/PM)

**Specifications & Ordering information**

Spec.	Model	DH.Thh7	
		Temperature	Humidity
3× Measuring Range		(1) Temp.: 0 ~ 50°C (display : -10.0 ~ 70.0°C), (2) Humidity : 20 ~ 90%RH (display : 0% ~ 99.9%RH), (3) Dew Point : -20 ~ 70°C	
2× Accuracy		(1) Temp.: ±1°C, (2) Humidity: ±5%RH (at 25°C, 10 ~ 90%RH, other ±7%RH)	
2× Resolution		(1) Temp.: 0.1°C/°F, (2) Humidity : 0.1%RH	
Temp. Response Time		2 mins	
Battery		3×AA Battery	
Dimension / Weight(g)		110×91×h30mm(LCD Size : 63×70 mm) / 200g	
Standard Package		Meter / Battery / Manual / Paper Box	
Cat. No. & Price ₩		DH.Thh3007	Ea

**DAIHAN-brand® SD-Card Logging Dew-point Thermo-Hygrometer, 0~50°C, 20~90% RH, -20+70°C DP, Time Clock Desktop / Wallmount, Programmable Danger Zone, Alarm 65dB, Max/Min, SD 카드로킹 이슬점 온습도계 NEW**



SD-Card Logging Dew-point Thermo-Hygrometer

- \* Simultaneously Displays Temperature and Humidity
- \* Real Time Display(Hour & Minute, AM/PM)
- \* Advanced SD Card Logging Design for Continuous Recording
- \* Temperature Unit °C/°F Switchable
- \* Check Humidity Condense Conditions Through Dew Point
- \* Max/Min Function to Review Data
- \* Programmable Danger Zone for Warning Purpose
- \* Desktop and Wall Mont for Long Time Monitoring
- \* Designed with Capacitance type humidity Sensor to Get Accurate and Quick Reading
- \* Long Battery Life. One year Via Alkaline Battery
- \* Audible Beeper and Bright Red Led for Danger Zone Warning

**Specifications & Ordering information**

Spec.	Model	DH.Thh9
<b>3× Measuring Range</b>		(1) Temp.: 0 ~ 50°C (display : -10.0 ~ 70.0°C), (2) Humidity : 20 ~ 90%RH (display : 0% ~ 99.9%RH), (3) Dew Point : -20 ~ 70°C
<b>2× Accuracy</b>		(1) Temp.: ±1°C, (2) Humidity : ±5%RH (at 25°C, 10 ~ 90%RH, other ±7%RH)
<b>2× Resolution</b>		(1) Temp.: 0.1°C/°F, (2) Humidity : 0.1%RH
<b>SD Card</b>		Max. 2GB SD Card or 4GB SDHC Card
<b>Battery</b>		3 × 1.5Volts AA Battery or 5V Adaptor
<b>Dimension / Weight(g)</b>		110×91×h30mm(LCD Size : 63×70 mm) / 200g
<b>Standard Package</b>		Meter / Adaptor / Manual / Paper Box / 256MB SD Card
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Thh3009</b>	<b>Ea</b>

**DAIHAN-brand® Handy Dew-point IR Thermo-Hygrometer for Air & Surface Temp / RH% / DP °C NEW**  
 Built in Laser-Beam, Backlight, PC Data Analysis, -40+500°C IR, 0~100% RH, -68+49.9°C DP, 휴대용 IR 온습도계



Unique Device Patent Pending.

- \* The Most Popular IR+ Humidity Two in One Meter
- \* Consist of ; Meter, Battery, Manual, Carry Case
- \* Triple Display Measures Air/Surface Temp. & Humidity
- \* Design with Precision Humidity Sensor
- \* Gear Damper Device (Design Patent) for Sensor Protection
- \* Auto Power off Time Adjustable
- \* IR Emissivity Value Adjustable 0.3~1.0
- \* Built-in Laser Beam (670nm) for Targeting
- \* Powered by 4pcs AAA Batteries
- \* Temperature Unit °C/°F is Switchable
- \* Laser Beam & Backlight Function Selectable
- \* PC Output Data Download

**Specifications & Ordering information**

Spec.	Model	DH.Thh11		
<b>Measure Range</b>		-40 ~ 500°C	-20 ~ 50°C	0 ~ 100%RH
<b>Resolution</b>		0.1°C / 0.1°F	0.1°C / 0.1°F	0.1%RH
<b>Accuracy</b>		±2°C at 20 ~ 200°C, Others is ±3°C	±0.6°C	±3%RH (at 25°C, 10 ~ 90%RH, others ±5%RH)
<b>3× Measuring Range</b>		(1) IR Temp.: -40 ~ 500°C, (2) Temp.: -20 ~ 50°C, (3) Humidity : 0 ~ 100%RH		
<b>3× Accuracy</b>		(1) IR Temp.: ±2°C at 20 ~ 200°C, Others is ±3°C, (2) Temp: ±0.6°C, (3) ±3%RH (at 25°C, 10 ~ 90%RH, others ±5%RH)		
<b>3× Resolution</b>		(1) IR Temp.: 0.1°C/°F, (2) Temp.: 0.1°C/°F, (3) Humidity : 0.1%RH		
<b>Dew Point &amp; Wet Bulb Temp.</b>		-68 ~ 49.9°C & -21.6 ~ 49.9°C		
<b>IR Repeatability</b>		±1°C		
<b>Emissivity</b>		0.3 ~ 1.0 adjustable		
<b>Dimension / Weight(g)</b>		70×50×h175mm(LCD Size : 44×26 mm) / 140g		
<b>Standard Package</b>		Meter / Battery / Manual / Carry Case		
<b>Cat. No. &amp; Price ₩</b>	<b>DH.Thh3011</b>			<b>Ea</b>
<b>Option ; DH.Gas3013.1</b>	① USB Cable & Software			<b>Ea</b>
<b>DH.Gas3013.2</b>	② RS232 Cable & Software			<b>Ea</b>

Handy Dew-point IR Thermo-Hygrometer



Hard Carrying Case

Cat. No	Description	Articles
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**DAIHAN-brand® Compact Gun type IR(infrared) Thermometer, Comply with FDA Standard Class II, Temp -40°C ~ +500°C with Ergonomic Hand Grip, °C/°F 비접촉 적외선(IR) 온도계 NEW**

NEW



Gun type IR Thermometer  
Soft Carry Case (Option)

- \* Built in Laser Beam(670nm, <1mw) for Targeting.
- \* Adjustable Emissivity from 0.3 to 1.0 for Metal and Non-Metal Surface Measurement.
- \* Quick and accurate IR Response Time : 500ms.
- \* Product Complies with FDA Standard Class II

**Specifications & Ordering information**

Spec.	Model	DH.The13
Measurement Range		-40°C ~ +500°C
Temp Accuracy		±2% or ±2°C at -20°C ~ +200°C, others ±3% or 3°C
Resolution		0.1°C/°F for -40°C ~ +110°C, 1°C/°F for others
Repeatability / Distance Ratio		±1°C / 10 : 1
Battery		1×9V Battery
Dimension & Weight(g)		80×45×h157 mm (LCD Size : 21.8×31.8 mm) / 140g
Standard Package		Meter / Battery / Manual / Paper Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.The3013</b>	<b>Set</b>
<b>Option ; DH.The3013.1</b>	Soft Carry Case(Pouch), Black for DH.The3013	<b>Ea</b>

**DAIHAN-brand® Waterproof IP65 IR(infrared)+Contact Pt-Probe Thermometer, with Laser-pointer, MAX/MIN with 180° Rotary Piercing Probe 8cm / Timer / Data-hold / °C / °F, -40°C +280°C/0.1°C, 접촉 + 비접촉 겸용 IR 온도계 NEW**

NEW



Waterproof IR & Probe Thermometer  
Soft Carry Case (Option)

- \* Follow HACCP Principle to Check Food Safety
- \* IP65 Waterproof Targeting, Washable Probe
- \* Quick to Inspect Danger Zone Temperature
- \* Big LCD with Backlight to Display Measured Temperature
- \* Flip over Probe for Internal Temperature Measurement
- \* Built-in Laser to Highlight the Area
- \* Certified HACCP
- \* Temperature Unit C/ F is Switchable
- \* Auto Power off in 20 mins Inactivity
- \* Quick and Accurate IR Response Time : 500ms
- \* Count down Timer Ensure Food Safety Storage
- \* Max Reading Displays while in IR Scanning Status

**Specifications & Ordering information**

Spec.	Model	DH.The15
2× Measuring		(1) IR Temp. : -40 ~ +280°C, (2) Probe Temp : -40 ~ +200°C
Accuracy		(1) IR Temp.: [<0°C(32°F)]: +/-1°C(2°F) +/-0.1, [0~65°C(32~150°F)]: +/-1°C(2°F), [>65°C(150°F)]: +/-1.5% of rdg, (2) Probe Temp.: [<-5°C(23°F)]: +/-1°C(2°F) [>65°C(150°F)]: +/-1°C or 1.5% of rdg, [-5 ~ 65°C(23 ~ 150°F)]: +/-0.5°C(1°F)
Resolution		(1) IR Temp.: 0.1°C/°F, (2) Probe Temp.: 0.1°C/°F
D:S ratio / IR Repeatability / Emissivity		3:1 / ±1°C / 0.97
Battery		1×9V Battery or Adaptor
Dimension / Weight		61.5×35.5×167 mm (LCD Size : 21×28mm) / 140g
Standard Package		Meter / Battery / Manual / Paper Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.The3015</b>	<b>Set</b>
<b>Option ; DH.The3015.1</b>	Soft Carry Case(Pouch) 176×75×h35mm, Black for DH.The3015	<b>Ea</b>

**DAIHAN-brand® High Temp IR(Infrared) Thermometer, with Large LCD & Laser-pointer, Temp -40°C ~ +816°C with Wrist Strap & Hard Carry Case & Soft Carrying Pouch, °C/°F 비접촉 적외선(IR) 온도계 NEW**

NEW



High Temp IR(Infrared) Thermometer  
Soft Carrying Pouch

- \* Built in Laser Beam(670nm, <1mw) for Targeting.
- \* Quick and accurate IR Response Time: 500ms.
- \* Rubber-Like Hand Grip Design.
- \* Large LCD w/ Backlight Function.
- \* Adjustable Emissivity from 0.3 to 1.0
- \* Easy Flip Battery Compartment Design.

**Specifications & Ordering information**

Spec.	Model	DH.The17
Measurement Range		-40°C ~ +816°C
Temp Accuracy		< 0°C : ±2°C / 0°C ~ 300°C : ±2% or ±2°C 300°C ~ 500°C : ±2.5% / > 500°C : ±3%
Resolution		0.1°C/°F(<300°C), 1°C/°F(>300°C)
Distance Ratio / Battery		12 : 1 / 2×AA battery
Dimension & Weight(g)		195×134×h50 mm (LCD Size : 34×37 mm) / 240g
Standard Package		Meter / Battery / Manual / Hard Carry Case / Wrist Strap / Soft Carrying Pouch
<b>Cat. No. &amp; Price ₩</b>	<b>DH.The3017</b>	<b>Set</b>
<b>Spare ; DH.The3017.1</b>	Soft Carry Case(Pouch) 200×133×h42mm, Black for DH.The3017	<b>Ea</b>

**DAIHAN-brand® IP67 Waterproof Digital Thermocouple Thermometer, with K-Probe NEW**  
 with 10 Sets Memories Data Storage, Recalling & Clearing,  $-100^{\circ}\text{C} + 800^{\circ}\text{C}$ , 방수 / 휴대용 1채널 디지털 온도계



Digital Thermocouple Thermometer

- \* Max/Min ( $^{\circ}\text{C}/^{\circ}\text{F}$ ) Memory Recalling.      \* EL Backlight for Use in Dim Light Environment.
- \* Alerting Alarm Beeps when Temperature Reaches/Beyond the Pre-set Limit
- \* Built in Holster with Flip Out Stand at the Back of the Unit.      \* Low Battery Indicator

**Specifications & Ordering information**

Spec.	Model	A1.TC9227A
Measurement Range		$-100^{\circ}\text{C} \sim +800^{\circ}\text{C}$ or $-148^{\circ}\text{F} \sim +1472^{\circ}\text{F}$
Resolution & Accuracy		0.1°, and $\pm 2^{\circ}\text{C}$
Water Proof & Weight		IP67 and 185g(only main unit) / Grey&Yellow
Battery		3 × 1.5Volts "AAA" Size or Equivalent
Sensor Type		K - Probe : od. $\phi 3.5 \times \text{L}110\text{mm}$ Plastic Handle : od. $\phi 17 \times \text{L}165\text{mm}$ , Cable : od. $\phi 4 \times \text{L}1050\text{mm}$
Dimension		54 × 165 × 25 mm (LCD Size : 32 × 23 mm)
Cat. No. & Price ₩		A1.TC9227A <span style="float:right">Ea</span>

**DAIHAN-brand® Portable Digital 2-Channel Thermocouple Thermometer, K / J / E / R / T / N / S-Type Probe Acceptable**  
 with  $\Delta T = T_1 - T_2$  / Max-Min / Avg / Memory, Without Probe,  $-200^{\circ}\text{C} \sim +1370^{\circ}\text{C}$ , 0.1 Divi., 휴대용 2채널 디지털 온도계 NEW



"A1.T9214T", Without Probe

**Multiple Thermocouple (Type K, J, T, E, N, R, S) Compatible**

- \* 2 Channel Reading ( $T_1$  &  $T_2$ ).      \* Differential Temperature Measurement ( $\Delta T = T_1 - T_2$ ).
- \* 30 Sets Data Storage      \* 7" Large LCD with Function Indicators and Backlight.
- \* Alarm Beeps when Temperature Reaches/ Beyond/ The Pre-Set Limit.      \* Audible Alarm.
- \* Optional PVC Holster with Flip Out Stand at the Back of the Unit.      \* Low Battery Indicator.

**Specifications & Ordering information**

Spec.	Model	A1.T9214T
Measurement Range		K-Type : $-200^{\circ}\text{C} \sim +1370^{\circ}\text{C}$ or $-328^{\circ}\text{F} \sim +2498^{\circ}\text{F}$ , Clock-Timer, Alarm
Resolution		0.1° for Whole Range
Accuracy		$\pm 0.05\%$ of Reading $+0.3^{\circ}\text{C} (+0.5^{\circ}\text{F})$ Below $-100^{\circ}\text{C} (+148^{\circ}\text{F})$ ; Add 0.15%
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$
Weight (g) / Color		310 / Yellow-Grey
Battery / Package		Battery Included ; 4 × 1.5Volts "AAA" Size or Equivalent / White Box
Sensor Type		Type K, J, E, T, N, R, S Thermocouple Acceptable ; Not Include
Dimension		81 × 172 × 33 mm (LCD Size : 59 × 35 mm)
Cat. No. & Price ₩		A1.T9214T ; Without Probe <span style="float:right">Ea</span>

※ Option ; K-Probes ⇒ See the 158 Page.

**DAIHAN-brand® RS232 / PC Data Analysis Thermometer, with Dual Input & Multiple-Type Probe, Compatible NEW**  
 with Time Clock / Backlight, K / J / T / R / S / E-Probe in Use,  $-200 \sim +1370^{\circ}\text{C}$  in K-Type, 2-ch. 다기능 센서 수용 온도계



- \* Non Sleep Mode Function available, Unit  $^{\circ}\text{C}/^{\circ}\text{F}$  is Switchable, Super Big LCD for easy Reading.
- \* RS232 interface for PC download, Data records stamped with real time clock, Backlight for dark area operation.

**Specifications & Ordering information, \* Hold Function to Freeze Current Reading**

Spec.	Model	DH.The7
6 × Measuring Range		(1) K-temp.: $-200 \sim 1370^{\circ}\text{C}$ , (2) J-temp.: $-200 \sim 760^{\circ}\text{C}$ , (3) T-temp.: $-200 \sim 390^{\circ}\text{C}$ , (4) R-temp.: $0 \sim 1760^{\circ}\text{C}$ , (5) S-temp.: $0 \sim 1760^{\circ}\text{C}$ , (6) E-temp.: $-200 \sim 736^{\circ}\text{C}$
Accuracy		(1) K- / (2) J- / (3) T- / (6) E-temp.: $\pm (0.1\% \text{rdg} + 0.7^{\circ}\text{C})$ (4) R- / (5) S-temp.: $\pm (0.3\% \text{rdg} + 0.7^{\circ}\text{C})$
Resolution		(1) K-temp.: 0.1°C for $-200 \sim 650^{\circ}\text{C}$ , 1°C for $640 \sim 1370^{\circ}\text{C}$ , (2) J-temp.: 0.1°C for $-200 \sim 500^{\circ}\text{C}$ , 1°C for $490 \sim 760^{\circ}\text{C}$ , (3) T-temp.: 0.1°C for $-200 \sim 390^{\circ}\text{C}$ , etc.
Battery		9V × 1pc or Adaptor
Dimension / Weight(g)		182 × 72 × h30 mm (LCD Size : 30 × 51 mm) / 150g
Standard Package		Meter / K Bead Probe / Battery / Manual
Cat. No. & Price ₩		DH.The3007 <span style="float:right">Set</span>
Spare ;	DH.The3007.1	① 4m K-Bead Thermocouple <span style="float:right">Ea</span>
Option ;	DH.Gas3013.1	② USB Cable & Software <span style="float:right">Ea</span>
	DH.Gas3013.2	③ RS232 Cable & Software <span style="float:right">Ea</span>
	DH.The3007.2	④ Rubber Holster, Blue <span style="float:right">Ea</span>

Cat. No	Description	Articles
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**DAIHAN-brand® Wallmount/SD-card Logging 4-ch. K-type Thermometer, -200°C ~ +1370°C** NEW  
 Ultimated Auto-Logging Memories in SD-card, with 2x Bead K-Probe/Alarm & Time Clock, **벽걸이 4채널 SD로거/온도계**



SD-Card Logging K-type Thermometer

**▶ No-Bothering Computer Setting! Auto-Log Anytime/Anywhere!**

- \* Super Big LCD Portable / Wallmount SD-card Logger Measures Temperature via K-type Thermometer
- \* Hold Function Freezers Current Readings, Checking Max / Min Value from Power On
- \* One Button Press to Display T1-T2, Display Temperature Change from Baseline
- \* Blue Backlight
- \* 12/24 hour Timer

**Specifications & Ordering information**

Spec.	Model	DH.The9
<b>K temp range / Resolution</b>		-200 ~ 1370°C, -328 ~ 2498°F / 0.1°C, 0.1°F
<b>K temp accuracy</b>		±(0.3% rdg + 1°C)
<b>Sampling rate</b>		Programmable from 1 second up
<b>Battery</b>		4 × AA Battery 9V adaptor ; Low Battery Indicator
<b>Dimension / Weight(g)</b>		152 × 100 × h39mm(LCD Size : 47 × 104 mm) / 300g
<b>Standard Package</b>		Meter / 2 × Bead Probe / Battery / Manual / SD-card / Plain Box
<b>Cat. No. &amp; Price ₩</b>	<b>DH.The3009</b>	<b>Set</b>
<b>Option ; DH.The3009.1</b>	① 1m K-Bead Thermocouple	<b>Ea</b>
<b>DH.The3009.2</b>	② Universal Plug 9V Adaptor	<b>Ea</b>

**DAIHAN-brand® Foldable/Portable Digital Multi-Thermometer-Set, with 4 × K-type Probe** NEW  
 with 180° Moving Probe Connector, Timer(Count Up), -200°C ~ +1370°C, 0.1 Divi.  
 with 4 K-Probe for Air/Immersion/ Penetration/ Surface, and Carrying Case, **휴대용 접이식 디지털 온도계 세트**



Foldable/Portable Digital Multi-Thermometer-Set

**■ Ideal for Multi-use with Multi-Function in Lab & Industry**

- \* Unique Feature of Folding Probe
- \* Probe Connector is Adjustable Through 45°, 90°, 135°, 180°
- \* Comprehensive and Variety Use
- \* Four Probes Included for Different Measurement (e.g. Surface, Semi-Solid, Air)
- \* Extra Carrying Box for Easy and Protective Storage
- \* Four Probes Included
- \* Large LCD
- \* Easy to Operate
- \* CE Approval
- \* Battery Included
- \* High Degree of Accuracy

**Function :** On/Off, Hold/Test, °C/°F, Max/Min (°C/°F) Memory Recalling, and Timer.

**Specifications & Ordering information**

Spec.	Model	A1.T9218
<b>Measurement Range</b>		-200°C ~ +1370°C or -328°F ~ +2498°F, Timer
<b>Resolution</b>		0.1° for Whole Range
<b>Accuracy</b>		±1.0°C or ±1.8°F In the Range of -49°C ~ +740°C or -56.2°F ~ +1364°F, Otherwise more than ±2.0°C or ±4°F
<b>Ambient Temperature</b>		0°C ~ +50°C or +32°F ~ +122°F
<b>Weight (g) / Color</b>		80 / Black
<b>Battery / Package</b>		2 × 3Volts "CR 2032" Size or Equivalent / Black Carrying Case
<b>Sensor Type</b>		Included 4 × Type K Thermocouple
<b>Dimension</b>		153 × 50 × 19 mm (LCD Size : 50 × 22 mm)
<b>Cat. No. &amp; Price ₩</b>	<b>A1.T9218</b>	<b>Ea</b>
<b>Spare ; A1.TK069T</b>	① Surface Probe, K-type	<b>Ea</b>
<b>; A1.TK066A</b>	② Airflow Probe, K-type	<b>Ea</b>
<b>; A1.TK148O</b>	③ Immersion Probe, Round, K-type	<b>Ea</b>
<b>; A1.TK133S</b>	④ Penetration Probe, K-type	<b>Ea</b>



Female Minisocket

**Digital Temp. Controller/Displayer for K-type Probes** NEW  
 with Female Minisocket for Miniplug, -50°C +400°C, **디지털 온도측정 / 조절계**

**■ Made in Korea**

**■ Ideal for Temp Control of Reactor-system**

- \* Ideal for Temperature Monitor / Controller for Reactor System
- \* With K-type Probe Connector & Electronic Cable 2m
- \* Jumbo LCD with Digit Height 18mm
- \* Dimension : 90 × 70 × h50mm
- \* 100~240VAC Free
- \* High Accuracy

**※ Note : The Controller Can be used in other Cable & Plug System.**

**SL.The5011** Digital Temp. Controller/Displayer-Set, -50°C ~ +400°C, K-type

Ea.	Price, ₩
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**Cowie® K-type PTFE Encapsulated Stainless-steel Thermocouple Probes, Can be Bent, -180°C +280°C NEW**  
 with Miniplug & PFA Insulated 1&2m Cable, Probe Body L100~900mm, PTFE 내약품/내부식/청결형 온도 프로브



- **Made in UK.**
- **Ideal for Reactor : Especially Long Body Probes**
- \* Outstanding Chemical Resistance, No-Contamination of Working Media, and Pressure Resistant
- \* Fully Pure PTFE Encapsulated Stainless-steel Core Probe for Rigidity, But can be Bent
- \* with Push-On Ferrule \* Response : 50% in 6~14 seconds, -180°C+280°C

(1) With L100~L700mm Probe-body and 1m Cable

Article No.	Probe Body	Ferrule	Total Length
CW.600.101.1	PTFE Capsulated K-probe, Body- $\phi 6 \times l 100$	L35mm	Total-L135mm
CW.600.201.1	- $\phi 7 \times l 200$	-L40mm	-L240mm
CW.600.301.1	- $\phi 8 \times l 300$	-L40mm	-L340mm
CW.600.401.1	- $\phi 8 \times l 400$	-L50mm	-L450mm
CW.600.501.1	- $\phi 9 \times l 500$	-L60mm	-L560mm
CW.600.601.1	- $\phi 9 \times l 600$	-L60mm	-L660mm
CW.600.701.1	- $\phi 9 \times l 700$	-L45mm	-L745mm

Ea.	Price, ₩

(2) With L500~L900mm Probe-body and 2m Cable

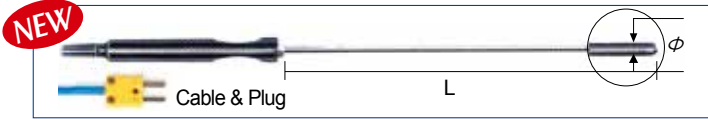
Article No.	Probe Body	Ferrule	Total Length
CW.600.501.1.2	PTFE Capsulated K-probe, Body- $\phi 9 \times l 500$	L60mm	Total-L560mm
CW.600.601.1.2	- $\phi 9 \times l 600$	-L60mm	-L660mm
CW.600.701.1.2	- $\phi 9 \times l 700$	-L45mm	-L745mm
CW.600.901.1.2	- $\phi 9 \times l 900$	-L45mm	-L945mm

Ea.	Price, ₩

**K-type Thermocouple Probes, for Wide-range Temp. -160°C ~ +1200°C NEW**  
 with Common use Plug "Miniature 2 x Flat" and Cable, "K-형" 온도계 & 각종 열기구 온도 프로브

- **K-Type Sensor Probes for Different Applications (Penetration Probe, Surface Probe, Pipe Clamp)** ■ Cable : od.  $\phi 3 \times L.1020$  mm
- **Miniature 2 x Flat (L14 x Thick 1mm) Plug Type** ■ Handle : Thermo Plastic od.  $\phi 17 \times L.170$  mm

(1) For Liquid & Air, Stainless-steel Probe, Resin Handle with Cable/Plug, -160°C ~ +1200°C



- AS1.5522.04 Liquid/ Air Probe "K", -160 ~ +700°C,  $\phi 1.0 \times L306$ mm, 1m Cable/Plug
- DH.WHP503040 , -60 ~ +600°C,  $\phi 4.8 \times L250$ mm, 1.8m Cable/Plug
- DH.WHP503050 , -60 ~ +500°C,  $\phi 4.8 \times L380$ mm, 1.8m Cable/Plug

Ea.	Price, ₩

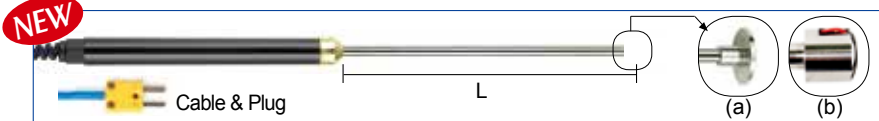
(2) For Semi - solid Penetration-type, Stainless-steel Probe, Resin Handle with Cable/Plug, -100°C ~ +1000°C



- A1.TK175S Penetration Probe "K", -100 ~ +800°C,  $\phi 3.2 \times L150$ mm, 1m Cable/Plug
- A1.TK225S , -100 ~ +1000°C,  $\phi 6.4 \times L200$ mm, 1m Cable/Plug

Ea.	Price, ₩

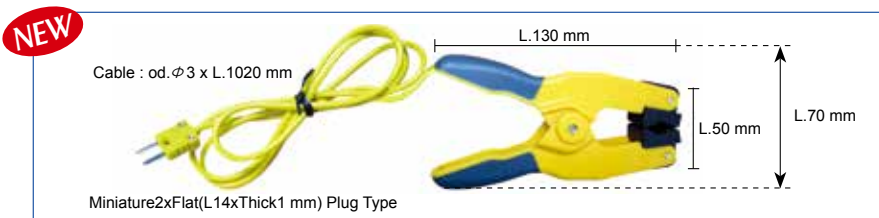
(3) For Surface / Contact, Stainless-steel Probe, Resin Handle with Cable/Plug, -100°C ~ +400°C



- A1.TK004T (a) Surface Probe "K", Head :  $\phi 15 \times t1.5$ , Stem :  $\phi 3.5 \times L180$ mm, -100 ~ +400°C, 1m Cable/Plug
- A1.TK033T (b) :  $\phi 16 \times t14$ , Stem :  $\phi 6.5 \times L215$ mm, -100 ~ +400°C, 1m Cable/Plug

Ea.	Price, ₩

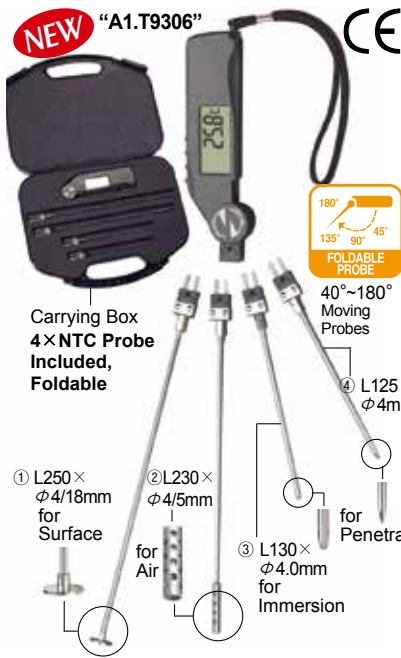
(4) Pipe Clamping Probe, with Cable Plug, -100°C ~ +120°C



- A1.TK0063 Pipe Clamp Probe, Pipe / Tubing,  $\phi 6 \sim 22$  mm Grip -100°C ~ +120°C

Ea.	Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® Foldable / Handy Digital Multi-Thermometer-Set** with 4 × NTC-Probe & 180° Moving Probe, -50°C ~ +300°C, 휴대용 접이식 온도계

- \* Stainless-steel Probe Adjusts From 0° To 180°.
- \* Jumbo LCD with Digit Height 18mm.
- \* Black Carrying Case with EVA Foam for Protective and Convenient Carriage.
- \* 1 Second Normal Temperature Sensing Time.
- \* CE Approval.
- \* Low Battery Indicator.

**Specifications & Ordering information**

Spec.	Model	A1.T9306
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
Ambient Temperature for Plastic Case		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color		65 / Grey
Battery/ Package		1 × 1.5Volts "A76" Size (LR44, G13) or Equivalent / Black Carrying Case
Sensor Type		Included 4 × Type NTC Thermocouple
Dimension		154 × 41 × 17 mm (LCD Size : 50 × 23mm)
Cat. No. & Price ₩	A1.T9306	Ea



**DAIHAN-brand® LCD Temperature Datalogger**, 62000 Sets of Data with USB Cable, -200°C ~ +70°C, 데이터 로거

- \* Instant current temperature read-out
- \* Completed with hidden buttons to avoid unexpected operation
- \* Hanging hole and magnet for easy mounting
- \* Works on Windows XP / Vista / 7 or above
- \* It is connected to the computer via USB cable(Software will be sent by email)

**Specifications & Ordering information**

Spec.	Model	A1.DL104
Measurement Range		-200°C ~ +70°C or -4°F ~ +158°F or +253°C ~ +343°C
Resolution & Accuracy		0.1°, Accu. ±1°C
Mode of recording		One-time, Endless Loop (overwriting), End At
Data Capa. and Waterproof		62000 sets of data, and IP×5
Ambient Temp.		-20°C ~ +70°C or -4°F ~ +158°F
Battery		1 × 3 volts "CR2032" size or equivalent × 2
Log interval		1/2/5/10/15/30 seconds 1/2/5/10/15/30/60/90/120 minutes
Dimension		41 × 60 × 23 mm (LCD Size : 28 × 18 mm)
Cat. No. & Price ₩	A1.DL104	Ea

**DAIHAN-brand® Waterproof Digital Thermocouple Thermometer**, with 1 × NTC-Probe with 10 Sets Memories Data Storage, Recalling & Clearing, -50°C ~ +300°C, 방수 / 휴대용 1채널 디지털 온도계



- \* Designed with Comprehensive Use with Waterproof Function(IP 67).
- \* Max/Min (°C/°F) Memory Recalling.
- \* Alerting Alarm Beeps when Temperature Reaches/Beyond the Pre-set Limit
- \* EL Backlight for Use in Dim Light Environment.
- \* Supplied with Sensor Probe and Plastic Handle Assembled Together
- \* PVC Holster with Flip Out Stand at the Back of the Unit.
- \* 1 Second Normal Temperature Sensing Time.
- \* Optional One Hour Auto Shut Off
- \* CE Approval.
- \* Low Battery Indicator.

**Specifications & Ordering information**

Spec.	Model	A1.T9234
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color /Water Proof		280 / Grey · Yellow / IP 67
Battery / Package		2 × 1.5Volts "AAA" Size or Equivalent / White Box
Sensor Type		NTC Probe : od.φ3.5×L110mm Plastic Handle : od.φ17×L120mm, Cable : od.φ4×L1450mm
Dimension		77 × 172 × 46 mm (LCD Size : 51 × 32 mm)
Cat. No. & Price ₩	A1.T9234	Ea

**DAIHAN-brand® IP67 Waterproof Digital 2-Channel Thermocouple Thermometer, with 2 × NTC-Probe** NEW  
 with 10 Sets Memories Data Storage, Recalling & Clearing, 50°C ~ +300°C, 방수 / 휴대용 2채널 디지털 온도계



Unit size :  
77 × 172 × 46 mm

"A1.T9234T" with 2 × NTC-Probe

- \* Convenient Function for Calculating Differential Temp-Measurement ( $\Delta T = T1 - T2$ ).
- \* Alerting Alarm Beeps when Temperature Reaches/Beyond the Pre-Set Limit
- \* 1 Second Normal Temperature Sensing Time.
- \* Low Battery Indicator.
- \* CE Approval.
- \* EL Backlight for Use in Dim Light Environment.
- \* Universal Kit Set with Two Stainless-steel Probes Together.

**Specifications & Ordering information**

Spec.	Model	A1.T9234T
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F Otherwise more than ±2.0°C or ±4°F
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color /Water Proof		280 / Grey · Yellow / IP 67
Battery / Package		2 × 1.5Volts "AAA" Size or Equivalent / White Box
Sensor Type		NTC Probe : od. $\phi$ 3.5 × L110mm Plastic Handle : od. $\phi$ 17 × L120mm, Cable : od. $\phi$ 4 × L1450mm
Dimension		77 × 172 × 46 mm (LCD Size : 51 × 32 mm)
Cat. No. & Price ₩	A1.T9234T	Ea

**DAIHAN-brand® NTC-type Probes, for NTC-type Thermocouple Thermometer** NEW

- (1) Penetration Probe : Suitable Semi-Solid, Liquid, Air-Temperature.
- (2) Surface Probe : Superior Contact, Plate-Temperature.
- (3) Robust Piercing Probe : Stronger Penetration Force, Rapid Response Time, Suitable for Frozen Food.

Cat. No.	Dimension	Temperature °C / °F / Others	Ea. Price, ₩
(1) A1.TN0300	4Pin(Pole) Plug( $\phi$ 38 × L39 mm), Cable : od. $\phi$ 4 × L.1450 mm with Protective Probe Cap Handle : Thermo Plastic od. $\phi$ 17 × L.120 mm od. $\phi$ 5.0 × L.275 mm	<b>Penetration,</b> -50°C ~ +300°C / -58°F ~ +572°F, Very Sharp Tip	
(2) A1.TN133T	4Pin(Pole) Plug( $\phi$ 38 × L39 mm), Cable : od. $\phi$ 4 × L.1450 mm Handle : Thermo Plastic od. $\phi$ 17 × L.120 mm od. $\phi$ 3.5 × L.110 mm Surface Probe $\phi$ 15mm × thick 1.5mm	<b>Surface,</b> -50°C ~ +300°C / -58°F ~ +572°F, Thin/Flat Disk	
(3) A1.TN332C	4Pin(Pole) Plug( $\phi$ 38 × L39 mm), Cable : od. $\phi$ 4 × L.1450 mm Handle : Thermo Plastic od. $\phi$ 17 × L.120 mm od. $\phi$ 5.0/3.5 × L.110 mm Piercing-type Probe : od. $\phi$ 3.5 mm od. $\phi$ 5.0 mm With Protective Probe Cap	<b>Robust Piercing,</b> -50°C ~ +300°C / -58°F ~ +572°F, Stronger Penetration Force	

**DAIHAN-brand® Module / Handy Solar Digital Thermometer, Max/Min** NEW  
 with 2 of Internal Sensor & 1m External Cable/NTC-Probe, -50°C ~ +300°C, 0.1/1.0°C Divi., 태양광 충전 온도계



Unit size :  
103 × 43 × 16 mm

Magnet at the Back

Module/Handy Digital Thermometer



**Unique Design of Using Solar Energy**

- \* 1 m Wire with Stainless-steel Probe.
- \* Strong Magnet for Easy Attachment.
- \* 1 Second Normal Temperature Sensing Time.
- \* CE Approval.

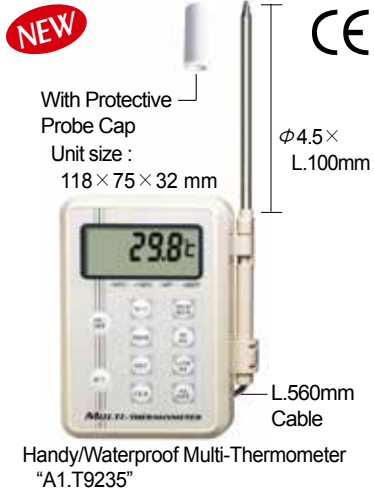
**Specifications & Ordering information**

Spec.	Model	A1.T9277B
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
Ambient Temp. / Weight(g) / Color		0°C ~ +50°C or +32°F ~ +122°F / 70g / Green
Battery / Package		1 × 1.5Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
Sensor Type		External Sharp NTC-Probe : od. $\phi$ 3.2 × L46mm with 1m Cable
Dimension		103 × 43 × 16 mm (LCD Size : 41 × 15 mm)
Cat. No. & Price ₩	A1.T9277B	Ea



Cat. No	Description	Articles
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**DAIHAN-brand® Handy / Waterproof Multi-Thermometer, with L560mm Cable & NTC-Probe** NEW  
 with 10 Memories Data Storage / Recalling / Clearing, -50°C ~ +300°C, 0.1/1.0°C Divi., **다용도 방수 온도계(온도센서 & 케이블)**



- \* 4.5mm Diameter of Stainless-steel Probe which Good for Solid Measurement.
- \* Alarm Beeps when Temperature Reaches/Beyond the Pre-Set Limit. \* Flip Out Stand.
- \* Compartment for Cable Storage. \* 1 Second Normal Temperature Sensing Time.
- \* Optional One Hour Auto Shut Off. \* Comprehensive Functions. \* CE Approval.

**Specifications & Ordering information**

Spec.	Model	A1.T9235
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color / Waterproof		120 / Ivory White, Splashproof
Battery / Package		1 × 1.5Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
Sensor Type		NTC-Probe : od.φ4.5 × L100mm (with L560mm Cable)
Dimension		118 × 75 × 32 mm (LCD Size : 49 × 22 mm)
Cat. No. & Price ₩	A1.T9235	Ea

**DAIHAN-brand® Pocket / Clip Digital Thermometer, Pen-Shape, L.125mm NTC-Probe Type** NEW  
 with Protective Plastic Sleeve/Pocket Clip, -50°C ~ +300°C, 0.1/1.0 Divi., **포켓형 디지털 온도계(포켓 클립형)**



- \* 4mm Diameter of Stainless-steel Probe which Good for Solid Measurement.
- \* Instant and Precision Temperature Display. \* 1 Second Normal Temperature Sensing Time.
- \* Large LCD Display with Digit Height 10mm. \* CE Approval. \* Pen-Shaped Design

**Specifications & Ordering information**

Spec.	Model	A1.T9307
Measurement Range		-50°C ~ +300°C or -58°F ~ +572°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°
Accuracy		±1.0°C or ±1.8°F In the Range of -30°C ~ +250°C or -22°F ~ +482°F, Otherwise more than ±2.0°C or ±4°F
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color		35 / Black
Battery / Package		1 × 1.5 Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
Sensor Type		NTC-Probe : od.φ4 × L125mm
Dimension		215 × 27 × 27 mm (LCD Size : 35 × 11 mm)
Cat. No. & Price ₩	A1.T9307	Ea

Pocket/Clip Digital Thermometer "A1.T9307"

**DAIHAN-brand® Metal Housing Waterproof (IP67) Thermometer, with Z-Clip & Protective Plastic Sleeve** NEW  
 Ideal for Kitchen or Lab, Max/Min, with NTC-Probe, -50°C ~ +150°C, **포켓형 디지털 방수 온도계(조절 가능 Z클립)**



- \* Unique Design of Metal Pulling Housing
- \* 2 Points Block Design to Prevent Product Rolling
- \* Main Unit Heat Resistance to 80°C
- \* Waterproof IP67 Rated
- \* Dishwasher Safe
- \* You can adjust the spacing of Z-Clip

**Specifications & Ordering information**

Spec.	Model	A1.ST9341C
Measurement Range		-50°C ~ +150°C or -58°F ~ +302°F
Resolution		0.1°
Accuracy		±1°C
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color		30(g) / Silver
Battery		1 × 1.5 volts "393" size or equivalent
Sensor Type		NTC-Probe : od.φ4 × L 122mm
Dimension		146 × 37 × 37 mm (LCD Size : 24 × 12 mm)
Cat. No. & Price ₩	A1.ST9341C	Ea

Metal Housing Waterproof(IP67) Thermometer

**DAIHAN-brand® Waterproof / Pocket Digital Thermometer, Max/Min, Extension Handle, with NTC-Probe** NEW  
with Protective Sleeve/Pocket Clip,  $-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ ,  $0.1/1.0^{\circ}\text{C}$  Divi., **포켓형 디지털 방수 온도계(손잡이 가변형)**



- \* Pen-Shaped Design.
- \* Waterproof : IP 67.
- \* Convenient Use of Hanger.
- \* Ingenious Design of Using Probe Sleeve Vent Hole as a Holder
- \* Connecting Probe Sleeve to Head of Unit as a Handle Extension.
- \* CE Approval.
- \* Press Button Membrane Keypad Function and Display.
- \* 1 Second Normal Temperature Sensing Time.

**Specifications & Ordering information**

Spec.	Model	A1.T9231C
Measurement Range		$-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ or $-58^{\circ}\text{F} \sim +572^{\circ}\text{F}$
Resolution		$0.1^{\circ}$ for $-19.9^{\circ} \sim +199.9^{\circ}$ , Otherwise $1^{\circ}$
Accuracy		$\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$ In the Range of $-30^{\circ}\text{C} \sim +250^{\circ}\text{C}$ or $-22^{\circ}\text{F} \sim +482^{\circ}\text{F}$ , Otherwise more than $\pm 2.0^{\circ}\text{C}$ or $\pm 4^{\circ}\text{F}$
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$
Weight (g) / Color		40 / Black
Battery / Package		1 × 1.5 Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
Sensor Type		NTC-Probe : od. φ4 × L115mm
Waterproof		IP 67
Dimension		206 × 13 × 19 mm (LCD Size : 25 × 8 mm)
Cat. No. & Price ₩	A1.T9231C	Ea

**DAIHAN-brand® Handy / Waterproof Multi-Thermometer, with Rubber Coated-Housing/-Hanger** NEW  
with Detachable φ5 × L280mm Long NTC-Probe,  $-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ ,  $0.1/1.0^{\circ}\text{C}$  Division, **다용도 방수 온도계(분리형 온도센서)**



- \* Unique Design of Probe Changeable Unit.
- \* 1 Second Normal Temperature Sensing Time.
- \* Supplied with Longer and Broader (280mm × φ5mm) Probe Together.
- \* Waterproof Function : IP 67.
- \* Rubber Coated Housing and Hanger.
- \* Flexible for Multi Usage.
- \* CE Approval.

**Specifications & Ordering information**

Spec.	Model	A1.T9304C
Measurement Range		$-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ or $-58^{\circ}\text{F} \sim +572^{\circ}\text{F}$
Resolution		$0.1^{\circ}$ for $-19.9^{\circ} \sim +199.9^{\circ}$ , Otherwise $1^{\circ}$
Accuracy		$\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$ In the Range of $-30^{\circ}\text{C} \sim +250^{\circ}\text{C}$ or $-22^{\circ}\text{F} \sim +482^{\circ}\text{F}$ , Otherwise more than $\pm 2.0^{\circ}\text{C}$ or $\pm 4^{\circ}\text{F}$
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$
Weight (g) / Color / Waterproof		275 / Grey · Yellow, IP 67
Battery / Package		1 × 1.5Volts "A76" Size (LR44, g13) or Equivalent / White Box
Sensor Type		NTC-Probe : od. φ6 × L275mm(with Connection 325mm)
Dimension		59 × 127 × 22 mm (LCD Size : 39 × 35 mm)
Cat. No. & Price ₩	A1.T9304C	Ea

**DAIHAN-brand® Waterproof / Handy Multi-Thermometer, with Adjustable Hanger & NTC-Probe,  $-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$**  NEW  
with Jumbo LCD, Max/Min, High- / Low-Alarm, Jumbo LCD,  $0.1/1.0^{\circ}\text{C}$  Divi., **포켓형 디지털 방수 온도계(조절 가능 행거)**



- \* Designed for Comprehensive of Use.
- \* Rubber Coated Adjustable Hanger.
- \* Press Button Membrane Keypad Function and Display.
- \* Alarm Beeps when Temperature Reaches/ Beyond the Pre-Set Unit.
- \* 1 Second Normal Temp. Sensing Time.
- \* Jumbo LCD Display with Digit Height 18mm.

**Specifications & Ordering information**

Spec.	Model	A1.T9314C
Measurement Range		$-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ or $-58^{\circ}\text{F} \sim +572^{\circ}\text{F}$
Resolution		$0.1^{\circ}$ for $-19.9^{\circ} \sim +199.9^{\circ}$ , Otherwise $1^{\circ}$
Accuracy		$\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$ In the Range of $-30^{\circ}\text{C} \sim +250^{\circ}\text{C}$ or $-22^{\circ}\text{F} \sim +482^{\circ}\text{F}$ , Otherwise more than $\pm 2.0^{\circ}\text{C}$ or $\pm 4^{\circ}\text{F}$
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$
Battery / Package / Waterproof		1 × 1.5V "A67" Size(LR44, G13) or Equivalent / Sliding Blister with Print Card, IP 67
Sensor Type		NTC-Probe : od. φ4 × L115mm
Dimension & Weight		210 × 53 × 18 mm (LCD Size : 32 × 30 mm) , 70g
Cat. No. & Price ₩	A1.T9314C	Ea

Cat. No	Description	Articles
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**DAIHAN-brand® Waterproof/Handy Corkscrew Heavy-Duty Thermometer, for Frozen Food & Solid** NEW  
 with  $\phi$  8mm Corkscrew NTC-Probe, Protective Sleeve,  $-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ ,  $0.1/1.0^{\circ}\text{C}$  Divi., **나사형 방수 온도계**



- \* Rugged Heavy Duty Design.
- \* CE Approval.
- \* Corkscrew Probe with 8mm Diameter.
- \* Protective Plastic Probe Sleeve with Pocket Clip
- \* 1 Second Normal Temperature Sensing Time.
- \* Waterproof : IP 67.

**Specifications & Ordering information**

Spec.	Model	A1.T9311C
Measurement Range		$-50^{\circ}\text{C} \sim +300^{\circ}\text{C}$ or $-58^{\circ}\text{F} \sim +572^{\circ}\text{F}$
Resolution		$0.1^{\circ}$ for $-19.9^{\circ} \sim +199.9^{\circ}$ , Otherwise $1^{\circ}$
Accuracy		$\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$ In the Range of $-30^{\circ}\text{C} \sim +250^{\circ}\text{C}$ or $-22^{\circ}\text{F} \sim +482^{\circ}\text{F}$ , Otherwise more than $\pm 2.0^{\circ}\text{C}$ or $\pm 4^{\circ}\text{F}$
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$
Weight (g) / Color / Waterproof		75 / Ivory White, IP 67
Battery / Package		$1 \times 1.5$ Volts "A76" Size (LR44, G13) or Equivalent / Sliding Blister with Print Card
Sensor Type		NTC-Probe : $\text{od.} \phi 8 \times \text{L}100\text{mm}$
Dimension		$161 \times 100 \times 30$ mm (LCD Size : $35 \times 11$ mm)
Cat. No. & Price ₩	A1.T9311C	Ea

**Alla® Folding Oven Thermometer, with 1m Stainless Cable & NTC-Probe, Timer/Alarm/Clock, up to  $300^{\circ}\text{C} / 572^{\circ}\text{F}$**  NEW  
 with 1m Stainless Cable & Probe, "Cable-Stay- in Oven",  $1^{\circ}$ - display, "23Hr-59Min-59Sec" Timer, **접이식 오븐 온도계**



- **Supplied by Alla® in France**
  - \* Useable Thermometer Acts as Great Helper in Kitchen.
  - \* Monitoring of Internal Temperature by Probe
  - \* Comprehensive Multi-Functional Device for Temperature and Alarm Checking.
  - \* With Waterproof Probe (IP 67) and Supplied with 1m Stainless-steel Cable
  - \* Battery & Protective Plastic Probe Cap Included
  - \* Magnet at the Back for Easy Attachment
  - \* Maximum Count : 23 : 59 : 59 (Hr : Min : Sec.)
  - \* In Blister Packaging
- Function :** On/Off,  $^{\circ}\text{C}/^{\circ}\text{F}$ , Timer, Clock, Alarm, High/Low Alarm

**Specifications & Ordering information**

Spec.	Model	AL.91000.003F
Measurement Range		$0 \sim +300^{\circ}\text{C}(1^{\circ}) / +32 \sim +572^{\circ}\text{F}$
Resolution		$1^{\circ}$
Accuracy		$\pm 1^{\circ}\text{C} / 1.8^{\circ}\text{F}$ between $0+150^{\circ}\text{C} / 32+302^{\circ}\text{F}$ $\pm 3^{\circ}\text{C} / 5.4^{\circ}\text{F}$ between $150+300^{\circ}\text{C} / 302+572^{\circ}\text{F}$
Battery		$2 \times 1.5$ Volts "AAA" Size
Dimension (mm)		Folding Screen : $125 \times 70 \times 10$ mm (LCD Size : $50 \times 35$ mm) Probe & Cable : $150\text{mm} \times \phi 4\text{mm}$ Probe & $100\text{cm}$ Cable
Cat. No. & Price ₩	AL.91000.003F	Ea

**DAIHAN-brand® Jumbo 2-row display Indoor / Outdoor Digital Thermometer, with NTC-Probe & 3m Cable, Max / Min**  
 with Flip Out Stand / Hanging Hole / Magnet for Attachment,  $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ,  $0.1$  Divi., **실내/외용 디지털 온도계(2열 표시)** NEW



- \* Ideal for Office, Home, Laboratory etc.
- \* Dual Row Display for Easy Reading.
- \* Indoor/Outdoor Temperature Display.
- \* Pocket Size with Large LCD Display.
- \* Flip Out Stand, Hanging Hole and Strong Magnet at the Back for Easy Attachment.
- \* 3 Meters Sensor Wire with Probe for Outdoor Temperature Measurement.
- \* CE Approval.

**Specifications & Ordering information**

Spec.	Model	A1.T9239	A1.T9267D
LCD Size		LCD Size : $30 \times 40$ mm	
Measurement Range		$-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$ or $-58^{\circ}\text{F} \sim +158^{\circ}\text{F}$	
Resolution		$0.1$ for Whole Range	
Accuracy		$\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$ In the Range of $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ or $-4^{\circ}\text{F} \sim +158^{\circ}\text{F}$ Otherwise more than $\pm 1.0^{\circ}\text{C}$ or $\pm 1.8^{\circ}\text{F}$	
Ambient Temperature		$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ or $+32^{\circ}\text{F} \sim +122^{\circ}\text{F}$	
Weight (g) / Color		70(g) / White	82(g) / White
Battery		$1 \times 1.5$ Volts "A76" Size (LR44, G13) or Equivalent	
Dimension		$70 \times 70 \times 17$ mm	$67 \times 65 \times 22$ mm
Cat. No. & Price ₩	A1.T9239	Ea	A1.T9267D Ea

**DAIHAN-brand® HACCP Precise Pt-100 Thermometer with Timer, Max / Min / Evg. -100°C ~ +300°C NEW**  
 Ideal for Foodstuff, with IP 67 Waterproof, 99Points Data Record, Alarm & Temp-Programmable, 0.01 °C/°F, 정밀 백금 센서 온도계



- \* Rigid Housing Design and the Most Accurate Pt100 Probe
- \* Complete Set IP67 Waterproof and Washable in Washing Machine
- \* Green/Red Dual Color Backlight to Indicate Temp. Hazards
- \* Temp. High Alarm Threshold Programmable
- \* °C/°F Switchable
- \* Max./Min./Avg. Reading Display
- \* Hold Function to Freeze Current Reading
- \* Countdown Timer Function Included

Spec.	Model	DH.The5
Measure Range		-100 ~ 300°C
Resolution		0.01°C / 0.01°F
Accuracy		±0.15°C
Temp. Response Time		3 mins
RTD Probe Size (mm)		Length - 150mm Diameter - 3.2mm Handle Length - 100mm, Cable Length - 1100mm
Battery		6 × AAA Battery
Dimension / Weight(g)		169 × 78.3 × h34.4 mm (LCD Size : 54 × 32.5 mm) / 200g
Standard Package		Meter / RTD Probe / Stainless Holder / Battery / Manual
Cat. No. & Price ₩		DH.The3005 <span style="float:right">Set</span>

**DAIHAN-brand® Heat Stroke Prevention WBGT Monitor, Temp / RH% / WBGT / Alarm 65dB NEW**  
 Desktop / Wallmount, Programmable Danger Zone, 0~50°C, 20~90% RH, WBGT 0~60°C, WBGT 모니터



- \* Wet Bulb Globe Temperature Monitor
- \* Checks Dangerous Heat Conditions through WBGT
- \* Temperature Unit °C / °F is Switchable
- \* Max/Min Function to Review Data
- \* Simultaneously Displays Temperature and Humidity
- \* Programmable Danger Zone for Warning Purpose
- \* Audible Beeper and Bright Red LED for Danger Zone Warning
- \* Real Time Display (Hour & Minute, AM/PM)
- \* Battery Low indicator

Spec.	Model	DH.The3
3 × Measuring Range		(1) Temp.: 0 ~ 50°C (Display : -10 ~ 70°C), (2) Humidity : 20 ~ 90%RH (Display : 0 ~ 99.9%RH), (3) WBGT : 0 ~ 60°C
2 × Accuracy		(1) Temp.: ±1°C (2) Humidity : ±5%RH (at 25°C, 10 ~ 90%RH, others ±7%RH)
2 × Resolution		(1) Temp.: 0.1°C/0.1°F, (2) Humidity : 0.1%RH
Temp. Response Time		120 Seconds Typical
Battery		3 × AA Battery
Dimension / Weight(g)		110 × 91 × h30mm(LCD Size : 63 × 70 mm) / ~200g
Standard Package		Meter / Battery / Manual / Paper Box
Cat. No. & Price ₩		DH.The3003 <span style="float:right">Set</span>

**DAIHAN-brand® Specialty Thermometer, Digital Spoon Thermometer & Digital Floating Pool Thermometer, 특수 온도계 NEW**



- CE Approval
- Sensor Type : NTC
- 1 Second Normal Temperature Sensing Time.

**(1) Digital Spoon Thermometer, for Baby/Health-Care, -50°C ~ +110°C, 0.1/1.0°C Division**

- \* Patented
- \* Made of ABS Plastic
- \* Complies with FDA(US)
- \* Ideal for Temp. Measurement of Small amount of Liquid
- \* Streamline Design with Spoon Handle

**(2) Digital Floating Pool Thermometer, Waterproof IP67, 0°C ~ +50°C, 0.1 Division**

- \* Floating On Water
- \* Supplied with 3m Nylon Cord with Magnetic Switch to Activate the Unit
- \* Ideal for Pool, Water tank, Aquarium
- \* Top Scale Reading without Hand Wetting



Spec.	Model	(1) Digital Spoon Thermometer	(2) Digital Floating Pool Thermometer
Measurement Range		-50°C ~ +110°C or -58°F ~ +230°F	0°C ~ +50°C or +32°F ~ +122°F
Resolution		0.1° for -19.9° ~ +199.9°, Otherwise 1°	0.1° for Whole Range
Accuracy		±1.0°C or ±1.8°F In the Range of 30°C ~ +110°C or -22°F ~ +230°F, Otherwise more than ±2.0°C or ±4°F	±1.0°C or ±1.8°F for Whole Range
Ambient Temperature		0°C ~ +50°C or +32°F ~ +122°F	0°C ~ +50°C or +32°F ~ +122°F
Weight (g) / Color		25g / Yellow or Pink, NTC	45g / Light Blue
Battery		1 × 1.5Volts "A76" Size (LR44, G13) or Equivalent	1 × 1.5Volts "AAA" Size or Equivalent
Dimension		175 × 22 × 13mm (LCD Size : 26 × 8 mm)	235 × 142 × 142mm (LCD Size : 71 × 29 mm)
Cat. No. & Price ₩		A1.T9220Y ; Yellow <span style="float:right">Ea</span> A1.T9220P ; Pink <span style="float:right">Ea</span>	A1.T9257 <span style="float:right">Ea</span>

(2) Digital Floating Pool Thermometer

**Wisdom Professional Melting Point Analyzer "MP360D", Up to +300°C ±0.5°C, Two Heating Speeds NEW**  
 Simultaneous Measurement of 2 Samples, Internal Cooling Fan, 용점 측정기, 2 샘플 동시측정, 급속 냉각



Professional Melting Point Analyzer

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- Excellent for the most General Lab Sample Melting Point Applications
- Simultaneous Measurement of Two Samples
- Broader and Clear View with : the Internal LED Light, the Magnified Lens, the Second Internal Display, the Second Internal Display, and the Inclination given by the Hind Legs
- Internal Fan for Rapid Cooling after Measurement
- External Manual Control for Easy and Immediate Hold Function
- Included Capillary Tubes, Close Type, L100mm, 100pcs
- \* The Heated Rate is Divided into 2 Speeds to Reduce the Viewing Time :
  - The Fast Stage is Set at 10°C below the Known Melting Point of the Sample.
  - The Temp. is kept at the Fast Stage Point and Beeping for the Next Stage.
- \* Ambient Temperature : 5.0 ~ 40°C
- \* Hand Held "READ" Push Button to Quick Response
- \* Data Recording System : 32 Sets of Data
- \* Forced Cooling Reduces Analysis Time.
- \* Inside Block Temperature View
- \* External Printer(Optional) Automatically Print Sample ID, Date and Melting Point.
- \* External Calibration

### Specifications & Ordering information

Spec.	Model	"MP360D"
Temp. Range & Accuracy		Ambient to 300°C, ±0.5°C
Temp. Resolution		0.1°C
Fast Stage Ramp Rate		20°C/min Fixed
Slow Ramp Rate		0.2~10°C/min Adjustable, 0.1°C/min Interval
Cooling Rate		25°C/min
Number of Samples		2
Display		4 Digit with 8 Segments
Heating Power Consumption		75W
Dimensions(w×d×h) & Net Weight		160×220×170mm, 1.8kg
Electrical Reqts.		1 Phase, AC 230V, 50 / 60Hz
Cat. No.		DH.Mel7011
Price, Each. ₩		

### Optional Accessories

DH.Mel621.0028	Capillary Tubes, Open Type, φ 1.0 ~ 1.5, L80mm
DH.Mel621.0030	, L100mm
DH.Mel621.0038	, Close Type, φ 1.0 ~ 1.5, L80mm
DH.Mel621.0040	, L100mm

Pk.	Price, ₩
200Pcs	
200Pcs	
200Pcs	
200Pcs	

DAIHAN-brand® Programmable Ball Mill “BML”, 2-/6- Pots, with Certi. & Traceability with Digital Feedback Control System, Digital LCD, 50~600 rpm, ±5 rpm, 10 Steps 6 Programs  
 디지털/프로그램식 볼밀/자밀, 2구 & 6구용, 정밀형, 속도조절식



(1) 2-Places Programmable Ball Mill “BML-2”

- Made in Korea      ■ CE Certified      ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Grinding / Mixing : Crystalline Chemicals, Inks, Paints, Pigments, Plants, Racks and Soils
- Microprocessor, Programmable, Variable Speed : 50~600 rpm
- Digital Feedback Control and LCD :  
**Speed (RPM), Power Bar-Graph and Timer Status**
- \* Antistatic Rubber Roller : Keeps Jars / Pots Centered
- \* Digital LCD with Back-Light Function
- \* Over Load Protection      \* Ergonomic and Compact Design
- \* NBR Roller with Pot Guide Ring
- \* Programmable Operation : 10 Steps 6 Programs
- \* Storage Function (RPM, Timer)
- \* Soundproof Cabinet for Safety and Minimum Noise (Optional)



(2) 6-Places Programmable Ball Mill “BML-6”

Specifications & Ordering information

Spec.	Model	(1) “BML-2”	(2) “BML-6”
Capacity		2-places, up to 2 pots	6-places, up to 6 pots
Motor		DC 40W Geared Motor (5 : 1 ratio)	DC 100W Geared Motor (5 : 1 ratio)
Maximum Load		30 kg	60 kg
Speed Range		50 ~ 600 rpm	
Speed Accuracy		± 5 rpm	
Timer		99 hr 59 min (Programmable)	
Display		Digital LCD with Back-Light Function	
Controller		Programmable Digital Feedback Controller with Jog-Shuttle Switch (Turn+Push)	
Program Function		10 Steps, 6 Programs	
Safety Device		Over Load Protector for Motor	
Dimension (w×d×h)	Roller (mm)	50×300	70×800
	External (mm)	620×300×515	1,200×500×795
Packing Size (w×d×h) (mm) & Gross Weight		760×460×700	1,300×620×1,010
		52 kg	115 kg
Power Consumption		40 W	100 W
Electric Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WBM05002	DH.WBM05006
	120V	DH.WBM05102	DH.WBM05106
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 20,000 별도!



Optional Soundproof Cabinet “BMC-6” for 6-Places Programmable Ball Mill “BML-6”

Optional Soundproof Cabinets

\* Designed for Minimizing Noise, and Safety Work

- DH.WBM050102 Soundproof Cabinet, “BMC2”, for 2-places“BML-2”, w1,020×d570×h1,120mm
- DH.WBM050106 Soundproof Cabinet, “BMC6”, for 6-places“BML-6”, w1,600×d770×h1,400mm

Ea.	Price, ₩

Cat. No	Description	Articles
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**Wisdom** Rotated Powder Mill Mixer "Rml300", Dry-type, 300cc, Max 14,000 rpm **NEW**  
 with Automatic Rotating Chamber(15rpm), Stainless-steel Body & SUS440c Blade, PTFE Packing, **회전형 밀 믹서**



Rotated Powder Mill Mixer "Rml300"

- Made in Korea
- PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Laboratory, Pharmaceutical, Chemical, Agriculture, Metal Ribbon, etc.
- Wide Range of Materials Including Rocks, Bone, Ceramic, Glass, Grain, Seed, etc.
- Closed, Dust Tight Crushing & Cutting Sanitary Stainless-steel Chamber(SUS304)
- Included SUS440c Knife Impeller, High strength and hardness Blade
- \* Automatic Rotating Chamber (Max.15rpm) Provides Efficient Grinding :  
 While the Knife is Rotating(Max.14,000rpm), the Rotation of the Chamber itself Moves the Inner Sample up, down, left, and right to Maximize the Mixing Dispersion.
- \* Digital Feedback Control : Steady and Constant Rotating
- \* Digital LCD with Back-Light Function
- \* Safety Sensor to Check Lid Open
- \* Quick and Easy to Clean

Specifications & Ordering information

Spec.	Model	"Rml300"
Capacity / Maximum Load		300cc, $\phi 106 \times h66 / 1.5\text{kg}$
Motor		AC High Frequency Motor(300Hz)
Speed Range	Blade	3000~14000rpm
	Chamber	Max.15rpm
Time		Max. 3min (Repeat 99, after 30sec)
Display		4" Digital LCD with Back-Light Function
Controller		PLC-Inverter Controller
Program Function		10 Recipe Memory
Safety Device		Safety Sensor for Lid Open
Dimensions	Body(mm)	w390 × d520 × h480
	Chamber(mm)	$\phi 163 \times h72$
Weight		Net. 60kg Gross 65kg
Power Consumption		400W
Electrical Reqts.		AC 230V, 60Hz
Cat. No.		<b>DH.Rml7011</b>
Price, Each. ₩		



(1) Standard Blade  $\phi 55\text{mm}$



(2) Standard Blade  $\phi 100\text{mm}$



(3) Round Blade  $\phi 70\text{mm}$



(4) Propeller Blade  $\phi 80\text{mm}$

Spare Accessories Blade

- DH.RmlB1010 (1) Standard Blade, 2-bladed, #440,  $\phi 55\text{mm}$ , "B1010"  
 DH.RmlB1011 (2) ,  $\phi 100\text{mm}$ , "B1011"

Ea.	Price, ₩

Optional Accessories

- DH.RmlB1015 (3) Round Blade, #440,  $\phi 70\text{mm}$ , "B1015"  
 DH.RmlB1016 (4) Propeller Blade, 4-bladed, #304,  $\phi 80\text{mm}$ , "B1016"

Ea.	Price, ₩

**Wisdom Pin Mill & Cutting Mill Common Use "Pml140" & "Cml140"**, Dry type, Max 4600rpm, Output <0.4~1.3mm with Stainless-Steel Body, Powerful 1Phase 3HP Motor, Maximum load 5Kg, Input <10mm, **실험실용 핀밀 & 커팅밀 검증 NEW**



Pin Mill & Cutting Mill, "Pml140"

- Made in Korea    ■ PL(Product Liability) Insurance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Ideal for Chemicals, Pharmaceuticals, Synthetic Resins, Metals, Ceramics, Mining, etc.
  - Extensive Crushing from Granular to Fine Grinding
  - Included 0.5mm Screen Sieve for Output Material
  - Excellent Quality of Output Material due to Low Heat Generated
  - Low Noise
- \* High Strength and Hardness : SUS304 Body/Feeder/Rotor, SUS430 Screen, SS400 Base Frame  
 \* The Raw Material is Diffused together with the Airflow by Rotation, and Crushed by the Impact of the Rotating Plate and the Fixed Plate.  
 \* Adjust the Desired Grinding Particle Size by Replacing the Internal Screen.  
 \* Pulverizing Various Raw Materials by Replacing the Grinding Disk  
 \* Easy to Separate and Assemble      \* Easy to Clean and Maintain      \* Simple Interface  
 \* Include : 4ea × Screen Sieve, 2ea × Screen Frame, 2ea × Filtered collection hopper

Specifications & Ordering information

Spec.	Model	"Pml140" Pin Mill	"Cml140" Cutting Mill
Grinding Disc		Pin type Rotor & Stator 10Ea × Rotor Pin, 17Ea × Stator Pin	Knife type Rotor 8Ea × Cutting Knife
Capacity		5kg(3~10kg/h)	
Hopper Size(w × d × h) / Input Raw Material		120 × 120 × 200 / <10mm	
Screen / Output material Dia.	Include	4ea × 140 / <0.5mm	
	Option	4ea × 60, 80, 100, 180 / <1.3, 0.8, 0.6, 0.4mm	
Speed & Motor	Feeder	25RPM, 40W, DC MOTER	
	Mill & Cutting	4600RPM, 1Phase 3HP	
Body Dia.		φ 165mm	
Dimension & Weight		450 × 550 × h1150, Net. 85kg / Gross. 90kg	
Power Consumption		2.2kW	
Electrical Reqts.		1 Phase, 230V 60Hz	
Cat. No.		DH.Pml7010	DH.Cml7010
Price, Each. ₩			

• Other Specifications are available upon Customer's Request.      ※ 운임 약 ₩ 55,000 별도!



(1) Grinding Disk Rotor



(2) Grinding Disk Stator



(3) Grinding Disk Knife



(4) Screen Sieve

Spare Accessories for Standard Chamber

- DH.PmlR1011 (1) Grinding Disk Rotor, Stainless-steel, "R1011", for "Pml140"
- DH.PmlS1012 (2) Grinding Disk Stator, Stainless-steel, "S1012", for "Pml140"
- DH.CmlK1011 (3) Grinding Disk Knife, Stainless-steel, "K1011", for "Cml140"
- DH.PmlS1018 (4) Screen Sieve 180, Stainless-steel, Output Material Dia.<φ 0.5mm, "S1018", for "Pml140", "Cml140"

Ea. Price, ₩

Optional Accessories

- DH.PmlS1015 (4) Screen Sieve 60, Stainless-steel, Output Material Dia.<φ 1.3mm, "S1015", for "Pml140", "Cml140"
- DH.PmlS1016 (4) Screen Sieve 80, Stainless-steel, Output Material Dia.<φ 0.8mm, "S1016", for "Pml140", "Cml140"
- DH.PmlS1017 (4) Screen Sieve 100, Stainless-steel, Output Material Dia.<φ 0.6mm, "S1017", for "Pml140", "Cml140"
- DH.PmlS1019 (4) Screen Sieve 180, Stainless-steel, Output Material Dia.<φ 0.4mm, "S1019", for "Pml140", "Cml140"

Ea. Price, ₩



# Ovens

**General Purpose, General-type, Forced-air** ..... P. 172~173  
**, Gravity-air** ..... P. 176~177  
**, SMART-type, Forced-air** ..... P. 174~175  
**, Gravity-air** ..... P. 178~179

**High Clean Air** ..... P. 180

**Industrial/Large-capacity** ..... P. 181

**Vacuum, General-type** ..... P. 183  
**, SMART-type** ..... P. 184  
**, Vacuum Pumps** ..... P. 185



Ovens, Forced-air  
"ThermoStable™ OF-105"



Ovens, Gravity-air  
"ThermoStable™ SON-105"



Vacuum Oven  
"ThermoStable™ OV-70"



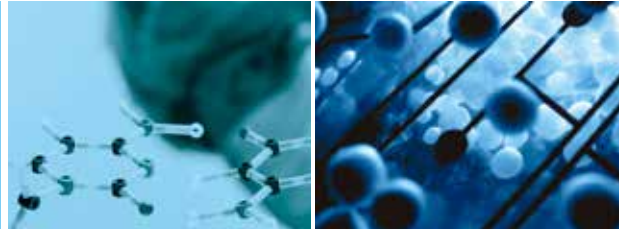
Hi-clean Air Oven  
"ThermoStable™ WOC-560"



Industrial Oven  
"ThermoStable™ WOF-L1000"

Innovative Technology to Improve the Quality of Human Life

## Features of DAIHAN Ovens



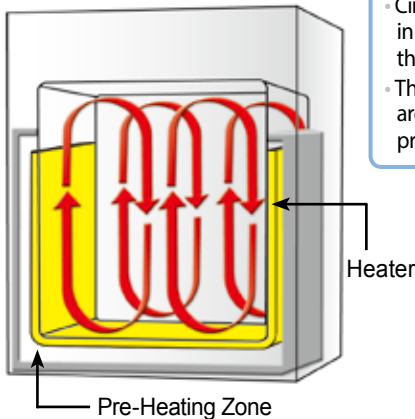
### High Performance Heating Mechanism of DAIHAN accomplishing world's best temperature accuracy and uniformity

The new types of Oven of DAIHAN are outfitted with high performance heating mechanism that is optimized respectively for capacity of chamber, power of heating element and air circulation type (Gravity Convection or Forced Convection).

The temperature displayed on the controller is accurately consistent with the actual temperature in the very center of the chamber or the average temperature in the entire area of the chamber, which maintains precisely within fluctuation specification. In addition, the temperature in the entire area of the chamber shows a very high stability keeping within a very slight variation specification in terms of temperature uniformity. Simultaneously, through the optimization of Fuzzy-PID controller, the 'heat-up time' to reach the Set Temperature after operating and the 'recovery time' to get back to the set temperature after opening and closing of the door are very short.

The newly developed high performance heating mechanism has achieved high degree of temperature accuracy and uniformity in the chamber. This is achieved by the heating elements installed on three sides - that is, the left, right and bottom parts of a chamber - which directly heat the stainless-steel chamber. This either enhances its material thermal conductivity to maximum (in case of the Incubator) or the heated air from the pre-heating zone in air-jacket type that is built in the three sides outside a chamber circulates first (in case of the Oven).

#### » Oven

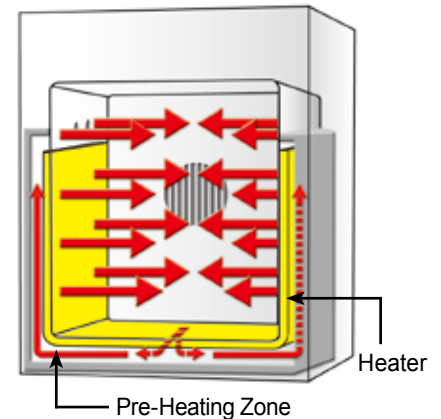


##### Gravity-air

- Circulation is made by heating elements that first heat the air in the pre-heating zone which surrounds the three sides of the chamber.
- The effects of both three-side heating and gravity convection are to be maximized via providing the heated air from the preheating zone restrictively into the chamber.

##### Forced-air

- The same three-side heating elements and pre-heating zone as Gravity Air-Flow model.
- The strong fan installed in the back of the chamber sucks the air inside the chamber, which is provided to the pre-heating zone, while the heated air is uniformly and quickly provided into the chamber through its specially designed side and bottom structure.



### ■ High Performance Heating Mechanism

The world's best performance and quality coming true via innovative heating mechanism !!

#### » Minimum

##### Fluctuation !

Minimization of Fluctuation in Temperature

##### Variation !

Minimization of spatial variation in temperature inside the chamber

##### Heat-up Time !

Minimization of reaching the set temperature

##### Overshoot !

Minimization of overshooting at the time of reaching the set temperature

#### » Perfect Door Lock by Double Latch

The up-and-down double latch structure pushes the door as closely to the chamber as possible, which leads to the minimization of temperature interference inside the chamber by the outside air.

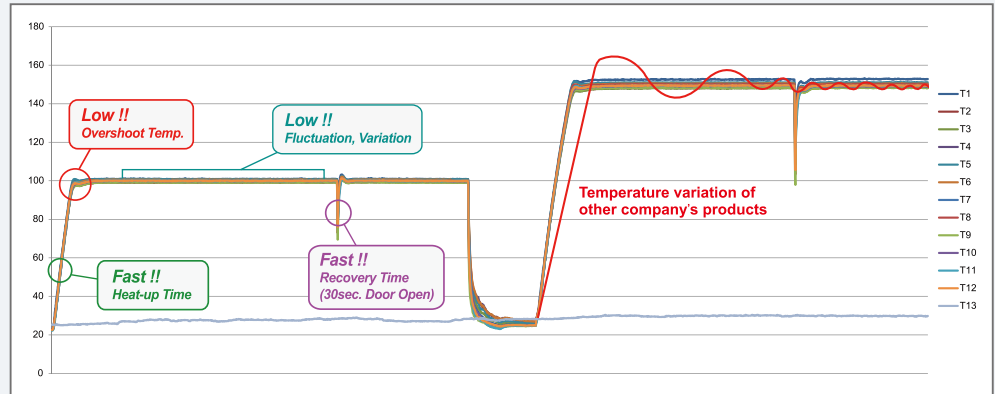
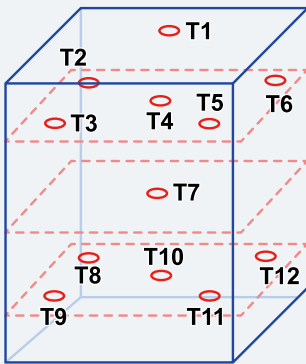


The structure allows the door to adhere firmly and closely to the chamber on both upper and lower sides in a balanced way

- High-performance thermal insulation
- Minimization of thermal losses from heat leak inside the chamber
- Enhancement of temperature accuracy and uniformity

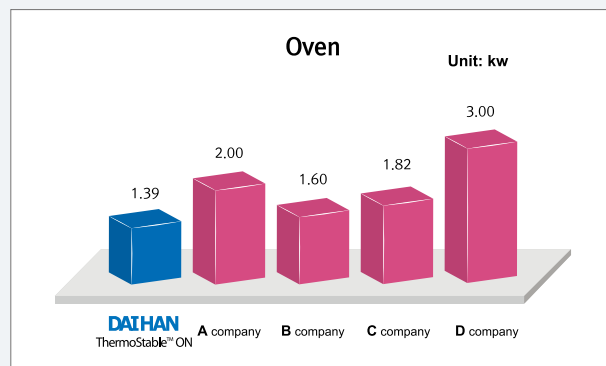
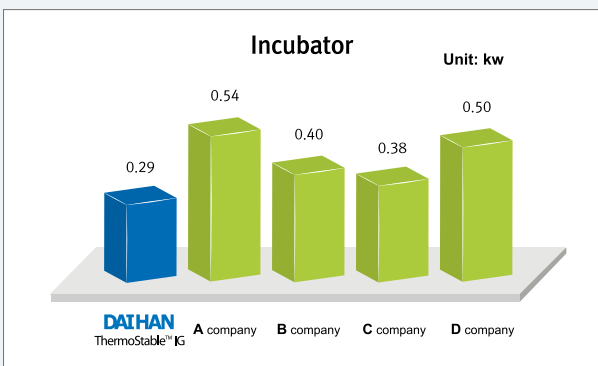
## » Temperature Uniformity Completely Tested by ASTM Standards

All the units supplied by DAIHAN Scientific are thoroughly tested, using 12 temperature sensors and the latest instruments to obtain validation, which corresponds to international standards. That is, Fluctuation and Variation (Uniformity) standards described in catalogues are actually guaranteed as the same.



## » Green Product

This is an environment-friendly product that achieves minimum power consumption by using heating element consuming minimum power for the capacity and temperature of the chamber, high-quality insulator and insulation structure, and complete door structure that guarantees shielding.



## » New Jog-Dial Controller (OF, ON models)

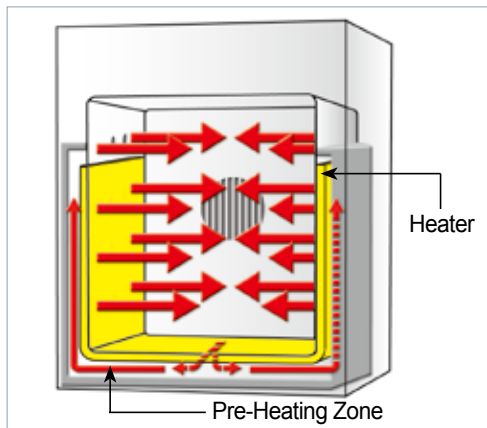


- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.

DAIHAN-brand® Forced-air Ovens "ThermoStable™ OF", 3-Side Heating Zone, 50-/105-/155-/305-Lit, up to 250°C, ±0.3°C with Wire Shelves/Digital PID Control/Jog-Dial & Push Button/Digital LCD/Back-light LCD/Pre-Heating Zone/Certi. & Traceability  
 강제 순환식 정밀 건조기/오븐, 고정밀 디지털 퍼지 제어, 우수한 온도 정확성/균일성



(1) Standard Model, "ThermoStable™ OF-105"



**3-Side Heating Zone Forced-air Mechanism :**  
 The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism  
 (Exclude OF-305, OF-W305)



Perfect Door Lock by Double Latch

- Made in Korea    ■ CE / UL / CUL Certified(Exclude 305 Lit.-model)
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - 3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
  - Digital PID Control System Implementing Superior Temperature Accuracy
  - Optimized Air Flow by Forced-air Mechanism
  - Patented Jog-Dial Control System
  - GD(Good Design)-mark    ■ PL(Product Liability) Insurance
- \* Suitable for Drying, Baking, Conditioning, Curing, Pre-Heating and Aging
  - \* The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism: 3-Side Heating
  - \* New Jog-Dial with Push Button    \* Compact New Body Design
  - \* 2~3ea of Stainless-steel Wire Shelves Included    \* Alarm Function : Error status and Timer-end
  - \* RS232C Interface for Monitoring and Controlling with PC
  - \* Ambient +5°C to 250°C Range with Fluctuation of ±0.3°C at 100°C
  - \* Storage Function of Temperature and Timer setting values
  - \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
  - \* Corrosion Resistant 304 Stainless-steel Chamber
  - \* Over Temperature & Over Current Protection, Sensor Error Detection

Specification

Spec.	Model	(1) Standard Model			
		ThermoStable OF-50	ThermoStable OF-105	ThermoStable OF-155	ThermoStable OF-305
			(2) Window Model		
		ThermoStable OF-W105	ThermoStable OF-W155	ThermoStable OF-W305	
Capacity	50Lit	105Lit	155Lit	305Lit	
Dimension (w×d×h)	Interior (mm)	370×345×420	485×415×535	550×480×600	550×470×1,180
	Exterior (mm)	518×647×724	653×712×882	718×777×947	721×777×1,619
Heater Power	650 W	1.4 kW	1.6 kW	3.4 kW	
Temp.	Range	Room Temp +5°C to 250°C			
	Fluctuation	±0.3°C at 100°C, ±0.5°C at 150°C			
	Variation	±1°C at 100°C, ±1.8°C at 150°C		±1°C at 100°C, ±2°C at 150°C	
	Sensor	PT 100			
Control Resolution	±0.1°C				
Heat-up Time	25 min. to 100°C, 45 min. to 150°C		25 min. to 100°C, 40 min. to 150°C		
	Recovery Time (Door open 30sec)	8 min. to 100°C, 8 min. to 150°C	6 min. to 100°C, 6 min. to 150°C		
Controller	Digital PID Control by Advanced Microprocessor Jog-Dial with Push Button				
RS232 Port	Available to connect with PC				
Display	Digital LCD with Back Light				
Timer	99hr 59 min (delay/continuous function)				
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel			
	Insulation	Glass Wool			
Shelves	2ea of Stainless-steel Wire Shelves included, Load per Shelf : 16 kg				
Ventilation	Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm				
	1ea	2ea	3ea		
Circulation	Forced-air Type				
Safety device	Over Temp. and Over Current Protector, Sensor Error Detector				
Others	UL/CUL Certified, CE Certified, GD-mark, Storage Function (Temp. and Time) Locking Mode (Jog-Dial Input Disabled), Alarm (Error Status and Timer-end)				
Net Weight (kg)	44	69	78	159	
Packing Size (w×d×h)(mm)	622×754×807	743×819×1,068	808×884×1,133	1,000×1,000×1,870	
Shipping Weight (kg)	59	79	92	219	
Power Consumption	674 W	1390 W	1566 W	3200 W	
Energy Consumption, at 100°C	117 Wh	187 Wh	204 Wh	-	
	, at 150°C	230 Wh	337 Wh	398 Wh	
Electric Reqts.	120V, 60Hz or 230V, 50/60Hz				

\* Other Specifications are available upon Customer's Request.

<Continued On Next Page>

Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Forced-air Ovens "ThermoStable™ OF">

### Ordering Information

※ 운임 약 ₩ 25,000 별도!

#### (1) Standard Model, Forced-air, with Wire Shelves

DH.WOF05050	Oven, Standard, 230V, 50 Lit, "ThermoStable OF-50"	Ea. Price, ₩
DH.WOF05105	, 105 Lit, "ThermoStable OF-105"	
DH.WOF05155	, 155 Lit, "ThermoStable OF-155"	
DH.WOF05305	, 305 Lit, "ThermoStable OF-305"	
DH.WOF06050	Oven, Standard, 120V, 50 Lit, "ThermoStable OF-50"	
DH.WOF06105	, 105 Lit, "ThermoStable OF-105"	
DH.WOF06155	, 155 Lit, "ThermoStable OF-155"	
DH.WOF06305	, 305 Lit, "ThermoStable OF-305"	

#### (2) Built in Viewing Window Model, Forced-air, with Wire Shelves

DH.WOF07105	Oven, Window, 230V, 105 Lit, "ThermoStable OF-W105"	Ea. Price, ₩
DH.WOF07155	, 155 Lit, "ThermoStable OF-W155"	
DH.WOF07305	, 305 Lit, "ThermoStable OF-W305"	
DH.WOF08105	Oven, Window, 120V, 105 Lit, "ThermoStable OF-W105"	
DH.WOF08155	, 155 Lit, "ThermoStable OF-W155"	
DH.WOF08305	, 305 Lit, "ThermoStable OF-W305"	

#### Spare Stainless-steel Wire Shelves

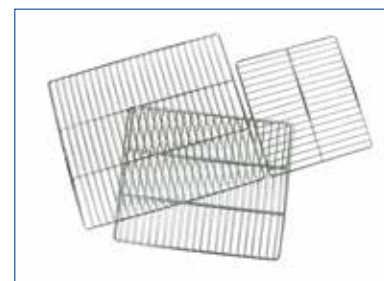
DH.WOF11050	Wire Shelf, for 50 Lit, "OFS050", w340×d310mm	Ea. Price, ₩
DH.WOF11105	, for 105 Lit, "OFS105", w455×d375mm	
DH.WOF11155	, for 155-/305-Lit, "OFS155", w520×d440mm	

#### Forced-air Oven with Validation (IQ, OQ) Service

DH.WOF31050	Validation Service(IQ, OQ), with "ThermoStable OF-50", "OFV1050"	Ea. Price, ₩
DH.WOF31105	Validation Service(IQ, OQ), with "ThermoStable OF-105", "OFV1105"	
DH.WOF31155	Validation Service(IQ, OQ), with "ThermoStable OF-155", "OFV1155"	
DH.WOF31305	Validation Service(IQ, OQ), with "ThermoStable OF-305", "OFV1305"	
DH.WOF32105	Validation Service(IQ, OQ), with "ThermoStable OF-W105", "OFV2105"	
DH.WOF32155	Validation Service(IQ, OQ), with "ThermoStable OF-W155", "OFV2155"	
DH.WOF32305	Validation Service(IQ, OQ), with "ThermoStable OF-W155", "OFV2305"	



(2) Window Model, "ThermoStable OF-W105"



Stainless-steel Wire Shelves (Included)



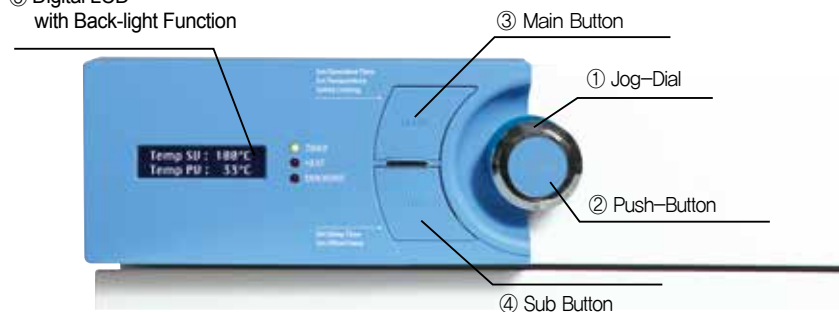
#### WiseRemote Control Software :

Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall

## » New Jog-Dial Controller

⑤ Digital LCD with Back-light Function



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.

DAIHAN-brand<sup>®</sup> SMART Forced-air Ovens “ThermoStable™ SOF”, 3-Side Heating Zone, 50-/105-/155-/305-Lit with Smart-Lab™ Controller, 4” Full Touch Screen/Fuzzy-PID Control/WiRe™ Service/Certi. & Traceability, up to 250℃, ±0.3℃ 스마트 강제 순환식 정밀 건조기/오븐, 우수한 온도 정확성/균일성, WiRe™서비스, 4인치 풀터치스크린 조절기



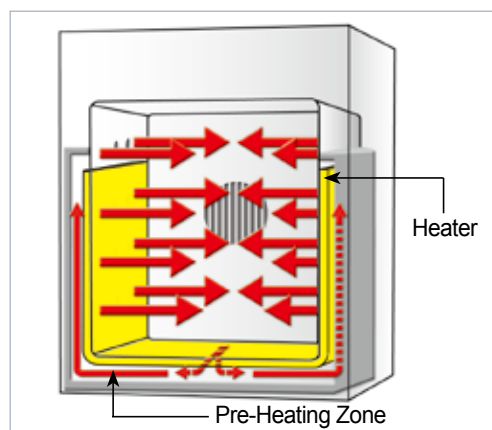
(1) Standard Model, “ThermoStable™ SOF-105”

- Made in Korea      ■ CE / UL / CUL Certified(Exclude 305 Lit.-model)
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - 3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
  - Digital Fuzzy Control System Implementing Superior Temperature Accuracy
  - Smart-Lab™ Controller      ■ Optimized Air Flow by Forced-air Mechanism
  - GD(Good Design)-mark      ■ PL(Product Liability) Insurance
- \* Suitable for Drying, Baking, Conditioning, Curing, Pre-Heating and Aging
  - \* The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism : 3 Side-Heating
  - \* Ergonomic Design 4” Full Touch Screen TFT LCD(Smart-Lab™ Controller)
  - \* WiRe™ App Service.      \* Automatic Data Recording
  - \* Self-Diagnostic Function      \* Compact New Body Design
  - \* Variable Program Setting for Multiple Patterns with Multiple Segments
  - \* Internet Connectivity with WiFi      \* Controller SW can be upgraded through USB port.
  - \* The Recorded Data could be transferred to PC by USB memory
  - \* 2~3ea of Stainless-steel Wire Shelves Included
  - \* RS232C Interface for Monitoring and Controlling with PC
  - \* Ambient to 250℃ of Temp. Range, Fluctuation of ±0.3℃ at 100℃
  - \* Corrosion Resistant 304 Stainless-steel Chamber
  - \* Over Temperature & Over Current Protection, Sensor Error Detection

Specification

Spec.	Model	(1) Standard Model			
		ThermoStable SOF-50	ThermoStable SOF-105	ThermoStable SOF-155	ThermoStable SOF-305
			(2) Window Model		
		ThermoStable SOF-W105	ThermoStable SOF-W155	ThermoStable SOF-W305	
Capacity	50Lit	105Lit	155Lit	305Lit	
Dimension (w×d×h)	Interior (mm)	370×345×420	485×415×535	550×480×600	550×470×1,180
	Exterior (mm)	518×647×724	653×712×882	718×777×947	721×777×1,619
Heater Power	650 W	1.4 kW	1.6 kW	3.4 kW	
Temp.	Range	Room Temp +5℃ to 250℃			
	Fluctuation	±0.3℃ at 100℃, ±0.5℃ at 150℃			
	Variation	±1℃ at 100℃, ±1.8℃ at 150℃		±1℃ at 100℃, ±2℃ at 150℃	
	Sensor	PT 100			
Control Resolution	±0.1℃				
Heat-up Time	25 min. to 100℃, 45 min. to 150℃		25 min. to 100℃, 40 min. to 150℃		
	Recovery Time (Door open 30sec)	8 min. to 100℃, 8 min. to 150℃	6 min. to 100℃, 6 min. to 150℃		
Controller	Smart-Lab™ Controller				
RS232 Port	Available to connect with PC				
Display	4” Full Touch Screen TFT LCD				
Timer	99hr 59 min (delay/continuous function)				
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel			
	Insulation	Glass Wool			
Shelves	2ea of Stainless-steel Wire Shelves included, Load per Shelf : 16 kg				
Ventilation	Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm				
	1ea	2ea	3ea		
Circulation	Forced-air Type				
Safety device	Over Temp. and Over Current Protector, Sensor Error Detector				
Others	UL/CUL Certified, CE Certified, GD-mark Storage Function (Temp. and Time), Alarm (Error Status and Timer-end)				
Net Weight (kg)	44	69	78	159	
Packing Size (w×d×h)(mm)	622×754×807	743×819×1,068	808×884×1,133	1,000×1,000×1,870	
Shipping Weight (kg)	59	79	92	219	
Power Consumption	674 W	1390 W	1566 W	3200 W	
Energy Consumption, at 100℃, at 150℃	117 Wh	187 Wh	204 Wh	-	
	230 Wh	337 Wh	398 Wh	-	
Electric Reqts.	120V, 60Hz or 230V, 50/60Hz				

\* Other Specifications are available upon Customer's Request.



3-Side Heating Zone Forced-air Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism (Exclude SOF-305, SOF-W305)



Perfect Door Lock by Double Latch

<Continued On Next Page>

Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® SMART Forced-air Ovens "ThermoStable™ SOF">

Ordering Information

※ 운임 약 ₩ 25,000 별도!

(1) Standard Model, Forced-air, with Wire Shelves

DH.SWOF05050	Oven, Standard, 230V, 50 Lit, "ThermoStable SOF-50"
DH.SWOF05105	, 105 Lit, "ThermoStable SOF-105"
DH.SWOF05155	, 155 Lit, "ThermoStable SOF-155"
DH.SWOF05305	, 305 Lit, "ThermoStable SOF-305"
DH.SWOF06050	Oven, Standard, 120V, 50 Lit, "ThermoStable SOF-50"
DH.SWOF06105	, 105 Lit, "ThermoStable SOF-105"
DH.SWOF06155	, 155 Lit, "ThermoStable SOF-155"
DH.SWOF06305	, 305 Lit, "ThermoStable SOF-305"

Ea. Price, ₩

(2) Built in Viewing Window Model, Forced-air, with Wire Shelves

DH.SWOF07105	Oven, Window, 230V, 105 Lit, "ThermoStable SOF-W105"
DH.SWOF07155	, 155 Lit, "ThermoStable SOF-W155"
DH.SWOF07305	, 305 Lit, "ThermoStable SOF-W305"
DH.SWOF08105	Oven, Window, 120V, 105 Lit, "ThermoStable SOF-W105"
DH.SWOF08155	, 155 Lit, "ThermoStable SOF-W155"
DH.SWOF08305	, 305 Lit, "ThermoStable SOF-W305"

Ea. Price, ₩

Spare Stainless-steel Wire Shelves

DH.WOF11050	Wire Shelf, for 50 Lit, "OFS050", w340×d310mm
DH.WOF11105	, for 105 Lit, "OFS105", w455×d375mm
DH.WOF11155	, for 155-/305-Lit, "OFS155", w520×d440mm

Ea. Price, ₩

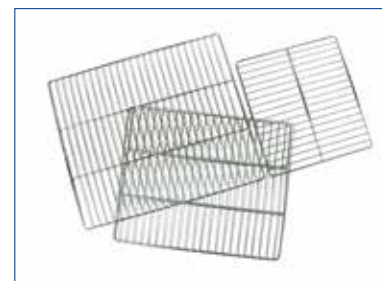
Forced-air Oven with Validation (IQ, OQ) Service

DH.SWOF31050	Validation Service(IQ, OQ), with "SOF-50", "SOFV1050"
DH.SWOF31105	, with "SOF-105", "SOFV1105"
DH.SWOF31155	, with "SOF-155", "SOFV1155"
DH.SWOF31305	, with "SOF-305", "SOFV1305"
DH.SWOF32105	Validation Service(IQ, OQ), with "SOF-W105", "SOFV2105"
DH.SWOF32155	, with "SOF-W155", "SOFV2155"
DH.SWOF32305	, with "SOF-W305", "SOFV2305"

Ea. Price, ₩



(2) Window Model, "ThermoStable SOF-W105"



Stainless-steel Wire Shelves (Included)

» DAIHAN WiRe™ App Service



4" Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

Controlled by Smart-Phone

DAIHAN-brand® Gravity-air Ovens "ThermoStable™ ON", 3-Side Heating Zone, 32-/50-/105-/155 Lit with 2 × Wire Shelves/Digital PID Control/Jog-Dial & Push Button, Digital LCD/Back-light, up to 230 °C, ± 0.5 °C 자연 대류식 정밀 건조기/오븐, 고정밀 디지털 퍼지 제어, 우수한 온도 정확성, with Certi. & Traceability



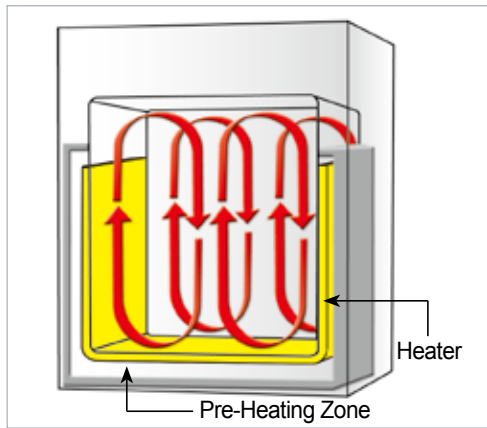
(1) Standard Model, "ThermoStable™ ON-105"

- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- 3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Digital PID Control System Implementing Superior Temperature Accuracy
- Optimized Air Flow by Gravity-air Mechanism
- Patented Jog-Dial Control System
- GD(Good Design)-mark
- PL(Product Liability) Insurance
- \* Suitable for Drying, Baking, Conditioning, Curing, Pre-Heating and Aging
- \* The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism : 3-Side Heating
- \* New Jog-Dial with Push Button
- \* Compact New Body Design
- \* 2 ea of Stainless-steel Wire Shelves Included
- \* Alarm Function : Error status and Timer-end
- \* RS232C Interface for Monitoring and Controlling with PC
- \* Ambient +5 °C to 230 °C Range with Fluctuation of ± 0.5 °C at 100 °C
- \* Storage Function of Temperature and Timer setting values
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
- \* Corrosion Resistant 304 Stainless-steel Chamber
- \* Over Temperature & Over Current Protection, Sensor Error Detection

Specification

Spec.	Model	(1) Standard Model			
		ON-32	ON-50	ON-105	ON-155
				(2) Window Model	
		ON-W105	ON-W155		
Capacity		32Lit	50Lit	105Lit	155Lit
Dimension (w × d × h)	Interior (mm)	310 × 290 × 360	370 × 350 × 420	485 × 409 × 535	550 × 474 × 600
	Exterior (mm)	458 × 557 × 664	518 × 647 × 724	653 × 712 × 882	718 × 777 × 947
Heater Power		500 W	650 W	1.4 kW	1.6 kW
Temp.	Range	Room Temp +5 °C to 230 °C			
	Fluctuation	± 0.5 °C at 100 °C, ± 0.6 °C at 150 °C			± 0.5 °C at 100 °C, ± 0.8 °C at 150 °C
	Variation	± 1.2 °C at 100 °C, ± 2.2 °C at 150 °C			
	Sensor	PT 100			
Control Resolution		± 0.1 °C			
Heat-up Time		30 min. to 100 °C, 43 min. to 150 °C	30 min. to 100 °C, 45 min. to 150 °C	35 min. to 100 °C, 50 min. to 150 °C	
	Recovery Time (Door open 30sec)	8 min. to 100 °C, 10 min. to 150 °C		10 min. to 100 °C, 12 min. to 150 °C	
Controller		Digital PID Control by Advanced Microprocessor Jog-Dial with Push Button			
RS232 Port		Available to connect with PC			
Display		Digital LCD with Back Light			
Timer		99hr 59 min (delay/continuous function)			
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel			
	Insulation	Glass Wool			
Shelves		2ea of Stainless-steel Wire Shelves included, Load per Shelf : 16 kg			
Ventilation		Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm			
		1ea	2ea		
Circulation		Gravity-air Type			
Safety device		Over Temp. and Over Current Protector, Sensor Error Detector			
Others		UL/CUL Certified, CE Certified, GD-mark			
		Storage Function (Temp. and Time)			
		Locking Mode (Jog-Dial Input Disabled)			
		Alarm (Error Status and Timer-end)			
Net Weight (kg)		36	44	69	78
Packing Size (w × d × h) (mm)		562 × 664 × 747	622 × 754 × 807	743 × 819 × 1,068	808 × 884 × 1,133
Shipping Weight (kg)		43	59	79	92
Power Consumption		502 W	674 W	1390 W	1566 W
Energy Consumption, at 100 °C, at 150 °C		90 Wh	117 Wh	187 Wh	204 Wh
		181 Wh	230 Wh	337 Wh	398 Wh
Electric Reqts.		120V, 60Hz or 230V, 50/60Hz			

\* Other Specifications are available upon Customer's Request.



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism (Gravity-air Mechanism)



Perfect Door Lock by Double Latch

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® Gravity-air Ovens "ThermoStable™ ON">

### Ordering Information

※ 운임 약 ₩ 25,000 별도!

#### (1) Standard Model, Gravity-air, with Wire Shelves

Model	Capacity	Voltage	Temperature Range
DH.WON05032	32 Lit.	230V	"ThermoStable ON-32"
DH.WON05050	50 Lit.	230V	"ThermoStable ON-50"
DH.WON05105	105 Lit.	230V	"ThermoStable ON-105"
DH.WON05155	155 Lit.	230V	"ThermoStable ON-155"
DH.WON06032	32 Lit.	120V	"ThermoStable ON-32"
DH.WON06050	50 Lit.	120V	"ThermoStable ON-50"
DH.WON06105	105 Lit.	120V	"ThermoStable ON-105"
DH.WON06155	155 Lit.	120V	"ThermoStable ON-155"

Ea. Price, ₩

#### (2) Built in Viewing Window Model, Gravity-air, with Wire Shelves

Model	Capacity	Voltage	Temperature Range
DH.WON07105	105 Lit.	230V	"ThermoStable ON-W105"
DH.WON07155	155 Lit.	230V	"ThermoStable ON-W155"
DH.WON08105	105 Lit.	120V	"ThermoStable ON-W105"
DH.WON08155	155 Lit.	120V	"ThermoStable ON-W155"

Ea. Price, ₩

#### Spare Stainless-steel Wire Shelves

Model	Capacity	Dimensions
DH.WON11032	32 Lit.	"ONS032", w280 × d280mm
DH.WON11050	50 Lit.	"ONS050", w340 × d310mm
DH.WON11105	105 Lit.	"ONS105", w455 × d375mm
DH.WON11155	155 Lit.	"ONS155", w520 × d440mm

Ea. Price, ₩

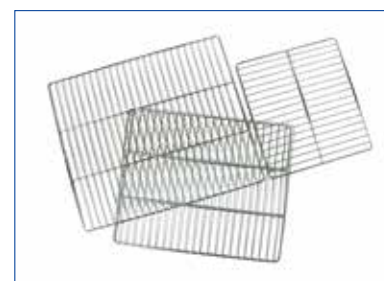
#### Gravity-air Oven with Validation (IQ, OQ) Service

Model	Capacity	Temperature Range
DH.WON31032	32 Lit.	"ON-32", "ONV1032"
DH.WON31050	50 Lit.	"ON-50", "ONV1050"
DH.WON31105	105 Lit.	"ON-105", "ONV1105"
DH.WON31155	155 Lit.	"ON-155", "ONV1155"
DH.WON32105	105 Lit.	"ON-W105", "ONV2105"
DH.WON32155	155 Lit.	"ON-W155", "ONV2155"

Ea. Price, ₩



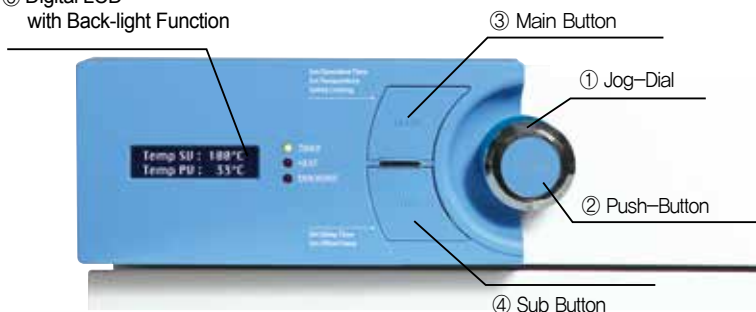
(2) Window Model, "ThermoStable ON-W105"



Stainless-steel Wire Shelves  
(Included)

## » New Jog-Dial Controller

⑤ Digital LCD with Back-light Function



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.



#### WiseRemote Control Software :

Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall

DAIHAN-brand<sup>®</sup> SMART Gravity-air Ovens “ThermoStable™ SON”, 3-Side Heating Zone, 32-/50-/105-/155 Lit with Smart-Lab™ Controller, 4” Full Touch Screen, Fuzzy-PID Control, WiRe™ Service, with Certi. & Traceability, up to 230 °C, ±0.5 °C 스마트 자연 대류식 정밀 건조기/오븐, 우수한 온도 정확성/균일성, WiRe™서비스, 4인치 풀터치스크린 조절기



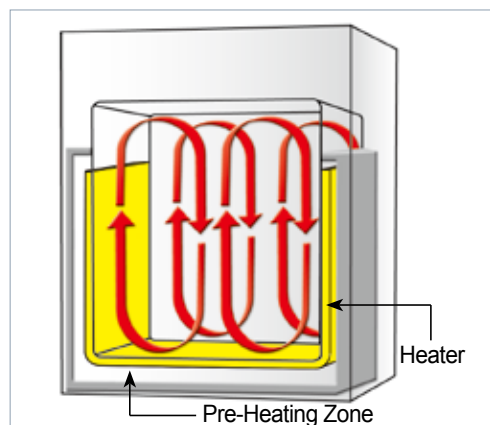
(1) Standard Model, “ThermoStable™ SON-105”

- Made in Korea
  - UL / CUL Certified
  - CE Certified
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - 3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
  - Digital Fuzzy Control System Implementing Superior Temperature Accuracy
  - Optimized Air Flow by Gravity-air Mechanism
  - Smart-Lab™ Controller
  - GD(Good Design)-mark
  - PL(Product Liability) Insurance
- \* Suitable for Drying, Baking, Conditioning, Curing, Pre-Heating and Aging
  - \* Ergonomic Design 4” Full Touch Screen TFT LCD(Smart-Lab™ Controller)
  - \* WiRe™ App Service.
  - \* Automatic Data Recording
  - \* Self-Diagnostic Function
  - \* Internet Connectivity with WiFi
  - \* Variable Program Setting for Multiple Patterns with Multiple Segments
  - \* The Recorded Data could be transferred to PC by USB memory
  - \* Controller SW can be upgraded through USB port.
  - \* Compact New Body Design
  - \* 2 ea of Stainless-steel Wire Shelves Included
  - \* RS232C Interface for Monitoring and Controlling with PC
  - \* Ambient to 230 °C of Temp. Range, Fluctuation of ±0.5 °C at 100 °C
  - \* Corrosion Resistant 304 Stainless-steel Chamber
  - \* Over Temperature & Over Current Protection, Sensor Error Detection

Specification

Spec.	Model	(1) Standard Model			
		SON-32	SON-50	SON-105	SON-155
				(2) Window Model	
		SON-W105	SON-W155		
Capacity		32Lit	50Lit	105Lit	155Lit
Dimension (w×d×h)	Interior (mm)	310×290×360	370×350×420	485×409×535	550×474×600
	Exterior (mm)	458×557×664	518×647×724	653×712×882	718×777×947
Heater Power		500 W	650 W	1.4 kW	1.6 kW
Temp.	Range	Room Temp +5 °C to 230 °C			
	Fluctuation	± 0.5 °C at 100 °C, ± 0.6 °C at 150 °C			± 0.5 °C at 100 °C, ± 0.8 °C at 150 °C
	Variation	± 1.2 °C at 100 °C, ± 2.2 °C at 150 °C			
	Sensor	PT 100			
Control Resolution		±0.1 °C			
Heat-up Time		30 min. to 100 °C, 43 min. to 150 °C	30 min. to 100 °C, 45 min. to 150 °C	35 min. to 100 °C, 50 min. to 150 °C	
Recovery Time (Door open 30sec)		8 min. to 100 °C, 10 min. to 150 °C		10 min. to 100 °C, 12 min. to 150 °C	
Controller		Smart-Lab™ Controller			
RS232 Port		Available to connect with PC			
Display		4” Full Touch Screen TFT LCD			
Timer		99hr 59 min (delay/continuous function)			
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel			
	Insulation	Glass Wool			
Shelves		2ea of Stainless-steel Wire Shelves included, Load per Shelf : 16 kg			
Ventilation		Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm			
		1ea		2ea	
Circulation		Gravity-air Type			
Safety device		Over Temp. and Over Current Protector, Sensor Error Detector			
Others		UL/CUL Certified, CE Certified, GD-mark			
		Storage Function (Temp. and Time)			
		Locking Mode (Jog-Dial Input Disabled)			
		Alarm (Error Status and Timer-end)			
Net Weight (kg)		36	44	69	78
Packing Size (w×d×h) (mm)		562×664×747	622×754×807	743×819×1,068	808×884×1,133
Shipping Weight (kg)		43	59	79	92
Power Consumption		502 W	674 W	1390 W	1566 W
Energy Consumption, at 100 °C		90 Wh	117 Wh	187 Wh	204 Wh
	, at 150 °C	181 Wh	230 Wh	337 Wh	398 Wh
Electric Reqts.		120V, 60Hz or 230V, 50/60Hz			

\* Other Specifications are available upon Customer's Request.



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism (Gravity-air Mechanism)



Perfect Door Lock by Double Latch

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Cat. No	Description	Articles
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<Continued From...DAIHAN-brand® SMART Gravity-air Ovens "ThermoStable™ SON">

Ordering Information

※ 운임 약 ₩ 25,000 별도!

(1) Standard Model, Gravity-air, with Wire Shelves

DH.SWON05032	Oven, Standard, 230V, 32 Lit, "ThermoStable SON-32"	Ea. Price, ₩
DH.SWON05050	, 50 Lit, "ThermoStable SON-50"	
DH.SWON05105	, 105 Lit, "ThermoStable SON-105"	
DH.SWON05155	, 155 Lit, "ThermoStable SON-155"	
DH.SWON06032	Oven, Standard, 120V, 32 Lit, "ThermoStable SON-32"	
DH.SWON06050	, 50 Lit, "ThermoStable SON-50"	
DH.SWON06105	, 105 Lit, "ThermoStable SON-105"	
DH.SWON06155	, 155 Lit, "ThermoStable SON-155"	

(2) Built in Viewing Window Model, Gravity-air, with Wire Shelves

DH.SWON07105	Oven, Window, 230V, 105 Lit, "ThermoStable SON-W105"	Ea. Price, ₩
DH.SWON07155	, 155 Lit, "ThermoStable SON-W155"	
DH.SWON08105	Oven, Window, 120V, 105 Lit, "ThermoStable SON-W105"	
DH.SWON08155	, 155 Lit, "ThermoStable SON-W155"	

Spare Stainless-steel Wire Shelves

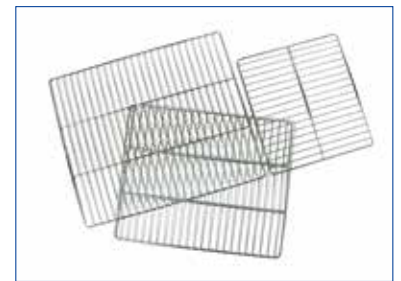
DH.WON11032	Wire Shelf, for 32 Lit, "ONS032", w280×d280mm	Ea. Price, ₩
DH.WON11050	, for 50 Lit, "ONS050", w340×d310mm	
DH.WON11105	, for 105 Lit, "ONS105", w455×d375mm	
DH.WON11155	, for 155 Lit, "ONS155", w520×d440mm	

Gravity-air Oven with Validation (IQ, OQ) Service

DH.SWON31032	Validation Service(IQ, OQ), with "SON-32". "SONV1032"	Ea. Price, ₩
DH.SWON31050	, with "SON-50", "SONV1050"	
DH.SWON31105	, with "SON-105", "SONV1105"	
DH.SWON31155	, with "SON-155", "SONV1155"	
DH.SWON32105	Validation Service(IQ, OQ), with "SON-W105", "SONV2105"	
DH.SWON32155	, with "SON-W155", "SONV2155"	



(2) Window Model, "ThermoStable SON-W105"



Stainless-steel Wire Shelves (Included)

» DAIHAN WiRe™ App Service



4" Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

Controlled by Smart-Phone

“ThermoStable™ WOC” High Clean Air Oven, with Class 100 HEPA Filter, 560-/800- Lit, with Certi. & Traceability with Chrome Coated steel Wire Shelves, Digital Fuzzy Control System, Clean Air Convection Mechanism, up to 250 °C, ± 1.0 °C  
 청정 고온 건조기/오븐, 고정밀 디지털 퍼지 제어, 우수한 청정도



High Clean Air Oven, with HEPA Filter  
 “ThermoStable™ WOC-560”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Specially Designed Clean Air Convection Mechanism Provides Dynamic Air Flow for Exhaust of Contaminated Air from the Chamber and Supply of Filtered Clean Air into the Chamber
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
- Patented Jog-Shuttle Control System
- \* Suitable for Critical Clean Application such as Electronics, Semiconductor, Pharmaceutical and Clinical Applications-Class 100 HEPA Filter is used.
- \* Specially Designed Clean Air Convection Mechanism Provides Dynamic Air Flow for Exhaust of Contaminated Air from the Chamber and Supply of Filtered Clean Air into the Chamber
- \* Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- \* User's Self-Compensation Function to Control Difference between Real Temp. and Indicated Temp. (± 20.0 °C)
- \* Storage Function : Set Values of Temperature and Timer
- \* Locking Mode Supported for Experimental Safety(Input to Jog-Shuttle can be Disabled)
- \* Over Temperature & Over Current Protection, Sensor Error Detection

Specifications & Ordering information

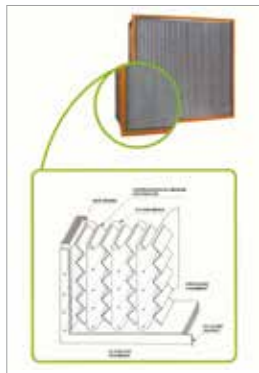
Spec.		Model	“WOC-560”	“WOC-800”
Capacity			560 Lit.	800 Lit.
Air Flow-type			High Clean Air Convection Mechanism	
Filter for Clean Air			HEPA Filter Class 100 for High Temperature	
Temp.	Range & Sensor		Room Temp. +5°C to 250 °C, PT100 Sensor	
	Accuracy & Uniformity		± 1.0°C, ± 2.0°C at 200 °C	
Timer & Alarm			99hr 59min (with delay / Continuous run.), Error status & Timer-end	
Display			Digital LCD with Back Light	
Controller			Digital Fuzzy Controller with Jog-Shuttle Switch(Turn+Push)	
Verification			Timer Operated Verification System	
Resolution			Control : ± 1.0°C, Display : ± 1.0°C	
Shelves			3ea of Perforated Shelves of Adjustable Position	
Load per Rack			16 kg, Total : 48 kg (16kg×3 Shelves)	
Safety Circuit			Over Temp. and Over Current Protector, Sensor Error Detector	
Material			Internal : Stainless-steel (# 304), External : Powder Coated steel, Insulation : Glass Wool	
Others			Storage Function, Locking Mode	
Dimension (w×d×h)	Interior (mm)		800×700×1,000	1,000×800×1,000
	Exterior (mm)		1,000×1,155×1,735	1,500×1,200×1,900
Packing Size (w×d×h) (mm)			1,200×1,400×h2,120mm,	1,700×1,400×h2,270mm,
& Gross Weight			386 kg	446 kg
Power Consumption			6.5 kW	9.4 kW
Electric Reqts.			60Hz or AC 230V, 380V 50/60Hz or 3 Phase	
Cat. No.	230V 3 Phase		DH.WOC00560	DH.WOC00800
	380V 3 Phase		DH.WOC03560	DH.WOC03800
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

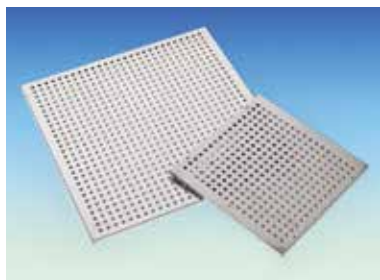
※ 운임 약 ₩ 85,000 별도!



High Efficiency and High Clean Air Convection Mechanism



High Temp. HEPA Filter



(1) Perforated shelves, Stainless-steel (Included)

Spare Perforated Shelves, Stainless-steel

DH.WOC10560 (1) Perforated Shelf, “OCS560”, w780×d680, for “WOC-560”  
 DH.WOC10800 , “OCS800”, w980×d880, for “WOC-800”

Ea.	Price, ₩

Optional N<sub>2</sub> Gas Inlet Device

DH.WOCN2GIN N<sub>2</sub> Gas Inlet Device, “WOC-N2GIN”

Ea.	Price, ₩

High Clean Air Oven with Validation (IQ, OQ) Service

DH.WOC30560 Validation Service(IQ, OQ), with “WOC-560”, “OCV560”  
 DH.WOC30800 , with “WOC-800”, “OCV800”

Ea.	Price, ₩

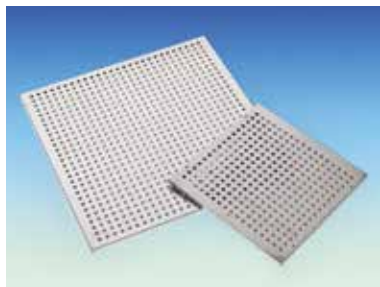
Cat. No	Description	Articles
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**“ThermoStable™ WOF” Industrial Forced-air Oven, 486-/840-/1176-Lit, with Certi. & Traceability**  
 with Stainless steel Perforated Shelves, Digital PID Control System, Superior Temp. Accuracy, up to 250 °C, ± 1.0 °C  
 대용량 산업용 열풍 순환식 건조기 / 오븐, 우수한 온도 정확성



**2-Year Warranty**

**Industrial Forced-air Oven “ThermoStable™ WOF-L1000” with Stainless-steel Perforated Shelves**



**(1) Perforated Shelves, Stainless-steel (Included)**

- **Made in Korea**    ■ **CE Certified**    ■ **PL(Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Heavy Forced Air-Circulation by Strong and Reliable Fan System : ideal for Semiconductor and Electronic Parts Baking Purpose**
- \* Heavy Forced Air-Circulation by Strong and Reliable Fan System : Ideal for Semiconductor and Electronic Parts Baking Purpose
- \* Voltage and Ampere Meter Equipped for Monitoring Safe Operation of the Machine
- \* Digital PID Control System Enables Superior Temperature Accuracy
- \* Digital Timer Function with Buzzer Alarm : up to 99 hrs 59 min
- \* Locker is Available for Operational Safety Control by an Administrator
- \* Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking
- \* Multi-Channel Temperature Sensors with Digital Display for Monitoring Temperature Uniformity in the Chamber is available(Optional)
- \* Default Damper to Enhance Thermal Efficiency
- \* Automatic Gas Exhaust Available (Optional)

**Specifications & Ordering information**

Spec.	Model	“WOF-L400”	“WOF-L800”	“WOF-L1000”
Capacity		486 Lit.	840 Lit.	1,176 Lit.
Air Flow-type		Forced-air Type		
Air Circulation Fan Motor		1/3HP	1/3 HP × 2 ea	1/3HP × 3 ea
Temp.	Range	Room Temp. +5 °C to 250 °C		
	Accuracy	± 1.0 °C at 150 °C		
	Uniformity	± 2.0 °C at 150 °C		
	Sensor	PT100		
Heating Power/Consumption		3 kW	5 kW	7 kW
Timer & Alarm		99hr 59min (with Continuous run.), Timer-end Alarm		
Display		2 lines LED for Temperature and Timer		
Controller		Digital PID Control		
Resolution		Control : ± 1.0 °C, Display : ± 1.0 °C		
Door		Powder coated Steel Door with Silicon Packing		
		1 Door	2 Doors	
Shelves		Included Stainless-steel Perforated Shelves		
		3 ea	3 ea	6 ea
Load per Rack		16 kg		
Permitted Total Load		48 kg (16kg × 3 Shelves)		96 kg (16kg × 6 Shelves)
Material		Internal : Stainless steel (# 304), External : Powder Coated steel, Insulation : Ceramic and Glass Wool Board		
Dimension (w × d × h)	Interior (mm)	900 × 600 × 900	1,250 × 700 × 960	1,400 × 700 × 1,200
	Exterior (mm)	1,200 × 750 × 1,700	1,500 × 840 × 1,800	1,650 × 840 × 2,150
Net Weight		316 kg	408 kg	478 kg
Others		Over Temp. and Over Current Protector, Sensor Error Detector, Leakage Breaker Locking Mode by Mechanical Locker		
Packing Size (w × d × h) (mm) & Gross Weight		1,400 × 1,220 × 1,960	1,700 × 1,310 × 2,060	1,850 × 1,310 × 2,410
		376 kg	488 kg	568 kg
Power Consumption		3.6 kW	6.2 kW	8.8 kW
Electric Reqts.		1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz	1Phase AC 230V, 50/60Hz	3Phase AC 380V, 50/60Hz
Cat. No.	230V	DH.WOFL0400	DH.WOFL0800	-
	120V	DH.WOFL0401	-	-
	3 Phase	-	-	DH.WOFL1002
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 85,000 별도!

**Spare Perforated Shelves, Stainless-steel**

- DH.WOF10400 (1) Perforated Shelf, “OFLS400”, w880 × d580mm, for “WOF-400”
- DH.WOF10800 , “OFLS800”, w1230 × d680mm, for “WOF-800”
- DH.WOF11000 , “OFLS1000”, w660 × d680mm, for “WOF-1000”

Ea.	Price, ₩

**Industrial Forced Convection Oven with Validation (IQ, OQ) Service**

- DH.WOF30400 Validation Service(IQ, OQ), with “WOF-L400”, “OFLV400”
- DH.WOF30800 , with “WOF-L800”, “OFLV800”

Ea.	Price, ₩

Maximum Convenience by Advanced Digital Technology

# DAIHAN NEW Generation Digital Precise Vacuum Oven

## Excellent Thermal Conductivity! Gas Exchangeable! ThermoStable™ Vacuum Oven

In vacuum condition, the heat transfer is limited because the chamber has no air inside and heat transfer by air can't be done. That means, the most significant technology for Vacuum Ovens is how to achieve the High Thermal Conductivity in vacuum.

DAIHAN New Vacuum Ovens have the independent Vent and Vacuum lines. This structure is ideal for maintenance of vacuum condition and the gas exchange.

Also, the newly developed High Heat Conduction Mechanism maximizes the heat conductivity in vacuum.

The ergonomic designed Jog-Dial Controller and the World-first Smart-Lab™ Controller are also equipped to the new generation Vacuum Ovens.

Experiencing this High Thermal Conductivity, **ThermoStable™ OV**, nothing can be compared.



### » Upgrade of Performance



#### • Available Gas Exchange

DAIHAN Vacuum Ovens have two independent tubing of Vent line and Vacuum line and each tubing is separately connected to the outer ports. This structure optimizes the gas exchange in the chamber.

Also, a new gas is inserted into the chamber through the Vent line located on the bottom and the inner air (gas) is simultaneously released through the Vacuum line located on the top.

By doing that, the vacuum is maintained in the chamber while the gas is exchanged.

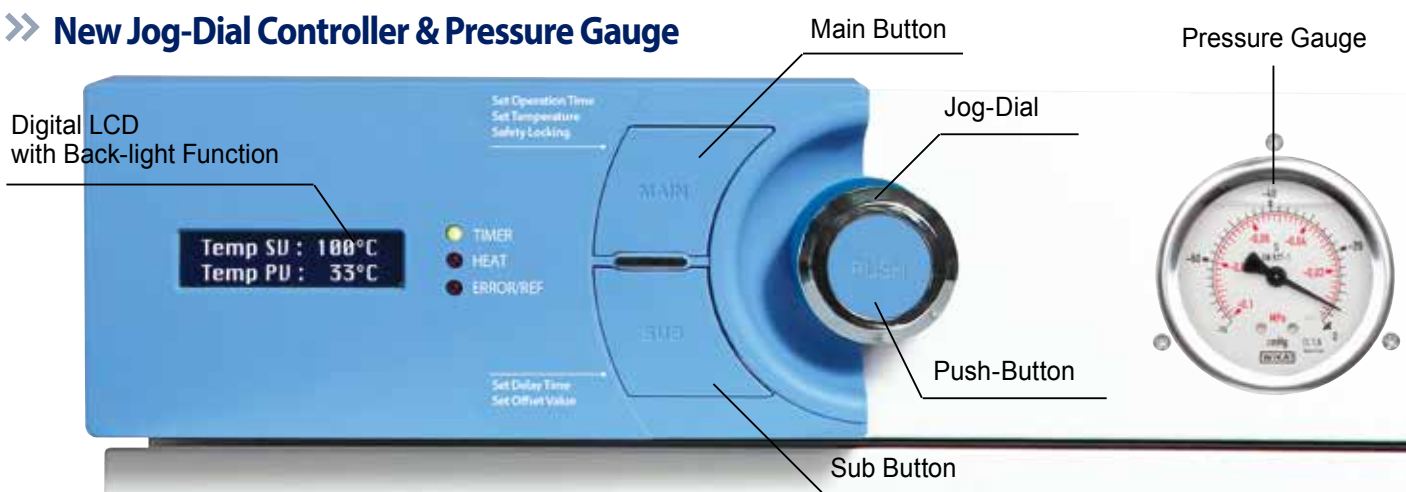


#### • High Heat Conduction

The unique High Heat Conduction Mechanism realizes the best performance of Heat Transfer in the vacuum environment that has no heat transfer by air.

The brackets attached on the sides of chamber, is directly assembled to the shelves. This structure enhances heat transfer to samples placed on shelves. The various sized flasks or beakers can be put in the chamber by simple disassembly of shelves.

### » New Jog-Dial Controller & Pressure Gauge



Cat. No	Description	Articles
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DAIHAN-brand® Precise Vacuum Ovens “ThermoStable™ OV”, Highly Safety Viewing Window, 18.6-/30-/70-Lit with 2 × Al-Shelves, Digital PID Control, Superior Temp. & Vacuum Accuracy, 10~750 mmHg, 200℃ 정밀 진공 건조기/오븐, 고정밀 디지털 퍼지 제어, 알루미늄 선반 포함, with Certi. & Traceability



Precise Vacuum Oven “ThermoStable™ OV-30”

- Made in Korea    ■ UL / CUL Certified    ■ CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Suitable for Drying, Baking, Conditioning, Curing, Out-Gassing Solids and Liquids, Vacuum Embedding, Moisture Testing, Plating and Aging Test
- Very Easy and Convenient for Vacuuming and Venting, Easy to read Vacuum Gauge
- Highly Safety Viewing Window (Tempered Safety Glass+ Polycarbonate Window)
- Heavy-duty Safety Front Door for User Safety
- Patented Jog-Dial Control System and Back-Light LCD
- PL(Product Liability) Insurance
- \* Digital PID Control System Implementing Superior Temperature Accuracy
- \* RS232C Interface for Remote Monitoring and Controlling with PC
- \* Superior Uniformity and Stability      \* Storage Function : Alarm & Timer
- \* High Quality Door Sealing : High Temperature Grade Silicone Molded Gasket
- \* Over Temperature & Over Current Protection and Sensor Error Detection
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)

Specifications & Ordering information

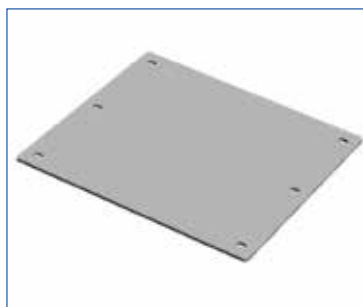
Spec.	Model	ThermoStable™ OV-20	ThermoStable™ OV-30	ThermoStable™ OV-70
Capacity		20 Lit.	30 Lit.	70 Lit.
Vacuum Range & Level & Rate		10 ~ 750 mmHg, 0.63mbar, 0.39mbar/hr		
Temp.	Range / Sensor	R/T +10℃ to 200℃, PT100		
	Accuracy	± 0.5℃ at 100℃ & 150℃		
	Uniformity	± 2.0℃ at 100℃, ± 3.0℃ at 150℃		± 2.5℃ at 100℃, ± 3.5℃ at 150℃
Heating Power/Consumption		170W × 2ea 130W × 2ea	350W × 2ea 450W × 2ea	
Heat-up Time		60 min. to 100℃, 90 min. to 150℃	70 min. to 100℃, 100 min. to 150℃	80 min. to 100℃, 100 min. to 150℃
Timer & Alarm		99hr 59min (with delay / Continuous run.), Error status & Timer-end		
Display		Digital LCD with Back Light		
Controller		Digital PID Controller with Jog-Dial Switch (Turn & Push)		
Resolution		Control : ± 1.0℃, Display : ± 1.0℃		
Shelves		Included 2ea Aluminum Shelves		
Safety Circuit		Over Temp. & Over Current Protector, Sensor Error Detector, Leakage Breaker		
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel, Window : Tempered Safety Glass 12T, Poly Carbonate 5T for Safety		
Others		Storage Function (Temp and Timer), Locking Mode (Jog-Dial Input Disabled)		
Dimension (w × d × h)	Interior (mm)	265 × 290 × 265	300 × 330 × 300	400 × 435 × 400
	Exterior (mm)	480 × 475 × 547	515 × 515 × 582	618 × 620 × 682
Vacuum Inlet Valve Size		od. 10 mm		
Net Weight		48 kg	55 kg	85 kg
Packing Size (w × d × h) (mm) & Gross Weight		570 × 570 × 775	605 × 605 × 815	710 × 710 × 910
		59 kg	67 kg	100 kg
Power Consumption		600 W	600 W	1.6 kW
Electric Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		
Cat. No.	230V	DH.WOV03020	DH.WOV03030	DH.WOV03070
	120V	DH.WOV04020	DH.WOV04030	DH.WOV04070
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.      ※ 운임 약 ₩ 25,000 별도!



**WiseRemote Control Software :**  
Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

\* You can Download this Software at DAIHAN-Sci.com Shopping-mall



(1) Standard Shelf, Aluminum (Included)

Spare Aluminum Shelves

- DH.WOV12020 (1) Standard Shelf, Aluminum, “OVSNO20”, w260 × d245 × h3mm, for 18.6 Lit.
- DH.WOV12030 “OVSNO30”, w290 × d285 × h3mm, for 30 Lit.
- DH.WOV12070 “OVSNO70”, w390 × d390 × h3mm, for 70 Lit.

Ea. Price, ₩

※ See page 185 for the Optional Vacuum Pumps

DAIHAN-brand® SMART Vacuum Ovens “ThermoStable™ SOV”, Highly Safety Viewing Window, 18.6-/30-/70-Lit, 200 °C with Smart-Lab™ Controller, 4” Full Touch Screen, Fuzzy-PID Control, Superior Temp. & Vacuum Accuracy, 10~750 mmHg 스마트 진공 건조기/오븐, 고정밀 디지털 퍼지 제어, 알루미늄 선반 포함, with Certi. & Traceability



- Made in Korea
- UL / CUL Certified
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Suitable for Drying, Baking, Conditioning, Curing, Out-Gassing Solids and Liquids, Vacuum Embedding, Moisture Testing, Plating and Aging Test
- Very Easy and Convenient for Vacuuming and Venting, Easy to read Vacuum Gauge
- Highly Safety Viewing Window (Tempered Safety Glass+ Polycarbonate Window)
- Heavy-duty Safety Front Door for User Safety
- Smart-Lab™ Controller
- PL (Product Liability) Insurance
- \* Superior Uniformity and Stability
- \* Compact New Body Design
- \* High Quality Door Sealing : High Temperature Grade Silicone Molded Gasket
- \* Over Temperature & Over Current Protection and Sensor Error Detection
- \* Ergonomic Design (Smart-Lab™ Controller)
- \* WiRe™ App Service.
- \* Automatic Data Recording
- \* Self-Diagnostic Function
- \* Internet Connectivity with WiFi
- \* Variable Program Setting for Multiple Patterns with Multiple Segments
- \* The Recorded Data Could be transferred to PC by USB memory
- \* Controller SW can be upgraded through USB port.

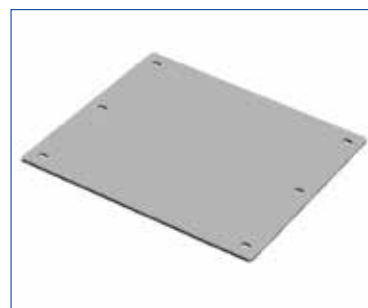
Specifications & Ordering information

Spec.	Model	ThermoStable™ SOV-20	ThermoStable™ SOV-30	ThermoStable™ SOV-70
Capacity		20 Lit.	30 Lit.	70 Lit.
Vacuum Range & Level & Rate		10 ~ 750 mmHg, 0.63mbar, 0.39mbar/hr		
Temp.	Range / Sensor	R/T +10 °C to 200 °C, PT100		
	Accuracy	± 0.5 °C at 100 °C & 150 °C		
	Uniformity	± 2.0 °C at 100 °C, ±3.0 °C at 150 °C	± 2.5 °C at 100 °C, ± 3.5 °C at 150 °C	
Heating Power/Consumption		170W×2ea 130W×2ea	350W×2ea 450W×2ea	
Heat-up Time		60 min. to 100 °C, 90 min. to 150 °C	70 min. to 100 °C, 100 min. to 150 °C	80 min. to 100 °C, 100 min. to 150 °C
Timer & Alarm		99hr 59min (with delay / Continuous run.), Error status & Timer-end		
Display		4"Full Touch Screen TFT LCD		
Controller		Smart-Lab™ Controller		
Resolution		Control : ± 1.0 °C, Display : ± 1.0 °C		
Shelves		Included 2ea Aluminum Shelves		
Safety Circuit		Over Temp. & Over Current Protector, Sensor Error Detector, Leakage Breaker		
Material		Internal : Stainless-steel (# 304), External : Powder Coated steel, Window : Tempered Safety Glass 12T, Poly Carbonate 5T for Safety		
Others		Program Function, WiRe™ App & Web Service.		
Dimension (w×d×h)	Interior (mm)	265×290×265	300×330×300	400×435×400
	Exterior (mm)	480×475×547	515×515×582	618×620×682
Vacuum Inlet Valve Size		od. 10 mm		
Net Weight		48 kg	55 kg	85 kg
Packing Size (w×d×h) (mm) & Gross Weight		570×570×775	605×605×815	710×710×910
		59 kg	67 kg	100 kg
Power Consumption		600 W	600 W	1.6 kW
Electric Rqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz		
Cat. No.	230V	DH.SWOV03020	DH.SWOV03030	DH.SWOV03070
	120V	DH.SWOV04020	DH.SWOV04030	DH.SWOV04070
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 25,000 별도!



Display of Smart-Lab™ Controller



(1) Standard Shelf, Aluminum (Included)

Spare Aluminum Shelves

- DH.WOV12020 (1) Standard Shelf, Aluminum, “OVSN020”, w260×d245×h3mm, for 18.6 Lit.
- DH.WOV12030 , “OVSN030”, w290×d285×h3mm, for 30 Lit.
- DH.WOV12070 , “OVSN070”, w390×d390×h3mm, for 70 Lit.

Ea. Price, ₩

※ See page 185 for the Optional Vacuum Pumps



Cat. No	Description	Articles
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TJV® Anticorrosive Vacuum / Pressure Diaphragm Pump "GM-series", Oil-Less /  $\geq 0.08\text{Mpa}$ , 200mbar, 60~120Lit/min  
Ideal for Use with Vacuum Oven, Diaphragm-type, Double Heads, 내부식성 더블 헤드 다이어프램 펌프



Double Heads, "GM-1.00", 60Lit./min



Double Heads, "GM-2.00", 120Lit./min

#### ※ Selection Guide

We Recommend "GM-1.00" or "GM-2.00" Vacuum Pump for 18.6- / 30- / 70-Lit. Vacuum Oven(P.183~184)

#### ■ Vacuum Ovens <Partial evacuation of Large units.>

#### ■ PTFE Coated as Pump's Chamber, Diaphragm & Valves, Suitable for Pumping Out Corrosive Gas or Organic Solvents

- \* High Efficiency
- \* Longer Operating Life
- \* Rotary Evaporator
- \* Evaporating System
- \* Vacuum Filtration and Drying Systems
- \* Vacuum Desiccators and Cabinets
- \* Laser-gas Circulation
- \* Vacuum Concentrator
- \* Medical/Pharmaceutical Equipment
- \* Exhaust of Gas-transfer Tube
- \* Analysis/Scientific Equipment
- \* TLC Sprayers

\* Ideal for Medicinal Products Analysis, Tenuously Chemical Engineering, Biochemical Pharmacy, Food Examination, Investigating and Solving Criminal Case, High-accuracy Chromatogram Apparatus and HPLC Solvent Filter

※ Note! 100mmHg = 13.33 kPa, 1 Lit./min = 0.035 CFM

#### Specification

Model	"GM-1.00"	"GM-2.00" New
Speed of Evacuation	60 Lit./min	120 Lit./min
Vacuum & Ultimate Pressure	200mbar, $\geq 0.08\text{Mpa}$	
Motor Power & Noise Level	160W, < 60dB	300W, < 60dB
Inlet / Outlet(mm)	O.D $\phi 6 / 6$	O.D $\phi 9 / 9$
Working Temp & Temp of the body	7 ~ 40°C, < 55	
Voltage Rating	230Vac, 50Hz	
Diaphragm & Valves	NBR(Nitrile Butadiene Rubber) with the PTFE Coating Outside	
Dimensions (L×B×H) & Weight	300×160×235mm, 10Kg	390×150×250mm, 20Kg

#### Ordering Information

TJ.Pu0111 Vacuum/Pressure Diaphragm Pump, Double Head, "GM-1.00", 60Lit./min, Anticorrosive  
TJ.Pu0112 "GM-2.00", 120Lit./min, Anticorrosive

Ea. Price, ₩

Vacuumer® Precision Vacuum Pumps "VOP-Series", Gas Ballast Valve Installed, 50 ~ 240Lit. with Double-Stage, Direct Drive & Oil Sealed Rotary Type, 정밀 고급형 진공펌프

#### ■ Made in Korea

#### ■ Gas Ballast Valve Installed

- \* Double Stage Vacuum Pump
- \* Over Current Protection
- \* Physical and Chemical Apparatus Industries
- \* Industrial Machines
- \* Vacuum Pumping System

#### ■ Oil Back Flow Prevention Mechanism Installed

- \* Easy-to-use Large Finger Grips
- \* Installed Filter Prevent Sludge Contamination
- \* Vacuum Evaporation Equipment
- \* Vacuum Dryer
- \* Vacuum Freeze Dryer. Etc



(1) VOP-60



(2) VOP-100



(3)

#### Specification

Model	"VOP-60"	"VOP-100"
Speed of Evacuation (50/60Hz)	50 / 60 Lit./min	100 / 120 Lit./min
Ultimate Pressure (Pa)	$6.7 \times 10^{-2}$ ( $6.7 \times 10^{-1}$ )	
Motor Power	Single Phase 220V, 200W, 4poles	Single Phase 220V, 400W, 4poles
Motor Speed(50/60Hz)	1430 / 1730 RPM	
Recommended Oil	COSMA-100	
Oil Capacity(mL)	800	900
Suction Pipe(o.d×i.d)	NW25(KF25)	
Temp. Range	7~40°C	
Weight	17kg	25kg
Dimensions(w×d×h)(mm)	165×411×234	171×464×238

\* Per Customer's request various specifications are available.

\* Using the Macleod gauge the ultimate pressure is measured. The measurements from the pirani gauge are show In ( )

#### Ordering Information

V3.VOP060 (1) Vacuum Pump, "VOP-60", 50 / 60 Lit./min, (50 / 60Hz), 220V  
V3.VOP100 (2) "VOP-100", 100 / 120 Lit./min, (50 / 60Hz), 220V

Ea. Price, ₩

#### Optional Accessories for VOP-series

V3.OMT150 (3) Oil Mist Trap for "VOP-60" / "VOP100"  
V3.COS101 (4) Oil for Vacuum Pump VOP-series, 1Lit.  
V3.COS104 (5) , 4Lit.

Ea. Price, ₩

#### ※ Selection Guide

We Recommend "VOP-60" Vacuum Pump for 18.6- / 30-Lit. Vacuum Oven(P.183~184)

We Recommend "VOP-100" Vacuum Pump for 18.6- / 30- / 70-Lit. Vacuum Oven(P.183~184)



(4) 1Lit.



(5) 4Lit.

Improving the Productivity of Your Chemistry ---

New Innovation LaboRactor™ 0.1 ~ 100Lit

# All for Glass Reaction System for Lab & Pilot Plant

AutoLifting- / Classic- / H.Mantle-Models in Vacuum-Line, -80°C +260°C  
with Glass Vessel / Lid or PTFE Lid, 45° DN Flange, Safety Connection, and Assembly Frame

Ideal for ▶ Experiment, ▶ Pilot- & Mass-Production



Manual Tilt

5~100 Lit. AutoLifting-Model I  
Manual Tilt, Double-Wall Vessel  
High Performance  
Ideal for Cleaning



5~100 Lit. Classic-Model II  
Double-Wall Vessel  
Good for Economic  
Operation



0.5~20 Lit. Suspended-Model III  
Double-Wall Vessel  
Good for Economic  
Operation



2~50 Lit. H.Mantle-Model IV  
Single-Wall Vessel  
Good for Simply  
Economic Operation



High-Torque Digital  
Overhead Stirrer



PTFE Lids &  
Clamping Sys.



Flasks, Round-type



Vessel, Double Wall



PTFE Stirring Impeller

and



General  
Multi-Neck Flasks

Cat. No	Description
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Articles
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LaboRactor™ 0.1~100Lit All for Reaction System, for Lab & Pilot Plant, with Glass Vessel, -80°C +260°C  
 Ideal for Chemistry / Pharmacy / Biomedical / Synthesis in Laboratory & Production Scales in Vacuum Line  
 For Reaction, Mixing, Dispersion & Homogenization, 0.5~1.5bar, 연구 및 제품 생산용 진공반응장치

## New Innovation AutoLifting & Tilt-System

High-torque Stirrer and Safety Stir-Flexi Coupling

Big Volume Reflux Condenser

PTFE Stirring Shaft & Impeller

Reflux Liquid Reservoir

■ PTFE Thermo-Probe "K-type"

Safety PTFE Flexible Connectors for All Joints

PTFE Lid & Clamping

Temp. and Stirring Control

Insulated Hose for Heating Fluid

AutoLifting Control

Double Wall Glass Vessel 5 ~ 100Lit

PTFE Outlet Valve

Manual Tilt

Heating / Cooling Circulator and Heat Transfer Fluid ; Option

Vacuum pump ; Option

AutoLifting and Manual Tilting Reactor System "Model-I"

### Applications

- Ideal for the Experiment, Pilot Production, and Production in Chemistry / Fine Chemical Engineering / Pharmacy / Synthesis, and Biomedical Engineering.
- Dispersion, Distillation, Evaporation, Homogenization & Mixing Processes at Laboratory & Production-Scales.

### Features

- Can be Used Direct Contact Thermo-Probe "K-type"
- Modular System:
  - You can choose Glass Vessel & Lid or PTFE-Lid, Stirrers, Vacuum Pump & Controller, Heating Mantle, Chiller / Cooler or Heating Circulator.
- Wide-Range Vessels and Convenience:
  - \* 0.1~100Lit. Vacuum-Purpose Vessels or General Multi-Neck Flasks.
  - \* Single or Double Walled Glass Vessels.
  - \* With or Without Out-Let Valve at Vessel Bottom.
- "45° DN 60~ DN 200" Standardized Flat-Flange System : with a Comprehensive Range of Accessories and Replacement Parts.
- Convenient O-Ring GROOVE in the Vessel's Flange:
  - Ideal for Vacuum or Pressure Applications, and Safe Mounting of the Vessel with the Associated Lid.
- All PTFE Safety Lid with Screw Joint or Glass Lid Available : You can choose
- Safety Flexible PTFE Connection for All Joint Parts.
- Fully Digital Feedback / Microprocessor Controlled Agitator(Stirrer) :
  - LCD Display, Power Bar Graph & Status, Over-Load /-Heat Protection Function.
- With Safety Flexible Coupling between Stirring-Motor & Shaft.
- Easy Installation ; Assembly Frame & Component Parts.
  - \* Good for Heavier-Work.
  - \* Modular Components-Spare or Option Parts.
  - \* Bench- or Floor-Type Assembly Frames.
  - \* Adjustable Height Length and Removable Frame.
  - \* Suppling the Component Parts.

LaboRactor™ 5~100 Lit AutoLifting Vacuum Reactor Set, with Jacketed Glass Vessel / Agitator / Frame / Glass Assembly with DN O-ring Flange / PTFE-Impeller & -Drainvalve, Digital Agitation & Lifting System, 자동리프팅/자켓 글라스 진공 반응조 세트

▶ **Advantage of Lifting System**

- Safety Cleaning the Vessel
- Easy Feeding of Large Volume Raw Materials
- Ideal for Maintenance

▶ **AutoLifting “Up-Down” and Manual Tilt System**

- With Induction Gear Motor, TM-Screw, Timing Belt & Pulley, and Limit Switch
- \* Adjustable Lifting Speed 1~53rpm & Height Length 200~500mm \* Tilt Angle 30 Degree

▶ **Graduated Double-wall Vacuum Glass Vessel, 5~100Lit**

- 45° DN Flange & 5mm Thick High Boro-glass 3.3 with Good Physical, Chemical Properties.
- PTFE Lid ; -80°C ~ +260°C ■ PTFE Drain Valve ; Aperture φ25mm, No-Dead Space
- \* Work in Constant Pressure and Vacuum Degree below 0.095MPa in stationary.
- \* Cooling and Heating Solution in the Interlayer can be Completely Removed after Reaction.

▶ **High-Torque Digital Agitator System, 50~1000rpm(800rpm/100Lit)**

- CE Certified ■ with Certificate & Traceability : Controlled by Serial Number
- Patented Jog-Shuttle Control System ■ PL(Product Liability) Insurance
- With Safety Flex-Coupling between Stir-Motor and PTFE Shaft, PTFE Impeller.
- \* Storage Function for the set values : RPM, Timer, and Locking \* Chuck - Corrosion Free.

▶ **Heavier-work Assembly Frame System**

- Material : OD φ27.2×thick 1.5/2.0mm Stainless-steel Pipe and AL-Profile 4040
- \* Assembly Construction System : Fully Adjustable \* Frames according to the Vessel Volumes.
- \* with 4 Castors including 2 Lockable Castors. \* 80 / 100Lit : OD φ27.2×thick 2.0mm STS Pipe



Specification of (A) Reactor Set

Models	“REA-5A”	“REA-10A”	“REA-20A”	“REA-30A”	“REA-50A”	“REA-80A”	“REA-100A”	
Jacket Vessel Volume	5 Lit.	10 Lit.	20 Lit.	30 Lit.	50 Lit.	80 Lit.	100 Lit.	
Jacket Volume Approx.	1.2 Lit.	2.6 Lit.	5 Lit.	8 Lit.	12 Lit.	20 Lit.	25 Lit.	
Vessel OD × h mm	230 × 455	270 × 550	365 × 580	365 × 710	410 × 800	460 × 970	500 × 970	
Inner Vessel OD mm	200	230	330	330	365	410	460	
Heat Hose Connector	GL25	GL32	GL32	① od 35 × id 18mm Flat Flange & Metal Clamp				
Drain Tube Size	Glass Tube : od 34 × id 20mm							
Digital Stirrer (Agitator)	Model, Control	Direct Controlled “SHT-50DX”			Remote Controlled “SHT-120T”			“SHT-140T”
	Viscosity & Torque	100,000 mPas			150,000 mPas			160,000mPas
	Speed	300 Ncm			500 Ncm			550 Ncm
Motor & Rating	Speed	50~1,000 rpm, Resolution : 1 rpm-Display / 1 rpm-Control						50~800 rpm
	Motor & Rating	Worm-Geared DC Motor (3.5:1 Ratio)						
Lifting	Speed	In · Output 83 / 75 W, 1 / 10 HP						In · Output 130 / 120 W, 1 / 6 HP
	Height	1~53 rpm, 15 Step Control						
Tilt Angle	200~500mm Distance Control							
Timer & Alarm	Manual 30 Degree							
Display	99hr 59min (with Continuous run.), Error status & Timer-end							
Controller	Digital LCD with Back-Light Function							
Shaft / Impeller	Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)							
Safety Device	φ 14mm PTFE Encapsulated Stainless-steel, Exposed End φ 12mm, up to 50 Lit.							
Power Consumption	Overload & Heat Protector for Motor							
Dimension Overall	175 W		300 W					
Power Supply	800 × 620 × h1900		915 × 670 × h2100		1000 × 720 × h2400		1200 × 790 × h2445	
	1 Phase, AC 230 V, 50 / 60 Hz							

Ordering for (A) Reactor Set, without Circulator & Vacu-Pump

Lifting Reactor Model & Volume	Stirrer Torque and DN-Flange	(1) with Glass Lid, 5 Necks		(2) with PTFE Lid, 6 Necks	
		Cat. No.	Price, ₩	Cat. No.	Price, ₩
“REA-5A”, 5 / 0.1Lit	300Ncm, DN 150	SL.Rea2531		SL.Rea2541	
“REA-10A”, 10 / 0.2Lit	“ ”, “ ”	SL.Rea2532		SL.Rea2542	
“REA-20A”, 20 / 0.4Lit	“ ”, “ ”	SL.Rea2533		SL.Rea2543	
“REA-30A”, 30 / 0.5Lit	“ ”, “ ”	SL.Rea2534		SL.Rea2544	
“REA-50A”, 50 / 1Lit	500Ncm, DN 200	SL.Rea2535		SL.Rea2545	
“REA-80A”, 80 / 1Lit	“ ”, “ ”	SL.Rea2536		SL.Rea2546	
“REA-100A”, 100 / 1Lit	“ ”, “ ”	SL.Rea2537		SL.Rea2547	

※ Note/ DN 150 Flanged PTFE Lid ; 5 Necks for 5Lit Vessels.

Ordering for Optional Necessaries

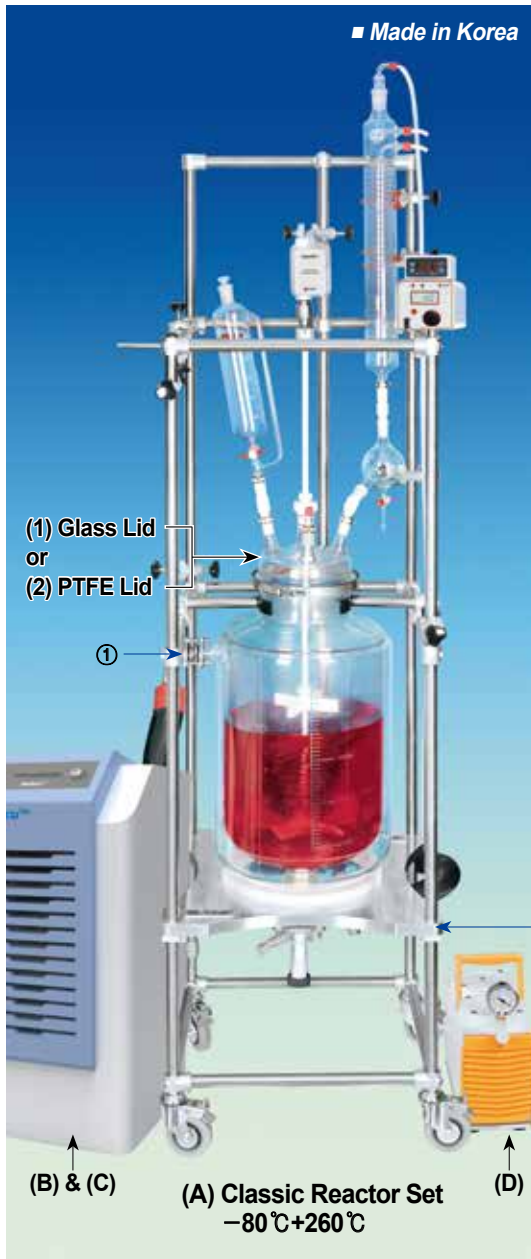
- (B) & (C) Heat/Cool Circulators and Heat Transfer Fluid. ⇒ See the Following 6-th. Page! The Circulator (B) Can be Used External Direct Contact Thermo-Probe “K-type”
- (D) Vacuum Pumps ⇒ See the Pump-Section!
- (E) PTFE Thermo-Probe “K-type” ⇒ See the Last Page.



- Top Safety : Non-Breakage, Anti-Chemical, & +280°C

Cat. No	Description	Articles
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**LaboRactor™ 5~100 Lit Classic Vacuum Reactor Set, with Jacketed Glass Vessel/Agitator/Frame/Glass Assembly with DN O-ring Flange / PTFE-Impeller & -Drainvalve, Digital 50~1000rpm, 5~100 Lit 자켓 글라스 진공 반응조 세트**



(1) Glass Lid  
w / 5×Joints



(2) All PTFE Lid  
w / 6×Screwjoints  
○ Top Safety : Non-Breakage,  
Anti-Chemical, & +280°C

**Heavy-work Support Frame dimension**  
φ 27.2×thick 1.5mm STS Pipe

5 & 10 Lit : 45×45×h130cm	50 & 80 Lit : 60×60×h180cm
20 & 30 Lit : 55×55×h170cm	100 Lit : 67×67×h200cm

- ▶ **Graduated Double-wall Vacuum Glass Vessel, 5~100Lit**
- 45° DN Flange & 5mm Thick High Boro-glass 3.3 with Good Physical, Chemical Properties.
- PTFE Lid ; -80°C ~ +260°C    ■ PTFE Drain Valve ; Aperture φ25mm, No-Dead Space
- Can be Used Direct Contact Thermo-Probe “K-type”

\* Work in Constant Pressure and Vacuum Degree below 0.095MPa in stationary.  
\* Cooling and Heating Solution in the Interlayer can be Completely Removed after Reaction.

- ▶ **High-Torque Digital Agitator System, 50~1000rpm(800rpm/100Lit)**
- CE Certified    ■ with Certificate & Traceability : Controlled by Serial Number
- Patented Jog-Shuttle Control System    ■ PL(Product Liability) Insurance
- With Safety Flex-Coupling between Stir-Motor and PTFE Shaft, PTFE Impeller.

\* Digital LCD with Back-Light Function.    \* Smooth Start and Change of the Stirring Speed.  
\* Storage Function for the set values : RPM and Timer    \* Chuck - Corrosion Free.  
\* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

- ▶ **Heavier-work Assembly Frame System ; Fully Adjustable**

■ **Material : OD φ27.2×thick 1.5/2.0mm Stainless-steel Pipe**  
\* with 4 Castors including 2 Lockable Castors.    \* 80 / 100Lit : OD φ27.2×thick 2.0mm STS Pipe

**Specification of (A) Reactor Set**

Models	“REA-5C”	“REA-10C”	“REA-20C”	“REA-30C”	“REA-50C”	“REA-80C”	“REA-100C”	
Jacket Vessel Volume	5 Lit.	10 Lit.	20 Lit.	30 Lit.	50 Lit.	80 Lit.	100 Lit.	
Jacket Volume Approx.	1.2 Lit.	2.6 Lit.	5 Lit.	8 Lit.	12 Lit.	20 Lit.	25 Lit.	
Vessel OD×h mm	230×455	270×550	365×580	365×710	410×800	460×970	500×970	
Inner Vessel OD mm	200	230	330	330	365	410	460	
Heat Hose Connector	GL25	GL32	GL32	① od 35×id 18mm Flat Flange & Metal Clamp				
Drain Tube Size	Glass Tube : od 34×id 20mm							
Digital Stirrer (Agitator)	Model, Control	Direct Controlled “SHT-50DX”			Remote Controlled “SHT-120T”			“SHT-140T”
	Viscosity & Torque	100,000 mPas			150,000 mPas		160,000mPas	
		300 Ncm			500 Ncm		550 Ncm	
	Speed	50~1,000 rpm, Resolution : 1 rpm-Display / 1 rpm-Control					50~800 rpm	
	Motor & Rating	Worm-Geared DC Motor (3.5:1 Ratio)						
	Timer & Alarm	In·Output 83 / 75 W, 1 / 10 HP						
	Display	In·Output 130 / 120 W, 1 / 6 HP						
	Controller	99hr 59min (with Continuous run.), Error status & Timer-end						
Shaft / Impeller	φ 10/8 PTFE Encapsulated Stainless-steel Shaft				φ 12/10 PTFE Encapsulated Stainless-steel Shaft			
Safety Device	Overload & Heat Protector for Motor							
Power Consumption	85 W					120 W		
Dimension Overall	45×45×h130cm		55×55×h170cm		60×60×h180cm		67×67×h200	
Power Supply	1 Phase, AC 230 V, 50 / 60 Hz							

**Ordering for (A) Reactor Set, without Circulator & Vacu-Pump**

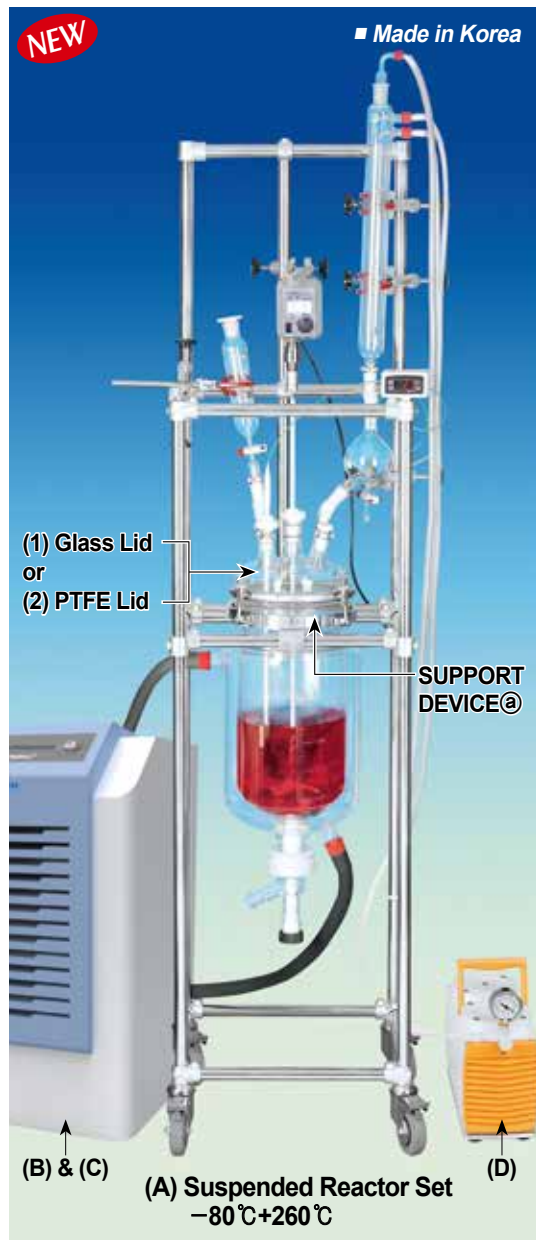
Classic Reactor Model & Volume	Stirrer Torque and DN-Flange	(1) with Glass Lid, 5 Necks		(2) with PTFE Lid, 6 Necks	
		Cat. No.	Price, ₩	Cat. No.	Price, ₩
“REA-5C”, 5 / 0.1Lit	300Ncm, DN 150	SL.Rea2511		SL.Rea2521	
“REA-10C”, 10 / 0.2Lit	“ ”, DN 200	SL.Rea2512		SL.Rea2522	
“REA-20C”, 20 / 0.4Lit	“ ”, “ ”	SL.Rea2513		SL.Rea2523	
“REA-30C”, 30 / 0.5Lit	“ ”, “ ”	SL.Rea2514		SL.Rea2524	
“REA-50C”, 50 / 1Lit	500Ncm, DN 200	SL.Rea2515		SL.Rea2525	
“REA-80C”, 80 / 1Lit	“ ”, “ ”	SL.Rea2516		SL.Rea2526	
“REA-100C”, 100 / 1Lit	“ ”, “ ”	SL.Rea2517		SL.Rea2527	

※ **Note!** DN 150 Flanged PTFE Lid ; 5 Necks for 5Lit Vessels.

**Ordering for Optional Necessaries**

- (B) & (C) Heat/Cool Circulators and Heat Transfer Fluid. ⇒ See the Following 5-th. Page!  
The Circulator (B) Can be Used External Direct Contact Thermo-Probe “K-type”
- (D) Vacuum Pumps ⇒ See the Pump-Section!
- (E) PTFE Thermo-Probe “K-type” ⇒ See the Last Page.

LaboRactor™ 0.5~20 Lit Suspended Vacuum Reactor Set, with Jacketed Glass Vessel/Agitator/Frame/Glass Assembly **NEW** with DN O-ring Flange / PTFE-Impeller & -Drainvalve, Digital 50~1000rpm, **행킹 타입 자켓 글라스 진공 반응조 세트 0.5~20 Lit**



▶ **Easy Installation & Remove, and Safety**

▶ **0.5~20Lit Graduated Double-wall Vacuum Glass Vessel**

- 45° DN Flange & 5mm Thick High Boro-glass 3.3 with Good Physical, Chemical Properties.
- PTFE Lid ; -80°C ~ +260°C. ■ PTFE Drain Valve ; No-Dead Space.
- Can be Used Direct Contact Thermo-Probe "K-type"

\* Work in Constant Pressure and Vacuum Degree below 0.095MPa in stationary.  
\* Cooling and Heating Solution in the Interlayer can be Completely Removed after Reaction.

▶ **High-Torque Digital Agitator System, 50~1000rpm**

- CE Certified. ■ with Certificate & Traceability : Controlled by Serial Number.
  - Patented Jog-Shuttle Control System. ■ PL(Product Liability) Insurance
  - With Safety Flex-Coupling between Stir-Motor and PTFE Shaft, PTFE Impeller.
- \* Digital LCD with Back-Light Function. \* Smooth Start and Change of the Stirring Speed.  
\* Storage Function for the set values : RPM and Timer. \* Chuck - Corrosion Free.  
\* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).

▶ **Heavier-work Assembly Frame System ; Fully Adjustable**

- Material : OD  $\phi$  27.2 × thick 1.5mm Stainless-steel Pipe.
  - With Heavy-duty Aluminium VESSEL SUSPENSION SUPPORT DEVICE® ; Very Easy Vessel Exchange!
  - With Heavy-duty Stainless-steel SUPPORT Guide® for the Bottom of 10 & 20Lit Vessels.
- \* with 4 Castors including 2 Lockable Castors. \* Benchtop Frame(With Feet) Available.

Specification of (A) Reactor Set

Models	"REA-S0.5"	"REA-S1"	"REA-S2"	"REA-S3"	"REA-S5"	"REA-S10"	"REA-S20"
Jacket Vessel Volume	0.5Lit.	1Lit.	2Lit.	3Lit.	5Lit.	10Lit.	20Lit.
Jacket Volume Approx.	0.2Lit.	0.4Lit.	0.8Lit.	1.1Lit.	1.2Lit.	2.6Lit.	5Lit.
Vessel OD × h mm	130 × 140	130 × 210	160 × 250	160 × 340	230 × 455	270 × 550	365 × 580
Inner Vessel OD mm	105	105	130	130	200	230	330
Heat Hose Connector	GL18		GL25		GL32		
Drain Tube Size	od 15 × id 10mm		od 18 × id 13mm		od 34 × id 20mm		
Digital Stirrer (Agitator)	Model, Control						
	Direct Controlled "SHT-50DX"						
	Viscosity & Torque						
	100,000 mPas						
	300 Ncm						
	Speed						
	50~1,000 rpm, Resolution : 1 rpm-Display / 1 rpm-Control						
Motor & Rating							
Worm-Geared DC Motor (3.5:1 Ratio)							
In · Output 83 / 75 W, 1 / 10 HP							
Timer & Alarm							
99hr 59min (with Continuous run.), Error status & Timer-end							
Display							
Digital LCD with Back-Light Function							
Controller							
Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)							
Shaft / Impeller	$\phi$ 8/6 PTFE Encapsulated Stainless-steel Shaft			$\phi$ 10/8 PTFE Encapsulated Stainless-steel Shaft			
Safety Device	Overload & Heat Protector for Motor						
Power Consumption	85 W						
Dimension Overall	45 × 45 × h75cm	45 × 45 × h130cm	50 × 50 × h150cm	55 × 55 × h170			
Power Supply	1 Phase, AC 230 V, 50 / 60 Hz						



(1) Glass Lid w / 5 × Joints



(2) All PTFE Lid w / 6 × Screwjoints  
◎ Top Safety : Non-Breakage, Anti-Chemical, & +280 °C



Support Guide® for 10 & 20 Lit



Ordering for Suspended Reactor Set, without Circulator & Vacu-Pump

Suspen-Reactor Model & Volume	Stirrer Torque and DN-Flange	(1) with Glass Lid, 5-Necks		(2) with PTFE Lid, 5-Necks	
		Cat. No.	Price, ₩	Cat. No.	Price, ₩
"REA-S0.5", 0.5 / 0.1Lit	300Ncm, DN 100	SL.Rea2481		SL.Rea2491	
"REA-S1", 1 / 0.1Lit	" , "	SL.Rea2482		SL.Rea2492	
"REA-S2", 2 / 0.2Lit	" , DN 120	SL.Rea2483		SL.Rea2493	
"REA-S3", 3 / 0.5Lit	" , "	SL.Rea2484		SL.Rea2494	
"REA-S5", 5 / 0.5Lit	" , DN 150	SL.Rea2485		SL.Rea2495	
"REA-S10", 10 / 1Lit	" , DN 200	SL.Rea2486		SL.Rea2496	
"REA-S20", 20 / 1Lit	" , "	SL.Rea2487		SL.Rea2497	

※ Note/ DN 200 Flanged PTFE Lid ; 6-Necks for 10 & 20 Lit Vessels.

Ordering for Optional Necessaries

(B) & (C) Heat/Cool Circulators and Heat Transfer Fluid. ⇒ See the Following 4-th. Page!  
The Circulator (B) Can be Used External Direct Contact Thermo-Probe "K-type"

(D) Vacuum Pumps ⇒ See the Pump-Section!

(E) PTFE Thermo-Probe "K-type" ⇒ See the Last Page.

Cat. No	Description	Articles
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LaboRactor™ 2~50 Lit Mantle-Heated Reactor Set, with (1) Single-wall Glass Vessel “Kettle” or (2) Round Flask with DN Series O-ring Flange / PTFE-Impeller & -Drainvalve, Digital 50~1000rpm, 맨틀가열형 진공반응조 세트, 케틀 & 환형



I. M-Model Kettle-type II. MR-Model R.Flask-type

■ Made in Korea



With Mantle Remote Controller

Mantle Heated Reactor Set, with (I) “Kettle” Vessel or (II) Round Flask



(1) Glass Lid  
W / 5×Joints



(2) All PTFE Lid  
W / 6× Screwjoints  
◎ Top Safety : Non-Breakage, Anti-Chemical, & 280 °C



↑ (E) Option ; PTFE Thermo-Probe “K-type”  
⇒ See the Last Page of Reactors

► DURAN-glass Single-wall Vacuum Glass Vessel

- Ideal for Lab, Pilot- & Mass-Production ■ -80 °C ~ +260 °C Withstand.
  - Can be Used Direct Contact Thermo-Probe “K-type”
  - Single-wall Vacuum Glass Reaction Vessel System with DN Grooved Flange.
  - 5mm Thick High Borosilicate Glass 3.3 with Good Physical, Chemical Properties.
- \* Work in Constant Pressure and Vacuum Degree below 0.095MPa in stationary.

► Remote-controlled Heating Mantle & Upper Cover, 450 °C

- With Digital Feedback Controller “WGD-30S” : Can be used PTFE External Direct Contact Thermo-Probe “K-type” (E) - Option.
- (B) Fabric-housed Mantle Cover Available - Option ※ Details ⇒ See the Mantle-Section!

► High-Torque Digital Agitator System, 50~1000rpm

- CE Certified ■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Patented Jog-Shuttle Control System ■ PL (Product Liability) Insurance
- With Safety Flex-Coupling between Stir-Motor and PTFE Shaft, PTFE Impeller.

Models	I. Kettle-type	“REA-2M”	“REA-4M”	“REA-6M”	“REA-10M”	“REA-20M”	—
	II. R.Flask-type	“REA-2MR”	“REA-3MR”	“REA-5MR”	“REA-10MR”	“REA-20MR”	“REA-50MR”
Vessel Work	M-Model	2Lit	4/5Lit	6/7Lit	10/12Lit	20/21Lit	-
Volume	MR-Model	2Lit	3Lit	5Lit	10Lit	20Lit	50Lit
Vessel od × h mm	M-Model	130 × 240	200 × 165	215 × 165	240 × 165	250 × 215	-
	MR-Model	165 × 215	185 × 240	225 × 280	280 × 350	350 × 430	480 × 650
Drain Tube Size		od 13 × id 9mm	od 15 × id 10mm	od 18 × id 13mm			
Digital Stirrer (Agitator)	Model, Control	Direct Controlled “SHT-50DX”					Remote Cont. SHT-120T
	Viscosity & Torque	100,000 mPas 300 Ncm					150,000 mPas 500 Ncm
	Speed	50~1,000 rpm, Resolution : 1 rpm-Display / 1 rpm-Control					
	Motor & Rating	Worm-Gear DC Motor (3.5:1 Ratio)					In · Output 83 / 75 W, 1 / 10 HP
	Timer & Alarm	99hr 59min (with Continuous run.), Error status & Timer-end					
	Display	Digital LCD with Back-Light Function					
	Controller	Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)					
Heating Mantle	► See the Mantle-Section						
Shaft / Impeller	φ 8/6 PTFE Encapsulated Stainless-steel Shaft			φ 10/8 PTFE Encapsulated Stainless-steel Shaft		φ 12/10 PTFE Shaft	
	Safety Device Overload & Heat Protector for Motor						
Power Consumption	635W	885W	935W	1485W	2085W	4120W	
Power Supply	1 Phase, AC 230 V, 50 / 60 Hz						

I. M-models With 2~20Lit Single-Wall Vessel “Kettle-type”, with PTFE Drain Valve

Mantle-heated Reactor Model & Volume	Mantle watts(W) and DN Flange	(1) with Glass Lid, 5 Necks		(2) with PTFE Lid, 5 Necks	
		Cat. No.	Price, ₩	Cat. No.	Price, ₩
“REA-2M”, 2Lit.	550W, DN100	SL.Rea2553		SL.Rea2563	
“REA-4M”, 4 / 5Lit.	800W, DN150	SL.Rea2554		SL.Rea2564	
“REA-6M”, 6 / 7Lit.	“ ”, “ ”	SL.Rea2555		SL.Rea2565	
“REA-10M”, 10 / 12Lit.	1400W, “ ”	SL.Rea2556		SL.Rea2566	
“REA-20M”, 20 / 22Lit.	2000W, DN200	SL.Rea2557		SL.Rea2567	

\* PTFE DN 200 Flanged Lid : 6-necks for 20Lit vessels.

II. MR-models With 2~50Lit Round Bottom Flask, with PTFE Drain Valve

Mantle-heated Reactor Model & Volume	Mantle watts(W) and DN Flange	(1) with Glass Lid, 5 Necks		(2) with PTFE Lid, 5 Necks	
		Cat. No.	Price, ₩	Cat. No.	Price, ₩
“REA-2MR”, 2Lit.	450W, DN100	SL.Rea2573		SL.Rea2583	
“REA-3MR”, 3Lit.	750W, DN120	SL.Rea2574		SL.Rea2584	
“REA-5MR”, 5Lit.	850W, “ ”	SL.Rea2575		SL.Rea2585	
“REA-10MR”, 10Lit.	1500W, DN150	SL.Rea2576		SL.Rea2586	
“REA-20MR”, 20Lit.	2000W, “ ”	SL.Rea2577		SL.Rea2587	
“REA-50MR”, 50Lit.	4000W, DN200	SL.Rea2578		SL.Rea2588	

\* PTFE DN 200 Flanged Lid : 6-necks for 20Lit vessels.

**DURAN® Stirred Bottle Reactor-set, GL45/GLS 80, with Mag-Stir Shaft/Impeller and 2 & 4-Ports, 500~2000ml**  
 Ideal for Small Volume Mixing/Reaction, Up to 140°C, 500 rpm Autoclavable, FDA, 자석교반기용 바틀형 반응조



(1) GL45 Stirred Reactor-set, w/2-port

- Supplied by DURAN® in Germany
- Completely Autoclavable
- Temperature Resistant up to 140°C
- Can be used up to 500 rpm
- Variable Stirrer Shaft can be used
- Compatible with the proven DURAN® Connection Systems ;  
 Hoses with Bores from 1.6 mm to 6.0 mm can be Fitted (GL45)  
 Hoses with Bores from 1.6 mm to 12.0 mm can be Fitted (GLS 80)
- Materials used PP / PTFE / PEEK / Stainless Steel
- Parts in contact with Media conform fully to FDA Requirements
- Complete Set :

- (1) 2 Ports/GL45 Stirred Reactor - ① DURAN® GL45 Bottle (500 or 1,000ml),  
 ② Folding Magnetic Stirrer & Shaft,  
 ③ GL45 PP Screwcap with 2×GL14 Ports & PBT Screwcap (Red),  
 ④ GL14 PP Screwcap (Blue)
- (2) 4 Ports/GLS 80 Stirred Reactor - ① DURAN® GLS 80 Bottle (1Lit. or 2Lit.),  
 ② Anchor-type Magnetic Stirrer & Shaft,  
 ③ GLS 80 PP Screwcap with 2×GL14 PBT Screw cap (Red)  
 & 2×GL18 PBT Screwcap (Red),  
 ④ 1 GL 14 PP Screwcap(blue) (Impeller-type Stirrer can be Supplied  
 Optionally)



(2) GLS 80 Stirred Reactor-set, w/4-port

- \* Significantly Improved thorough Mixing Compared to Standard Magnetic Stirring Bar
- \* Ideal for the Mixing Process : Mixing Liquids, Dissolving Solids
- \* The Whole assembly is Autoclavable, so that it Can be Used in Biological Applications (Fermentation)
- \* The Connections Permit you to Introduce other Media into the Bottle or Remove Media During Mixing
- \* Can be Connected Extra Media Bottles or Fitted a Sterile Pressure Release

※ Note :

- Instead of direct Heating, a Water or Oil Bath should be used to Ensure an even Heat transmission and to avoid tension in the Glass.
- The Stirred Reactor can be Heated in a Temperature Cabinet
- Optimum Mixing is Obtained with a Filling Volume of 300ml (GL45)
- Due to Lid Design, No Probes (for Temperature Measurement) can be Used (GL45)

(1) 2 Ports/GL45 Stirred Reactor-set, with Fitting Mag-Stir Shaft/Impeller

- DU.1200395 Stirred Reactor -set, 2 Ports, GL45, 500 / 100ml
- DU.1200396 , 1,000 / 100ml

Ea.	Price, ₩

Spare Accessories for GL45 Stirred Reactor

- DU.1200391 Folding Magnetic Stirrer for GL45 Stirred Reactor, incl. Shaft  
 PP/Stainless steel, including PEEK Connection
- DU.1200390 Spare Screwcap 2-ports for GL45 Stirred Reactor,  
 with GL14 Screwcap, PP, Blue

Ea.	Price, ₩

(2) 4 Ports/GLS 80 Stirred Reactor-set with Anchor Mag-Stir Shaft/Impeller

- DU.1200380 Stirred Reactor -set, 4 Ports, GL80, 1,000 / 100ml
- DU.1200381 , 2,000 / 200ml

Ea.	Price, ₩

Spare Accessories for GLS 80 Stirred Reactor

- DU.21286545 Bottle, Baffled, GLS80, with PP GLS80 Screwcap & Pouring Ring,  
 1Lit., φ101mm×h222mm
- DU.1200379 Reactor Screwcap, GLS 80, incl. Anchor Stirrer, Shaft, Connection,  
 GL14 & GL18 Screwcap
- DU.1200382 Impeller Stirrer, Magnetic (Option)
- DU.1200383 Anchor Stirrer, Magnetic
- DU.1200385 Screwcap, PP, Blue / Grey
- DU.1200386 Shaft, Stainless Steel, incl. PEEK Connection

Ea.	Price, ₩



(1) & (2)

(3) →

DU.21286545  
 Bottle, Baffled,  
 GLS80

EX. Figure  
 : DURAN® Stirred Reactor-set  
 and DAIHAN® Hotplate Stirrer



Cat. No	Description	Articles
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DAIHAN-brand® Precise High-temp Bath Circulator “MaXircu™ CH”, to 250℃, ±0.1℃, 8-/12-/22-/30-Lit with 1×Stainless-steel Flat Lid/Digital Fuzzy Control System/Certi. & Traceability, Flow 16 Lit./min, Lift 2.8m  
 Ideal for Reactors, etc., External Circulating Connect - od.12.5/id.10.5mm, 정밀 고온 배스겸용 고온 써클레이터



High Temp. Bath Circulators : “CH-8” & “CH-12”

- Made in Korea. ■ CE Certified. ■ PL(Product Liability) Insurance.
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
  - Advanced Heating System Ensures Temperature Performance.
  - Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
  - Innovative Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 16 Lit./min.).
  - Controlled 5 Steps Circulation speed(Flow Rate).
  - Patented Jog-Dial Control System and Capacitive Touch Button.
- \* 304 Stainless-steel Bath and Lid for Superior Durability and High Thermal Efficiency.  
 \* Compensation Function to Control Difference between Real Temp. and Indicated Temp.  
 \* Digital Timer Function : ‘Delay Time’ and ‘Operation Time’ can be Controlled.  
 \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled).

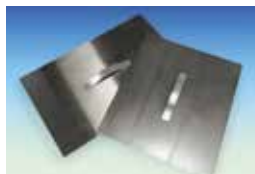
Specifications & Ordering information

Spec.	Model	MaXircu™ CH-8	MaXircu™ CH-12	MaXircu™ CH-22	MaXircu™ CH-30
Bath Volume		8 Lit.	12 Lit.	22 Lit.	30 Lit.
Pump		Max Flow Rate : 16 Lit./min, (Controlled 5 Steps Flow Rate Speed), Max Pressure : 5 psi, Max Lift : 2.8m			
Temp. Range & Accuracy		Room Temp +5℃~ 250℃, ±0.1℃			
Temp. Resolution		0.1℃-Display, 0.5℃-Control			
Temp. Uniformity & Probe		±0.2℃, PT100			
Heating Power		1.0 kW	1.5 kW	2.2 kW	2.5 kW
Heat-up Time		50 min. to 100℃			
External Circulation Nozzle		id.10.5 / od.12.5 mm			
Timer & Alarm		99hr 59min (Delay & Continuous run), Error status & Timer-end			
Display		Digital LCD with Back-Light Function			
Controller		Digital Fuzzy Controller with Jog - Dial Knob (Turn+Push)			
Safety Circuit		Over-Temp./-Current protection, Sensor Error & Low Level Detection			
Material		Stainless steel (#304)-Internal, Powder Coated steel-External, 50mm Thickness Ceramic Fiber-Insulation			
Lid & Drain Valve		included Stainless-steel Flat Lid, Ball Valve, Optional Dome Lid,			
Dimension (w×d×h)	Effective Space	180×130×h155	250×130×h155	340×250×h155	340×250×h200
	Mounted	180×320×h155	250×320×h155	340×440×h155	340×440×h200
	External	303×443×h569	373×443×h569	463×563×h569	463×563×h614
Packing Size (mm) & Gross Weight(kg)		470×400×h500	470×400×h500	600×490×h500	600×490×h500
		19 kg	21 kg	23 kg	37 kg
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			
Cat. No.	230V	DH.WCH00408	DH.WCH00412	DH.WCH00422	DH.WCH00430
	120V	DH.WCH00508	DH.WCH00512	DH.WCH00522	DH.WCH00530
Price, Each. ₩					

\* Other Specifications are available upon Customer' s Request. ※ 운임 약 ₩ 9,000 별도



External Circulating Nozzle



Flat Lid, Included



Ex. Multi-use High Temp. Bath Circulator with Modular Reactor System



(1) & (2)



(3)

Insulated Silicone & Teflon PFA Circulation Hose, Id  $\phi$  10 ~ 19mm, L1/1.5m

- Supplied by SciLab Korea \*  $\phi$  37mm Black NBR Foam Insulated Silicone or PFA-Hose
- \* Silicone Vacu-Hose : id 10×od 13mm, id 15×od 20mm, id 18×od 24mm, 220℃ \* SL.Tub4031 & SL.Tub4032 : PFA Hose
- \* PFA Hose : id 10×od 12mm / PTFE Hose : id 15×od 16mm, id 19×od 21mm, -100 + 260℃

(1) Insulated Silicone Hose, 220℃

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4021	Sili-hose, id 10mm, L1m	1m	
SL.Tub4022	, L1.5m	1.5m	
SL.Tub4023	, id 15mm, L1m	1m	
SL.Tub4024	, L1.5m	1.5m	
SL.Tub4025	, id 18mm, L1m	1m	
SL.Tub4026	, L1.5m	1.5m	

(2) Insulated PFA Hose, 260℃

SL.Tub	Material	Length	dh Pk. Price, ₩
SL.Tub4031	PFA-hose, id 10mm, L1m	1m	
SL.Tub4032	, L1.5m	1.5m	
SL.Tub4033	PTFE-hose, id 15mm, L1m	1m	
SL.Tub4034	, L1.5m	1.5m	
SL.Tub4035	, id 19mm, L1m	1m	
SL.Tub4036	, L1.5m	1.5m	

(3) Best Insulatedly & Flexible Stainless-steel Circulation Hose, Id  $\phi$  17mm, L1m, 360℃

SL.Tub	Material	Length	Ea. Price, ₩
SL.Tub7021	Flexible Stainless-steel Circulation Hose, id 17×od 60mm, L1m	L1m	

DAIHAN-brand® -30°C +200°C Precise Refrigerated Heating External Circulators "MaXircu™ WHR", Lift 38m, ±0.2°C  
 Ideal for 5~100 Lit Reactors, Heating Line, etc., with Pre-Cooling Sys, Can be used with External Direct Contact K-type Temp. Probe(Optional)  
 with High Quality Magnetic Pump, Flow 20-/40-/60-Lit/min, 정밀 고온/냉동 겸용 외부 써클레이터



-30°C ~ +200°C Refrigerated / Heating External Circulator, "MaXircu™ WHR-50"



Assembly-type Safety Connection Ports/Pipe, for Fluid In/Out-let ; ISO RC 1" Thread, Located On Rear-Upper Panel



▶ Figure ; One of the Applications in the Reactor System.

- Made in Korea
- PL (Product Liability) Insurance
- Max. Lift : 38m
- Ideal for Various Size Reactor-system.
- Built in Magnetic Pump ensures Long-life Time.
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Can be used with External Direct Contact K-type Temp. Probe(Optional)
- Innovated Powerful Circulation Pump ensures Temp. Uniformity : Internal and External Circulation (Max Flow Rate : 20-/40-/60-Lit./min.)
- Assembly-type Safety Connection Ports/Pipe (for Fluid In/Out-let : ISO RC 1" Screw Stainless-steel.)
- Patented Jog-Dial Control System and Digital LCD with Back-Light Function.
- With High Quality Shock-proof Caster for Convenient and Safe Moving.
- Independently 3-systems : Refrigerating System, Heating System, Pre-Cooling System.
- Embedded External Nozzle Part for the Prevention of Nozzle Damaged.
- Stainless-steel Internal Bath for Prevention of Corrosion.

- \* Urethane Foam Insulation
- \* Warning and Auto-Stop Function in case of Liquid Shortage.
- \* More Faster Cool-down and Heat-up Time
- \* Connection with Evaporator or Viscometer is applicable.
- \* Wide-range Filling Volume 10Lit./18Lit./25Lit.
- \* Useful for 5~100Lit. Various Reactors and Evaporators.
- \* High Quality Magnetic Pump : Max Flow Rate 20-/40-/60-Lit/min and Max. Pressure 4 bar

Specifications & Ordering information

Spec.	Model	"MaXircu™ WHR-20"	"MaXircu™ WHR-50"	"MaXircu™ WHR-100"
Temp. Range & Stability		-30°C ~ +200°C-Range, ±0.2°C(at 15°C)-Stability		
Heat-Fluid Filling Volume		10 Lit. max	18 Lit. max	25 Lit. max
Useful for 5~100Lit Reactors, etc.		for 5~20Lit Reactor, etc.	for 20~50Lit Reactor, etc.	for 50~100Lit Reactor, etc.
Refrigerator Capacity		4.5 kW	7.5 kW	18 kW
Heater		2.5 kW	6.0 kW	12 kW
Lid & Top Opening Dia.		φ80 mm		
Fluid In/Out-let Connector		ISO RC 1" (English System AG 1") Thread, Stainless-steel		
Pump Power, Max. Flow Rate		20 Lit/min	40 Lit/min	60 Lit/min
Lift Height, m Max. Pressure & Lift		Max Pressure : 4 bar, Max. Lift : 38m		
Cooling Capacity	at +15°C	8.1 kW	13.1 kW	22.7 kW
	at 0°C	4.3 kW	7.3 kW	12.6 kW
	at -25°C	1.4 kW	3.1 kW	5.45 kW
External Dimension		550×630×h1060 mm	700×790×h1270 mm	770×1100×h1500 mm
Optional External Temp. Sensor K-type Probe		Can be used with External Direct Contact K-type Temp. Probe. (Optional)		
Material		Stainless steel-Internal, Powder Coated steel-External		
Electrical Reqts.		3Phase 380V		
Cat. No.		DH.WHR0020	DH.WHR0050	DH.WHR0100
Price, Each. ₩				

\* Other Specifications are available upon Customer' s Request.

※ 운임 약 ₩ 20,000 별도!

Therminol D12® -85+230°C Best COOL-/HEAT-ing Transfer Fluid, Synthetic Hydrocarbon Mixture  
 for Low/High-Temp Baths, Clearly Harmless Liquid, Low Odor FDA Grade, 4/18/200Lit, 냉매/열매 겸용 합성 탄화수소혼합물(액체)



(1) 4Lit

(2) 18Lit

- Supplied by "Eastman" USA
- Clear, Water white Liquid / Non-Toxic / Low-Smell, FDA-Grade.
- The Best Circulation Properties / Thermal Stability.
- The Lowest Viscosity, cP ▶ (1) -50°C : 12cP, (2) 100°C : 0.46cP, (3) 200°C : 0.19cP, (4) 230°C : 0.16cP
- \* Specific Gravity : 0.759 at 25°C
- \* Autoignition Temp : 247°C
- \* Flash Point : 62°C
- \* Freezing Point : -94°C
- \* Boiling Point(90%) : 204°C
- \* Package : (1) 4Lit. and (2) 18Lit. PE Square Bottle / Subdivision, Original-200Lit. Steel Drum / 155kg

SL.CirD12.1 (1) "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 4 Lit.

4ℓ .dh pk ₩

4Lit

SL.CirD12.2 (2) "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 18Lit.

18ℓ .dh pk ₩

18Lit

※ 운임 약 ₩ 25,000 별도!

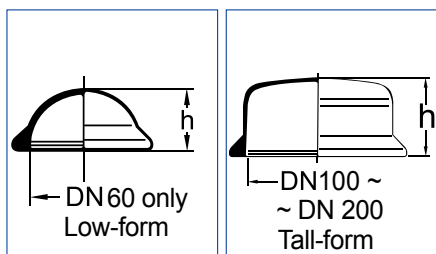
SL.CirD12 "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 200Lit./Drum

Drum Price, ₩

200Lit

Cat. No	Description	Articles
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1~5 Necks DURAN-glass 45° DN-Standard Flange Lids, for Reaction Vessels, ₩ 14/23, 24/40, and 34/45 with Perfect Compatibility, Chemical & Heat-Resistant, 45° DN-표준 플랜지 반응조 뚜껑, 완벽한 호환성



A. DN 60 Flange Blank Lid Low-form  
B. ~ E. DN 100~DN 200 Flange Blank Lid Tall-form

- Made of DURAN Borosilicate Glass 3.3 : by SciLab Korea.
- Chemical Resistance : Class-A2 & S1 to Alkali & Acid, and HGB-1 Hydrolytic Class.
- Heat Resistance : (1) 1260 °C/Working Point, (2) 825 °C/Softening Point, (3) 560 °C/Annealing Point

► The Specification of 45° DN-Standardized / Strong Flanges : 5-Ranges

- A. DN 60 Flange : id  $\phi$  60 × od  $\phi$  100mm    D. DN 150 Flange : id  $\phi$  150 × od  $\phi$  184mm  
 B. DN 100 Flange : id  $\phi$  100 × od  $\phi$  138mm    E. DN 200 Flange : id  $\phi$  200 × od  $\phi$  242mm  
 C. DN 120 Flange : id  $\phi$  120 × od  $\phi$  158mm



SciLab® 1 & 2-neck Lids

(1) 1-socket Neck Lids, 45° DN-Flanged

Cat. No	DN flange	Center neck ₩	Price Ea. ₩
SL.Re2001	DN 60	₩ 14/23	
SL.Re2002		24/40	
SL.Re2003		₩ 24/40	
SL.Re2004	DN 100	34/45	
SL.Re2005		₩ 24/40	
SL.Re2006	DN 120	34/45	
SL.Re2007		₩ 24/40	
SL.Re2008		34/45	
SL.Re2009	DN 200	₩ 24/40	
SL.Re2010		34/45	

(2) 2-socket Necks Lids, 45° DN-Flanged

Cat. No	DN flange	Center neck ₩	Side neck 15° angle ₩	Price Ea. ₩
SL.Re2011	DN 60	₩ 14/23	₩ 14/23	
SL.Re2012		24/40	24/40	
SL.Re2013	DN 100	₩ 24/40	₩ 24/40	
SL.Re2014		34/45	24/40	
SL.Re2015	DN 120	₩ 24/40	₩ 24/40	
SL.Re2016		34/45	24/40	
SL.Re2017	DN 150	₩ 24/40	₩ 24/40	
SL.Re2018		34/45	24/40	
SL.Re2019	DN 200	₩ 24/40	₩ 24/40	
SL.Re2020		34/45	24/40	



(3) SciLab® 3-neck Lid Tall-form 45° DN-flange Lids. 15° angle or Vertical Side-neck

(3) 3-socket Necks 45° DN-flange Lids, with DN60 ~ DN200-flanges, 15° Angle or Vertical Side-necks

SL.Re2021	DN 60-flange Lid, 3-neck, Center-₩ 24/40, 2 × 15° Side ₩ 14/23	
SL.Re2022		, 2 × 15° Side ₩ 24/40
SL.Re2023	DN 100-flange Lid, 3-neck, Center-₩ 24/40, 2 × 15° Side ₩ 14/23	
SL.Re2024		, 2 × 15° Side ₩ 24/40
SL.Re2025		- ₩ 34/45, 2 × 15° Side ₩ 24/40
SL.Re2026	DN 120-flange Lid, 3-neck, Center-₩ 24/40, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40	
SL.Re2027		, 2 × 15° Side ₩ 24/40
SL.Re2028		- ₩ 34/45, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40
SL.Re2029		, 2 × 15° Side ₩ 24/40
SL.Re2031	DN 150-flange Lid, 3-neck, Center-₩ 24/40, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40	
SL.Re2032		, 2 × 15° Side ₩ 24/40
SL.Re2033		- ₩ 34/45, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40
SL.Re2034		, 2 × 15° Side ₩ 24/40
SL.Re2035	DN 200-flange Lid, 3-neck, Center-₩ 24/40, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40	
SL.Re2036		, 2 × 15° Side ₩ 24/40
SL.Re2037		- ₩ 34/45, 1 × 15° Side ₩ 24/40, 1 × Vertical ₩ 24/40
SL.Re2038		, 2 × 15° Side ₩ 24/40

Ea.	Price, ₩



(4) DURAN® Original

(4) DURAN Original 4-neck Lids, with 45° DN-flange, with DN100/120/150-flanges & DIN 29/32 & 14/23 Joints

SM.2439247	DN 100-flange Lid, Center-₩ 29/32, 2 × 15° Side ₩ 29/32, 1 × Vertical ₩ 14/23
SM.2439251	DN 120-flange Lid, - ₩ 29/32, 2 × 15° Side ₩ 29/32, 1 × Vertical ₩ 14/23
SM.2439259	DN 150-flange Lid, - ₩ 29/32, 2 × 15° Side ₩ 29/32, 1 × Vertical ₩ 14/23

Ea.	Price, ₩

<Continued On Next Page>

<Continued From...1~5 Necks DURAN-glass 45° DN-Standard Lids>

**4 & 5 Necks DURAN-glass 45° DN-Standard Flange Lids for Reaction Vessels, ₩ 14/23, 24/40, and 34/45 with Perfect Compatibility, Chemical & Heat-Resistant, 45° DN-표준 플랜지 반응조 뚜껑, 완벽한 호환성**



(5) 4-Neck, Tall-form 45° DN-flange Lids  
Center : ₩ 24/40 or ₩ 34/45,  
2× 15° angled &  
1× Vertical Side-neck

- Made of DURAN Borosilicate Glass 3.3 : by SciLab Korea.
- Chemical Resistance : Class-A2 & S1 to Alkali & Acid, and HGB-1 Hydrolytic Class.
- Heat Resistance : (1) 1260°C/Working Point, (2) 825°C/Softening Point, (3) 560°C/Annealing Point

(5) 4-socket Necks 45° DN-flange Lids,  
with DN60 ~ DN200-flanges, 15° Angle or Vertical Side-necks

SL.Re	Description	Ea.	Price, ₩
SL.Re2041	DN 60-flange Lid, 4-neck, Center-₩ 24/40, 2× 15° Side ₩ 14/23, 1× Vertical ₩ 14/23		
SL.Re2042	, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 14/23		
SL.Re2043	DN 100-flange Lid, 4-neck, Center-₩ 24/40, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 14/23		
SL.Re2044	, 1× Vertical ₩ 24/40		
SL.Re2045	, 3× 15° Side ₩ 24/40		
SL.Re2047	-₩ 34/45, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 14/23		
SL.Re2048	, 1× Vertical ₩ 24/40		
SL.Re2049	, 3× 15° Side ₩ 24/40		
SL.Re2051	DN 120-flange Lid, 4-neck, Center-₩ 24/40, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2052	, 3× 15° Side ₩ 24/40		
SL.Re2053	, 3× Vertical-side ₩ 24/40		
SL.Re2055	-₩ 34/45, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2056	, 3× 15° Side ₩ 24/40		
SL.Re2057	, 3× Vertical-side ₩ 24/40		
SL.Re2061	DN 150-flange Lid, 4-neck, Center-₩ 24/40, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2062	, 3× 15° Side ₩ 24/40		
SL.Re2063	, 3× Vertical-side ₩ 24/40		
SL.Re2065	-₩ 34/45, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2066	, 3× 15° Side ₩ 24/40		
SL.Re2067	, 3× Vertical-side ₩ 24/40		
SL.Re2071	DN 200-flange Lid, 4-neck, Center-₩ 24/40, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2072	, 3× 15° Side ₩ 24/40		
SL.Re2073	, 3× Vertical-side ₩ 24/40		
SL.Re2075	-₩ 34/45, 2× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2076	, 3× 15° Side ₩ 24/40		
SL.Re2077	, 3× Vertical-side ₩ 24/40		



(6) 5-Neck, Tall-form 45° DN flange Lids  
Center : ₩ 14/23, 24/40, or 34/45  
3× 15° angled &  
1× Vertical Side-neck

(6) 5-socket Necks 45° DN-flange Lids,  
with DN100 ~ DN200-flanges, 15° Angle or Vertical Side-necks

SL.Re	Description	Ea.	Price, ₩
SL.Re2084	DN 100-flange Lid, 5-neck, Center-₩ 24/40, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 14/23		
SL.Re2085	, 1× Vertical ₩ 24/40		
SL.Re2086	, 4× 15° Side ₩ 24/40		
SL.Re2087	-₩ 34/45, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 14/23		
SL.Re2088	, 1× Vertical ₩ 24/40		
SL.Re2089	, 4× 15° Side ₩ 24/40		
SL.Re2091	DN 120-flange Lid, 5-neck, Center-₩ 24/40, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2092	, 4× 15° Side ₩ 24/40		
SL.Re2093	, 4× Vertical-side ₩ 24/40		
SL.Re2095	-₩ 34/45, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2096	, 4× 15° Side ₩ 24/40		
SL.Re2097	, 4× Vertical-side ₩ 24/40		
SL.Re2101	DN 150-flange Lid, 5-neck, Center-₩ 24/40, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2102	, 4× 15° Side ₩ 24/40		
SL.Re2103	, 4× Vertical-side ₩ 24/40		
SL.Re2105	-₩ 34/45, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2106	, 4× 15° Side ₩ 24/40		
SL.Re2107	, 4× Vertical-side ₩ 24/40		
SL.Re2111	DN 200-flange Lid, 5-neck, Center-₩ 24/40, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2112	, 4× 15° Side ₩ 24/40		
SL.Re2113	, 4× Vertical-side ₩ 24/40		
SL.Re2115	-₩ 34/45, 3× 15° Side ₩ 24/40, 1× Vertical ₩ 24/40		
SL.Re2116	, 4× 15° Side ₩ 24/40		
SL.Re2117	, 4× Vertical-side ₩ 24/40		

Cat. No	Description	Articles
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**4~6 Necks All PTFE 45° DN-Standard Flanged Reactor Lids, with Assembly Screw  $\nabla$  Taper Socket Joint, DN60~DN200 Flanged Common Use "ASTM & DIN"  $\nabla$  Cone Jointware, PTFE 45° DN, 표준 플랜지 반응조 안전 뚜껑**



Exchangeable

- ▶ Top-Safety : Non-Breakage / Non-Scratch / Chemically Inert / 280°C stable
- ▶ Exchangeable Screw NPT : ①  $\nabla$  Joints / ② Stirrer Guides / ③ Fittings (ex.Temp-Adapters) / ④ Blanking Nut Stoppers, etc
- ▶ It could change with  $\nabla$ Socket Joint or any Fittings which have Same Size Screw NPT.
- ▶ These Safety PTFE Lids are compatible with DURAN® 45° Flange-type DN-60/-100/-120/-150 & DN200 Flanged Glass Vessels and DN Quick Release Clamps perfectly.

- Made in U.K.
- PTFE is Pure, Virgin Material, which conforms to FDA and USP Class VI Requirements.
- Common Use with ASTM & DIN  $\nabla$  Cone Jointware of  $\nabla$  14/-, 19/-, 24/-, 29/-, 34/-, and 45/-
- Screw-in Assembly of Fittings to give Flexibility, Versatility and Significant Cost Saving
- All Fittings are Interchangeable for the same Thread Sizes. :  $\nabla$  Joints, Compression Screw Fittings, Blanking Nut Stoppers, Stirrer Guide, etc.
- The PTFE Lid fit Vessels with DURAN® type DN 60, 100, 120, 150 and DN 200 Flange Vessels & Quick Release Clamps.

- \* Can accommodate all usual Ancillary Equipment, Condensers, Probes, etc.
- \* Improved Durability and Safety compared to Conventional Glass Lids
- \* Improved Thermal Insulation and Reduced Condensation
- \* Standard Reactor Lids fit Vessels with 60, 100, 150 and 200mm DURAN® type Flanges.

▶ The Specification of 45° DN-Standardized / Strong Flanges : 5-Ranges, DIN/ISO

- A. DN 60 Flange : id  $\phi$  60 × od  $\phi$  100mm
- B. DN 100 Flange : id  $\phi$  100 × od  $\phi$  138mm
- C. DN 120 Flange : id  $\phi$  120 × od  $\phi$  158mm
- D. DN 150 Flange : id  $\phi$  150 × od  $\phi$  184mm
- E. DN 200 Flange : id  $\phi$  200 × od  $\phi$  242mm



**(1) DN 60/45° Flanged PTFE 4-neck Reactor Lid, with 3 ×  $\nabla$  24/- & 1 ×  $\nabla$  14/- Screw Sockets (0.5" NPT)**

- \* Pre-assembled Reactor Lid to Fit DURAN® DN60/45° Flange "id 60 x od 100mm" type.
- \* The Screw  $\nabla$ Socket Joints are Removable & Exchangeable ⇒ All Fittings for Same Screw NPT size.
- \* Suitable for ASTM & DIN Joint Cones = Common Use :  $\nabla$  24/40 & 24/29 and  $\nabla$  14/35 & 14/23 Cone Jointware

SL.Rea4011 PTFE Reactor Lid, DN60, 4-Screw  $\nabla$  Sockets : 3 × 24/- & 1 × 14/-

Price/Ea. ₩

Lid Base	Screw Neck Size, inch NPT	Neck Place Type	Pre-Assembled Socket and Usage in ASTM & DIN Cones	Optional/Exchangeable $\nabla$ Joints & Fittings in Same Screw NPT Size
Centre Neck	0.5" NPT	Vertical	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	① $\nabla$ Socket Joint : (14/-), 19/-, (24/-), & 29/- ③ Screw Clamping Holders, Bore $\phi$ 6~14mm and Stopper Plugs ④ Blanking Nut Stoppers ⑤ Screw-Extension Adapter NPT-Male 0.5" & Female 0.75" and then ② Stirrer Guides for $\phi$ 8~10mm Shafts
Side Neck-1	0.5" NPT	10°&10° Compound Angle	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-2	0.5" NPT	10°&10° Compound Angle	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-3	0.5" NPT	10°&10° Compound Angle	$\nabla$ 14/- Screw Taper Socket : Common Use-14/35 & 14/23 Cones	



**(2) DN 100/45° Flanged PTFE 5-neck Reactor Lid, with 5 ×  $\nabla$  24/- Screw Sockets (0.75" NPT)**

- \* Pre-assembled Reactor Lid to Fit DURAN® DN100/45° Flange "id 100 x od 138mm" type.
- \* The Screw  $\nabla$ Socket Joints are Removable & Exchangeable ⇒ All Fittings for Same Screw NPT size.
- \* Suitable for ASTM & DIN Joint Cones = Common Use :  $\nabla$  24/40 & 24/29 Cone Jointware

SL.Rea4013 PTFE Reactor Lid, DN100, 5-Screw  $\nabla$  Sockets : 5 × 24/-

Price/Ea. ₩

Lid Base	Screw Neck Size, inch NPT	Neck Place Type	Pre-Assembled Socket and Usage in ASTM & DIN Cones	Optional/Exchangeable $\nabla$ Joints & Fittings in Same Screw NPT Size
Centre Port	0.75" NPT	Vertical	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	① $\nabla$ Socket Joint : (24/-), 29/-, (34/-), & 45/- ② Stirrer Guides for $\phi$ 8~10mm Shafts ③ Screw Clamping Holders, Bore $\phi$ 6~14mm and Stopper Plugs ④ Blanking Nut Stoppers ⑤ Screw-Extension Adapter NPT-Male 0.75" & Female 1"
Side Neck-1	0.75" NPT	Vertical	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-2	0.75" NPT	10° Angle	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-3	0.75" NPT	10° Angle	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-4	0.75" NPT	10°&10° Compound Angle	$\nabla$ 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	

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<Continued From...4~6 Necks All PTFE 45° DN-Standard Flange Reactor Lids>



(3) DN 120/45° Flanged PTFE 5-neck Reactor Lid, with 1 × 34/- & 4 × 24/- Screw Sockets (0.75" NPT)

- \* Pre-assembled Reactor Lid to Fit DURAN® DN120/45° Flange "id 120 x od 158mm" type.
- \* The Screw Socket Joints are Removable & Exchangeable ⇒ All Fittings for Same Screw NPT size.
- \* Suitable for ASTM & DIN Joint Cones = Common Use : 34/45 & 34/35 and 24/40 & 24/29 Cones

SL.Rea4015 PTFE Reactor Lid, DN120, 5-Screw Socket : 1 × 34/- & 4 × 24/-

Price/Ea. ₩

Lid Base	Screw Neck Size, inch NPT	Neck Place Type	Pre-Assembled Socket and Usage in ASTM & DIN Cones	Optional/Exchangeable Socket Joints & Fittings in Same Screw NPT Size
Centre Port	1" NPT	Vertical	34/- Screw Taper Socket : Common Use-34/45 & 34/35 Cones	① Socket Joint : (24/-), 29/-, (34/-), & 45/- ② Stirrer Guides for φ8~10mm Shafts ③ Screw Clamping Holders, Bore φ6~14mm and Stopper Plugs ④ Blanking Nut Stoppers ⑤ Screw-Extension Adapter NPT-Male 0.75" & Female 1"
Side Neck-1	0.75" NPT	Vertical	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-2	0.75" NPT	10° Angle	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-3	0.75" NPT	10° Angle	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-4	0.75" NPT	10°&10° Compound Angle	24/- Screw Taper Socket : Common Use-34/45 & 34/35 Cones	



(4) DN 150/45° Flanged PTFE 5-neck Reactor Lid, with 3 × 24/-, 1 × 34/- & 1 × 45/- Screw Sockets (1" NPT)

- \* Pre-assembled Reactor Lid to Fit DURAN® DN150/45° Flange "id 150 x od 184mm" type.
- \* The Screw Socket Joints are Removable & Exchangeable ⇒ All Fittings for Same Screw NPT size.
- \* Suitable for ASTM & DIN Joint Cones = Common Use : 34/45 & 34/35, 24/40 & 24/29 and 45/50 & 45/40 Cones

SL.Rea4017 PTFE Reactor Lid, DN150, 5-Screw Socket : 3 × 24/-, 1 × 34/- & 1 × 45/-

Price/Ea. ₩

Lid Base	Screw Neck Size, inch NPT	Neck Place Type	Pre-Assembled Socket and Usage in ASTM & DIN Cones	Optional/Exchangeable Socket Joints & Fittings in Same Screw NPT Size
Centre Port	1" NPT	Vertical	34/- Screw Taper Socket : Common Use-34/45 & 34/35 Cones	① Socket Joint : (24/-), 29/-, (34/-), & 45/- ② Stirrer Guides for φ8~10mm Shafts ③ Screw Clamping Holders, Bore φ6~14mm and Stopper Plugs ④ Blanking Nut Stoppers ⑤ Screw-Extension Adapter NPT-Male 1" & Female 1.5"
Side Neck-1	1" NPT	Vertical	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-2	1" NPT	Vertical	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-3	1" NPT	10° Angle	45/- Screw Taper Socket : Common Use-45/50 & 45/40 Cones	
Side Neck-4	1" NPT	10°&10° Compound Angle	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cone	



(5) DN 200/45° Flanged PTFE 6-neck Reactor Lid, with 3 or 4 × 24/-, 1 or 2 × 34/- & 1 × 45/- Screw Sockets

- \* Pre-assembled Reactor Lid to Fit DURAN® DN200/45° Flange "id 200 x od 242mm" type.
- \* The Screw Socket Joints are Removable & Exchangeable ⇒ All Fittings for Same Screw NPT size.
- \* Suitable for ASTM & DIN Joint Cones = Common Use : 34/45 & 34/35, 24/40 & 24/29 and 45/50 & 45/40 Cones

② SL.Rea4019 PTFE Reactor Lid, DN200, 6-Screw Socket : 4 × 24/-, 1 × 34/- & 1 × 45/-

Price/Ea. ₩

③ SL.Rea4020

: 3 × 24/-, 2 × 34/- & 1 × 45/-

Price/Ea. ₩

Lid Base	Screw Neck Size, inch NPT	Neck Place Type	Pre-Assembled Socket and Usage in ASTM & DIN Cones	Optional/Exchangeable Socket Joints & Fittings in Same Screw NPT Size
Centre Port	1" NPT	Vertical	34/- Screw Taper Socket : Common Use-34/45 & 34/35 Cones	① Socket Joint : (24/-), 29/-, (34/-), & 45/- ② Stirrer Guides for φ8~10mm Shafts ③ Screw Clamping Holders, Bore φ6~14mm and Stopper Plugs ④ Blanking Nut Stoppers ⑤ Screw-Extension Adapter NPT-Male 1" & Female 1.5"
Side Neck-1	1" NPT	Vertical	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-2	1" NPT	Vertical	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
Side Neck-3	1" NPT	10° Angle	② 24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cones	
	1.5" NPT		③ 34/- Screw Taper Socket : Common Use-34/45 & 34/35 Cones	
Side Neck-4	1" NPT	10°&10° Compound Angle	24/- Screw Taper Socket : Common Use-24/40 & 24/29 Cone	
Side Neck-5	1.5" NPT	10° Angle	45/- Screw Taper Socket : Common Use-45/50 & 45/40 Cone	

2-Kinds of 6-Necks

② Basic-type

34/-, 1" NPT-Aperture  
; Condenser Connection

③ Wide Condensing-type

34/-, 1.5" NPT-Aperture  
; Condenser Connection

Cat. No	Description	Articles
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Exchangeable NPT-PTFE Screw Taper Socket Joints

### Accessory NPT-PTFE Screw Standard Taper Socket Joints for PTFE Reactor Lids

Suitable for "ASTM & DIN" Cone Jointware, PTFE 반응조 뚜껑용 NPT스크류 표준 소켓 조인트

- Made of UK. ■ Fit to the Same Screw NPT Necks of PTFE Reactor Lids: Easy Exchangeable
- Pure / Chemically Resistant / Cleanable / Durable / Non-Breakage / Non-scratch / 280°C stable

(1) For DN60-flanged Lid, with 0.5" NPT Screw Necks, ₩ 14/- ~ ₩ 29/-

<b>CW.PC711.1413</b>	PTFE Screw Socket, 0.5" NPT, ₩ 14/-, for ₩ 14/35 & 14/23 Cones, $\phi 22 \times h45$ mm	Ea. Price, ₩
<b>CW.PC711.1913</b>	, ₩ 19/-, for ₩ 19/38 & 19/26 Cones, $\phi 27 \times h50$ mm	
<b>CW.PC711.2413</b>	, ₩ 24/-, for ₩ 24/40 & 24/29 Cones, $\phi 34 \times h67$ mm	
<b>CW.PC711.2913</b>	, ₩ 29/-, for ₩ 29/42 & 29/32 Cones, $\phi 40 \times h68$ mm	

(2) For DN100 & 120-flanged Lid, with 0.75" NPT Screw Necks, ₩ 19/- ~ ₩ 34/-

<b>CW.PC711.1919</b>	PTFE Screw Socket, 0.75" NPT, ₩ 19/-, for ₩ 19/38 & 19/26 Cones, $\phi 27 \times h55$ mm	Ea. Price, ₩
<b>CW.PC711.2419</b>	, ₩ 24/-, for ₩ 24/40 & 24/29 Cones, $\phi 34 \times h55$ mm	
<b>CW.PC711.2919</b>	, ₩ 29/-, for ₩ 29/42 & 29/32 Cones, $\phi 40 \times h68$ mm	
<b>CW.PC711.3419</b>	, ₩ 34/-, for ₩ 34/45 & 34/35 Cones, $\phi 47 \times h75$ mm	

(3) For DN150 & 200-flanged Lid, with 1" NPT Screw Necks, ₩ 24/- ~ ₩ 45/-

<b>CW.PC711.2425</b>	PTFE Screw Socket, 1" NPT, ₩ 24/-, for ₩ 24/40 & 24/29 Cones, $\phi 34 \times h60$ mm	Ea. Price, ₩
<b>CW.PC711.2925</b>	, ₩ 29/-, for ₩ 29/42 & 29/32 Cones, $\phi 40 \times h60$ mm	
<b>CW.PC711.3425</b>	, ₩ 34/-, for ₩ 34/45 & 34/35 Cones, $\phi 47 \times h75$ mm	
<b>CW.PC711.4525</b>	, ₩ 45/-, for ₩ 45/50 & 45/40 Cones, $\phi 58 \times h90$ mm	

(4) For DN200-flanged Lid, with 1.5" NPT Screw Necks, ₩ 24/- ~ ₩ 45/-

<b>CW.PC711.2438</b>	PTFE Screw Socket, 1.5" NPT, ₩ 24/-, for ₩ 24/40 & 24/29 Cones, $\phi 48 \times h55$ mm	Ea. Price, ₩
<b>CW.PC711.2938</b>	, ₩ 29/-, for ₩ 29/42 & 29/32 Cones, $\phi 48 \times h55$ mm	
<b>CW.PC711.3438</b>	, ₩ 34/-, for ₩ 34/45 & 34/35 Cones, $\phi 48 \times h55$ mm	
<b>CW.PC711.4538</b>	, ₩ 45/-, for ₩ 45/50 & 45/40 Cones, $\phi 61 \times h80$ mm	



(1), (2), (3) NPT Holder Set

### Accessory NPT-PTFE Screw Clamping Holder, Grip Bore $\phi 7 \sim 19$ mm for Rod & Tubing

Ideal for Thermometer/Probes, Sampling tubes, Inert Gas Tube, etc., 스크류 그립 홀더, 온도계/샘플튜브등 다양도

- \* Made in UK.
- \* Consist of PTFE Bored Body and Replacement Seal Pack of Screw Clamp Nut / PEEK "Olive" Grip Ring / Bored Cone Nut

(1) 0.5" NPT Holder Set, Bore  $\phi 7 \sim 12$ mm

<b>CW.701.050.07</b>	0.5" NPT Holder Set, $\phi 7$ mm Bore	Set. Price, ₩
<b>CW.701.050.08</b>	, $\phi 8$ mm Bore	
<b>CW.701.050.09</b>	, $\phi 9$ mm Bore	
<b>CW.701.050.12</b>	, $\phi 12$ mm Bore	

(2) 0.75" NPT Holder Set, Bore  $\phi 8 \sim 16$ mm

<b>CW.701.075.08</b>	0.75" NPT Holder Set, $\phi 8$ mm Bore	Set. Price, ₩
<b>CW.701.075.12</b>	, $\phi 12$ mm Bore	
<b>CW.701.075.14</b>	, $\phi 14$ mm Bore	
<b>CW.701.075.16</b>	, $\phi 16$ mm Bore	

(3) 1" NPT Holder Set, Bore  $\phi 8 \sim 19$ mm

<b>CW.701.100.08</b>	1" NPT Holder Set, $\phi 8$ mm Bore	Set. Price, ₩
<b>CW.701.100.12</b>	, $\phi 12$ mm Bore	
<b>CW.701.100.14</b>	, $\phi 14$ mm Bore	
<b>CW.701.100.16</b>	, $\phi 16$ mm Bore	
<b>CW.701.100.19</b>	, $\phi 19$ mm Bore	

(4) Replacement Seal Pack of 3 Parts, Bore  $\phi 7 \sim 19$ mm

- \* Consist : ① Screw Clamp Nut, ② "Olive" Grip Ring, and ③ Bored Cone Nut

<b>CW.701.007</b>	Seal Pack, 3parts, $\phi 7$ mm Bore	3parts	Pk. Price, ₩
<b>CW.701.008</b>	, $\phi 8$ mm Bore	3parts	
<b>CW.701.009</b>	, $\phi 9$ mm Bore	3parts	
<b>CW.701.012</b>	, $\phi 12$ mm Bore	3parts	
<b>CW.701.014</b>	, $\phi 14$ mm Bore	3parts	
<b>CW.701.016</b>	, $\phi 16$ mm Bore	3parts	
<b>CW.701.019</b>	, $\phi 19$ mm Bore	3parts	

② Replacement "Olive" Grip Ring, Bore  $\phi 7 \sim 19$ mm

<b>CW.701.07</b>	"Olive" Grip Ring, $\phi 7$ mm Bore	5ea	Pk. Price, ₩
<b>CW.701.08</b>	, $\phi 8$ mm Bore	5ea	
<b>CW.701.09</b>	, $\phi 9$ mm Bore	5ea	
<b>CW.701.12</b>	, $\phi 12$ mm Bore	5ea	
<b>CW.701.14</b>	, $\phi 14$ mm Bore	5ea	
<b>CW.701.16</b>	, $\phi 16$ mm Bore	5ea	
<b>CW.701.19</b>	, $\phi 19$ mm Bore	5ea	



① Screw Clamp Nut  
② "Olive" Grip Ring  
③ Cone Clamp Nut  
(4) Replacement Seal Pack

(5) Optional PTFE Plugs to Seal the "Screw Clamping Holder",  $\phi 7 \sim 19$ mm, 스크류 그립 홀더용 마개

- \* The Plugs are Used to Seal the "NPT-PTFE Screw Clamping Holder" without the Need to Remove the "Clamping holder" from the PTFE Lid of Reactor

<b>CW.703.07</b>	PTFE Plug, for Bore- $\phi 7$ mm	Ea. Price, ₩
<b>CW.703.08</b>	- $\phi 8$ mm	
<b>CW.703.09</b>	- $\phi 9$ mm	

<b>CW.703.12</b>	PTFE Plug, for Bore- $\phi 12$ mm	Ea. Price, ₩
<b>CW.703.14</b>	- $\phi 14$ mm	
<b>CW.703.16</b>	- $\phi 16$ mm	
<b>CW.703.19</b>	- $\phi 19$ mm	



(5) Optional Plug to Seal the "Screw Clamping Holder"

**NPT-PTFE Blanking Nut Stoppers, to Seal Unused Blank Neck Ports of PTFE Lids, 0.5"~1.5" NPT**  
 for Used to Seal Unused / Blank Neck Ports of PTFE Reactor Lids, PTFE 반응조 커버의 Blank Neck용 마개



\* Made in UK. \* Used to Seal Unused / Blank Neck Ports of PTFE Reactor Lids

**CW.702.050** PTFE Blanking Nut Stopper, 0.5" NPT  
**CW.702.075** , 0.75" NPT  
**CW.702.100** , 1" NPT  
**CW.702.150** , 1.5" NPT

Ea.	Price, ₩



**PTFE-NPT-Extension Adapters**  
 스크류 확장 어댑터, 특히 DN 60 뚜껑의 중앙에 Stirrer Guide 0.75" NPT를 사용시에 ①번 어댑터가 필요함

\* Especially, Good for the Center Neck of DN 60 Flanged Lid : for the Use of Stirrer Guide 0.75" NPT

**CW.713.050075** ① PTFE NPT-Extension Adapter, 0.5" NPT Male, 0.75" NPT Female, h46mm  
**CW.713.075100** ② , 0.75" NPT Male, 1" NPT Female, h46mm  
**CW.713.100150** ③ , 1" NPT Male, 1.5" NPT Female, h43mm

Ea.	Price, ₩

**Screw-NPT-PTFE/PEEK High-class Vacuum Stirrer Guide, with 0.75" & 1" NPT for  $\phi$  8~16mm Shafts**  
 for Direct Assembly into PTFE Reactor Lids, 500rpm Stable/max 800rpm, Chemically Inert, -200°C~+280°C stable, 고품질 진공 교반셀



(1)



(2)

■ Made of UK.

■ Useful for a Wide-Range Vacuum Condition

\* Acceptable a Wide Temperature Range without Shedding Particles from the Guide Seal Whilst Maintaining Vacuum Operation  
 \* Screw-NPT : for Direct Assembly into PTFE Reactor Lids \* Ant-Whip and Reduced Vibration

(1) for Middle/Low Vacuum, for Shaft  $\phi$  8~ $\phi$  16mm

**CW.710.0819** PTFE Stirrer Guide, Vacuum, 0.75" NPT, for-8mm shaft, h63mm  
**CW.710.1019** -10mm shaft, h63mm  
**CW.710.0825** PTFE Stirrer Guide, Vacuum, 1" NPT, for-8mm shaft, h67mm  
**CW.710.1025** -10mm shaft, h67mm  
**CW.710.1225** -12mm shaft, h67mm  
**CW.710.1425** -14mm shaft, h80mm  
**CW.710.1625** -16mm shaft, h80mm

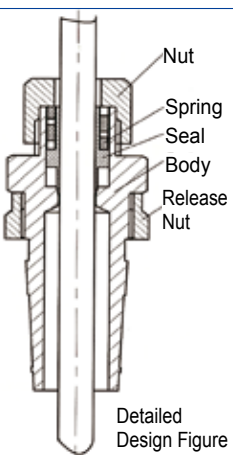
Ea.	Price, ₩

(2) for High Vacuum, 5mmHg/5psi, for Shaft  $\phi$  8~ $\phi$  16mm

**CW.709.0819** PTFE Stirrer Guide, Hi-Vacuum, 0.75" NPT, for-8mm shaft, h106mm  
**CW.709.1019** -10mm shaft, h106mm  
**CW.709.1219** -12mm shaft, h106mm  
**CW.709.0825** PTFE Stirrer Guide, Hi-Vacuum, 1" NPT, for-8mm shaft, h110mm  
**CW.709.1025** -10mm shaft, h110mm  
**CW.709.1225** -12mm shaft, h112mm  
**CW.709.1425** -14mm shaft, h112mm  
**CW.709.1625** -16mm shaft, h112mm

Ea.	Price, ₩

**Joint-Screw-NPT-PTFE/PEEK High-class Vacuum Stirrer Guide, with ASTM/DIN Glass Cone Joint, for  $\phi$  8~16mm Shafts**  
 Ideal for Middle/Low-Vacuum, 500/800rpm, Chemically Inert, -200°C~+280°C stable, 고품질 진공 교반셀



High Performance Shaft Guides

■ Made of UK.

■ Suitable for Glass Same Size Socket of ASTM or DIN

\* with an Adjustable / Replaceable Compression Seal Sizes ; for  $\phi$  8~ $\phi$  16mm Shafts  
 \* PTFE in the only Media Contact Material

(1) for ASTM Socket Joint Sizes, for  $\phi$  8~ $\phi$  16mm Shaft

**CW.005.0.0824** Stirrer Seal, USA-type, for- $\phi$  8mm Shafts,  $\text{ㄷ}24/40$  Joint  
**CW.005.0.1024** - $\phi$  10mm Shafts,  $\text{ㄷ}24/40$  Joint  
**CW.005.0.1034** - $\phi$  10mm Shafts,  $\text{ㄷ}34/45$  Joint  
**CW.005.0.1434** - $\phi$  14mm Shafts,  $\text{ㄷ}34/45$  Joint  
**CW.005.0.1634** - $\phi$  16mm Shafts,  $\text{ㄷ}34/45$  Joint

Ea.	Price, ₩

(2) for DIN/ISO Socket Joint Sizes, for  $\phi$  8~ $\phi$  16mm Shaft

**CW.005.00.0824** Stirrer Seal, EUROPE-type, for- $\phi$  8mm Shafts,  $\text{ㄷ}24/29$  Joint  
**CW.005.00.1029** - $\phi$  10mm Shafts,  $\text{ㄷ}29/32$  Joint  
**CW.005.00.1045** - $\phi$  10mm Shafts,  $\text{ㄷ}45/40$  Joint  
**CW.005.00.1434** - $\phi$  14mm Shafts,  $\text{ㄷ}34/35$  Joint  
**CW.005.00.1645** - $\phi$  16mm Shafts,  $\text{ㄷ}45/40$  Joint

Ea.	Price, ₩



Cat. No	Description	Articles
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250 ~ 50,000ml DURAN® Original Vacuum/Pressure Round Reaction Flasks, with 45° DN-Flange/O-ring Groove up to 1.0 bar at 250°C, Perfect Compatibility, DURAN® 정품 환형 진공 / 압력 반응 플라스크, O-링 홀부, 완벽한 호환성 표준화 규격



- **DURAN® Original Reaction Flasks, Borosilicate Glass 3.3 : Made in Germany.**  
 ※ But, The "SL.Re~" Items of 250, 500, 1000, 3000, and 50,000ml : Finished by SciLab Korea.  
 "Joining Original DURAN® Blank-DN flange 45° / O-ring groove & -Flask".
- **DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance.**  
**Chemical-Resistant :** (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class.  
**Heat-Stability :** (1) 560°C -Annealing point, (2) 825°C -Softening point,  
 (3) 1260°C -Melt Working point, and (4) 525°C-Transformation Temp.
- **Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless-steel Quick-Release-Clamp.**  
**Also Suitable for General Purpose.**
- **45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks**
  - ① DN 60 Flange : idφ 60 × odφ 100mm
  - ② DN 100 Flange : idφ 100 × odφ 138mm
  - ③ DN 120 Flange : idφ 120 × odφ 158mm
  - ④ DN 150 Flange : idφ 150 × odφ 184mm
  - ⑤ DN 200 Flange : idφ 200 × odφ 242mm



**Ordering : Vessels and Heating Mantles**

(1) 250 & 500ml - 45° DN 60 flange/O-ring groove

SL.Re2161 React-Flask, DN 60, 250ml, φ 85 / thick 2 ± 1 × nφ 70 × h145mm, 1.0 bar.  
 SL.Re2162 , 500ml, φ 105 / thick 2 ± 1 × nφ 70 × h165mm, 1.0 bar.

(2) 1,2,4, and 6 Lit. - 45° DN 100 flange/O-ring groove

SL.Re2164 React-Flask, DN 100, 1,000~1,300(full)ml, 1.0 bar,  
 φ 131 / thick 2.3 ± 0.8 × nφ 106 × h185mm.  
 SM.2439563 , 2,000~2,600(full)ml, 1.0 bar,  
 φ 165 / thick 4.0 ± 1 × nφ 106 × h215mm.  
 SM.2439571 , 4,000~4,700(full)ml, 1.0 bar,  
 φ 206 / thick 4.0 ± 1 × nφ 106 × h265mm.  
 SM.2439576 , 6,000~6,700(full)ml, 1.0 bar,  
 φ 236 / thick 4.5 ± 1 × nφ 106 × h295mm.

(3) 3 & 5 Lit. - 45° DN 120 flange/O-ring groove, Thick. 3.5 ± 0.5mm

SL.Re2166 React-Flask, DN 120, 3,000~3,500(full)ml, 1.0 bar,  
 φ 185 / thick 3.5 ± 1 × nφ 130 × h240mm.  
 SM.2439773 , 5,000~6,000(full)ml, 1.0 bar,  
 φ 225 / thick 3.3 ± 1 × nφ 130 × h280mm.

(4) 10 & 20 Lit. - 45° DN 150 flange/O-ring groove, Thick. 4.5 ± 1mm

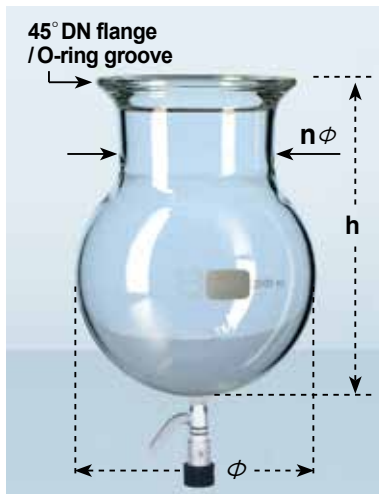
SM.2439986 React-Flask, DN 150, 10,000~12,000(full)ml, 0.5 bar,  
 φ 280 / thick 4.5 ± 1 × nφ 160 × h350mm.  
 SM.2439991 , 20,000~22,000(full)ml, 0.5 bar,  
 φ 350 / thick 4.5 ± 1 × nφ 156 × h420mm.

(5) 50 Lit. - 45° DN 200 flange/O-ring groove, Thick. 5 ± 1mm

SL.Re2171 React-Flask, DN 200, 50,000~56,000(full)ml, 0.5 bar,  
 φ 480 / thick 5.5 ± 1 × nφ 215 × h650mm.

Vessel		DAIHAN® Heat-Mantle, 230V	
Ea.	Price, ₩	Cat. No	Ea. Price, ₩
		DH.WHM12012	
		DH.WHM12013	
		DH.WHM12014	
		DH.WHM12015	
		DH.WHM8037	
		DH.WHM12018	
		DH.WHM12016	
		DH.WHM12017	
		DH.WHM12019	
		DH.WHM12070	
		DH.WHM12075	

※ DH.WHM12075 : without Temp. Controller



**2~50Lit. PTFE Drain-valved Reaction Flasks Mantles, with 45° DN-flange/O-ring Groove 배출 밸브형 진공/압력 반응 플라스크, O-링 홀부, 완벽한 호환성 표준화 규격**

\* Joining DURAN Flask and PTFE Drain Valve : by SciLab Korea

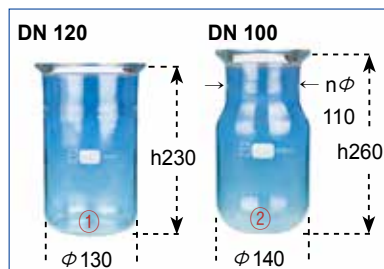
- SL.Re2292 React-Flask, DN 100, 2,000~2,600(full)ml, 1.0 bar.  
 φ 165 / thick 4.0 ± 1 × nφ 106 × h215mm
- SL.Re2293 React-Flask, DN 120, 3,000~3,500(full)ml, 1.0 bar.  
 φ 185 / thick 3.5 ± 1 × nφ 130 × h240mm
- SL.Re2294 React-Flask, DN 120, 5,000~6,000(full)ml, 1.0 bar.  
 φ 225 / thick 3.3 ± 1 × nφ 130 × h280mm
- SL.Re2295 React-Flask, DN 150, 10,000~12,000(full)ml, 0.5 bar.  
 φ 280 / thick 4.5 ± 1 × nφ 160 × h350mm
- SL.Re2296 React-Flask, DN 150, 20,000~22,000(full)ml, 0.5 bar.  
 φ 350 / thick 4.5 ± 1 × nφ 156 × h420mm
- SL.Re2298 React-Flask, DN 200, 50,000~56,000(full)ml, 0.5 bar.  
 φ 480 / thick 5.5 ± 1 × nφ 215 × h650mm

Vessel		DAIHAN® Heat-Mantle, 230V	
Ea.	Price, ₩	Cat. No	Ea. Price, ₩
		DH.WHM8222	
		DH.WHM8232	
		DH.WHM8233	
		DH.WHM8226	
		DH.WHM8227	
		DH.WHM8228	

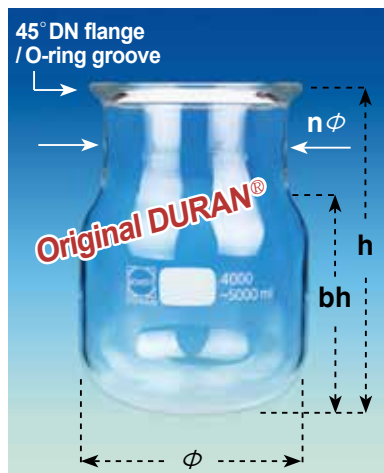
100 ~ 20,000ml DURAN® Original Vacuum/Pressure Reaction Vessel, with 45° DN-flange/O-ring Groove with Perfect Compatibility, 0.5 ~ 2.5 bar, 정품 DURAN® 원저 진공 / 압력 반응 베셀, O-링 홈부, 완벽한 호환성 표준화 규격



(1) Cylindrical-form, 100 ~ 3,600ml R / B Vacuum / Pressure Vessels



※ Comparison! 2,600ml :  
① "Re2212" Cylindrical-form and  
② "DU.2439063" Kettle-form



(2) Kettle-form, 2,000 ~ 21,000ml R / B Vacuum / Pressure Vessels



- Original DURAN® Vacuum / Pressure Reaction Vessels : Made in Germany. But, The "SL.Re ~ items" : Joining Original DURAN® Blank DN flange 45° / O-ring and Blank Round-Bottom Vessel : by SciLab Korea.
- DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance. Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class. Heat-Stability : (1) 560°C -Annealing point, (2) 825°C -Softening point, (3) 1260°C -Melt Working point, and (4) 525°C -Transformation Temp.
- Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp. Also Suitable for General Purpose
- 45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks
  - ① DN 60 Flange : id φ 60 × od φ 100mm
  - ② DN 100 Flange : id φ 100 × od φ 138mm
  - ③ DN 120 Flange : id φ 120 × od φ 158mm
  - ④ DN 150 Flange : id φ 150 × od φ 184mm
  - ⑤ DN 200 Flange : id φ 200 × od φ 242mm

※ The following "DU.~" items : Original DURAN® Products ! \* The "h" Vessel Height Approximately.

Ordering : Vessels and Heating Mantles

(1) 0.1~3.6 Lit. Cylindrical-form, with Vacuum DN flange 45° /O-ring Groove

- SM.2439024 DN 60 Vessel, - 100~200(full)ml, 2.5 bar, φ 70 / thick 3.5 ± 1 × h85mm.
- SM.2439036 - 250~310(full)ml, 2.5 bar, φ 70 / thick 3.5 ± 1 × h125mm.
- SM.2439044 DN 100 Vessel, - 500~750(full)ml, 1.5 bar, φ 106 / thick 3.5 ± 1 × h120mm.
- SM.2439054 - 1,000~1,400(full)ml, 1.5 bar, φ 106 / thick 3.5 ± 1 × h205mm.
- SL.Re2212 ① DN 120 Vessel, - 2,000~2,600(full)ml, 1.5 bar, φ 130 / thick 4.5 ± 1 × h240mm.
- SL.Re2213 - 3,000~3,600(full)ml, 1.5 bar, φ 130 / thick 4.5 ± 1 × h320mm.

(2) 2~21 Lit. Kettle-form, with Vacuum DN flange 45° /O-ring Groove

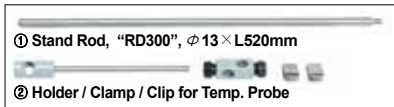
- SM.2439063 ② DN 100 Vessel, - 2,000~2,600(full)ml, 1.5 bar, φ 140 / thick 4.5 ± 1 × nφ 110 × bh210 × h270mm.
- SM.2439071 DN 150 Vessel, - 4,000~5,800(full)ml, 1.0 bar, φ 200 / thick 5 ± 1 × nφ 165 × bh215 × h290mm.
- SM.2439076 - 6,000~7,400(full)ml, 1.0 bar, φ 215 / thick 5 ± 1 × nφ 165 × bh245 × h320mm.
- SM.2439086 - 10,000~12,000(full)ml, 0.5 bar, φ 240 / thick 5.5 ± 1 × nφ 165 × bh335 × h410mm.
- SL.Re2217 DN 200, Vessel, - 20,000~21,000(full)ml, φ 250 / thick 5.5 ± 1 × nφ 215 × bh500 × h575mm.

Vessel	DAIHAN® Heat-Mantle, 230V	
Ea. Price,₩	Cat. No	Ea. Price,₩
	DH.WHM8130	
	DH.WHM8131	
	DH.WHM12146	
	DH.WHM8133	
	DH.WHM8134	
	DH.WHM8136	
	DH.WHM8135	
	DH.WHM8138	
	DH.WHM8139	
	DH.WHM8141	
	DH.WHM8142	

DAIHAN-brand® Reaction Vessel Heating Mantles, Basic-type, 450°C, 0.1~100Lit. with Built-in Temperature Controller, with Nickel Chrome Heating Element, with Certi. & Traceability 반응조용 히팅맨틀, 온도 조절기 내장, 기본형, Ni-Cr 열선내장

※ Note !

- ▶ Details : Please See the Heating Mantle-Section !
- ▶ Heating Mantle with Temp. Controller



Optional : Stainless-steel Rod, Holder & Clamp

- DH.WHP503037 ① Stand Rod, φ 13 × L520mm, "RD300", for Heating Mantles
- DH.WHP503012 ② Holder & Clamp, "CL220", for Temp. Sensor

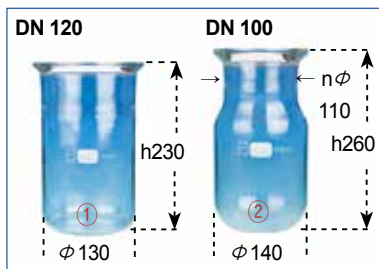
Ea.	Price, ₩

Cat. No	Description	Articles
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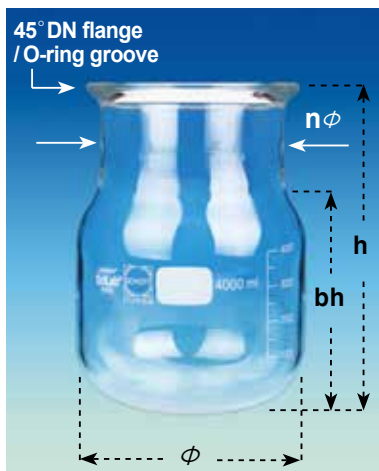
Graduated 100 ~ 10,000ml DURAN-glass Vacuum / Pressure Vessel, with 45° DN-flange/O-ring Groove with Perfect Compatibility, 0.5 ~ 2.5 bar, 눈금부 환저 진공 / 압력 반응 베셀, O-링 홈부, 완벽한 호환성 표준화 규격



(1) Graduated Cylindrical-form  
100 ~ 3,600ml : Vacu- / General-



※ Comparison! 2,600ml :  
① "Re2224" Cylindrical-form and  
② "Re2226" Kettle-form



(2) Graduated R / B Kettle-form  
2,000 ~ 12,000ml : Vacu- / General-

- Graduated Original DURAN® Vacuum / Pressure Vessels : by SciLab Korea.
  - DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance.  
Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class.  
Heat-Stability : (1) 560°C -Annealing point, (2) 825°C -Softening point,  
(3) 1260°C -Melt Working point, and (4) 525°C-Transformation Temp.
  - Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp.  
Also Suitable for General Purpose
  - 45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks
    - ① DN 60 Flange : idφ 60 × odφ 100mm
    - ② DN 100 Flange : idφ 100 × odφ 138mm
    - ③ DN 120 Flange : idφ 120 × odφ 158mm
    - ④ DN 150 Flange : idφ 150 × odφ 184mm
    - ⑤ DN 200 Flange : idφ 200 × odφ 242mm
- \* The "h" Vessel Height Approximately.

### Ordering : Vessels and Heating Mantles

(1) 0.1 ~ 3.6 Lit. Cylindrical-form,  
with Vacuum DN flange 45° /O-ring Groove

- |           |   |
|-----------|---|
| SL.Re2220 | DN 60 Vessel, - 100~200(full)ml, 2.5 bar,<br>φ 70 / thick 3.5 ± 1 × h85mm.          |
| SL.Re2221 | - 250~310(full)ml, 2.5 bar,<br>φ 70 / thick 3.5 ± 1 × h125mm.                       |
| SL.Re2222 | DN 100 Vessel, - 500~750(full)ml, 1.5 bar,<br>φ 106 / thick 3.5 ± 1 × h120mm.       |
| SL.Re2223 | - 1,000~1,400(full)ml, 1.5 bar,<br>φ 106 / thick 3.5 ± 1 × h205mm.                  |
| SL.Re2224 | ① DN 120 Vessel, - 2,000~2,600(full)ml, 1.5 bar,<br>φ 130 / thick 4.5 ± 1 × h240mm. |
| SL.Re2225 | - 3,000~3,600(full)ml, 1.5 bar,<br>φ 130 / thick 4.5 ± 1 × h320mm.                  |

(2) 2 ~ 12 Lit. Kettle-form,  
with Vacuum DN flange 45° /O-ring Groove

- |           |   |
|-----------|---|
| SL.Re2226 | ② DN 100 Vessel, - 2,000~2,600(full)ml, 1.5 bar,<br>φ 140 / thick 4.5 ± 1 × nφ 110<br>× bh215 × h270mm. |
| SL.Re2227 | DN 150 Vessel, - 4,000~5,800(full)ml, 1.0 bar,<br>φ 200 / thick 5 ± 1 × nφ 165<br>× bh220 × h290mm.     |
| SL.Re2228 | - 6,000~7,400(full)ml, 1.0 bar,<br>φ 215 / thick 5 ± 1 × nφ 165<br>× bh250 × h320mm.                    |
| SL.Re2229 | - 10,000~12,000(full)ml, 0.5 bar,<br>φ 240 / thick 5.5 ± 1 × nφ 165<br>× bh340 × h410mm.                |

Vessel	DAIHAN® Heat-Mantle, 230V	
Ea. Price, ₩	Cat. No	Ea. Price, ₩
	DH.WHM8130	
	DH.WHM8131	
	DH.WHM12146	
	DH.WHM8133	
	DH.WHM8134	
	DH.WHM8136	
	DH.WHM8135	
	DH.WHM8138	
	DH.WHM8139	
	DH.WHM8141	



DAIHAN-brand® Reaction Vessel Heating Mantles, Basic-type, 450°C, 0.1~100Lit. with Built-in Temperature Controller, with Nickel Chrome Heating Element, with Certi. & Traceability  
반응조용 히팅맨틀, 온도 조절기 내장, 기본형, Ni-Cr 열선내장

### ※ Note !

- ▶ Details : Please See the Heating Mantle-Section !
- ▶ Heating Mantle with Temp. Controller

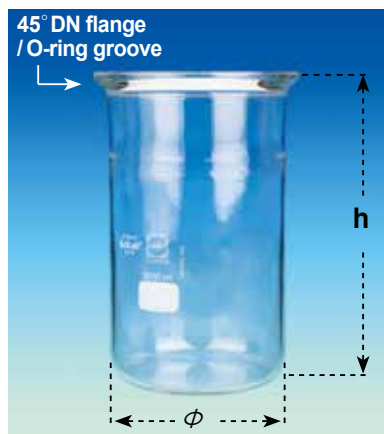
① Stand Rod, "RD300", φ 13 × L520mm  
② Holder / Clamp / Clip for Temp. Probe

Optional : Stainless-steel Rod, Holder & Clamp

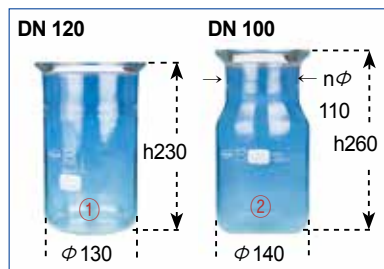
- |              |  |
|--------------|--|
| DH.WHP503037 | ① Stand Rod, φ 13 × L520mm, "RD300", for Heating Mantles |
| DH.WHP503012 | ② Holder & Clamp, "CL220", for Temp. Sensor              |

Ea. Price, ₩

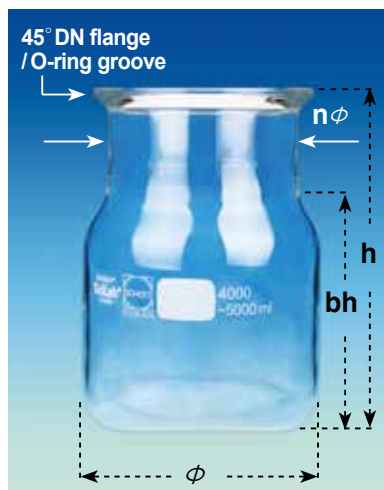
100 ~ 20,000ml DURAN-glass Flat-bottom Vacuum/Pressure Reaction Vessels, with 45° DN-flange/O-ring Groove with Perfect Compatibility, 0.5 ~ 2.5 bar, 평저 진공 / 압력 반응 베셀, O-링 홈부, 완벽한 호환성 표준화 규격



(1) F/B Cylindrical-form  
100 ~ 3,600ml : Vacu- / General-



※ Comparison! 2,500ml :  
① "Re2186" Cylindrical-form and  
② "Re2191" Kettle-form



(2) Kettle-form,  
2,000 ~ 21,000ml : Vacu- / General-



Basic-type Reaction Vessel Mantle with Controller

- Flattened Original DURAN® Reaction Vessels : by SciLab Korea.  
But, the DN 120 & DN 200-Vessels : Joining Original DURAN® Blank-DN flange 45° / O-ring and Vessel : by SciLab Korea
  - DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance.  
Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class.  
Heat-Stability : (1) 560°C -Annealing point, (2) 825°C -Softening point,  
(3) 1260°C -Melt Working point, and (4) 525°C-Transformation Temp.
  - Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp.  
Also Suitable for General Purpose
  - 45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks
    - ① DN 60 Flange : idφ 60 × odφ 100mm
    - ② DN 100 Flange : idφ 100 × odφ 138mm
    - ③ DN 120 Flange : idφ 120 × odφ 158mm
    - ④ DN 150 Flange : idφ 150 × odφ 184mm
    - ⑤ DN 200 Flange : idφ 200 × odφ 242mm
- \* The "h" Vessel Height Approximately.

Ordering : Vessels and Heating Mantles

(1) 0.1~3.6 Lit. Flat Bottom-form,  
with Vacuum DN flange 45°/O-ring Groove, Flat-bottom

- SL.Re2181 DN 60 Vessel, - 100~190ml, 2.5 bar,  
φ 70 / thick 3.5 ± 1 × h75mm.
- SL.Re2182 - 250~310ml, 2.5 bar,  
φ 70 / thick 3.5 ± 1 × h120mm.
- SL.Re2184 DN 100 Vessel, - 500~700ml, 1.5 bar,  
φ 106 / thick 3.5 ± 1 × h115mm.
- SL.Re2185 - 1,000~1,300ml, 1.5 bar,  
φ 106 / thick 3.5 ± 1 × h190mm.
- SL.Re2186 ① DN 120 Vessel, - 2,000~2,500ml, 1.5 bar,  
φ 130 / thick 4.5 ± 1 × h230mm.
- SL.Re2187 - 3,000~3,600ml, 1.5 bar,  
φ 130 / thick 4.5 ± 1 × h310mm.

(2) 2~21 Lit. Kettle-form, \* 15 Lit only : Cylindrical-form  
with Vacuum DN flange 45° /O-ring Groove, Flat-bottom

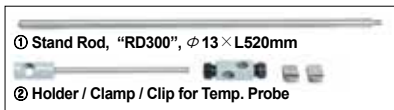
- SL.Re2191 ② DN 100 Vessel, - 2,000~2,500ml, 1.5 bar,  
φ 140 / thick 4.5 ± 1 × nφ 110  
× bh210 × h260mm.
- SL.Re2192 DN 150 Vessel, - 4,000~5,700ml, 1.0 bar,  
φ 200 / thick 5 ± 1 × nφ 160  
× bh215 × h280mm.
- SL.Re2193 - 6,000~7,200ml, 1.0 bar,  
φ 215 / thick 5 ± 1 × nφ 165  
× bh245 × h300mm.
- SL.Re2194 - 10,000~12,000ml, 0.5 bar,  
φ 240 / thick 5.5 ± 1 × nφ 165  
× bh335 × h400mm.
- SL.Re2198 DN 200 Vessel, - 20,000~21,000ml, 0.5 bar,  
φ 250 / thick 5.5 ± 1 × nφ 215  
× bh500 × h575mm.

Vessel	DAIHAN® Heat-Mantle, 230V	
	Ea. Price, ₩	Cat. No
		DH.WHM8130
		DH.WHM8131
		DH.WHM12146
		DH.WHM8133
		DH.WHM8134
		DH.WHM8136
		DH.WHM8135
		DH.WHM8138
		DH.WHM8139
		DH.WHM8141
		DH.WHM8142

DAIHAN-brand® Reaction Vessel Heating Mantles, Basic-type, 450°C, 0.1~100Lit. with Built-in Temperature Controller, with Nickel Chrome Heating Element, with Certi. & Traceability  
반응조용 히팅맨틀, 온도 조절기 내장, 기본형, Ni-Cr 열선내장

※ Note !

- ▶ Details : Please See the Heating Mantle-Section !
- ▶ Heating Mantle with Temp. Controller



Optional : Stainless-steel Rod, Holder & Clamp

- DH.WHP503037 ① Stand Rod, φ 13 × L520mm, "RD300", for Heating Mantles
- DH.WHP503012 ② Holder & Clamp, "CL220", for Temp. Sensor

Ea.	Price, ₩

Cat. No	Description	Articles
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PTFE Drain-valved 250 ~ 20,000ml DURAN-glass Vacuum/Pressure Reaction Vessel, with 45° DN-flange/O-ring Groove with Perfect Compatibility, 0.5 ~ 2.5 bar, 배출 밸브형 진공 / 압력 반응 베셀, O-링 홈부, 완벽한 호환성 표준화 규격



(1) Cylindrical-form, 250 ~ 3,600ml, PTFE Drain-valved

- **Joining DURAN Original Vacuum / Pressure Reaction Vessels(SM.24390-series) and Domestic PTFE Drain Valves : by SciLab Korea.**
- **DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance.**  
**Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class.**  
**Heat-Stability : (1) 560°C -Annealing point, (2) 825°C -Softening point, (3) 1260°C -Melt Working point, and (4) 525°C-Transformation Temp.**
- **Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp. Also Suitable for General Purpose**
- **45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks**
  - ① **DN 60 Flange** : id φ 60 × od φ 100mm
  - ② **DN 100 Flange** : id φ 100 × od φ 138mm
  - ③ **DN 120 Flange** : id φ 120 × od φ 158mm
  - ④ **DN 150 Flange** : id φ 150 × od φ 184mm
  - ⑤ **DN 200 Flange** : id φ 200 × od φ 242mm

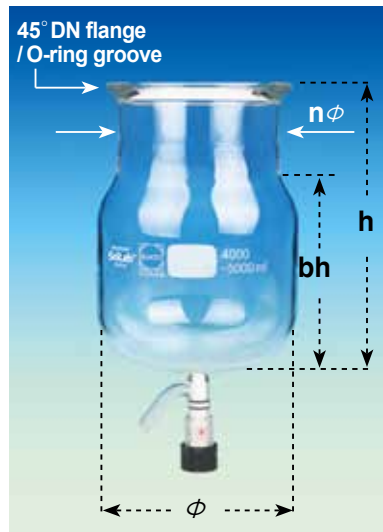
\* The "h" Vessel Height Approximately.

**Ordering : Vessels and Heating Mantles**

(1) 0.25~3.6 Lit. Cylindrical-form, with PTFE Drain-valve, with Vacuum DN Flange 45° /O-ring groove.

- SL.Re2231 **DN 60** Vessel, - **250~310(full)ml**, 2.5 bar, φ 70 / thick 3.5 ± 1 × h125mm.
- SL.Re2232 **DN 100** Vessel, - **500~750(full)ml**, 1.5 bar, φ 106 / thick 3.5 ± 1 × h120mm.
- SL.Re2233 - **1,000~1,400(full)ml**, 1.5 bar, φ 106 / thick 3.5 ± 1 × h205mm.
- SL.Re2234 **DN 120** Vessel, - **2,000~2,600(full)ml**, 1.5 bar, φ 130 / thick 4.5 ± 1 × h240mm.
- SL.Re2235 - **3,000~3,600(full)ml**, 1.5 bar, φ 130 / thick 4.5 ± 1 × h320mm.

Vessel	DAIHAN® Heat-Mantle, 230V	
Ea. Price, ₩	Cat. No	Ea. Price, ₩
	DH.WHM8190	
	DH.WHM8191	
	DH.WHM8192	
	DH.WHM8194	



(2) Kettle-form, 2,000 ~ 21,000ml PTFE Drain-valved

(2) 2~21 Lit. Kettle-form, with PTFE Drain-valve, with Vacuum DN Flange 45° /O-ring groove. \* 15 Lit only : Cylindrical-form

- SL.Re2240 **DN 100** Vessel, - **2,000~2,600(full)ml**, 1.5 bar, φ 140 / thick 4.5 ± 1 × nφ 110 × bh210 × h270mm.
- SL.Re2241 **DN 150** Vessel, - **4,000~5,800(full)ml**, 1.0 bar, φ 200 / thick 5 ± 1 × nφ 165 × bh215 × h290mm.
- SL.Re2242 - **6,000~7,400(full)ml**, 1.0 bar, φ 215 / thick 5 ± 1 × nφ 165 × bh245 × h320mm.
- SL.Re2243 - **10,000~12,000(full)ml**, 0.5 bar, φ 240 / thick 5.5 ± 1 × nφ 165 × bh335 × h410mm.
- SL.Re2246 **DN 200** Vessel, - **20,000~21,000(full)ml**, φ 250 / thick 5.5 ± 1 × nφ 215 × bh500 × h575mm.

	DH.WHM8193	
	DH.WHM8196	
	DH.WHM8197	
	DH.WHM8199	
	DH.WHM8200	

※ Temp. Controller : Option



(2) Bottom Outlet-type Heating Mantle Remotecontrolled

DAIHAN® Remotecontrolled Reaction Vessel Heating Mantles, Bottom Outlet-type, 450°C, 0.1~100Lit. for Reaction Vessel, with Nickel Chrome Heating Element, K-type Thermo-sensor Integrated, Option-Controller 반응조용 히팅맨틀, 조절기별도, K-type 온도센서 내장, Ni-Cr 열선내장, 자력교반기와 사용가능

▶ Details : Please See the Heating Mantle-Section !

**Optional Analog & Digital Controller**



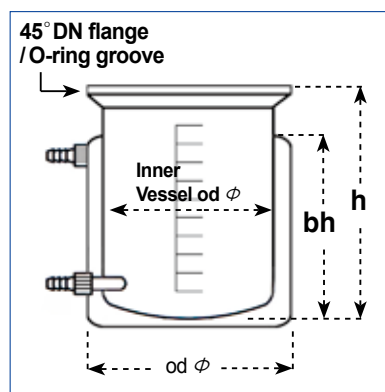
- DH.WHM13500 (1) Analog Controller, "C10A", 230V
- DH.WHM12500 (2) Full Digital Controller, "C10D", 230V

Ea. Price, ₩

**Graduated 250 ~ 20,000ml Jacketed Vacuum / Pressure Vessel, with 45° DN-flange/O-ring Groove with Perfect Compatibility, DURAN-glass/GL18-PTFE Connected, 0.5 ~ 2.5 bar, 눈금부 자켓 베셀**



Graduated Jacket Vessel : with 18 ~ 32 PTFE Hose Connection, & DN flange 45° / O-ring for Vacuum / Pressure Use.



◎ The Figure of Graduated Jacket Vessel

- Made of DURAN® Blank Vessels(Vacuum / Pressure) / DN-flange or Heavy-wall Tubing : by SciLab Korea.
- Flat-Bottom Outer Jacket, and Semi-Round Bottom Inner Vessel.
- DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance. Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class. Heat-Stability : (1) 560°C -Annealing point, (2) 825°C -Softening point, (3) 1260°C -Melt Working point, and (4) 525°C-Transformation Temp.
- Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp. Also Suitable for General Purpose
- 45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks
  - ① DN 60 Flange : id φ 60 × od φ 100mm
  - ② DN 100 Flange : id φ 100 × od φ 138mm
  - ③ DN 120 Flange : id φ 120 × od φ 158mm
  - ④ DN 150 Flange : id φ 150 × od φ 184mm
  - ⑤ DN 200 Flange : id φ 200 × od φ 242mm

\* The "h" Vessel Height Approximately, and Cylindrical-form Vessels.

\* with The Safety GL-18 or 25 or 32 PTFE Hose Connector Set : NO-Broken, Exchangeable, up to-250°C, Anti-Chemicals.

	Ea.	Price, ₩
SL.Re2251 DN 60 Vessel, - 250~310 / 50ml, φ 105×bh100, h150mm, GL 14 inner vessel : od φ 65 / thick 3.5×h150mm, outer jacket : od φ 105 / thick 4mm.		
SL.Re2252 - 500~620 / 100ml, φ 105×bh190, h240mm, GL 18 inner vessel : od φ 65 / thick 3.5×h240mm, outer jacket : od φ 105 / thick 4mm.		
SL.Re2253 DN 100 Vessel, - 500~750 / 100ml, φ 130×bh80, h140mm, GL 18 inner vessel : od φ 105 / thick 3×h140mm, outer jacket : od φ 130 / thick 3mm.		
SL.Re2254 - 1,000~1,400 / 100ml, φ 130×bh150, h210mm, GL 18 inner vessel : od φ 105 / thick 3×h210mm, outer jacket : od φ 130 / thick 3mm.		
SL.Re2255 DN 120 Vessel, - 2,000~2,600 / 200ml, φ 160×bh190, h250mm, GL 18 inner vessel : od φ 130 / thick 4×h250mm, outer jacket : od φ 160 / thick 4.5mm.		
SL.Re2256 - 3,000~3,600 / 500ml, φ 160×bh280, h340mm, GL 25 inner vessel : od φ 130 / thick 4×h250mm, outer jacket : od φ 160 / thick 4.5mm.		
SL.Re2257 DN 150 Vessel, - 5,000~6,100 / 500ml, φ 215×bh360, h430mm, GL 25 inner vessel : od φ 160 / thick 4.5×h430mm, outer jacket : od φ 215 / thick 5.5mm.		
SL.Re2259 DN 200 Vessel, - 10,000~11,800 / 1,000ml, φ 270×bh290, h360mm, GL 32 inner vessel : od φ 215 / thick 5.5×h360mm, outer jacket : od φ 270 / thick 5mm.		
SL.Re2262 - 20,000~22,000 / 2,000ml, φ 270×bh590, h670mm, GL 32 inner vessel : od φ 215 / thick 5×h670mm, outer jacket : od φ 270 / thick 5mm.		



(1) Straight-type (2) Bent-type

◎ GL 14~32 : PTFE Connect-Set

**Spare DURAN® GL-14/18/25/32 PTFE Screw Hose Connector Set. -50 +250°C**

\* Advantage of the Safety PTFE Connect Set

① NO-Broken, ② Easy Exchangeable, ③ Anti-Chemicals & Temp. -50 +250°C.

\* Complete Set with PBT Screw cap, PTFE / Silicone Sealing Ring, and PTFE Connector.

(1) Straight-type

	Ea.	Price, ₩	Pk.	Price, ₩
SM.28623000 Connect, PTFE, Strai, GL 14, Tube od 8 × id 5.0 mm			10ea	
SM.28623020 , GL 18, Tube od 11 × id 7.5 mm			10ea	
SL.Con4011 , GL 25, Tube od 15 × id 11 mm				
SL.Con4012 , GL 32, Tube od 19 × id 15 mm				

(2) Bent-type

	Ea.	Price, ₩	Pk.	Price, ₩
SM.28623060 Connect, PTFE, Bent, GL 14, Tube od 8 × id 5.0 mm			10ea	
SM.28623080 , GL 18, Tube od 11 × id 7.5 mm			10ea	

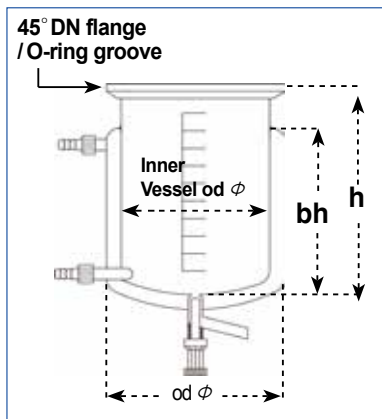
Cat. No	Description	Articles
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**0.25 ~ 100 Lit Drain valved·Jacketed·Graduated Vacuum / Pressure Vessel, with 45° DN-flange/O-ring Groove with Perfect Compatibility, DURAN-glass, PTFE-valved/-GL connect, 0.5 ~ 2.5 bar, 자켓 밸브형 눈금부 진공 / 압력 베셀**



※ The Figure : up to 20Lit

PTFE Valved / Graduated Jacket Vessel with GL 14 ~ 32 PTFE Hose Connection &



※ The Figure : 30~100Lit Vessel Only



① Heated Fluid In-Out Flat Flange (od φ35×id φ18mm) & Metal Clamp

- Made of DURAN® Blank Vessels(Vacuum / Pressure) / DN-flange or Heavy-wall Tubing : by SciLab Korea.
  - DURAN® Borosilicate Glass α 3.3(Boro 3.3) : Chemical & Heat-Stability / Resistance. Chemical-Resistant : (1) Class-A2 & S1 to Alkali & Acid and, (2) HGB-1 Hydrolytic Class. Heat-Stability : (1) 560 °C -Annealing point, (2) 825 °C -Softening point, (3) 1260 °C -Melt Working point, and (4) 525 °C-Transformation Temp.
  - Ideal for Pressure & Vacuum-use : due to the Wall-Thickness and Geometry 45° DN Flange / O-Ring Sealing with DURAN® 3-segment Stainless steel Quick-Release-Clamp. Also Suitable for General Purpose
  - 45° DN-Standard Flanges : Perfect Compatibility with Lids & Flasks
    - ① DN 60 Flange : id φ 60 × od φ 100mm
    - ② DN 100 Flange : id φ 100 × od φ 138mm
    - ③ DN 120 Flange : id φ 120 × od φ 158mm
    - ④ DN 150 Flange : id φ 150 × od φ 184mm
    - ⑤ DN 200 Flange : id φ 200 × od φ 242mm
- \* The PTFE Drain Valve : Resist up to 280 °C, Anti-Chemical, and Dead Space-Free !  
 \* The "h" Vessel Height Approximately, and Cylindrical-form Vessels.  
 \* with The Safety GL-18 or 25 or 32 PTFE Hose Connector Set : NO-Broken, Exchangeable, up to-250 °C, Anti-Chemicals.

SL.Re	DN	Vessel, -	Ea.	Price, ₩
SL.Re2271	DN 60	Vessel, - 250~310 / 50ml, φ 105 × bh100, h150mm, GL 14 inner vessel : od φ 65 / thick 3.5 × h150mm, outer jacket : od φ 105 / thick 4mm.		
SL.Re2272		- 500~620 / 100ml, φ 105 × bh190, h240mm, GL 18 inner vessel : od φ 65 / thick 3.5 × h240mm, outer jacket : od φ 105 / thick 4mm.		
SL.Re2273	DN 100	Vessel, - 500~750 / 100ml, outer φ 130 × bh80, h140mm, GL 18 inner vessel : od φ 105 / thick 3 × h140mm, outer jacket : od φ 130 / thick 3mm.		
SL.Re2274		- 1,000~1,400 / 100ml, φ 130 × bh150, h210mm, GL 18 inner vessel : od φ 105 / thick 3 × h210mm, outer jacket : od φ 130 / thick 3mm.		
SL.Re2275	DN 120	Vessel, - 2,000~2,600 / 200ml, φ 160 × bh190, h250mm, GL 18 inner vessel : od φ 130 / thick 4 × h250mm, outer jacket : od φ 160 / thick 4.5mm.		
SL.Re2276		- 3,000~3,600 / 500ml, φ 160 × bh280, h340mm, GL 25 inner vessel : od φ 130 / thick 4 × h250mm, outer jacket : od φ 160 / thick 4.5mm.		
SL.Re2277	DN 150	Vessel, - 5,000~6,100 / 500ml, φ 215 × bh360, h430mm, GL 25 inner vessel : od φ 160 / thick 4.5 × h340mm, outer jacket : od φ 215 / thick 5.5mm.		
SL.Re2279	DN 200	Vessel, - 10,000 / 1,000ml, φ 270 × bh315, h435mm, GL 32 inner vessel : od φ 230 / thick 6.0 × h435mm, outer jacket : od φ 270 / thick 6.0mm.		
SL.Re2282		- 20,000 / 1,000ml, φ 365 × bh380, h515mm, GL 32 inner vessel : od φ 330 / thick 6.0 × h515mm, outer jacket : od φ 365 / thick 6.0mm.		
SL.Re2283		- 30,000 / 1,000ml, φ 365 × bh510, h645mm, Flat Flange w/Clamp inner vessel : od φ 330 / thick 6.0 × h645mm, outer jacket : od φ 365 / thick 6.0mm.		
SL.Re2284		- 50,000 / 2,000ml, φ 415 × bh550, h745mm, Flat Flange w/Clamp inner vessel : od φ 365 / thick 6.0 × h745mm, outer jacket : od φ 415 / thick 6.0mm.		
SL.Re2285		- 80,000 / 2,000ml, φ 460 × bh615, h800mm, Flat Flange w/Clamp inner vessel : od φ 415 / thick 6.0 × h800mm, outer jacket : od φ 460 / thick 6.0mm.		
SL.Re2286		- 100,000 / 2,000ml, φ 500 × bh735, h900mm, Flat Flange w/Clamp inner vessel : od φ 460 / thick 6.0 × h900mm, outer jacket : od φ 500 / thick 6.0mm.		

※ 30~100Lit : Flat Flange Connection System for Heating Transfer Fluid and Drain Valve.

SciLab-brand® Assembly Reactor Frame of  $\phi 27.2$ mm Stainless-steel pipe, for Heavier-Work, 0.25~100Lit. with or without Caster, Bench-top and Floor-top Models, 조립식 중량 / 반응조 설치용 만능프레임, 높이 / 간격 조절식



↑ Frame Installation Figure with Reactor System

- Supplied by SciLab Korea
- Consist of  $\phi 27.2$ mm Stainless-steel Pipe, Aluminum-Connector & - Setting Board with Cushion Insert, and with or without Caster.
- 80 / 100Lit : od  $\phi 27.2 \times$  thick 2.0mm STS
- Optional Accessories : Holders for DN flange of Vessels

(1) Bench-top Frame with Foot, ※ 운임 약 ₩ 50,000 별도!  
Stainless pipe  $\phi 27.2 \times$  thick 1.5mm

- | Ea.        | Price, ₩   |
|------------|--|
| SL.ReF7011 | Reactor Frame $\phi 27.2$ STS Pipe, for 0.5~5Lit., DN 60~120-flange<br>Size : 400×400×Height 750mm |
| SL.ReF7012 | Reactor Frame $\phi 27.2$ STS Pipe, for 2~10Lit., DN 120~200-flange<br>Size : 450×450×Height 800mm |

(2) Floor-top Frame with Casters, ※ 운임 약 ₩ 100,000 별도!  
Stainless pipe  $\phi 27.2 \times$  thick 1.5/2.0mm

- | Ea.        | Price, ₩   |
|------------|--|
| SL.ReF7015 | Reactor Frame $\phi 27.2$ STS Pipe, for 5~10Lit., DN 120~200-flange<br>Size : 450×450×Height 1300mm  |
| SL.ReF7016 | Reactor Frame $\phi 27.2$ STS Pipe, for 10~20Lit., DN 150&200-flange<br>Size : 500×500×Height 1500mm |
| SL.ReF7017 | Reactor Frame $\phi 27.2$ STS Pipe, for 30Lit., DN 200-flange<br>Size : 550×550×Height 1700mm        |
| SL.ReF7018 | Reactor Frame $\phi 27.2$ STS Pipe, for 50Lit., DN 200-flange<br>Size : 600×600×Height 1800mm        |
| SL.ReF7019 | Reactor Frame $\phi 27.2$ STS Pipe, for 80&100Lit., DN 200-flange<br>Size : 670×670×Height 2000mm    |

(3) Optional DN-flange Holders, Adjustable.

- | Ea.        | Price, ₩                             |
|------------|--------------------------------------|
| SL.ReF7021 | DN-flange Holder, for -DN 60 Vessels |
| SL.ReF7022 | , for -DN 100 Vessels                |
| SL.ReF7023 | , for -DN 120 Vessels                |
| SL.ReF7024 | , for -DN 150 Vessels                |
| SL.ReF7025 | , for -DN 200 Vessels                |



(4) PTFE Cushion

(4) Spare PTFE Cushion Ring

- | SL.ReF7035 | PTFE Cushion Ring, od $\phi 170 \times$ id $\phi 120 \times$ Thick 15mm, for Set-board 450×450mm | Ea. | Price, ₩  |
|------------|--|-----|-----------|
| SL.ReF7036 | , od $\phi 230 \times$ id $\phi 180 \times$ Thick 15mm,  |     | 500×500mm |
| SL.ReF7037 | , od $\phi 340 \times$ id $\phi 275 \times$ Thick 15mm,  |     | 550×550mm |
| SL.ReF7038 | , od $\phi 360 \times$ id $\phi 290 \times$ Thick 15mm,  |     | 600×600mm |
| SL.ReF7039 | , od $\phi 420 \times$ id $\phi 340 \times$ Thick 15mm,  |     | 670×670mm |



(5) Setting Boards

(5) Spare Setting Boards, Aluminium

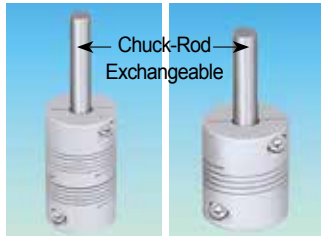
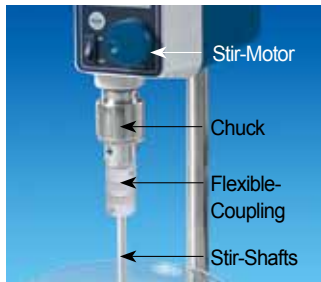
- | SL.ReF7040 | Setting Board, Center Hole - $\phi 125$ , 450×450×Thick 10mm, for 2~10 Lit. | Ea. | Price, ₩    |
|------------|---|-----|-------------|
| SL.ReF7041 | - $\phi 185$ , 500×500×Thick 10mm,  |     | 10~20 Lit.  |
| SL.ReF7042 | - $\phi 280$ , 550×550×Thick 15mm,  |     | 30 Lit.     |
| SL.ReF7043 | - $\phi 295$ , 600×600×Thick 20mm,  |     | 50 Lit.     |
| SL.ReF7044 | - $\phi 345$ , 670×670×Thick 30mm,  |     | 80~100 Lit. |

(6) Spare  $\phi 27.2$ mm Tube Connectors for the Reactor Frames





Cat. No	Description	Articles
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(1) Hi-flex Metal for  $\phi 6\sim 16$  Shafts ; (2) Heavy-duty Metal for  $\phi 10\sim 16$  Shafts

**Flexible Couplings, for Safety Stirring of  $\phi 6\sim 16$ mm Shafts of Overhead Stirrers**  
 for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링, 교반축의 불균형등을 완전 보정

■ **Used to Compensate Any Vibrations Between The Motor and Stirring Shafts** \* Made of DURALUMIN  
 \* Made in Korea \* Shaft Fastening by Screw Clamp Band \* with Exchangeable STS Chucking Rod  $\phi 8 / 10 / 12$ mm, L40mm

**(1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for  $\phi 6\sim 16$ mm Stir-Shafts**  
 Ideal for Low/High Viscosity and High/Low Speed

		Ea.	Price, ₩
SL.StiC011	Stir-Coupling, Hi-flex, $\phi 8$ mm Chuck-rod, for- $\phi 6$ mm Stir-Shaft, 56g, $\phi 25 \times h44$ mm		
SL.StiC012	- $\phi 8$ mm Stir-Shaft, 53g, $\phi 25 \times h44$ mm		
SL.StiC013	- $\phi 10$ mm Stir-Shaft, 49g, $\phi 25 \times h44$ mm		
SL.StiC014	Stir-Coupling, Hi-flex, $\phi 10$ mm Chuck-rod, for- $\phi 8$ mm Stir-Shaft, 49g, $\phi 25 \times h44$ mm		
SL.StiC015	- $\phi 10$ mm Stir-Shaft, 43g, $\phi 25 \times h44$ mm		
SL.StiC016	- $\phi 12$ mm Stir-Shaft, 33g, $\phi 25 \times h44$ mm		
SL.StiC017	Stir-Coupling, Hi-flex, $\phi 12$ mm Chuck-rod, for- $\phi 10$ mm Stir-Shaft, 33g, $\phi 25 \times h44$ mm		
SL.StiC018	- $\phi 12$ mm Stir-Shaft, 123g, $\phi 32 \times h60$ mm		
SL.StiC019	- $\phi 14$ mm Stir-Shaft, 120g, $\phi 32 \times h60$ mm		
SL.StiC020	- $\phi 16$ mm Stir-Shaft, 118g, $\phi 32 \times h60$ mm		

**(2) Heavy-duty Metal Coupling, with Short Flex-band, for  $\phi 10\sim 16$ mm Stir-Shafts**  
 Low-Flexible type, Ideal for High Viscosity and Middle/Low Speed

		Ea.	Price, ₩
SL.StiC023	Stir-Coupling, Low-flex, $\phi 10$ mm Chuck rod, for- $\phi 10$ mm Stir-Shafts., 45g, $\phi 25 \times h30$		
SL.StiC024	- $\phi 12$ mm Stir-Shafts., $\phi 25 \times h30$		
SL.StiC025	Stir-Coupling, Low-flex, $\phi 12$ mm Chuck rod, for- $\phi 12$ mm Stir-Shafts., 105g, $\phi 32 \times h38$		
SL.StiC026	- $\phi 14$ mm Stir-Shafts., $\phi 32 \times h38$		
SL.StiC027	- $\phi 16$ mm Stir-Shafts., $\phi 32 \times h38$		

**SciLab-brand® PTFE Stirrer-Guide/Seals, for  $\phi 8\sim \phi 14$ mm Shafts, with ₩24/-, ₩29/-, and ₩34/-Joints**  
 with 2 Bearings / Screw-Retainer / Viton O-ring, All PTFE,  $-180\sim +260^\circ\text{C}$  Stable, PTFE 스티러 씰



■ **Made in Korea** ■ **Common-use : to ASTM & DIN-type Socket Joints**

**(1) for  $\phi 8$ mm Stir-Shafts**

		Ea.	Price, ₩
SL.Ada405	for $\phi 8$ mm Rod, ₩24/40		
SL.Ada406	, ₩29/42		
SL.Ada407	, ₩34/45		

**(2) for  $\phi 10$ mm Stir-Shafts**

		Ea.	Price, ₩
SL.Ada409	for $\phi 10$ mm Rod, ₩24/40		
SL.Ada410	, ₩29/42		
SL.Ada411	, ₩34/45		

**(3) for  $\phi 12$  &  $14$ mm Stir-Shafts**

		Ea.	Price, ₩
SL.Ada413	PTFE Stir-Guide, for $\phi 12$ mm Rod, ₩34/45		
SL.Ada415	, for $\phi 14$ mm Rod, ₩34/45		

**Multiuse Glass Screw-adapter Set, for Vacu-Stirrer Guide or Thermometer/Tubing Holder, for  $\phi 6\sim 14$ mm-Grip**  
 with DURAN® PBT GL-Opentop Screwcap/PTFE-Silicone O-Ring Seal/ ₩Joint, Anti-Chemical,  $200^\circ\text{C}$ -stable, 다용도 스크류 어댑터 셋



(1) Vacuum Stirrer Guide  
 (2) Thermometer/Tubing Holder

■ **Made of DURAN® Borosilicate Glass 3.3 & Seal Kit (GL-Opentop cap / O-Ring Seal : by SciLab Korea).**

**(1) For Vacuum Stirrer Guide, for  $\phi 8\sim 14$ mm Stir-Shafts, with DURAN® GL 25 & 32 Seal Kit & ₩Joint**

① with ASTM ₩ 24/40 ~ 45/50 Joints

		Ea.	Price, ₩
SL.StiS241	for $\phi 8$ mm Rod, GL25, 24/40		
SL.StiS242	, 29/42		
SL.StiS243	, 34/45		
SL.StiS245	for $\phi 10$ mm Rod, GL25, 24/40		
SL.StiS246	, 29/42		
SL.StiS247	, GL32, 34/45		
SL.StiS251	for $\phi 12$ mm Rod, GL32, 34/45		
SL.StiS252	, 45/50		
SL.StiS253	for $\phi 14$ mm Rod, GL32, 34/45		
SL.StiS254	, 45/50		

② with DIN ₩ 24/29 ~ 45/40 Joints

		Ea.	Price, ₩
SL.StiS241D	for $\phi 8$ mm Rod, GL25, 24/29		
SL.StiS242D	, 29/32		
SL.StiS243D	, 34/35		
SL.StiS245D	for $\phi 10$ mm Rod, GL25, 24/29		
SL.StiS246D	, 29/32		
SL.StiS247D	, GL32, 34/35		
SL.StiS251D	for $\phi 12$ mm Rod, GL32, 34/35		
SL.StiS252D	, 45/40		
SL.StiS253D	for $\phi 14$ mm Rod, GL32, 34/35		
SL.StiS254D	, 45/40		

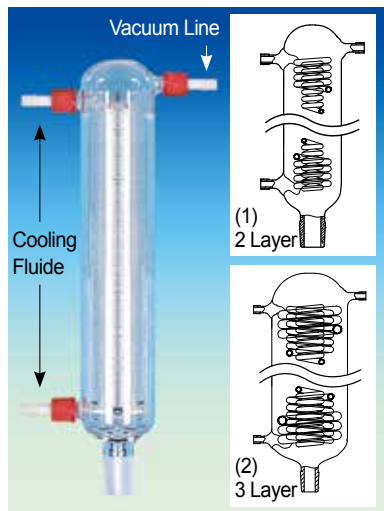
**(2) For Thermometer/Tube/Rod Holder, for  $\phi 6\sim 8$ mm Grip, with DURAN® GL14 & 18 Seal Kit & ₩Joint**

① with ASTM & 14/23 Joints

		Ea.	Price, ₩
SL.Ada2011	for $\phi 6$ mm grip, GL14, 14/23		
SL.Ada2012	, 19/38		
SL.Ada2013	, 24/40		
SL.Ada2014	for $\phi 8$ mm grip, GL18, 24/40		

② with DIN ₩ Joints

		Ea.	Price, ₩
SL.Ada2011	for $\phi 6$ mm grip, GL14, 14/23		
SL.Ada2016	, 19/26		
SL.Ada2017	, 29/32		
SL.Ada2018	for $\phi 8$ mm grip, GL18, 29/32		



**Big Volume Reflux Condensers, Boro-glass 3.3, Ideal for Reactors 5~100 Lit. with ₩24/29, 34/35, and Safety "Screw-On" PP Connection, 대용량 반응조용 냉각기**

- **Made of Borosilicate Glass 3.3 : Supplied by SciLab Korea**
- **GL Screw Connection for Safety Working.**

; Safety Hose Connections-Type, with 3×"Screw-On" Plastic Hose Connections GL18 / 25 PP-Kit Supplied with Detachable "Screw-On" Plastic Hose Connections GL18 / 25 PP-Kit for Easy and Safe Attachment of Rubber Hose for Cooling Fluid & Vacuum Line.

**(1) 2-Layer Coil Condenser for 5~50 Lit.**

- SL.Con2111** Reactor Condenser, GL18, for 5~10Lit. od 50mm×h435mm, ₩24/29
- SL.Con2112** , for 10~20Lit. od 100mm×h455mm, ₩24/29
- SL.Con2113** , GL25, for 20~50Lit. od 100mm×h595mm, ₩34/35

Ea.	Price,₩

**(2) 3-Layer Coil Condenser for 80~100 Lit.**

- SL.Con2115** Reactor Condenser, GL25, for 80~100Lit. od 165mm×h645mm, ₩34/35

Ea.	Price,₩



**SciLab® Stainless-steel Condenser / Column Holding Clamp, 냉각기용 클램프**

- **Made in Korea**
- \* Ideal for Various Big Volumed Condenser / Column
- \* Easy Adjust with Adjusting Screw Nut \* Stem od13mm

- SL.Cla7201** Clamp, STS, Band-type, Grip Capa. φ50~75mm, Overall 350mm
- SL.Cla7202** φ85~115mm, Overall 400mm
- SL.Cla7203** φ150~178mm, Overall 450mm

Ea.	Price,₩

**Cowie® K-type PTFE Encapsulated Stainless-steel Thermocouple Probes, Can be Bent, -180°C +280°C with Miniplug & PFA Insulated 1&2m Cable, Probe Body L100~900mm, PTFE 내약품/내부식/청결형 온도 프로브**



- **Made in UK.**
- **Ideal for Reactor : Especially Long Body Probes**
- \* Outstanding Chemical Resistance, No-Contamination of Working Media, and Pressure Resistant
- \* Fully Pure PTFE Encapsulated Stainless-steel Core Probe for Rigidity, But can be Bent
- \* with Push-On Ferrule \* Response : 50% in 6~14 seconds, -180°C+280°C

**(1) With L100~L700mm Probe-body and 1m Cable**

- CW.600.101.1** PTFE Capsulated K-probe, Body-φ6×L100, Ferrule-L35mm, Total -L135mm
- CW.600.201.1** -φ7×L200, -L40mm, -L240mm
- CW.600.301.1** -φ8×L300, -L40mm, -L340mm
- CW.600.401.1** -φ8×L400, -L50mm, -L450mm
- CW.600.501.1** -φ9×L500, -L60mm, -L560mm
- CW.600.601.1** -φ9×L600, -L60mm, -L660mm
- CW.600.701.1** -φ9×L700, -L45mm, -L745mm

Ea.	Price,₩

**(2) With L500~L900mm Probe-body and 2m Cable**

- CW.600.501.1.2** PTFE Capsulated K-probe, body-φ9×L500, Ferrule-L60, Total-L560mm
- CW.600.601.1.2** -φ9×L600, -L60, -L660mm
- CW.600.701.1.2** -φ9×L700, -L45, -L745mm
- CW.600.901.1.2** -φ9×L900, -L45, -L945mm

Ea.	Price,₩

**Necessary Products & Accessories for Reactor System**

- Heating Mantles, for Single-Wall Flasks/Vessels ; ▶ See the "HEATING MANTLE"-Section!
- High Temp External Circulators, for Double-Wall Vessels ; ▶ See the "HEATING CIRCULATOR"-Section!
- Stirring Motors and - Shafts/Impellers, for Agitation ; ▶ See the "STIRRERS & the Access"-Section!

DAIHAN Scientific

# Refrigerators & ULT Freezers

0~10°C Refrigerators, Blood Bank and Pharmaceutical ..... P. 212  
 , Laboratory / Cold Lab Chamber ..... P. 213  
 -35°C Lab Freezers, Laboratory ..... P. 214  
 -86°C ULT Freezer, Personal-type (General & SMART-type) ... P. 216  
 , Upright-type (SMART-type) **New** ..... P. 217  
 -95°C ULT Freezer, Upright-type (SMART-type) **New** ..... P. 218  
 ULT Freezer Accessories ..... P. 219~220



**Lab Refrigerators**  
"ThermoStable™ LR-1000"



**ULT Freezer**  
"DuoFreez™ U300"



**Lab Freezer**  
"ThermoStable™ WLF-420"



**ULT Freezer**  
"UniFreez™ U80"



WiRe™ App Service

**Controlled by Smart-Phone**

“ThermoStable™ BR/PR” Blood Bank-and Pharmaceutical-Refrigerators, GMP Certi, Medical Device, 0°C~10°C with PID Controller, Chart Recorder, Door Lock System, Drawer or Wire-Shelves, 620- & 1140-Lit, 혈액보관/시약약품 보관용 냉장고



(1) 620 Lit. Blood Bank Refrigerator “BR-600”



(2) 1140Lit. Pharmaceutical Refrigerator “PR-1000”

- Made in Korea
- CE Certified
- GMP Certified
- PL (Product Liability) Insurance
- Medical Device
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Superior Temperature Uniformity and Quick Recovery by Forced Air Refrigeration System
- CFC-Free Refrigeration System
- Automatic Defrost System

- \* Intelligent Control of Refrigerator for Preventing Overload of Compressor
- \* Double Fold Tempered Glass Window
- \* Alarm Set Points of Temperature Deviation at +5.5 and -1.5 Under Temperature
- \* Automatic Condensate Removal, No Drain Line Required
- \* Available Built in Chart Recorder and Remote Alarm System(Optional)
- \* Built in Battery for Power Failure Alarm

Specifications & Ordering information

Spec.	Model	(1) Blood Bank Refrigerator		(2) Pharmaceutical Refrigerator	
		“BR-600”	“BR-1000”	“PR-600”	“PR-1000”
Capacity		620 Lit.	1,140Lit.	620 Lit.	1,140Lit.
Temp. Range		0°C~+10.0°C, at Room Temperature of 30°C and Humidity of 70%			
Temp. Resolution and Sensor		1°C-Display, 1°C-Control, PT100 Sensor			
Refrigerant		CFC-Free(R-134A) Refrigeration System			
Compressor		1/3 HP			
Evaporator		Auto Exchange Dual Evaporator			
Air Circulation		Dual Turbo Fan Forced-air Type			
Defrost		Automatic Defrost System			
Controller & Display		Digital PIDcontroller, LCD Display			
Door		Outer Door with Glass Window with Safety Door Lock System			
Shelves		6×Drawer-type Shelves	12×Drawer-type Shelves	5×Wire Shelves	10×Wire shelves
Recorder		Included Chart Recorder			
Others		with Door Lock Device, Over Current- & Temp, Over Current Protection, Sensor Error Detection			
Material		Internal : Stainless-steel, External : Powder Coated-steel			
Dimension (w×d×h)	Internal(mm)	620×700×1,430	1,140×700×1,430	620×700×1,430	1,140×700×1,430
	External(mm)	740×805×1,930	1,260×805×1,930	740×805×1,930	1,260×805×1,930
Net Weight		134 kg	208 kg	134 kg	208 kg
Power Consumption		650 W	750 W	650 W	750 W
Electrical Reqts.		1 Phase, AC120V, 60Hz or AC230V, 50/60Hz			
Cat. No.	230V	DH.RefB0600	DH.RefB1000	DH.RefP0600	DH.RefP1000
	120V	DH.RefB0601	DH.RefB1001	DH.RefP0601	DH.RefP1001
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 95,000 별도!

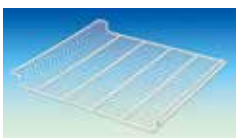
Spare Perforated Drawer Shelves or Teflon-coated Steel Wire Shelves

- DH.RefA0007 (a) Perforated Drawer Shelf, Stainless-steel, w570×d570 mm, for “BR-600”
- DH.RefA0008 (a) Perforated Drawer Shelf, Stainless-steel, w470×d570 mm, for “BR-1000”
- DH.RefA0003 (b) Wire Shelf, Teflon-coated Steel, w600×d624 mm, for “PR-600”
- DH.RefA0004 (b) Wire Shelf, Teflon-coated Steel, w560×d624 mm, for “PR-1000”

Ea. Price, ₩



(a) Included Perforated Drawer Shelf



(b) Teflon-coated Steel Wire Shelves

Cat. No	Description	Articles
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**“ThermoStable™ LR” Smart Laboratory Refrigerators, 0°C~10°C, 620- & 1140-Lit**  
 with Smart-Lab™ System, Stainless-steel Wire Shelves, CFC-Free, Automatic Defrost System, Door Lock Sys, 실험실용 다용도 냉장고



(1) 620 Lit. Laboratory Refrigerator “LR-600”

- Made in Korea ■ CE Certified ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Superior Temperature Uniformity and Quick Recovery by Forced Air Refrigeration System
- CFC-Free Refrigeration System ■ Automatic Defrost System
- Smart-Lab™ Controller
  - Ergonomic 7" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
  - WiRe™ App Service.
    - Internet Connectivity with WiFi
    - Self-Diagnostic Function
    - Automatic Data Recording
    - Push Alarm Service to Smart Phone : Power- / Temperature- / Door Open-Error Status
    - Built in USB port for Data Download and Program Upgrade
    - Password Protected Setting
    - Interactive Temperature Graph
    - Digital Calibration(Offset Function)
    - Min-/Max-Temperature

- \* Intelligent Control of Refrigerator for Preventing Overload of Compressor
- \* Double Fold Tempered Glass Window
- \* Alarm Set Points of Temperature Deviation at +5.5 and -1.5 Under Temperature
- \* Automatic Condensate Removal, No Drain Line Required
- \* Available Built in Chart Recorder and Remote Alarm System(Optional)

Specifications & Ordering information

Spec.	Model	SMART Laboratory Refrigerator	
		“LR-600”	“LR-1000”
Capacity & Doors		620 Lit., 1-Door	1,140Lit., 2-Doors
Temp. Range		0°C~+10.0°C (PT100 Sensor)at R/T of 30°C and Humidity of 70%	
Temp. Resolution		1°C-Display, 1°C-Control	
Refrigerant		CFC-Free(R-134A) Refrigeration System	
Compressor & Evaporator		1/3 HP, Auto Exchange Dual Evaporator	
Air Circulation		Dual Turbo Fan Forced-air Type	
Defrost & Circulation		Automatic Defrost System, Dual Turbo Fan	
Controller & Display		Smart-Lab Controller, 7" Full Touch Screen TFT LCD, WiRe™ App Service	
Door		Outer Door with Glass Window	
Shelves		5× Teflon-coated Steel Wire Shelves	10× Teflon-coated Steel Wire Shelves
Others		with Door Lock Device, Over Current- & Temp, Over Current Protection, Sensor Error Detection	
Material		Internal : Stainless-steel, External : Powder Coated-steel	
Dimension (w×d×h)	Internal(mm)	620×700×1,430	1,140×700×1,430
	External(mm)	740×805×1,930	1,260×805×1,930
Net Weight		134 kg	208 kg
Power Consumption		650 W	750 W
Electrical Reqts.		1 Phase, AC120V, 60Hz or AC230V, 50/60Hz	
Cat. No.	230V	DH.Refl0600	DH.Refl1000
	120V	DH.Refl0601	DH.Refl1001
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 95,000 별도!

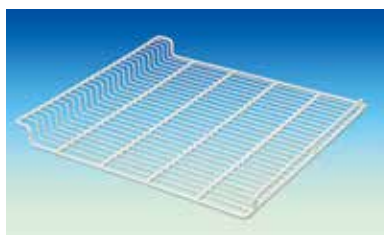


(2) 1140Lit. Laboratory Refrigerator “LR-1000”

Spare Teflon-coated Steel Wire Shelves

- DH.RefA0003 (a) Wire Shelf, Teflon-coated Steel, w600×d624 mm, for “LR-600”
- DH.RefA0004 (a) , w560×d624 mm, for “LR-1000”

Ea. Price, ₩



(a) Teflon-coated Steel Wire Shelves

» DAIHAN WiRe™ App Service



7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



WiRe™ App Service

Controlled by Smart-Phone

**“ThermoStable™ WLF” Digital Laboratory Freezer, -35°C ~ +10°C, 320- /420- /620- Lit**  
 with 3 × Shelves, Digital Fuzzy Control System, Fast Freezing Function, CFC-Free Refrigeration, Certi. & Traceability  
 디지털 저온 냉동고, 디지털 퍼지 컨트롤, 친환경 냉매(134A) 채용, 급속 냉동 기능



- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Fast Freezing Function
- Patented Jog-Shuttle Control System
- CFC-Free (134A) Refrigeration System
- \* Suitable for Storage of Bio Reagent, Seed, Enzyme and Various Samples
- \* Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- \* Storage Function : Set Values of Temperature and Timer
- \* Digital LCD with Back-Light Function
- \* Locking Mode supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Intelligent Control of Refrigerator for Preventing Overload of Compressor
- \* Corrosion Resistant 304 Stainless-steel Chamber and Shelves
- \* Over Current Protection, Sensor Error Detection, Leakage Breaking

**Specifications & Ordering information**

Spec.	Model	"WLF-320"	"WLF-420"	"WLF-620"
Capacity		330 Lit.	420 Lit.	624 Lit.
Type		Upright Type		
Temp. Range & Sensor		-35°C ~ +10°C, PT100		
Temp. Resolution		1°C-Display, 1°C-Control		
Refrigerant & Compressor		CFC-Free(134A) Refrigeration System, 3/4HP	CFC-Free(134A) Refrigeration System, 1HP	
Display		Digital LCD with Back-Light Function		
Controller		Digital Controller with Jog-Shuttle Switch (Turn+Push)		
Included Shelf & Load per Shelf		3ea Stainless-steel Shelves (# 304)		
Safety Device		Over Current Protector, Sensor Error Detector, Leakage Breaker		
Material		Stainless-steel (# 304)-Internal, Powder Coated steel-External		
Dimension : Interior & Exterior		600 × 550 × h1,000mm, 820 × 700 × h1,700mm	600 × 700 × h1,000mm, 820 × 850 × h1,700mm	780 × 800 × h1,000mm, 1000 × 950 × h1,700mm
Packing Size & Gross Weight		1,160 × 910 × h2,160mm, 290 kg	1,160 × 1,060 × h2,160mm, 314 kg	1,340 × 1,160 × h2,160mm, 350 kg
Power Consumption		1.7 kW	1.8 kW	1.8 kW
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz		
Cat. No.	230V	DH.WLF00320	DH.WLF00420	DH.WLF00620
	120V	DH.WLF01320	DH.WLF01420	DH.WLF01620
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 55,000 별도!



with Inner Doors "ThermoStable™ WLF"

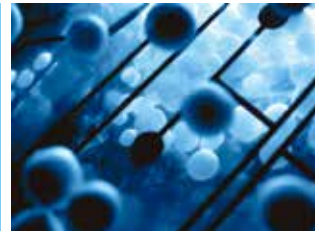
**Spare Stainless-steel Flat Shelf**

- DH.WLF10320 Flat Shelf, w580 × d530mm, "LFS320", for "WLF-320"
- DH.WLF10420 , w580 × d680mm, "LFS420", for "WLF-420"
- DH.WLF10620 , w760 × d780mm, "LFS620", for "WLF-620"

Ea. Price, ₩

Innovative Technology to Improve the Quality of Laboratory

## Simple, Efficient and Green - UniFreez™ Doubled Security and Power - DuoFreez™



### Innovation of Freezing System

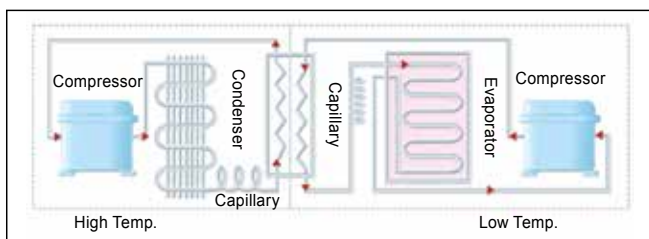
#### DAIHAN UniFreez™ System (Simplified Hi-Efficiency Freezing System)

Most of the Ultra-Low Temperature Freezers has two compressors cooperating with each other to drop the internal temperature down to  $-86^{\circ}\text{C}$  as shown in the following figure and its overall freezing mechanism is very complicated.

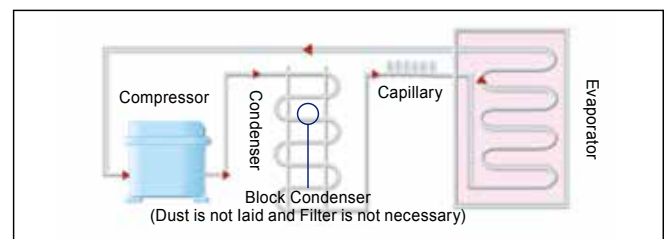
However, our new **UniFreez™** uses only single compressor. Even though, single set of a compressor, a capillary tube, a condenser and an evaporator is incorporated, it ensures the temperature down to  $-86^{\circ}\text{C}$  by an advanced control technology of the compressor and the process of specially mixed refrigerants. **UniFreez™** overcomes technical complexity of the typical cascaded double compressor system. Simplification of the freezing mechanism and electricity minimizes the noise, power consumption and failure of operation.

*High-Efficiency ! User Safety ! Energy Saving ! Long Life time !*

#### Simplified Hi-Efficiency Freezing System Mechanism : Easy Maintenance



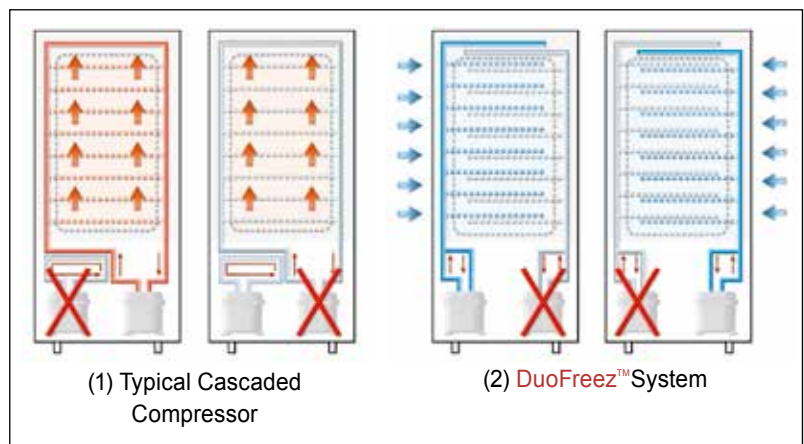
Typical Cascaded Compressor System  
Two Freezing cycles contribute Complicated mechanism



New UniFreez™ System  
Single freezing cycle works only!!

#### Doubled Security and Robustness! DuoFreez™

We offer an extraordinary high-stability system powered by two **UniFreez™ System** operating independently. Normally, both of the two compressors are running, and it drops the temperature inside the storage chamber down to  $-95^{\circ}\text{C}$ . Even if one **UniFreez™ System** fails in operation by a certain unexpected problem, the other **UniFreez™ System** still works and maintains ultra-low temperature down to  $-80^{\circ}\text{C}$ . It means one **UniFreez™ System** works as a 'backup' of the other **UniFreez™ System**. This innovative mechanism realizes doubled stability, robustness and fault tolerance, which are the most important feature of the ULT freezer needed by all the customers.



(1) Typical Cascaded Compressor

(2) DuoFreez™ System

▶ **The lowest temperature of  $-95^{\circ}\text{C}$  is ensured by DuoFreez™ system running independently and simultaneously**

▶ **Fault Tolerance System**  
- Realization of doubled stability and robustness

▶ **Incomparable Fast and Powerful Freezing**  
- Fast Recovery of Target Temperature

(1) **Complicated mechanism**

⇒ If one of compressor fails, temperature would go up

(2) **Even if one of the two UniFreez™ systems fails to run, the other one is still running properly** ⇒ **Minimum  $-80^{\circ}\text{C}$**

“UniFreez™ U25 & 80” Personal Smart-Lab™ ULT Freezer, Upright Type, -86°C ~ -65°C

Non-Freon Refrigerants, with Certi. & Traceability, 개인용 초저온 냉동고, 단일 냉각 시스템, 터치 스크린 LCD 컨트롤러, 친환경 냉매 채용



Personal ULT Freezer “UniFreez™ U80”, with Smart-Lab Controller

- Made in Korea
- UL/CUL Certified & GD mark (Only “U80” model)
- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Personal type Compact Ultra Low Temperature Freezer
- “UniFreez™ U” System can freeze down to -86°C : realize robust and long life time.
- Smart-Lab™ Controller (Only “U80” model)
  - : Remote Controlled by Smart-Phone with WiRe™ App Service
  - Ergonomic 7” Full Touch Screen TFT LCD
  - Easy Monitoring and Control
  - Internet Connectivity with WiFi
  - Storage Management & Automatic Temp. Data Recording
  - Self-Diagnostic Function : Built in Standard Warning and Alarm Functions
  - RS232 Communication Link
- \* Easy Maintenance and Improved Performance
- \* High-quality Insulation Panel and Inner Doors ensure defrosting around outer surface.
- \* Robust & Flexible design of Door Handle
- \* Use of Block Condenser removes filter and causes of related failure.
- \* Filter-free Mechanism lowers heat generated by the compressor
- \* CFC-free Refrigerants are used
- \* External Temp. Sensor Hole
- \* Inner Door Height : 252mm (“UniFreez™ U80”)



WiRe™ App Service

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

Controlled by Smart-Phone



Personal ULT Freezer “UniFreez™ U25”, with Digital Feedback Controller

Specifications & Ordering information

Spec.		Model	“UniFreez™ U25”	“UniFreez™ U80”
Capacity			25 Lit.	82 Lit.
Temp.	Range		-86°C ~ -65°C	
	Sensor		at Room Temperature of 30°C and Humidity of 70%	
Compressor			PT100 Sensor	
Condenser Type			Hermetic Type	
Refrigerant			Block Condenser, No Pin, Filter Free Mechanism	
Controller			Natural (CFC Free Refrigerant System)	
Shelves			Digital Feedback Controller	7” Full Touch Screen TFT LCD
Max. Q'ty of Racks			None	Included 1 Stainless-steel Shelf
Material			None, Only 10~15 boxes are applicable	4pcs of 12(4×3)-Placed Rack (RFU5234)
Dimension (w×d×h)	Internal		Stainless-steel (#304)	
	External		Powder Coated steel Plate	
	Inner Door		Powder Coated Stainless-steel (#304)	
Weight	Internal (mm)		200×420×300	340×485×520
	External (mm)		390×627×785	530×687×1,060
Packing Size (w×d×h) (mm)			52 kg	60 kg
Gross Weight			880×860×1,300	960×760×1,350
Power Consumption			69 kg	102 kg
Electrical Reqts.			321 w/h	
Cat. No.	230V		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	
	120V		DH.WUF0032	DH.SWUF0075
Price, Each. ₩			DH.WUF0132	DH.SWUF0175

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 45,000 별도!

Optional Freezer Racks, Boxes, etc. : Please See 219~220 Page



Cat. No	Description	Articles
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**“UniFreez™ U” Smart-Lab™ ULT Freezer, 4 & 5-Door, Upright-type, -86°C ~ -65°C NEW**

Non-Freon Refrigerants, Auto Vacuum Releasing System, 308-/393-/503-/714-Lit, Wire™ Service

초저온 냉동고, 업라이트형, 단일 냉각 시스템, 터치 스크린 LCD 컨트롤러, 친환경 냉매 채용



SMART Ultra-Low Temperature Freezer, “UniFreez™ U300”

- Made in Korea
- GD(Good Design)-mark
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- “UniFreez™ U” System can freeze down to -86°C : realize robust and long life time.
- Smart-Lab™ Controller : Remote Controlled by Smart-Phone with WiRe™ App Service
  - Ergonomic 7" Full Touch Screen TFT LCD
  - Easy Monitoring and Control - Eye level Controller
  - Internet Connectivity with WiFi
  - Storage Management & Automatic Temp. Data Recording
  - Self-Diagnostic Function : Built in Standard Warning and Alarm Functions
  - RS232 Communication Link
- \* Easy Maintenance and Improved Performance
- \* High-quality Insulation Panel and Inner Doors ensure defrosting around outer surface.
- \* Automatic Vacuum Breaker - Easy to re-open the Door.
- \* Robust & Flexible design of Door Handle
- \* Use of Block Condenser removes filter and causes of related failure.
- \* Filter-free Mechanism lowers heat generated by the compressor
- \* CFC-free Refrigerants are used
- \* External Temp. Sensor Hole
- \* Inner Door Height : 312mm(4 Door), 252mm(5 Door)
- \* Included Shelves : 3ea.(4 Door), 4ea.(5 Door)

**Specifications & Ordering information**

Spec.	Model	“UniFreez U300” 4 & 5 Door	“UniFreez U400” 4 & 5 Door	“UniFreez U500” 4 & 5 Door	“UniFreez U700” 4 & 5 Door
Capacity		308 Lit.	393 Lit.	503 Lit.	714 Lit.
Temp.	Range	-86°C ~ -65°C			-80°C ~ -65°C
	Sensor	at Room Temperature of 30°C and Humidity of 70%			
Compressor		Hermetic Type			
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism			
Refrigerant		Natural (CFC Free Refrigerant System)			
Controller & Display		7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)			
Shelves		3ea.(4 Door), 4ea(5 Door)			
Max. Q'ty of Racks	4-Door	12pcs of 15(5×3)- Placed Rack (RFU4234)	16pcs of 15(5×3)- Placed Rack (RFU4234)	16pcs of 20(5×4)- Placed Rack (RFU4257)	24pcs of 20(5×4)- Placed Rack (RFU4257)
	5-Door	15pcs of 12(4×3)- Placed Rack (RFU5234)	20pcs of 12(4×3)- Placed Rack (RFU5234)	20pcs of 16(4×4)- Placed Rack (RFU5257)	30pcs of 16(4×4)- Placed Rack (RFU5257)
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel Plate			
	Inner Door	Powder Coated Stainless-steel (#304)			
Chamber Dimension (w×d×h)	Internal(mm)	470×500×1,310	600×500×1,310	600×640×1,310	880×620×1,310
	External(mm)	710×750×1,900	840×750×1,900	840×890×1,900	1,120×870×1,900
Net Weight		180 kg	210 kg	240 kg	320 kg
Packing Size (w×d×h) (cm) & Gross Weight		110×110×222	116×116×222	116×124×222	140×140×221
		275 kg	296 kg	327 kg	442 kg
Power Consumption		352 w/h	373 w/h	458 w/h	503 w/h
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			

**Smart-Lab™ Controller**



7" Full Touch Screen TFT LCD



WiRe™ App Service

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

**Controlled by Smart-Phone**

Cat. No.	4-Door, 230V	DH.SWUF00300	DH.SWUF00400	DH.SWUF00500	DH.SWUF00700
	4-Door, 120V	DH.SWUF03300	DH.SWUF03400	DH.SWUF03500	DH.SWUF03700
Price, Each. ₩					
Cat. No.	5-Door, 230V	DH.SWUF00350	DH.SWUF00450	DH.SWUF00550	DH.SWUF00750
	5-Door, 120V	DH.SWUF03350	DH.SWUF03450	DH.SWUF03550	DH.SWUF03750
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request. ※ 운임 약 ₩ 55,000별도!

Optional Freezer Racks, Boxes, etc. : Please See 219~220 Page

“DuoFreez™ U” Smart-Lab™ ULT Freezer, 4 & 5-Door, Upright-type, -95°C ~ -65°C **NEW**

Non-Freon Refrigerants, Auto Vacuum Releasing System, Eco Mode, 308 -/393-/503-/714-Lit

초저온 냉동고, 업라이트형, DuoFreez™ System, 7인치 풀터치 스크린 컨트롤러, 친환경 냉매 채용, WiRe™서비스



SMART Ultra-Low Temperature Freezer, “DuoFreez™ U300”

- Made in Korea
  - GD(Good Design)-mark
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - DuoFreez™ System can down to -95°C and High-stability System can be Offered : If One System fails in operation, the other System still Maintains down to -80°C
  - Smart-Lab™ Controlle: Remote Controlled by Smart-Phone with WiRe™ App Service
    - Ergonomic 7" Full Touch Screen TFT LCD
    - Easy Monitoring and Control - Eye level Controller
    - Internet Connectivity with WiFi
    - Storage Management & Automatic Temp. Data Recording
    - Self-Diagnostic Function : Built in Standard Warning and Alarm Functions
    - RS232 Communication Link
  - UL/CUL & CE Certified
  - PL(Product Liability) Insurance
- \* Easy Maintenance and Improved Performance
  - \* High-quality Insulation Panel and Inner Doors ensure defrosting around outer surface.
  - \* Automatic Vacuum Breaker - Easy to re-open the Door.
  - \* Robust & Flexible design of Door Handle
  - \* Use of Block Condenser removes filter and causes of related failure.
  - \* Filter-free Mechanism lowers heat generated by the compressor
  - \* Eco Mode Function for Low Power-consumption.
  - \* Inner Door Height : 312mm(4 Door), 252mm(5 Door)
  - \* Included Shelves : 3ea.(4 Door), 4ea.(5 Door)
  - \* External Temp. Sensor Hole
  - \* CFC-free Refrigerants are used

Specifications & Ordering information

Spec.	Model	“DuoFreez U300” 4 & 5 Door	“DuoFreez U400” 4 & 5 Door	“DuoFreez U500” 4 & 5 Door	“DuoFreez U700” 4 & 5 Door
Capacity		308 Lit.	393 Lit.	503 Lit.	714 Lit.
Freezing System		DuoFreez™ System			
Temp.	Range	-95°C~-65°C			-90°C~-65°C
	Sensor	at Room Temperature of 30°C and Humidity of 70%			
Compressor		Hermetic Type			
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism			
Refrigerant		Natural ( CFC Free Refrigerant System)			
Controller & Display		7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)			
Shelves		3ea(4 Door), 4ea(5 Door)			
Max. Q'ty of Racks	4-Door	12pcs of 15(5×3)-Placed Rack (RFU4234)	16pcs of 15(5×3)-Placed Rack (RFU4234)	16pcs of 20(5×4)-Placed Rack (RFU4257)	24pcs of 20(5×4)-Placed Rack (RFU4257)
	5-Door	15pcs of 12(4×3)-Placed Rack (RFU5234)	20pcs of 12(4×3)-Placed Rack (RFU5234)	20pcs of 16(4×4)-Placed Rack (RFU5257)	30pcs of 16(4×4)-Placed Rack (RFU5257)
Material	Internal	Stainless-steel (#304)			
	External	Powder Coated steel Plate			
	Inner Door	Powder Coated Stainless-steel (#304)			
Chamber Dimension (w×d×h)	Internal(mm)	470×500×1,310	600×500×1,310	600×640×1,310	880×620×1,310
	External(mm)	710×750×1,900	840×750×1,900	840×890×1,900	1,120×870×1,900
Net Weight		220 kg	260 kg	300 kg	320 kg
Packing Size (w×d×h) (cm) & Gross Weight		110×110×222	116×116×222	116×124×222	140×140×221
		300 kg	352 kg	352 kg	442 kg
Power Consumption	Dual mode	398 w/h	474 w/h	507 w/h	596 w/h
	Eco. mode	352 w/h	373 w/h	458 w/h	503 w/h
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz			

Smart-Lab™ Controller



7" Full Touch Screen TFT LCD



WiRe™ App Service

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

Controlled by Smart-Phone

Optional Freezer Racks, Boxes, etc.  
: Please See 219~220 Page

Cat. No.	4-Door, 230V	DH.SWUF01300	DH.SWUF01400	DH.SWUF01500	DH.SWUF01700
	4-Door, 120V	DH.SWUF02300	DH.SWUF02400	DH.SWUF02500	DH.SWUF02700
Price, Each. ₩					
Cat. No.	5-Door, 230V	DH.SWUF01350	DH.SWUF01450	DH.SWUF01550	DH.SWUF01750
	5-Door, 120V	DH.SWUF02350	DH.SWUF02450	DH.SWUF02550	DH.SWUF02750
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 55,000별도!

Cat. No	Description	Articles
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**“UniFreez™ U” & “DuoFreez™ U” Smart-Lab ULT Freezer, Optional Racks NEW**



(1) Sliding Drawer-type Rack, 15Places  
“RFU4257SD”

(1) Optional Freezer Racks, Sliding Drawer-type for 0.5~2ml, 3~4ml, 5ml Vial Boxes  
\* Stainless-steel (#304) \* without Boxes

For 2 Door-type U80

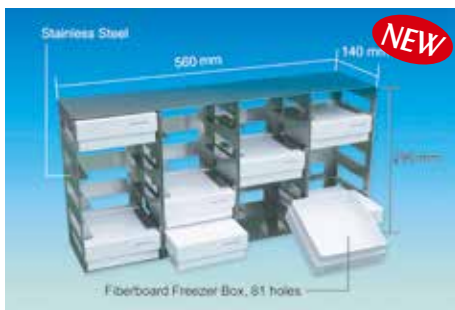
Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU5234SD	“RFU5234SD”	140×420×232	0.5 ~ 2ml, 12(4×3)	U80 (4ea)	
DH.RFU5434SD	“RFU5434SD”	140×420×171	3 ~ 4ml, 6(2×3)		
DH.RFU5534SD	“RFU5534SD”	140×420×211	5ml, 6(2×3)		

For 4 Door-type U300, U400, U500, U700

Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU4234SD	“RFU4234SD”	140×420×290	0.5 ~ 2ml, 15(5×3)	U300(12ea) U400(16ea)	
DH.RFU4434SD	“RFU4434SD”	140×420×256	3 ~ 4ml, 9(3×3)		
DH.RFU4534SD	“RFU4534SD”	140×420×311	5ml, 9(3×3)		
DH.RFU4257SD	“RFU4257SD”	140×560×290	0.5 ~ 2ml, 20(5×4)	U500(16ea) U700(24ea)	
DH.RFU4457SD	“RFU4457SD”	140×560×256	3 ~ 4ml, 12(3×4)		
DH.RFU4557SD	“RFU4557SD”	140×560×311	5ml, 12(3×4)		

For 5 Door-type U300, U400, U500, U700

Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU5234SD	“RFU5234SD”	140×420×232	0.5 ~ 2ml, 12(4×3)	U300(15ea) U400(20ea)	
DH.RFU5434SD	“RFU5434SD”	140×420×171	3 ~ 4ml, 6(2×3)		
DH.RFU5534SD	“RFU5534SD”	140×420×211	5ml, 6(2×3)		
DH.RFU5257SD	“RFU5257SD”	140×560×232	0.5 ~ 2ml, 16(4×4)	U500(20ea) U700(30ea)	
DH.RFU5457SD	“RFU5457SD”	140×560×171	3 ~ 4ml, 8(2×4)		
DH.RFU5557SD	“RFU5557SD”	140×560×211	5ml, 8(2×4)		



(2) Side Access-type Rack, 20Places  
“RFU4257SA”

(2) Optional Freezer Racks, Side Access-type for 0.5~2ml, 3~4ml, 5ml Vial Boxes  
\* Stainless Steel (#304) \* without Boxes

for 2 Door-type U80

Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU5234SA	“RFU5234SA”	140×420×232	0.5 ~ 2ml, 12(4×3)	U80 (4ea)	
DH.RFU5434SA	“RFU5434SA”	140×420×171	3 ~ 4ml, 6(2×3)		
DH.RFU5534SA	“RFU5534SA”	140×420×211	5ml, 6(2×3)		

for 4 Door-type U300/U400/U500/U700

Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU4234SA	“RFU4234SA”	140×420×290	0.5 ~ 2ml, 15(5×3)	U300(12ea) U400(16ea)	
DH.RFU4434SA	“RFU4434SA”	140×420×256	3 ~ 4ml, 9(3×3)		
DH.RFU4534SA	“RFU4534SA”	140×420×311	5ml, 9(3×3)		
DH.RFU4257SA	“RFU4257SA”	140×560×290	0.5 ~ 2ml, 20(5×4)	U500(16ea) U700(24ea)	
DH.RFU4457SA	“RFU4457SA”	140×560×256	3 ~ 4ml, 12(3×4)		
DH.RFU4557SA	“RFU4557SA”	140×560×311	5ml, 12(3×4)		

for 5 Door-type U300/U400/U500/U700

Cat. Number	Model	Rack Size(mm) (w×d×h)	Freezer Box & No. of Boxes	Freezer Capacity (No. of Racks)	Ea. Price, ₩
DH.RFU5234SA	“RFU5234SA”	140×420×232	0.5 ~ 2ml, 12(4×3)	U300(15ea) U400(20ea)	
DH.RFU5434SA	“RFU5434SA”	140×420×171	3 ~ 4ml, 6(2×3)		
DH.RFU5534SA	“RFU5534SA”	140×420×211	5ml, 6(2×3)		
DH.RFU5257SA	“RFU5257SA”	140×560×232	0.5 ~ 2ml, 16(4×4)	U500(20ea) U700(30ea)	
DH.RFU5457SA	“RFU5457SA”	140×560×171	3 ~ 4ml, 8(2×4)		
DH.RFU5557SA	“RFU5557SA”	140×560×211	5ml, 8(2×4)		



(1) ~ (3) White Boxes



(4) 5 Color Assorted Box-Set



(5) 5 Color Hinged Boxes



C11.001 C11.002

(6) Hard Board Storage Boxes



(1) Temp. Chart Recorder, "KT622"



(2) Chart Paper, "C657", 60 charts for 420 days



(3) Replacement Pens 6ea, Red color, "P222", for Cart Recorder



(4) LCO<sub>2</sub> back up system "LCO2B"



(5) Remote Alarm System "RWAS"

Optional Freezer Boxes

(1) for 0.5~2ml Cryovials/Microtubes, 81 & 100 hole White Boxes, h52mm  
0.5ml : Screwcap Microtubes

SL.Box9001 81-hole Box, White, h52mm, Cell φ 15mm  
SL.Box9002 100-hole Box, White, h52mm, Cell φ 12.5mm

Ea.	Price, ₩	Cs.	Price, ₩
		100set	
		100set	

(2) for 3ml Cryovials, 81 & 100 hole White Boxes, h77mm  
Maybe fit to 4ml Cryovials

SL.Box9003 81-hole Box, White, h77mm, Cell φ 15mm  
SL.Box9004 100-hole Box, White, h77mm, Cell φ 12.5mm

Ea.	Price, ₩	Cs.	Price, ₩
		100set	
		100set	

(3) for 5ml Cryovials, 64 & 81 hole White Boxes, h98mm **NEW**

SL.Box9007 64-hole Box, White, h98mm, Cell φ 16mm  
SL.Box9008 81-hole Box, White, h98mm, Cell φ 15mm

Ea.	Price, ₩	Cs.	Price, ₩
		100set	
		100set	

(4) for 0.5~2ml Cryovials & Microtubes, 5 Color Assorted Box-Set, 81 & 100 hole  
5 Colors : Blue / Green / Pink / Yellow / White-Assorted

SL.Box9005 81-hole/5 color Box set, h52mm, Cell φ 15mm  
SL.Box9006 100-hole/5 color Box set, h52mm, Cell φ 12.5mm

Set.	Price, ₩	Cs.	Price, ₩
5ea		25set	
5ea		25set	

(5) for 0.5~2ml Cryovials & Microtubes, ID-Color™ 81holes  
5 Color Cardboard Freezer Box-set

SL.Box9014.Y Freezer Box, 81-hole, for 0.5~2.0ml, Yellow  
SL.Box9014.O , Orange  
SL.Box9014.G , Green  
SL.Box9014.B , Blue  
SL.Box9014.W , White

Ea.	Price, ₩	Cs.	Price, ₩
		20ea	
		* 5color assorted 4pk.	

(6) for 1.5/2.0ml Cryovials/ Microtube, 81-Holes Hard Board Storage Boxes  
with Hard Board / PP Divider

C11.001 Hard Board Box, with Hard Board Divider, 81 Hole, 133×133×h52 mm  
C11.002 , with PolyPropylene Divider, 81 Hole, 133×133×h52 mm

Ea.	Price, ₩

Optional Recorder/Remote Alarm System/LCO<sub>2</sub> Back up System

DH.KT622 (1) Temp. Chart Recorder, "KT622", with "C657" Chart Paper  
DH.C657 (2) Chart Paper, "C657", 60 Charts, for 420 days recording  
DH.P222 (3) Replacement Pens, "P222", 6ea Red color, for "KT622" Chart Recorder  
DH.LCO2B (4) LCO<sub>2</sub> Back up System, "LCO2B"  
DH.RWAS (5) Remote Wire/Wireless Alarm System, "RWAS"

Ea.	Price, ₩

ULT Freezer with Validation (IQ, OQ) Service

DH.SWUF30300 Validation Service(IQ, OQ), with "UniFreez U300", "SUFV300"  
DH.SWUF30400 U400, "SUFV400"  
DH.SWUF30500 U500, "SUFV500"  
DH.SWUF30700 U700, "SUFV700"  
DH.WUF30032 Validation Service(IQ, OQ), with "UniFreez U25", "UFV32"  
DH.SWUF30075 U80, "SUFV75"

Ea.	Price, ₩

# Safety Cabinets

**Safety Cabinets, For Chemicals** ..... P. 222-224  
**, For Flammables** ..... P. 225

## Ducted PVC Safety Cabinets for Chemicals "FGC-2001"



## PP Safety Cabinets for Strong Acid & Corrosives 2 Doors, 170Lit

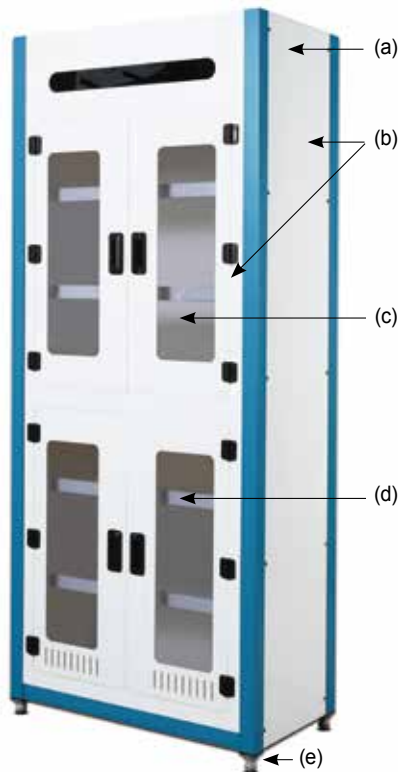


**Safety Cabinets  
for Flammables**  
Single Door, 45Lit



**Safety Cabinets  
for Acid & Corrosives**  
Single Door, 45Lit

DAIHAN-brand® Ducted Safety Cabinets for Chemicals, with Clear PVC-/Safety Glass-Door Window, Built-in PVC/Al-buttruss with Internal & External PVC/Steel Plate, Duct & Pipe Silicon Sealing, Gas Leak Completely Blocked, **덕트형 약품기구 보관장, 환기형**



(1) PVC Safety Cabinets, "FGC-2001"

- **Made in Korea**      ■ **Durable, Hazardous Chemical Gas Remove.**
- **Internal/External PVC Sheet/Steel Plate Good Resistance of Chemicals & Acid.**
- **Clear PVC-/Tempered Safety Glass-Window**  
(Custom-Made Safety Cabinet : Wide Variety of Material for User Selection)

- \* Discharging Toxic Gas Generated During Storage Various Reagents to the Outside through the Duct Structure
- \* Effective in Maintaining a Comfortable indoor to Prevent the Laboratory Room Air being Polluted.
- \* It may Create a Space to Treat the Harmful Substances in the Human Body Safely and Comfortably
- \* Process Pipe & Duct Silicon Sealing to Completely Block the Gas Leakage to the Outside
- \* Optional Blower User Selection : External-model(Stainless steel-/ Steel-/ PVC-/ PP-Blower) & Internal-model(Steel-/ PVC-/ PP-Blower)
- \* Optional 24-hour Timer : Automatically Adjustable Exhaust attached to a Safety Cabinet

**(1) Ducted PVC Safety Cabinet, Clear PVC Door Window**

- **Internal/External PVC Material Resistance of Chemicals and Acids**
- **Built-in PVC-buttruss**      ■ **1-Room, 4-Doors, 5-Shelfs**

- \* Safe Storage of Chemicals and Acids
- \* Door Window : Use the Clear PVC Transparency and Protect the Experimenter Against the Risk of Explosion.
- \* Basic Materials of Construction : Internal(PVC), External(PVC), 5-stage a Fixed Shelf(PVC)

**Specifications & Ordering information**

Spec.	Model	"FGC-2001"	"FGC-2003"	"FGC-2005"
(a) Duct size		φ 100mm / φ 150mm		
(b) Body & Door Material		PVC(Extrusion Moulding)		
(c) Door Window Material		Clear PVC		
(d) Shelf Material		PVC (5 Fixed-type)		
(e) Foot Material		PVC(Height Adjustable up to 30mm)		
Dimension(w × d × h)		900 × 500 × h2100mm	1200 × 500 × h2100mm	1500 × 500 × h2100mm
Power Supply		220V / 60Hz		
Cat. No.		DH.FGC2001	DH.FGC2003	DH.FGC2005
Price, Ea. ₩				

\* Other Specifications are available upon Customer's Request.

※ **Note! Freight and Installation Charges Separately.**

**(2) Ducted Steel Safety Cabinet, Tempered Safety Glass Door Window**

- **Internal/External Steel plate with Powder finished for Resistance of Chemicals**
- **Built-in Particle Board-plate & Al-buttruss**      ■ **1-Room, 2-Doors, 5-Shelfs**

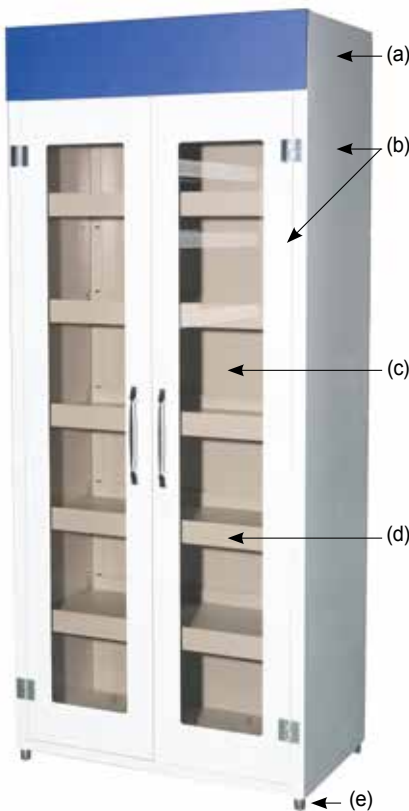
- \* Safe Storage of Chemicals
- \* Use Tempered Safety Glass Protects the Experimenter Against the Risk of Explosion.
- \* Basic Materials of Construction : Internal(Steel), External(Steel), 5-stage a Fixed Shelf(PB & Al)

**Specifications & Ordering information**

Spec.	Model	"FGC-900"	"FGC-1200"	"FGC-1500"
(a) Duct size		φ 100mm / φ 150mm		
(b) Body & Door Material		Steel(with Powder Finished)		
(c) Door Window Material		Tempered Safety Glass		
(d) Shelf Material		PB(Particle Board) Plate + Aluminum Buttruss (5 Fixed-type)		
(e) Foot Material		Stainless-steel(Height Adjustable up to 30mm)		
Dimension(w × d × h)		900 × 500 × h2100mm	1200 × 500 × h2100mm	1500 × 500 × h2100mm
Power Supply		220V / 60Hz		
Cat. No.		DH.FGC0900	DH.FGC1200	DH.FGC1500
Price, Ea. ₩				

\* Other Specifications are available upon Customer's Request.

※ **Note! Freight and Installation Charges Separately.**



(2) Steel Safety Cabinets, "FGC-900"

Cat. No	Description	Articles
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Zoyet® Safety Cabinet for Acid & Corrosives, with Double Layer Fire Proof Steel with Insulation Layer, 15~410 Lit for Easy Open & Close 180° Door with Double Keys, with Steel Shelves, Optional PP Trays, with Manual-/Self Closing-Door Compliance with OSHA 29 CFR 1910.106 and NFPA CODE 30, 안전 케비닛, 산 또는 부식성 시약 보관용



■ Complies with OSHA 29 CFR 1910.106, NFPA CODE 30 and FM Standard.

■ Safe Construction ;

- Complete Double Layer Fire Proof Sheet Steel, 38mm of Insulation Layer between Double Layer Wall Space.
- Sheet Steel of Thickness over 1.0mm All-welded Together making it more Durable and Robust.
- Inside and Outside surface of Cabinet is finished on Blue Permanent and Corrosion- resistant Paints.
- Spill Control Sill of 5cm Height prevent Maximum Leak Control on Accidental Spill.
- 3-point Inter-active Locking System Provides Easy, Fail-safe, Positive Door Closure.
- Easy open-close 180° Cabinet Door with Double Keys



■ Special Features ;

- (a) Fully Welded, not Riveted Construction holds Squareness for Long Life and offers greater Protection in a Fire since Air Gaps are reduced.
- (b) Inside and Outside surface of Cabinet is finished on Blue Permanent and Corrosion-resistant Paints.
- (c) Highly Secure Lock with Dual Protection (Padlock and Key lock) makes Storage Safer.
- (d) Dual Vents with Built-in Flash Arresters Strategically placed at Bottom and Opposite Top.
- (e) 5cm Leakproof Containment Sump holds Leaks and meets US EPA Requirements.
- (f) Adjustable Leveling Feet make it easy to Balance Cabinets on Uneven Surface.
- (g) Label makes it Apparently Visible for Site Manager or Operators to identify where the Chemicals stored quickly.
- (h) Continuous Piano Hinge provides better Open-close Smooth Operation, ensuring Endurance and Reliability.

※ Note! Freight and Installation Charges Separately.



(1), (3) Single Door, 45Lit.

(1), (3) Single Door, 83 Lit.

(1) with Manual-closing Single Door, 15~83 Lit. Shelves Capacity : 50Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0004B	1 Door, Manual, 1 Shelf , 15Lit.	w430×d430×h560mm , 35kg	
HW.ZYC0012B	, 45Lit.	w590×d460×h890mm , 56kg	
HW.ZYC0022B	, 2 Shelves, 83Lit.	w590×d460×h1650mm, 85kg	

(2) with Manual-closing 2 Doors, 114~410 Lit. Shelves Capacity : 100Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0030B	2 Doors, Manual, 1 Shelf , 114Lit.	w1090×d460×h1120mm, 100kg	
HW.ZYC0045B	, 2 Shelves, 170Lit.	w1090×d460×h1650mm, 138kg	
HW.ZYC0060B	, 227Lit.	w860×d860×h1650mm , 165kg	
HW.ZYC0090B	, 340Lit.	w1090×d860×h1650mm, 190kg	
HW.ZYC0110B	, 410Lit.	w1500×d860×h1650mm, 270kg	

(3) with Self-closing Single Door, 15~83 Lit. Shelves Capacity : 50Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0004BS	1 Door, Self-closing, 1 Shelf , 15Lit.	w430×d430×h560mm , 35kg	
HW.ZYC0012BS	, 45Lit.	w590×d460×h890mm , 56kg	
HW.ZYC0022BS	, 2 Shelves, 83Lit.	w590×d460×h1650mm, 85kg	

(4) with Self-closing 2 Doors, 114~410 Lit. Shelves Capacity : 100Kg

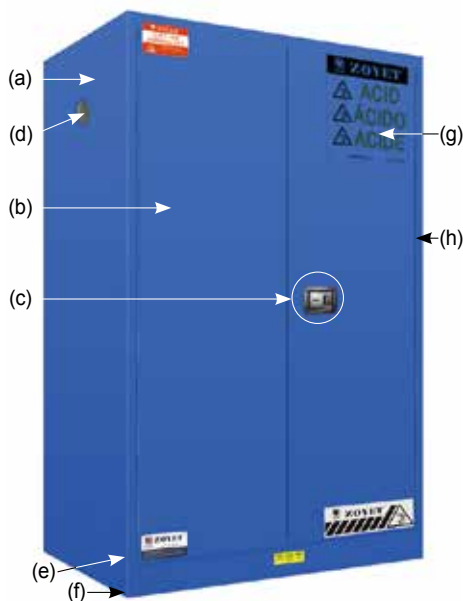
Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0030BS	2 Doors, Self-closing, 1 Shelf , 114Lit.	w1090×d460×h1120mm, 100kg	
HW.ZYC0045BS	, 2 Shelves, 170Lit.	w1090×d460×h1650mm, 138kg	
HW.ZYC0060BS	, 227Lit.	w860×d860×h1650mm , 165kg	
HW.ZYC0090BS	, 340Lit.	w1090×d860×h1650mm, 190kg	
HW.ZYC0110BS	, 410Lit.	w1500×d860×h1650mm, 270kg	

(5) Spare Steel Shelves for Flammable / Acid & Corrosives Safety Cabinets

Cat. No.	Description	Ea.	Price, ₩
HW.GB0004	Steel Shelf, for 15Lit. Cabinets , w340×d340×h28mm		
HW.GB0012	, for 45/83Lit. Cabinets , w500×d370×h28mm		
HW.GB0030	, for 114/170Lit. Cabinets, w1000×d370×h28mm		
HW.GB0060	, for 227Lit. Cabinets , w770×d770×h28mm		
HW.GB0090	, for 340Lit. Cabinets , w1000×d770×h28mm		
HW.GB0110	, for 410Lit. Cabinets , w1400×d770×h28mm		

(6) Optional PP Trays for Acid & Corrosives Safety Cabinets

Cat. No.	Description	Ea.	Price, ₩
HW.PPGB0004	PP Tray, for 15Lit. Cabinets , w330×d330×h35mm		
HW.PPGB0012	, for 45/83Lit. Cabinets , w490×d360×h35mm		
HW.PPGB0030	, for 114/170Lit. Cabinets, w990×d360×h35mm		
HW.PPGB0060	, for 227Lit. Cabinets , w760×d760×h35mm		
HW.PPGB0090	, for 340Lit. Cabinets , w1000×d760×h35mm		
HW.PPGB0110	, for 410Lit. Cabinets , w1390×d760×h35mm		



(2), (4) for Acid & Corrosives, 2 Doors, 340Lit.



(5) Spare Steel Shelf

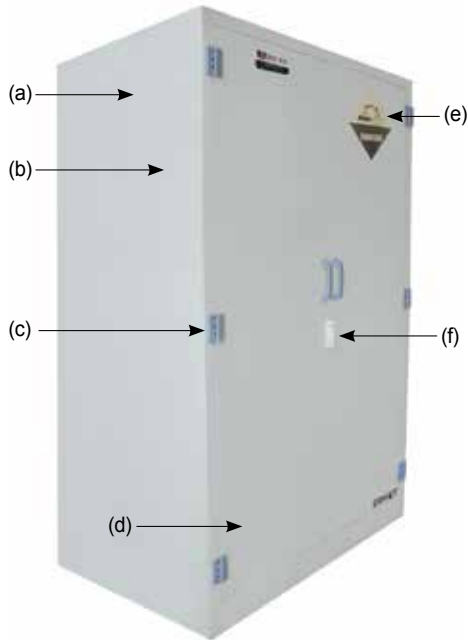


(6) Optional PP Tray

Zoyet® PP Safety Cabinets for Strong Acid & Corrosives, with Liquid-tight, with All-welded Interior, 15~170 Lit  
According to OSHA Requirement, with White Durable Polypropylene, PP 안전 케비닛, 산 & 부식물질 보관용



(1) PP, Single Door, 15Lit.



(2) PP, 2 Doors, 170Lit.



(3) Spare PP Shelf (4 Hooks included)

- Meets OSHA Requirement for Secondary Containment.
- White Durable Polypropylene Cabinet is intended to store Acid and Corrosive Substance, such as Example, Sulfuric Acid, Hydrochloric Acid, Acetic Acid, Nitric Acid, Sodium Hydroxide, Potassium Hydroxide etc.
- Store the most Corrosive Chemicals with no fear of Rust or Corrosion of the Storage Cabinet.
- All Cabinets have Liquid-tight, All-welded Interior to Contain Accidental Spills.
- Special Features ;
  - (a) PP Cabinet Body adopts High Quality Anti-shock White PP board of 8mm Thickness, Welded as a Whole with Same Property and Color Welding Bar.
  - (b) Equipped with Internationally recognized Leakage Proof Shelves, which could be detached out to be cleaned. Shelves are Adjustable.
  - (c) PP Hinges for Durability and Long Life.
  - (d) Cabinet Door could be customized as Left-open or Right-open.
  - (e) Cabinet Doors are marked clearly with Warning Label Reading "CORROSIVE".
  - (f) To improve Operational Safety, Padlock could be used to provide Extra Protection.

※ Note! Freight and Installation Charges Separately.

(1) Manual-closing Single Door, 15~45 Lit. Shelves Capa.: 25Kg(for 15L), 30Kg(for 45L)

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYP0004	1 Door, Manual, 1 Shelf, 15Lit.	w430×d430×h560mm, 11kg	
HW.ZYP0012	, 45Lit.	w590×d460×h890mm, 25kg	

(2) Manual-closing 2 Doors, 100~170 Lit. Shelves Capa.: 35Kg(for 100L), 40Kg(for 114/170L)

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYP0026	2 Doors, Manual, 1 Shelf , 100Lit.	w910×d600×h900mm , 46kg	
HW.ZYP0030	, 114Lit.	w1090×d460×h1120mm, 52kg	
HW.ZYP0045	, 2 Shelves, 170Lit.	w1090×d460×h1650mm, 75kg	

(3) Spare PP Shelves for Acid & Corrosives PP Safety Cabinets

- HW.PPS04 PP Shelf, for 15Lit. Cabinets, w405×d345×h78mm
- HW.PPS12 , for 45Lit. Cabinets, w565×d375×h78m
- HW.PPS26 , for 100Lit. Cabinets, w885×d515×h78mm
- HW.PPS30 , for 114Lit. Cabinets, w1065×d375×h78mm
- HW.PPS45 , for 170Lit. Cabinets, w1065×d375×h78mm

Ea.	Price, ₩



Polypropylene (PP) Safety Cabinets for Acid & Corrosives



Cat. No	Description	Articles
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Zoyet® Safety Cabinets for Flammables, with Double Layer Fire Proof Steel with Insulation Layer, 15~410 Lit for Easy Open & Close 180° Door with Double Keys, with High Visible Warning Label, with Manual-/Self Closing-Door Compliance with OSHA 29 CFR 1910.106 and NFPA CODE 30, 안전 케비닛, 인화성 시약 보관용



■ Complies with US OSHA 29 CFR 1910.106, NFPA CODE 30 and FM Standard

■ Safe Construction ;

- Complete Double Layer Fire Proof Sheet Steel, 38mm of Insulation Layer between Double Layer Wall Space.
- Sheet Steel of Thickness over 1.0mm All-welded Together making it more Durable and Robust, with Better Fire Proof Capacity.
- Galvanized Steel Shelves direct Spills to Back and Bottom of a Leakproof 50mm/150mm Bottom Sump.
- Spill Control Sill of 5cm Height prevent Maximum Leak Control on Accidental Spill.
- 3-point Inter-active Locking System Provides Positive Closure with Increased Heat Resistance.
- Easy open-close 180° Door with Double Keys (Padlock and Key Lock)
- Built-in Grounding Connector on Outside Side Panel for Easy Grounding

■ Special Features ;

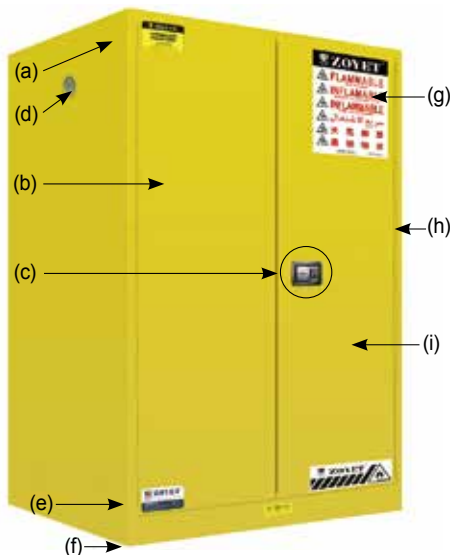
- (a) Fully Welded, not Riveted Construction holds Squareness for Long Life and offers greater Protection in a Fire since Air Gaps are reduced.
- (b) Safety Shelves direct Spills to back and Bottom of Leakproof Sump. Adjustable on 60mm Centers, they meet ANSI Standards with a 99kg Theoretically Allowable Load.
- (c) Highly Secure Lock with Dual Protection (Padlock and Key lock) makes Storage Safer.
- (d) Dual Vents with Built-in Flash Arresters Strategically placed at Bottom and Opposite Top.
- (e) 5cm Leakproof Containment Sump holds Leaks and meets US EPA Requirements.
- (f) Adjustable Leveling Feet make it easy to Balance Cabinets on Uneven Surface.
- (g) Label makes it Apparently Visible for Site Manager or Operators to identify where the Chemicals stored quickly.
- (h) Continuous Piano Hinge provides better Open-close Smooth Operation, ensuring Endurance and Reliability.
- (i) Durable and Chemical-resistant, Lead-free Powder-coat Paint Finish, Inside and Out, retains High Gloss Look and minimizes the Effects of Corrosion and Humidity.



(1), (3) for Flammables, Single Door, 15Lit



(2), (4) for Flammables, 2 Doors, 114Lit.



(2), (4) for Flammables, 2 Doors, 340Lit.



(5) Spare Steel Shelf

※ Note! Freight and Installation Charges Separately.

(1) with Manual-closing Single Door, 15~83 Lit. Shelves Capacity : 50Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0004	1 Door, Manual, 1 Shelf , 15Lit.	w430×d430×h560mm , 35kg	
HW.ZYC0012	, 45Lit.	w590×d460×h890mm , 56kg	
HW.ZYC0022	, 2 Shelves, 83Lit.	w590×d460×h1650mm, 85kg	

(2) with Manual-closing 2 Doors, 114~410 Lit. Shelves Capacity : 100Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0030	2 Doors, Manual, 1 Shelf , 114Lit.	w1090×d460×h1120mm, 100kg	
HW.ZYC0045	, 2 Shelves, 170Lit.	w1090×d460×h1650mm, 138kg	
HW.ZYC0060	, 227Lit.	w860×d860×h1650mm , 165kg	
HW.ZYC0090	, 340Lit.	w1090×d860×h1650mm, 190kg	
HW.ZYC0110	, 410Lit.	w1500×d860×h1650mm, 270kg	

(3) with Self-closing Single Door, 15~83 Lit. Shelves Capacity : 50Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0004S	1 Door, Self-closing, 1 Shelf , 15Lit.	w430×d430×h560mm , 35kg	
HW.ZYC0012S	, 45Lit.	w590×d460×h890mm , 56kg	
HW.ZYC0022S	, 2 Shelves, 83Lit.	w590×d460×h1650mm, 85kg	

(4) with Self-closing 2 Doors, 114~410 Lit. Shelves Capacity : 100Kg

Cat. No.	Description	Dimensions & Weight	Price, Ea. ₩
HW.ZYC0030S	2 Doors, Self-closing, 1 Shelf , 114Lit.	w1090×d460×h1120mm, 100kg	
HW.ZYC0045S	, 2 Shelves, 170Lit.	w1090×d460×h1650mm, 138kg	
HW.ZYC0060S	, 227Lit.	w860×d860×h1650mm , 165kg	
HW.ZYC0090S	, 340Lit.	w1090×d860×h1650mm, 190kg	
HW.ZYC0110S	, 410Lit.	w1500×d860×h1650mm, 270kg	

(5) Spare Steel Shelves for Flammable / Acid & Corrosives Safety Cabinets

Cat. No	Description	Dimensions & Weight	Ea.	Price, ₩
HW.GB0004	Steel Shelf, for 15Lit. Cabinets	w340×d340×h28mm		
HW.GB0012	, for 45/83Lit. Cabinets	w500×d370×h28mm		
HW.GB0030	, for 114/170Lit. Cabinets,	w1000×d370×h28mm		
HW.GB0060	, for 227Lit. Cabinets	w770×d770×h28mm		
HW.GB0090	, for 340Lit. Cabinets	w1000×d770×h28mm		
HW.GB0110	, for 410Lit. Cabinets	w1400×d770×h28mm		

# Shakers

**Mixer, Rocker *New*** ..... P. 228  
 , Rotor ..... P. 228  
 , Vortex *New* ..... P. 227~228

**Shakers, Orbital Motion *New*** ..... P. 229~231  
 , Reciprocating Motion *New* ..... P. 231~233  
 , Rocker ..... P. 234  
 , Rotator ..... P. 235

● **Vortex Mixer**



● **Rocker**



● **Tube Mix Rotor**



● **Rotators**



● **Shakers, Orbital/Reciprocating**



Cat. No	Description	Articles
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DAIHAN-brand® **New-generation Multifunction Vortex Mixer-set "MaXshake™ VM30"**, 3,300rpm, with Certi. & Traceability with  $\phi$  76mm(3inch) Platform Head & Pop-off Cup Head, Variable Speed Control, Continuous or Touch-on Mixing **NEW**  
 다용도 볼텍스 믹서, 다양한 속도 조절, 인체공학적인 디자인 적용, 강력하고 안정된 동작과 저소음



**2-Year Warranty**

**Multifunction Vortex Mixer Set "MaXshake™ VM30" with  $\phi$  76mm(3") Platform(PM110)**

- **Made in Korea**
- **PL (Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Ideal for Mixing Solutions in Test Tubes or Small Flasks with Circular, Oscillating Movement**
- **Variable Speed Control Allows Slow Speed Shaking Action up to High Speed Vortexing**
- \* Gentle Mixing to Re-suspending Pellet
- \* Ergonomic Design with Stable Low Profile Body.
- \* A Robust and Sturdy Diecast Construction Vortex Mixer.
- \* Exceptional Stability on the Bench Thanks to the Combination of Weight and Non-slip Feet.
- \* Variable Speed up to 3,300rpm.
- \* Continuous-run or Touch-activated Run Modes.
- \* Variable Speed for Gentle to Vigorous Mixing.
- \* Powerful Motor for Efficient Mixing
- \* Circular Orbit for an Effective Vortex at any Speed
- \* Constant Torque within the Full Range of Speed.
- \* Eccentric with Oil-less Ball Bearings
- \* Optimized Counter Balance System Minimizes Vibration.
- \* Counter Balance Design for Minimal Body Vibration.
- \* Special Designed Silicon Feet Absorb Vibration at High Speeds.
- \* Speed Regulation through Knob provided on the Control Panel
- \* Electronic Speed Control for Constant Speed even during Changes in Load
- \* Conical Tube can be Mixed Smoothly by Hand Holding.
- \* One Mixing Head for a Variety of Tube Sizes
- \* Universal Head for a Variety of Mixing Applications
- \* Accepting Vessels up to 76mm Diameter
- \* MBR(Methyl Methacrylate Butadiene Rubber) Feet for Ultra Stability and Vibration Damping

**Specifications & Ordering information**

Spec.	Model	"MaXshake™ VM30"
Speed Range		0 ~ 3,300 rpm
Shaking Motion		Orbital, Circuit Orbit : 4.0mm
Control		Analog Phase Controller
Motor		Brushless AC Motor
Head		included Pop-off Cup Head and $\phi$ 76mm Platform
Max. Load		0.5kg
Material		Aluminum Die-casting with Powder Coating
Dimensions (w × d × h) (mm)		140 × 190 × h123 mm
Weight		3 kg
Others		3-position Power Switch Operates Aluminum Die-casting with Powder Coating included Pop-off Cup Head and $\phi$ 76mm Platform
Packing Dimension (w × d × h) (mm)		175 × 255 × h215 mm
Gross Weight		3 kg
Power Consumption		30 W
Electrical Reqts.		1 Phase, AC 120V, 50 / 60Hz or AC 230V, 50 / 60Hz

Cat. No.	230V	60Hz	DH.WVM00030
		50Hz	DH.WVM00031
	120V	60Hz	DH.WVM00032
		50Hz	DH.WVM00033
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

**Spare Platform Heads**

- DH.WVM00110 (1) Platform Head, "PM110",  $\phi$  76mm(3inch)
- DH.WVM00210 (2) Pop-off Cup Head, "PM210"

Ea. Price, ₩

**Optional Platform Heads**

- DH.WVM00310 (3) Microtube Platform Head(0.5~2.0ml), "PM310"

Ea. Price, ₩



**DAIHAN-brand® Mini Vortex Mixer “VM-100”, Up to 3,200rpm**  
with Silicone Head, Space Saving Compact Design, Variable Speed Control, 소형 볼텍스 믹서



- **Quality Certification : ISO 9001**
- **Ideal for Mixing Solutions in Test Tubes Oscillating Movement**
- \* Mini Size saved the Space of Working Desk
- \* Variable Speed Control and Automatically Press Start
- \* Powerful and Quiet Vortex Mixing Action for Tubes up to 50ml
- \* Blue/Orange Silicon Top Head \* Max. Speed : 3,200 rpm \* Orbit : 4.5mm
- \* Overall Dimension & Weight(N.W./G.W.) : 55×173×h81 mm, 0.77 / 0.9 k

**DH.WVM0100.B** Mini Vortex Mixer, VM-100, for 230V, Blue Silicon Head  
**DH.WVM0100.O** , Orange Silicon Head  
**DH.WVM0101.B** , for 110V, Blue Silicon Head  
**DH.WVM0101.O** , Orange Silicon Head

Ea. Price, ₩

**DAIHAN-brand® Compact Multifunction Mixer/Rocker “MixM-100”, Smoothly Rocking Motion, 24rpm** NEW  
with Rubber Cushion Platform, Continuous Operation, Ideal for Dishes(≥ ϕ 10cm) or 1.5~50ml Tubes, 소형 다기능 믹서-락커



- **Quality Certification : ISO 9001.**
- **Ideal for Dishes(≥ ϕ 100mm) and 1.5 ~ 50ml Tubes.**
- **Capacity ; 3ea - ϕ 100mm Dishes, or 30ea - 1.5ml Microtubes, or 15ea - 15ml Tubes, or 8ea - 50ml Tubes.**
- **Easy to load and unload the Test Tubes without Turning the Mixer Off.**
- **Rubber Cushion preventing the Test Tubes from Slipping.**
- \* Widely used in Hematology, Chemistry, Research and Bacteriology Laboratories.
- \* Smooth, Steady, Quiet, and Continuous Operation
- \* Platform Dimension : w300×d115 mm
- \* Speed : 24rpm at 60Hz / 20rpm at 50Hz
- \* Overall Dimension & Weight(N.W./G.W.) : w350×d140×h110 mm, 1.5 / 2.0 kg

Ordering information

**DH.MixM0100** LAB Special Mixer, 24 rpm, MixM-100, for 230V  
**DH.MixM0101** , MixM-101, for 120V

Ea. Price, ₩

**DAIHAN-brand® Tube Mix Rotor “MixR-40”, with 5× Mixing Rollers, Rocking & Rolling-motion, Fixed 40rpm**  
Ideal for 15~50ml Test Tube, with Timer/Minimum Noise Motor/Cooling Pan/0~60min Timer, 튜브 믹싱 로터



“MixR-40” Mix Rotor,  
40rpm, 5×Mixing Rollers

- **Made in Korea**      ■ **with 5×Mixing Rollers(ϕ32×L325mm)**
- **Ideal for Mixing Blood Samples, Viscous Substances and Liquid-Solid Suspensions, Use in a Variety of Applications, Prevention of Blood Coagulation and Immune Precipitation, etc.**
- **Rocking & Rolling Mixing-motion for Complete Sample Mixing**
- \* Stability Mixing Motion and Built in Minimize Noise AC Synchronous Motor
- \* Built in Cooling Pan Protecting Over Temperature for Long Operating Time.
- \* Can Use with 8ea×15ml Test Tubes or 8ea×50ml Test Tubes
- \* Built in 99hr 59min Timer for User Convenience      \* Stability Fixed 40rpm Mixing Speed
- \* Can be Used in Cold Lab Chambers or Incubators

Specifications & Ordering information

Spec.	Model	“MixR-40”
No. of Mixing Roller		5ea×Mixing Rollers
Mixing Roller Size & Material		ϕ 32×L325 mm, PVC
Mixing Speed		Fixed 40rpm
Motor		AC Synchronous Motor, 12W
Timer		0~60min Analog Timer/Continuous Run
Material(Body)		Powder-coated Steel
Dimension & Weight		490×220×h100 mm, 3 kg
Electric Reqt.s.		AC230V, 50/60Hz
Cat. No.	230V	<b>DH.MixR1040</b>
Price, Each. ₩		

Cat. No	Description	Articles
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**DAIHAN-brand® Analog Orbital Shaker “ShkO-300”, 10 Levels Speed Control/40~300rpm with 0~60min Timer, Useful Rubber Mat-/Universal-/Well Plate-Platforms, Included Rubber Mat Platform, **궤도형 셰이커****



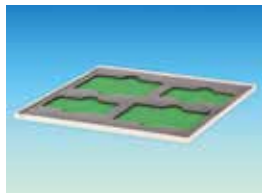
“ShkO-300” 40~300rpm Orbital Shaker, with 0~60min Analog Timer

- **Made in Korea**
- **Stepless Speed Controller(10Levels Speed/40~300rpm)**
- **Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, and Combinatorial Chemistry, etc.**

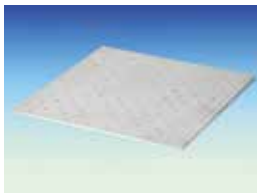
- \* Brushless DC Motor : Low Noise and Long Life time
- \* Optimal Platform Rotation for Intensive Mixing
- \* Built in 0~60min Timer for User Convenience
- \* Useful Rubber Mat-/Universal-/Well Plate-Platforms
- \* Included Rubber Mat Platforms

**Specifications & Ordering information**

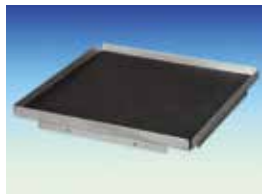
Spec.	Model	“ShkO-300”
Speed Range (rpm)		40~300 rpm, 10 Levels Speed Control
Shaking Motion		Orbital Motion
Motor		20W DC 12V Motor
Timer		0~60min Analog Timer/Continuous Run
Platform Size (mm)		285 × 285 × h10 mm
Material		Powder-coated Steel
Electric Reqts.		AC230V, 50/60Hz
Cat. No.	230V	<b>DH.ShkO1300</b>
Price, Each. ₩		



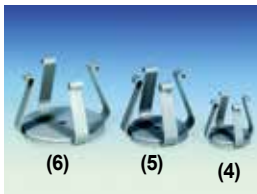
(1) PCR Plate Platform



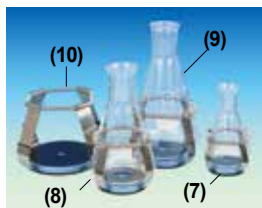
(2) Universal Platform, for Various Flask Holders



(3) Rubber Mat Platform, Multi-purpose (Included)



ABS Flask Holders “FH500”/“FH250”/“FH100”



STS Wire Spring Flask Holder

**Optional or Spare Platforms/Flask Holders**

- DH.ShkO3001 (1) PCR Plate Platform, for PCR Plate, w285 × d285mm
- DH.WSO504100 (2) Universal Platform, for Flask Holder, w230 × d230mm
- DH.ShkO3003 (3) Rubber Mat Platform, Multi-use, w285 × d285mm
- DH.WIS504030 (4) ABS Flask Holder, “FH100”, for 50~100ml Flask,
- DH.WIS504035 (5) , “FH250”, for 200~300ml Flask,
- DH.WIS504040 (6) , “FH500”, for 500~1000ml Flask,
- DH.WIS600100 (7) STS Wire Spring Flask Holder, “FHS100”, for 100ml Flask
- DH.WIS600250 (8) , “FHS250”, for 250ml Flask
- DH.WIS600500 (9) , “FHS500”, for 500ml Flask
- DH.WIS601000 (10) , “FHS1000”, for 1000ml Flask

Ea. Price, ₩

DAIHAN-brand® Digital Orbital Shaker “SHO”, 10~300 rpm, Low Noise & Long Life Cycle, with Certi. & Traceability with Programmable Digital Feedback Control, Available Rubber Mat-/Universal-Platform, without Platform  
 디지털 궤도형 셰이커, 저소음 및 긴 수명, 부드러운 시동 동작 및 속도 조절



(a) 230×230 mm Orbital Shaker “SHO-1D” with Rubber Mat Platform (Optional)

- Made in Korea
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, and Combinatorial Chemistry
- Patented Jog-Shuttle Control System
- PL(Product Liability) Insurance
- \* Hybridization, Washing Blots, Culturing Microbes
- \* Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, and Combination Chemistry
- \* Optimal Platform Rotation for Intensive Mixing
- \* Brushless DC Motor (Low Noise & Long Life Cycle)
- \* High Precision Digital Rotation Speed Control
- \* Programmable Operation Mode Supported
- \* Digital LCD with Back-Light Function
- \* Smooth Start and Change of Shaking Speed
- \* Universal Platform for Easy and Fast Fixation of Any Kind of Flasks and Bottles (Optional)
- \* Storage Function, Alarm & Overload Protection
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Variable accessories are available (Optional)



(b) 350×350 mm Orbital Shaker “SHO-2D” with Universal Platform (Optional)

Specifications & Ordering information

Spec.	Model	(a) “SHO-1D”	(b) “SHO-2D”
Shaking Platform Size		230 × 230 mm	350 × 350 mm
Shaking Motion		Orbital Motion	
Speed Range		10 ~ 300 rpm	
Max. Load		8 kg	10 kg
Amplitude of Rotation (mm)		8 mm	15 mm
Motor		Brushless DC Motor	
Permissible Ambient Temperature		Ambient +5 ~ 50 °C	
Permissible Relative Moisture		85%	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Programmable Digital Feedback Controller with Jog-Shuttle Switch(Turn+Push)	
Program Function		10 Steps, 6 Programs	
Platform		Universal Platform for various Shapes & Size of Flask	
Max. Capacity of Flask Holder	For 50~100ml	9 ea	20 ea
	For 200~300ml	7 ea	16 ea
	For 500~1000ml	4 ea	9 ea
Holder		Durable & Flexible Plastic Flask holder	
Dimension (w × d × h) (mm)		250 × 330 × 150	400 × 480 × 160
Base Platform Size (mm)		230 × 230	350 × 350
Safety Circuit		Overload Protector for Motor	
Net Weight		14 kg	20 kg
Others		CE Certified, PL(Product Liability) Insurance Smooth Start and Change of the Stirring Speed for Stable Running Storage Function (Program, RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (Error Status and Timer-end)	
Packing Size (w × d × h) (mm) & Gross Weight		450 × 350 × 250	580 × 500 × 250
		18 kg	23 kg
Power Consumption		40 W	
Electrical Reqt.s.		Free Voltage (1 Phase, AC 80V~240V, 50/60Hz)	
Cat. No.	230V	DH.WSO04010	DH.WSO04012
	120V	DH.WSO05010	DH.WSO05012
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ 운임 약 ₩ 9,000 별도!

The Details of Optional Platforms/  
 Flask Holders/Spring Racks :  
 Please See 233Page

Cat. No	Description	Articles
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DAIHAN-brand® **New-generation** Digital Shaker, Orbital or Reciprocating “MaXshake™”, Adjustable 2 × Size Platforms, 10~300 rpm with Programmable func., Large LCD display, Quiet & Low-vibration, Available Rubber Mat-/Universal-Platform(Optional), without Platform 디지털 셰이커, 2 × 사이즈 플랫폼 사용 가능, 저소음/저진동 긴 수명, 부드러운 시동 동작 및 속도 조절 **NEW**



(a) Digital Shaker Orbital-motion “MaXshake™ OB2” with w295 × d295mm Rubber Mat Platform



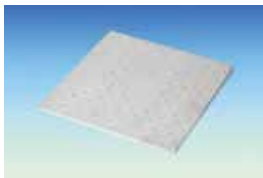
(b) Digital Shaker Reciprocating-motion “MaXshake™ RP2” with w346 × d346mm Universal Platform

- **Made in Korea**
- **PL (Product Liability) Insurance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, Chemistry**
- **Patented Jog-Shuttle Control System** \* Variable Accessories are Available (Optional)
- \* Hybridization, Washing Blots, Culturing Microbes
- \* Compact Design Easily Fits in Incubators and on the Laboratory Bench.
- \* Soft Start and Noise-free Operation. \* Digital Speed Control easily adjusts from 10 to 300 rpm
- \* Built-in Digital Timer. Use in Continuous Shaking or Timer Mode up to 99 hr 59 min.
- \* Gentle Speed up and Slow down by PID Speed Control. Slow Start Motion decreases Risk of Spills.
- \* Large LCD for Speed and Time Adjustment, makes it possible to read the Speed, Timer Function and Operating Mode.
- \* Low Vibration, Low Noise
- \* Speed Regulation by Microprocessor.
- \* Constant Speed Independent Ofload.
- \* Audible Buzzer Alarms on Time Expiration and when an Error Occurs.
- \* Over-speed Detection and Protection.
- \* Brushless Motor Provides Maintenance Free Operation.
- \* Clearly laid out Control Panel for easy Operation.
- \* Excellently Applicable for Continuous Operation.
- \* Comprehensive Range of Accessories.
- \* Automatic Recovery from Power Break.

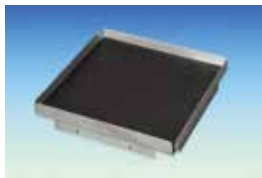
**Specifications & Ordering information**

Spec.	Model	(a) “MaXshake™ OB2”	(b) “MaXshake™ RP2”
Shaking Platform Size		255 × 255 mm	
Shaking Motion		Orbital Motion	Reciprocating Motion
Speed Range & Max. Load		10 ~ 300 rpm, 10kg	
Amplitude of Rotation (mm)		10 mm	
Motor		Brushless DC Motor	
Permissible Temp. & Moisture		Ambient +5 ~ 50°C, 80%	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Large Size Digital LCD with Back-Light Function	
Controller		Digital Fuzzy Controller with Touch Button, Jog-dial	
Program Function		10 Steps, 6 Programs	
Platform		Universal Platform for various Shapes & Size of Flask	
Max. Capacity of Flask Holder	For 100ml	Standard by 251 × 251mm Universal Platform : 9 ea Flask Holders Standard by 346 × 346mm Universal Platform : 20 ea Flask Holders	
	For 250ml	Standard by 251 × 251mm Universal Platform : 7 ea Flask Holders Standard by 346 × 346mm Universal Platform : 15 ea Flask Holders	
	For 500ml	Standard by 251 × 251mm Universal Platform : 5 ea Flask Holders Standard by 346 × 346mm Universal Platform : 9 ea Flask Holders	
	For 1000ml	Standard by 251 × 251mm Universal Platform : 4 ea Flask Holders	
		Standard by 346 × 346mm Universal Platform : 6 ea Flask Holders	
Dimension & Weight		376 × 375 × h138 mm(Base Platform : 255 × 255 mm), 13kg	
Packing Dimension & Weight		345 × 420 × h205 mm, 13.5kg	
Safety Circuit		Overload Protector for Motor	
Power Consumption		45 W	
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz	

**Optional Platforms/Spring Rack**



(1) Universal Platform



(2) Rubber Mat Platform



(3) Universal Spring Rack



(4) Platform for Round Flask



(5) Platform for Separatory Funnel

Cat. No.	230V	DH.WSO00300	DH.WSR00300
	120V	DH.WSO00301	DH.WSR00301

Price, Each. ₩

\* Other Specifications are available upon Customer's Request.

※ **운임 약 ₩ 9,000 별도!**

**Optional Platforms/Spring Racks**

- DH.WSO604100 (1) Universal Platform, w251 × d251mm
- DH.WSO604200 (1) , w346 × d346mm
- DH.WSO604110 (2) Rubber Mat Platform, w295 × d295mm
- DH.WSO604210 (2) , w370 × d370mm
- DH.WSO604140 (3) Universal Spring Rack, w295 × d295 × h100mm
- DH.WSO604240 (3) , w370 × d370 × h100mm
- DH.WSO604130 (4) Platform for Round Flask, w350 × d260 × h153mm
- DH.WSO604230 (5) Platform for Separatory Funnels, w350 × d260 × h153mm

Ea. Price, ₩

The Details of Flask Holders : Please See 233Page

DAIHAN-brand® Digital Reciprocating Shaker “SHR”, 10~300 rpm, Low Noise & Long Life Cycle with Programmable Digital Feedback Control, Available Rubber Mat-/Universal-Platform, without Platform  
 디지털 왕복형 셰이커, 저소음 및 긴 수명, 부드러운 시동 동작 및 속도 조절



(a) 230×230 mm Reciprocating Shaker “SHR-1D” with Rubber Mat Platform (Optional)



(b) 350×350 mm Reciprocating Shaker “SHR-2D” with Universal Platform (Optional)

- Made in Korea
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, and Combinatorial Chemistry
- Patented Jog-Shuttle Control System
- PL (Product Liability) Insurance
- \* Hybridization, Washing Blots, Culturing Microbes
- \* Ideal for Culturing Cells to Hybridization, Staining and Destaining Gels, and Combination Chemistry
- \* Optimal Platform Rotation for Intensive Mixing
- \* Brushless DC Motor (Low Noise & Long Life Cycle)
- \* High Precision Digital Rotation Speed Control
- \* Programmable Operation Mode Supported
- \* Digital LCD with Back-Light Function
- \* Smooth Start and Change of Shaking Speed
- \* Universal Platform for Easy and Fast Fixation of Any Kind of Flasks and Bottles (Optional)
- \* Storage Function, Alarm & Overload Protection
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Variable accessories are available (Optional)

### Specifications & Ordering information

Spec.	Model	(a) “SHR-1D”	(b) “SHR-2D”
Shaking Platform Size		230×230 mm	350×350 mm
Shaking Motion		Reciprocating	
Speed Range		10 ~ 300 rpm	
Max. Load		8 kg	10 kg
Amplitude of Rotation (mm)		8 mm	15 mm
Motor		Brushless DC Motor	
Permissible Ambient Temperature		Ambient +5 ~ 50 °C	
Permissible Relative Moisture		85%	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Programmable Digital Feedback Controller with Jog-Shuttle Switch(Turn+Push)	
Program Function		10 Steps, 6 Programs	
Platform		Universal Platform for various Shapes & Size of Flask	
Max. Capacity of Flask Holder	For 50~100ml	9 ea	20 ea
	For 200~300ml	7 ea	16 ea
	For 500~1000ml	4 ea	9 ea
Holder		Durable & Flexible Plastic Flask holder	
Dimension (w×d×h) (mm)		250×330×150	400×480×160
Base Platform Size (mm)		230×230	350×350
Safety Circuit		Overload Protector for Motor	
Net Weight		14 kg	20 kg
Others		CE Certified, PL(Product Liability) Insurance Smooth Start and Change of the Stirring Speed for Stable Running Storage Function (Program, RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (Error Status and Timer-end)	
Packing Size (w×d×h) (mm)		450×350×250	580×500×250
& Gross Weight		18 kg	23 kg
Power Consumption		40 W	
Electrical Reqt.s.		Free Voltage (1 Phase, AC 80V~240V, 50/60Hz)	
Cat. No.	230V	DH.WSR04020	DH.WSR04022
	120V	DH.WSR05020	DH.WSR05022
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

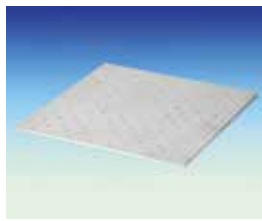
※ 운임 약 ₩ 9,000 별도!

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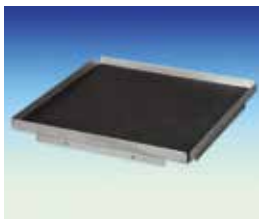


Cat. No	Description	Articles
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<Continued From... DAIHAN-brand® Digital Reciprocating Shaker, “SHR”>



(1) Universal Platform “SP100” / “SP200”

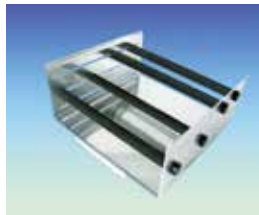


(2) Rubber Mat Platform “SP110” / “SP210”



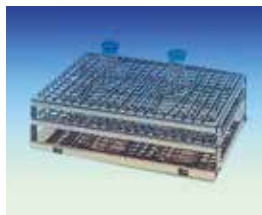
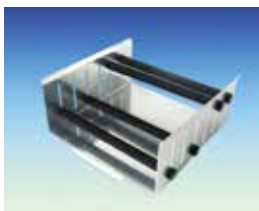
with Flasks

(3) Platform for Flasks “SP120” / “SP220”



with Separatory funnels

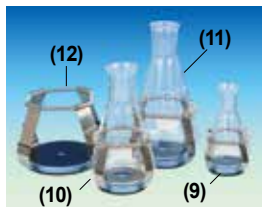
(4) Platform for Separatory Funnels “SP130” / “SP230”



(5) Universal Spring Rack “SP140” / “SP240”



ABS Flask Holders “FH500”/“FH250”/“FH100”



STS Wire Spring Flask Holder (Optional)

**Optional Platforms/Flask Holders/Spring Racks**

- DH.WSO504100 (1) Universal Platform, “SP100”, for “SHO/SHR-1D”, w230 × d230mm
- DH.WSO504200 (1) Universal Platform, “SP200”, for “SHO/SHR-2D”, w350 × d350mm
- DH.WSO504110 (2) Rubber Mat Platform, “SP110”, for “SHO/SHR-1D”, w270 × d270mm
- DH.WSO504210 (2) Rubber Mat Platform, “SP210”, for “SHO/SHR-2D”, w370 × d370mm
- DH.WSO504120 (3) Platform for Flasks, “SP120”, for “SHO/SHR-1D”, w350 × d230 × h153mm
- DH.WSO504220 (3) Platform for Flasks, “SP220”, for “SHO/SHR-2D”, w350 × d350 × h153mm
- DH.WSO504130 (4) Platform for Separatory Funnels, “SP130” for “SHO/SHR-1D”, w350 × d235 × h174mm
- DH.WSO504230 (4) Platform for Separatory Funnels, “SP230” for “SHO/SHR-2D”, w351 × d355 × h174mm
- DH.WSO504140 (5) Universal Spring Rack, “SP140” for SHO/SHR-1D, w270 × d270 × h100mm
- DH.WSO504240 (5) Universal Spring Rack, “SP240” for SHO/SHR-2D, w370 × d370 × h100mm
- DH.WIS504030 (6) ABS Flask Holder, “FH100”, for 50~100ml Flask, for “SHO”, “SHR” and “IS”
- DH.WIS504035 (7) ABS Flask Holder, “FH250”, for 200~300ml Flask, for “SHO”, “SHR” and “IS”
- DH.WIS504040 (8) ABS Flask Holder, “FH500”, for 500~1000ml Flask, for “SHO”, “SHR” and “IS”
- DH.WIS600100 (9) STS Wire Spring Flask Holder, “FHS100”, for 100ml Flask for “SHO”, “SHR” and “IS”
- DH.WIS600250 (10) STS Wire Spring Flask Holder, “FHS250”, for 250ml Flask for “SHO”, “SHR” and “IS”
- DH.WIS600500 (11) STS Wire Spring Flask Holder, “FHS500”, for 500ml Flask for “SHO”, “SHR” and “IS”
- DH.WIS601000 (12) STS Wire Spring Flask Holder, “FHS1000”, for 1000ml Flask for “SHO”, “SHR” and “IS”

Ea. Price, ₩

Ea. Price, ₩

**Platform Selection Guide**

APPLICATION	PLATFORM	HOLDER
Culturing Microbes Mixed with Erlenmeyer Flask	<b>Universal Platform</b> SP100 for SHO/SHR-1D SP200 for SHO/SHR-2D	<b>Flask Holder</b> FH100 (50~100ml), FH250(200~300ml) FH500 (500~1000ml), FHS100(100ml), FHS250(250ml), FHS500(500ml), FHS1000(1000ml)
Staining/Destaining Gel, Washing Blots Gentle Mixing(Shaking)	<b>Rubber Mat Platform</b> SP110 for SHO/SHR-1D SP320 for SHO/SHR-2D	
Mixed Sample, Combination Chemistry Combinatorial Chemistry, with Round Flask	<b>Platform for Flask</b> SP120 for SHO/SHR-1D SP220 for SHO/SHR-2D	
Combinatorial Chemistry with Separatory Funnel	<b>Platform for Separatory Funnels</b> SP130 for SHO/SHR-1D SP230 for SHO/SHR-2D	
with Variety of Size Flask & Bottle	<b>Universal Spring Rack</b> SP140for SHO/SHR-1D SP240 for SHO/SHR-2D	

DAIHAN-brand® Programmable Digital Rockers “RK”, Digital Feedback Control, 5~50 rpm, with Certi. & Traceability with 290×200mm or 300×300mm Platform, Smooth Start & Wave Motion, Tilt Angle ±6°/±9°  
 디지털 락커, 디지털 피드백 컨트롤 시스템, 부드러운 시동 동작 및 속도 조절



(1) 290×200 mm Rocker with Platform “RK-1D”

- Made in Korea
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- High Precision Digital Speed Control : 1rpm
- Patented Jog-Shuttle Control System
- PL (Product Liability) Insurance
- \* Gel Staining, Destaining, Blotting
- \* Cell Culture, Hybridization, Washing
- \* High Precision Digital Speed Control : 1rpm
- \* Programmable Operation Mode Supported : 10 Steps and 6 Programs
- \* Digital Timer : Max. 99hr 59min
- \* Digital LCD with Back-Light Function for Timer, RPM and Power Bar-Graph
- \* Smooth Start and Change of Rocking Speed
- \* Overload Protection Function for Motor
- \* Storage Function for Set Values : RPM and Timer
- \* Alarm Function : Error Status and Timer-end
- \* Stainless steel Platform Comes with Gray Nonslip Rubber Pad
- \* Stackable Platform with Pad to Double Mixing Area (Optional)
- \* Locking Mode supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

Specifications & Ordering information



(2) 300×300 mm Rocker with Platform “RK-2D” with Second Platform(Optional)

Spec.		Model	(1) “RK-1D”	(2) “RK-2D”
Dimensions (w×d×h)	Platform (mm)		290×200	300×300
	Overall (mm)		290×240×150	300×330×150
Speed Range (rpm)			5 ~ 50	
Angle (degree)			±6 or ±9 (±9 as Factory Default)	
Motor			14W Geared DC Motor	
Program Function			10 Steps, 6 Programs	
Timer & Alarm			99hr 59min (with Continuous run.), Error status & Timer-end	
Display			Digital LCD with Back-Light Function	
Controller			Programmable Digital Feedback Controller with Jog-Shuttle Switch(Turn+Push)	
Safety Circuit			Overload Protector for motor	
Platform			Included Platform(290×200mm)	Included Platform(300×300mm)
Others			CE Certified, PL(Product Liability) Insurance Smooth Start and Change of the Stirring Speed for Stable Running Storage Function (RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm ( Error Status and Timer-end )	
Packing Dimension (w×d×h) (mm)			450×350×250	
Gross Weight			7 kg	8 kg
Power Consumption			35 W	
Electrical Reqts.			Free Voltage (1 Phase, AC 80V~240V, 50/60Hz)	
Cat. No.	230V		DH.WRK01010	DH.WRK01020
	120V		DH.WRK02010	DH.WRK02020
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

Optional Second Platform

		Ea. Price, ₩
DH.WRK05011	Second Platform, “RK5011”, for “RK-1D”, w290×d200, with 4 Pillars(L120mm)	
DH.WRK05021	Second Platform, “RK5021”, for “RK-2D”, w300×d300, with 4 Pillars(L120mm)	

Cat. No	Description	Articles
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**DAIHAN-brand® Programmable Digital Rotator “RT-10”, 0~90° Mixing Angle, 5~60rpm, with Certi. & Traceability with Digital Feedback Control, Adjustable Speed & Angle of Rotation, Continuous or Timed Operation**

디지털 로테이터, 디지털 피드백 컨트롤 시스템, 회전각 및 회전속도 조절 가능



**Programmable Digital Rotator “RT-10”  
with 1.5ml × 32ea Disk (WRT120)**

- **Made in Korea**      ■ **CE Certified**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **Adjustable Speed and Angle of Rotation : 0 to 90°**

- **Patented Jog-Shuttle Control System**
- **PL(Product Liability) Insurance**

- \* General Mixing, Diffusing, Dialyzing and Hybridization, Aerating Culture
- \* Keeping Biological Samples in Suspension
- \* Adjustable Speed and Angle of Rotation : 0 to 90°
- \* Digital Feedback Control: Steady and Constant Rotating
- \* Continuous or Timed Operation
- \* Digital LCD with Back-Light Function
- \* Programmable Operation Mode Supported : 10 Steps and 6 Programs
- \* Overload Protection for motor
- \* Smooth Start and Change of Stirring Speed
- \* Storage Function for Set values of RPM and Time
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Durable Construction for Long-Term Operation
- \* 5 Different Disks and 3 Roller Drums(Optional)
- \* Disk for 250ml Flask is available

**Specifications & Ordering information**

Spec.	Model	“RT-10”
Speed range		5~ 60 rpm
Angle range		0° ~ 90°
Motor		35W
Program Function		10 Steps, 6 Programs
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end
Display		Digital LCD with Back-Light Function
Controller		Programmable Digital Feedback Controller with Jog-Shuttle
Temp. Resistance		Lower than 65°C (Dry Air)
Safety Circuit		Overload Protector for motor
Dimensions (w × d × h) (mm)		200 × 250 × h260 mm
Weight		6 kg
Others		CE Certified, PL(Product Liability) Insurance Storage Function (RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) User Self-compensation Function, Alarm (Error Status and Timer-end)
Packing Size (w × d × h) (mm) & Gross Weight		370 × 240 × h430 mm 8.5 kg
Power Consumption		40 W
Electrical Reqts.		1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz

Cat. No.	230V	DH.WRT00010
	120V	DH.WRT00020
Price, Each. ₩		

\* Other Specifications are available upon Customer’s Request.



(1) Disk, “WRT100”



(2) Disk, “WRT110”



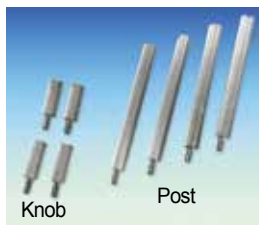
(3) Disk, “WRT120”



(4) Disk, “WRT130”



(5) Disk, “WRT140”



(6) Knob & Post “WRT300”  
(Included)

**Optional Disk & Roller Drum**

- DH.WRT00100 (1) Disk, “WRT100”, for 50ml conical tube × 8ea
- DH.WRT00110 (2) , “WRT110”, for 15ml conical tube × 16ea
- DH.WRT00120 (3) , “WRT120”, for 1.5ml conical/centrifuge Tube × 32ea
- DH.WRT00130 (4) , “WRT130”, for 1.5ml conical/centrifuge Tube × 60ea
- DH.WRT00140 (5) , “WRT140”, 250ml Flask-capacity × 4ea

Ea.	Price, ₩

**Spare Knob & Post**

- DH.WRT00300 (6) 4 × knobs & 4 × Post, “WRT300”, for Installing Disk

Ea.	Price, ₩

# Stirrers

**Magnetic Stirrers**, Magnetic Stirring, Multi-point ..... P. 237  
 , Magnetic Stirring with Heating **New** P. 238~241  
**Overhead Stirrers**, High Speed-type ..... P. 243~245  
 , High Torque-type ..... P. 246~248  
 , Jar Tester/6-paddle Stirrer ..... P. 249  
 , Accessories  
 (Stirrer Guide/Impeller/Rod/Stand) P. 249~256

● **Magnetic Hotplate Stirrers**



“MaXtir™ MSH500”

● **High Torque Overhead Stirrer**



“HT-120DX”

● **High Speed Overhead Stirrer**



“HS-30D-Set”

● **Multi-point Magnetic Stirrers**



“MS-MP8”

● **Jar Tester/6-paddle Stirrer**



“JT-M6C”

DAIHAN-brand® Digital Multi-point Magnetic Stirrers “MS-MP”, 4-/8-Points, Max. 500ml per Point with Digital Feedback Control System, Digital LCD Display, Synchronous Operation, 80~1,200 rpm, with Certi. & Traceability 4-/8-멀티포인트 디지털 자력교반기, 디지털 피드백 컨트롤 시스템



(1) 4-Point Stirrer, Digital Multi-Point Magnetic Stirrer “MS-MP4”



(2) 8-Point Stirrer, Digital Multi-Point Magnetic Stirrer “MS-MP8”

- Made in Korea
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideally Suitable for Use in Incubators and Climatic Chambers
- Excellent for Multi-use and wide range of Sample Testing
- Patented Jog-Shuttle Control System
- PL(Product Liability) Insurance

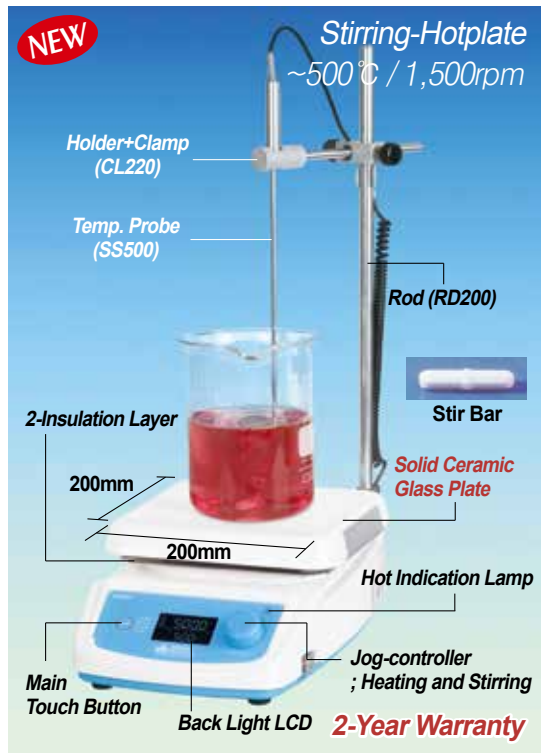
- \* Ideally Suitable for Use in Incubators and Climatic Chambers
- \* Excellent for Multi-use and wide range for Sample Testing
- \* Ideal for Heat-sensitive Procedures such as Microbiology and Biochemistry Applications
- \* Synchronous Operation of 4 / 8 Stirring Points
- \* Increased Effectiveness by Microprocessor Control
- \* Digital LCD with Back-Light Function
- \* Up to 0.5 Lit. Stirring Capacity per Point
- \* Smooth Start and Change of Stirring Speed
- \* Digital Timer Function (99 hr 59 min)
- \* Storage Function for the Set Values : RPM and Timer
- \* Extraordinary Mechanical, Physical and Chemical Resistance
- \* Locking Mode supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Free Voltage (AC 80V ~ 240V, 50 / 60Hz) by SMPS

### Specifications & Ordering information

Spec.	Model	(1) “MS-MP4”	(2) “MS-MP8”
Number of Stirring Points		4 (2×2) Stirring Points	8 (4×2) Stirring Points
Plate Size (mm)		210×300	210×500
Stirring Capacity (H <sub>2</sub> O)		Max. 0.5 Lit. per Point	
Distance between Stirring Points		100 mm	
Speed Range		80 ~ 1,200 rpm	
Motor Rating		16/9 W	
Speed Control Resolution		5 rpm	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch(Turn+Push)	
Stirring Bar		4ea 3cm bar-included, Usable : up to 3cm bar	8ea 3cm bar-included, Usable : up to 3cm bar
Permissible Ambient Temperature		Room Temp. +5 ~ 50 °C	
Permissible Relative Moisture		85%	
Material	Plate	Stainless-steel (# 304)	
	Body	Power Coated Steel	
Dimension (w×d×h) (mm)		210×300×65	210×500×65
Weight		2.5 kg	3.5 kg
Others		CE Certified, PL(Product Liability) Insurance Storage Function (RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (Error Status and Timer-end)	
Packing Size (w×d×h) (mm) & Gross Weight		300×330×180	330×540×180
Power Consumption		20 W	
Electrical Reqts.		Free Voltage (1 Phase, AC 80 ~ 240 V, 50 / 60 Hz)	
Cat. No.	230V	DH.WMS03036	DH.WMS03038
	120V	DH.WMS02036	DH.WMS02038
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

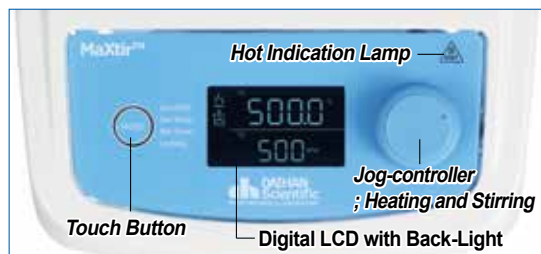
DAIHAN-brand® **New** 500°C Hi-Temp. Hotplate Stirrers “MaXtir™ MSH500”, Solid Ceramic Glass Plate, 200×200mm with Large LCD, Optimum Insulation Layer. Accurate Temp. Control, Touch-button Controller, Hot-Top Indicator, Max. 500°C, Accu. ±0.3°C 고온용 디지털 가열 자력 교반기, 최적의 방열구조, 디지털 피드백 온도 제어, 내열성/내화학성/내산성 솔리드 세라믹 글라스 플레이트 **NEW**



(a) “MaXtir™ MSH500” Package-set



(b) “MaXtir™ MSH500” Unit only



New Generation Controller of “MaXtir™ MSH500” model



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



- Made in Korea
  - PL(Product Liability) Insurance
  - Ergonomic Design
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - High-quality Solid Ceramic Glass Plate : Heat-/Chemical-/Acid-Resistance and Easy to Clean
  - Optimum Insulation Fourfold Layers : BTU + Ceramic Paper + 2×SUS Insulation Layers
  - Brushless Shade Motor & Powerful Magnet ensures Powerful Stirring and Precise Speed Control, Minimization Noise
  - Maximum Temperature of 500°C
  - Microprocessor PID control
  - Patented Controller “Jog-Dial” and Main Touch Button - Best Durability, Best Mobility, Best Convenient to Operate with Back-Light Function
  - 2×Internal K-type Temp. Sensor Operating Independently : 1×Temp. Control Sensor for Temperature Accuracy and 1×Over Temp. Detection Sensor for User Safety
  - Hot Top Indicator LED Lamp : Hot Surface(Over 50°C) Warning Lamp for User Safety
- \* Excellent for Sample Drying and most General Lab Heating Applications  
 \* User's Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)  
 \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)  
 \* Storage Function for the set Values : Temp. and Timer  
 \* Minimization of Noise and Improved the Product Life  
 \* Use of the Special Advanced Insulation for the safety of the Body Temp.  
 \* Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)

### Specifications & Ordering information

Spec.		Model	(a) “MaXtir™ MSH500” (Package-set)	(b) “MaXtir™ MSH500” (Unit Only)
Material	Body	Powder Coated Aluminum		
	Plate	Solid Ceramic Glass Plate, 200×200mm		
Stirring Capa.		Max. 20 Lit.		
Speed & Control Resolution		80 ~ 1,500 rpm, 5 rpm		
Temp. Range & Accuracy		Max. 500°C, ±0.3°C at Set Temperature		
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control		
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less		
Heating Power / Consumption		850W		
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end Display		
Controller		Digital Feedback Controller with Jog Dial (Turn+Push) and Touch button.		
Stirring Bar		3cm bar-included, Usable : up to 5cm bar		
Safety Circuit		Over Temp. Protection, Hot Top Indicator LED Lamp		
included Standard Acc.		Unit, *External Temp Probe-set, with 1ea Stir Bar	Unit with 1ea Stir Bar	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH		
Dimension & Weight		220×332×h114mm, 3.8kg		
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz, with Cord/Plug		
Cat. No.	230V	DH.WMH00500	DH.WMH01500	
	120V	DH.WMH00501	DH.WMH01501	
Price, Each. ₩				

\* Other Specifications are available upon Customer's Request.

### Component of Package-set

- \* Package-set : ① Hotplate Unit ② “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe

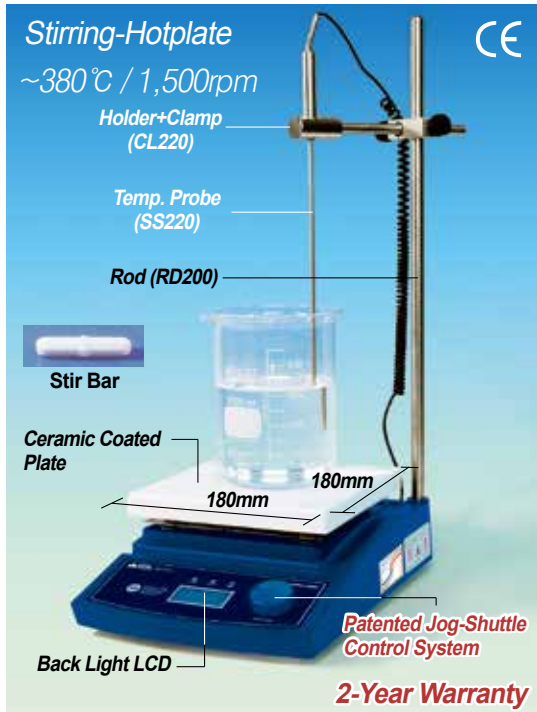
### Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ 4×L250mm, Cable L190mm,
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ 4×L250mm, Cable L190mm,
- DH.WHP503036 (3) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm, Screw, for “MaXtir™ HP500”, “MaXtir™ MSH500”
- DH.WHP503012 (4) Holder/Clamp/Clip, “CL220”, for Temp. Probe

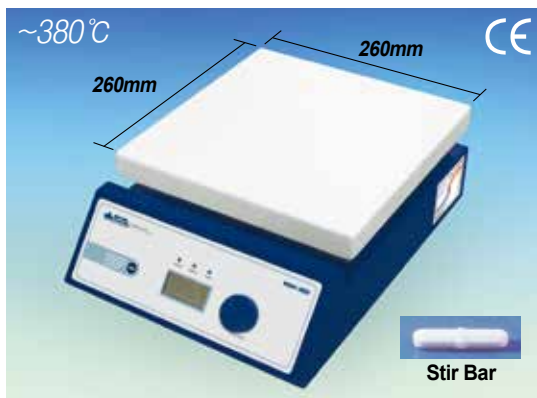
Ea. Price, ₩

Cat. No	Description	Articles
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**DAIHAN-brand® 380°C Digital Hotplate Stirrer “MSH-D”, Ceramic-Coated Plate, ±0.3°C, with Certi. & Traceability with Digital Feedback Control, Accurate Temp. Control, 180×180mm- or 260×260mm-Plate, 80 ~ 1,500 rpm**  
**디지털 가열 자력 교반기, 디지털 피드백 온도 제어, 우수한 온도균일성, 세라믹 코팅 플레이트**



(a) 180×180mm Plate-type Digital Precise Hotplate “MSH-20D” Package-set



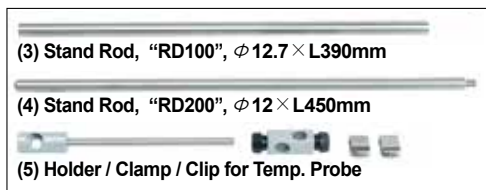
(b) 180×260mm Plate-type Digital Precise Hotplate “MSH-30D” Unit only



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



- Made in Korea ■ CE Certified ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Digital Feedback Control by High-Performance Microprocessor
- Patented Jog-Shuttle Control System

- \* User's Self-Compensation Function : to Control Difference between Real Temp. and Indicated Temp. (±20.0°C)
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Storage Function for the set Values : Temp. and Timer
- \* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- \* Superior Temperature Uniformity : less than 10% on the Plate at Ambient Temperature

### Specifications & Ordering information

Spec.	Model	(a) “MSH-20D”	(b) “MSH-30D”
Plate Size(mm)		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Stirring Capa. & Motor Rating		Max. 20 Lit., 9 / 4 W	
Speed & Control Resolution		80 ~ 1,500 rpm, 5 rpm	
Temp. Range & Accuracy		Max. 380°C, ±0.3°C at Set Temperature	
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		600W	1.2 kW
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Safety Circuit		Over Temp. Protection	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 3.3kg	286×387×h99mm, 3.5kg
Packing Size & Gross Weight		400×280×h200mm, 5kg	430×320×h200mm, 5kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Unit only			
Cat. No.	230V	DH.WMH03020	DH.WMH03022
	120V	DH.WMH02020	DH.WMH02022
Price, Each. ₩			

* External Temp. Probe Package-set			
Cat. No.	230V	DH.WMH03021	DH.WMH03023
	120V	DH.WMH02021	DH.WMH02023
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

### Component of Package-set

- \* “MSH-20D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD200” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe
- \* “MSH-30D” Package-set : Complete with ① Hotplate Unit ② : “SS500” PT100 External / Direct Contact Temp. Probe, ③ “RD100” Stainless steel Support Rod φ 12×L450mm ④ “CL220” Holder+Clamp for External Temp. Probe

### Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip

- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ 4×L250mm, Cable L190mm
- DH.WHP503011 (3) Stand Rod, “RD100”, Stainless steel, φ 12.7×L450mm for “HP-30A/30D”, “MSH-30A/30D”, Non-screw
- DH.WHP503036 (4) Stand Rod, “RD200”, Stainless steel, φ 12×L450mm for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”, Screw
- DH.WHP503012 (5) Holder/ Clamp / Clip, “CL220”, for Temp. Probe

Ea.	Price, ₩

DAIHAN-brand® 380°C Analog Premium Hotplate Stirrer “MSH-A”, Ceramic-Coated Plate, 1,500 rpm, with Certi. & Traceability Built-in Linearity PWM Controller, Superior Temperature Uniformity, Precise Control of Temp. & RPM, 180×180mm or 260×260mm  
 아날로그 가열 자력 교반기, 우수한 온도균일성, 세라믹 코팅 플레이트



(a) 180×180mm Plate-type Hotplate Stirrer “MSH-20A”



(b) 260×260mm Plate-type Hotplate Stirrer “MSH-30A”

- Made in Korea
- CE Certified
- PL (Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- Superior Linearity for Temperature Control & Stirring Speed
- Ceramic Coated Plate-Chemical / Acid Resistance
- \* Excellent for Sample Drying and most General Lab Heating Applications
- \* Superior Temperature Uniformity : Less than 10% on the Plate at Ambient Temperature
- \* Superior Linearity for Temperature Control & Stirring Speed by Specially Designed Control Circuitry.(PWM Control)
- \* Smart Design of Body made by Aluminum Die-Casting (MSH-20A)
- \* Ceramic Coated Plate-Chemical/Acid Resistance
- \* Maximum Temperature of 380°C

### Specifications & Ordering information

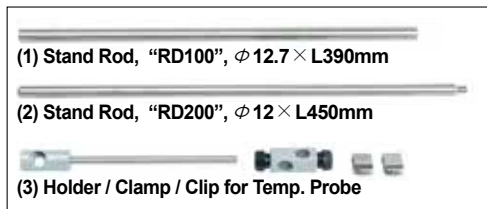
Spec.	Model	(a) “MSH-20A”	(b) “MSH-30A”
Plate Size		180×180mm Plate-type	260×260mm Plate-type
Material	Body	Powder Coated Aluminum	Powder Coated steel
	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance, Easy to Clean)	
Stirring Capa. & Motor Rating		Max. 20 Lit., 9 / 4 W	
Speed Range		Max. 1,500 rpm	
Temp. Range		Max. 380°C	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		600W	1.2 kW
Controller		Superior Linearity PWM Controller	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Temp. & RH %		Ambient +5 ~ 50°C, 85% RH	
Dimension & Weight		206×307×h99mm, 2.8kg	286×387×h99mm, 3.3kg
Packing Size & Gross Weight		400×280×h200mm, 5kg	430×320×h200mm, 5kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WMH03120	DH.WMH03121
	120V	DH.WMH02120	DH.WMH02121
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

### Optional Stand Rod & Holder/Clamp

- DH.WHP503011 (1) Stand Rod, “RD100”, Stainless steel, Non-screw  $\phi 12.7 \times L390$ mm, for “HP-30A/30D”, “MSH-30A/30D”
- DH.WHP503036 (2) Stand Rod, “RD200”, Stainless steel, 1.5p screw,  $\phi 12 \times L450$ mm, for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”
- DH.WHP503012 (3) Holder / Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩



### Specialized Features

#### High Stability in Very Low & High-Temperature

General analog control  
 General Phase Control Use with AC !! (Very sensitive Point)

PWM Control  
 Use with DC !! (Super linearity)

DAIHAN Realize **Stable & Easy to Use!**

#### Long Life Power & Mechanism!

SMPS (Switching Mode Power Supply)  
 Use with Safety & Regular DC !!

AC → Stable DC !!

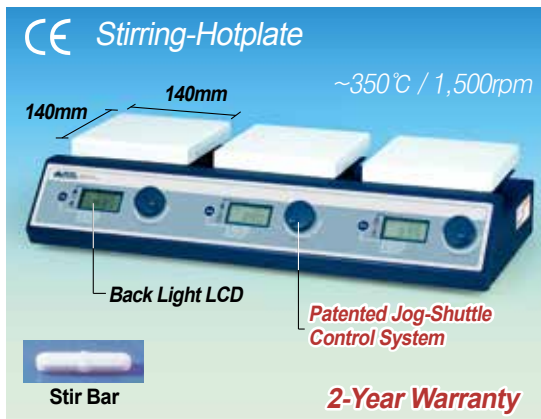
SSR (Solid State Relay)-Non Contact  
 No Electronic Harm!

Realize **Long Life Cycle!**



Cat. No	Description	Articles
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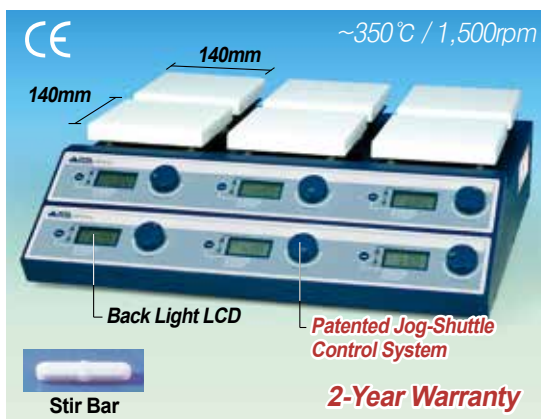
DAIHAN-brand® 350°C Systematic Multi-Hotplate Stirrers “SMHS”, 3- or 6-Places, Ceramic-Coated Plates with Digital Feedback Control, Independent Heating & Stirring Control, up to 350°C, 80~1,500 rpm  
 멀티 가열 자력 교반기, 우수한 온도균일성, 3- or 6- 구 개별 조절 가능



(a) 3 × 1 Plates-type Multi-Hotplate Stirrer “SMHS-3”

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Excellent for Multi-use and wide range Sample Testing
- Patented Jog-Shuttle Control System
- \* Systemized 3- and 6-Hotplate Stirrer
- \* Independent Heating and Stirring Control
- \* Digital Feedback Control by High-Performance Microprocessor
- \* Ceramic Coated Plate-Chemical/Acid Resistance
- \* Maximum Temperature of 350°C with ±0.3°C Control Accuracy
- \* Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- \* Digital LCD with Back-Light Function
- \* Digital Timer Function Included : 99 hr 59 min
- \* Storage Function for the Set Values : Temperature, RPM and Timer
- \* Locking Mode for Experimental Safety Supported

Specifications & Ordering information



(b) 3 × 2 Plates-type Multi-Hotplate Stirrer “SMHS-6”

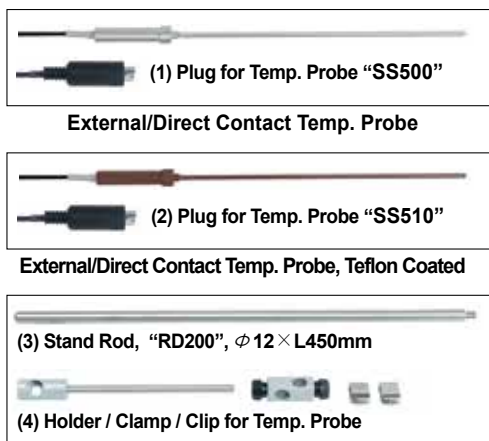
Spec.	Model	(a) “SMHS-3”	(b) “SMHS-6”
Plate-type		3×1 Plates-type	3×2 Plates-type
Material		Plate : Ceramic Coated Aluminum, Body : Powder Coated steel	
Plate Size(mm)		140×140	
Stirring Capa. & Motor Rating		Max. 20 Lit.(H <sub>2</sub> O), 9/4W×3	Max. 20 Lit.(H <sub>2</sub> O), 9/4W×6
Speed & Control Resolution		80 ~ 1,500 rpm, 5 rpm	
Temp. Range & Accuracy		Max. 350 °C, ±0.3°C at Set Temp.	
Temp. Resolution		0.1 °C-Display, 0.5 °C-Control	
Temp. Uniformity		Specially Designed Heating Module : Temp. Difference 10% less	
Heating Power/Consumption		400 W × 3 Plates	400 W × 6 Plates
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Temp. & RH %		Room Temp. +5 ~ 50°C, 85% RH	
Dimension & Weight		510×240×h100mm, 10kg	510×410×h180mm, 18kg
Packing Size & Gross Weight		540×330×h170mm, 10kg	570×540×h230mm, 18kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.WMH03503	DH.WMH03506
	120V	DH.WMH02503	DH.WMH02506
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ 3 Rear Hotplate Stirrer SMHS-6 have 3 Ports available to connect External Temp. Probe.

※ 운임 약 ₩ 9.000 별도!

Optional External Temp Probes/Stand Rods/Holder, Clamp, Clip



- DH.WHP503060 (1) Direct Contact Temp. Probe, “SS500”, “PT100”, Probe φ4×L250mm, Cable L190mm
- DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe, “SS510”, Probe φ4×L250mm, Cable L190mm
- DH.WHP503036 (3) Stand Rod, “RD200”, Stainless-steel, φ12×L450mm for “HP-20A/20D”, “MSH-20A/20D”, “MSH-50A/55A”, “MSH-50D/55D” and “SMHS”, 1.5p Screw
- DH.WHP503012 (4) Holder / Clamp / Clip, “CL220”, for Temp. Probe

Ea. Price, ₩

## DAIHAN-brand® Overhead Stirrer Product Line / Selection Guide

Speed & Torque		High Speed						High Torque						
Control		Analog Model		Digital Model				Analog Model		Digital Model				
Controller-type		Integrated Controller		Integrated Controller		Remote Controller		Integrated Controller		Integrated Controller		Remote Controller		
Models		HS-50A	HS-120A	HS-30D	HS-100D	HS-30T	HS-100T	HT-50AX	HT-120AX	HT-50DX	HT-120DX	HT-50T	HT-120T	HT-140T
Max. Capacity(H <sub>2</sub> O)		10 Lit.	20 Lit.	10 Lit.	20 Lit.	10 Lit.	20 Lit.	40 Lit.	60 Lit.	40 Lit.	60 Lit.	50 Lit.	80 Lit.	100 Lit.
Max. Viscosity(mPas)		10,000	50,000	10,000	50,000	10,000	50,000	100,000	150,000	100,000	150,000	100,000	150,000	160,000
Motor Rating (Input / Output)		83/75W (1/10 hp)	130/120W (1/6 hp)	83/75W (1/10 hp)	130/120W (1/6 hp)	83/75W (1/10 hp)	130/120W (1/6 hp)	83/75W (1/10 hp)	130/120W (1/6 hp)	83/75W (1/10 hp)	130/120W (1/6 hp)	83/75W (1/10 hp)	130/120W (1/6 hp)	130/120W (1/6 hp)
Max. Torque(Ncm)		85	145	85	145	85	145	300	500	300	500	300	500	550
Impeller Dia.(mm)		8						10						
Speed Range (rpm)		200 ~ 3,000						50 ~ 1,000						
Motor Rating (In / Out)		Direct Driven Motor						3.5:1 Ratio Worm-Geared Motor						
Controller		Analog Phase Controller		Digital Feedback Controller with Jog Shuttle Switch(Turn+Push)		Digital Feedback Controller with Jog Shuttle Switch(Turn+Push), Remote type		Analog Phase Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push), Remote type		
Display		None		Digital LCD (Timer, RPM & Power Bar-graph)				None		Digital LCD (Timer, RPM & Power Bar-graph)				
Operating Environment	Ambient Temp. Range (°C)	0 ~ 40												
	Max. Permissible Humidity(%)	80												
Safety Device		Over Heat Protector for motor		Over Load & Heat Protector for motor				Over Heat Protector for motor		Over Load & Heat Protector for motor				
Body Dimension (w×d×h mm)		90×145×180				90×100×180		90×180×130	90×210×130	90×180×130	90×210×130	155×180×110	155×230×110	155×230×110
Body Weight (kg)		4.5	5.3	4.5	5.3	3*	3.8*	3.5	4	3.5	4	3.5	4	4
Others		- Smooth Start and Change of the Stirring Speed for stable running - Storage Function (RPM & Timer) : Only Digital Models						- Smooth Start and Change of the Stirring Speed for stable running - Storage Function (RPM & Timer) : Only Digital Models - Storage Function (RPM & Timer) : Only Digital Models - Alarm (Error Status and Timer-end) : Only Digital Models						
Power Supply **		AC 230V, 50/60Hz												

\* Weight of Remote Controller = 2.5kg

\*\* Other Specifications are Available Upon Customer's Request.

## Standard Viscosity

(Unit : mPas)

Material	Viscosity	Recommended Models			
Water	1	HS-30D HS-50A HS-30T	HS-100D HS-120A HS-100T	HT-50DX HT-50AX HT-50T	HT-120DX HT-120AX HT-120T HT-140T
Milk	3				
Soybean oil	160				
Varnish	500				
Lacquer	1,000				
Honey	3,000				
Standard Viscosity	10,000	-	-	-	-
Standard Viscosity	15,000				
Ketchup	30,000				
Standard Viscosity	50,000				
Mustard	70,000				
Corn Syrup	100,000				
Standard Viscosity	150,000	-	-	-	-
Peanut Butter	250,000				

Cat. No	Description	Articles
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**DAIHAN-brand® High-Speed Analog Overhead Stirrers “HS-A”, for Low-/Middle-Viscosity, Max.10/20Lit, Max. 3,000rpm with “Push-Through” Shaft(φ8mm or Less) and Chuck grip φ3~10mm, Flex-Coupling φ6~12mm, up to 50,000 mPas**  
**아날로그 고속 교반기, 저/중점도용, 사용교반봉 ; ①기본은 φ3~10mm, ②관통은 φ3~8mm, & ③별도의 Flex-Coupling 활용시 φ6~12mm**



**Max. 10 Lit. (H<sub>2</sub>O) Hi-Speed Analog Overhead Stirrer “HS-50A -Set”**

- **Made in Korea**    ■ **CE Certified**    ■ **PL(Product Liability) Insurance**
- **Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance**
- **with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System**
- **“Push-Through” Shafts(φ8mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - “Adjustable Height of Shaft”**
- **Ideal for Low-/Middle-Viscosity**    \* Easy-to-use Dial for Speed Setting
- \* Smooth Start and Change of the Stirring Speed    \* Stainless-steel Chuck : Grip φ3~10mm

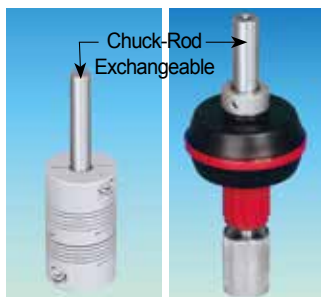
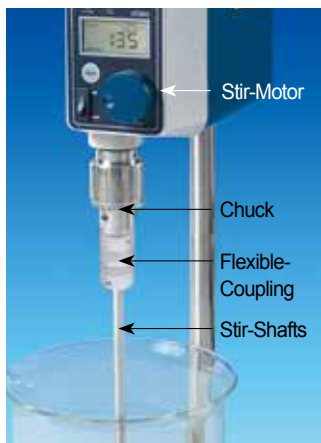
**Specifications & Ordering information**

Spec.	Models	(1) “HS-50A”	(2) “HS-120A”
<b>Stirring Capacity</b>		Max. 10 Lit. (H <sub>2</sub> O)	Max. 20 Lit. (H <sub>2</sub> O)
<b>Maximum Viscosity / Torque</b>		10,000 mPas / 85 Ncm	50,000 mPas / 145 Ncm
<b>Speed Range &amp; Motor</b>		0 ~ 3,000 rpm, Direct Driven DC Motor	
<b>Motor Rating (Input / Output)</b>		83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
<b>Controller / Safety Device</b>		Analog Phase Controller / Over Heat Protector for motor	
<b>Chuck Grip Capa. φ mm</b>		dia φ3~10mm Shafts	
<b>“Push-Through” Shafts</b>		dia φ8mm or Less	
<b>Permissible Temp. &amp; Humidity</b>		0 ~ 40 °C, 80%	
<b>Material</b>		ABS and Aluminum	
<b>Dimension &amp; Weight</b>		90 × 145 × h180mm, 4.5 kg	90 × 145 × h180mm, 5.3 kg
<b>Packing Size &amp; Gross Weight</b>		320 × 300 × h180mm, 5 kg	320 × 300 × h180mm, 8 kg
<b>Power Consumption</b>		85 W	130 W
<b>Electrical Reqts.</b>		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Stand Package-set			
Cat. No.	230V	DH.WOS01211	DH.WOS01216
	120V	DH.WOS02211	DH.WOS02216
Price, Each. ₩			
Unit-only			
Cat. No.	230V	DH.WOS01210	DH.WOS01215
	120V	DH.WOS02210	DH.WOS02215
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

**The Figure ; Use of Coupling**



(1) Hi-flex Metal ; (2) Rubber Based for φ6~12 Shafts ; for φ7~10 Shafts

- \* **“HS-50A” Package-set** : Complete with ① “HS-50A” Stirrer Unit, ② “S721” Stainless-steel Impeller (Rod φ8×L500mm, 3-Blade φ50mm), ③ “CL200” Clamp, and ④ “KA1177” Safety Stand (Rod φ23×L800mm, Base w34×d29cm)
- \* **“HS-120A” Package-set** : Complete with ① “HS-120A” Stirrer Unit, ② “S723” Stainless-steel Impeller (Rod φ8×L650mm, 3-Blade φ80mm), ③ “CL200” Clamp, and ④ “KA1177” Safety Stand (Rod φ23×L800mm, Base w34×d29cm)

**Flexible Couplings, for Safety Stirring of φ6~12mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링**

■ **Used to Compensate Any Vibrations Between The Motor and Stirring Shafts**

**(1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for φ6~12mm Stir-Shafts Ideal for Low/High Viscosity and High/Low Speed**

- \* Made in Korea    \* Shaft Fastening by Screw Clamp Band    \* Made of DURALUMIN
- \* with Exchangeable STS Chucking Rod φ8 & 10mm, L40mm

SL.StiC011	Stir-Coupling, Hi-flex, φ8mm Chuck-rod , for-φ6mm Stir-Shaft , 56g, φ25×h44mm	Ea.	Price, ₩
SL.StiC012	-φ8mm Stir-Shaft , 53g, φ25×h44mm		
SL.StiC013	-φ10mm Stir-Shaft, 49g, φ25×h44mm		
SL.StiC014	Stir-Coupling, Hi-flex, φ10mm Chuck-rod, for-φ8mm Stir-Shaft , 49g, φ25×h44mm		
SL.StiC015	-φ10mm Stir-Shaft, 43g, φ25×h44mm		
SL.StiC016	-φ12mm Stir-Shaft, 33g, φ25×h44mm		

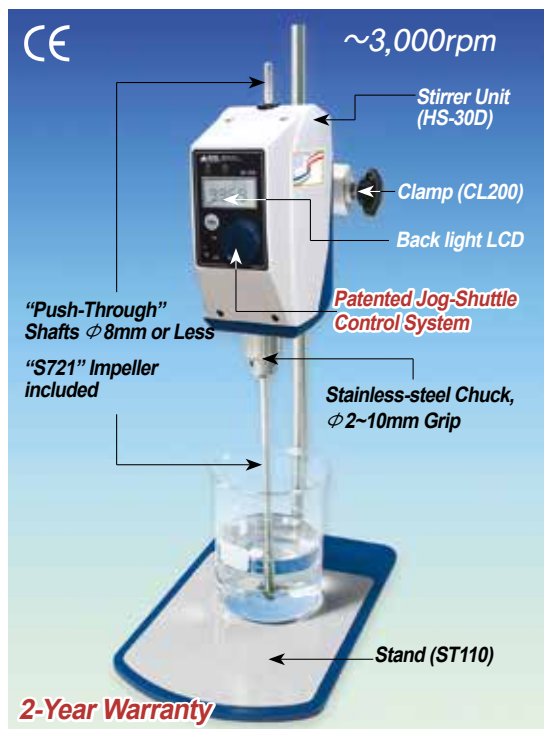
**(2) Very Flexible Rubber Based Coupling, for φ7~10mm Shafts Especially, Ideal for GLASS Shafts and Low/Middle Viscosity & High Speed**

- \* Made in Germany    \* Shaft Fastening by Screw Compression Rubber Ring Pad.
- \* with φ10×L40mm Exchangeable Stainless-steel Chucking Rod

WI.1445000	Stir-Coupling, Rubber Based, for φ7~φ10mm Shafts, 72.5g, Body φ46×h80mm	Ea.	Price, ₩

※ **Note! Details of Wide-Range Couplings : See the “Stirrer Accessories”**

DAIHAN-brand® High-Speed Digital Overhead Stirrers “HS-D”, for Low-/Middle-Viscosity, Max. 10/20Lit, Max. 3,000rpm with “Push-Through” Shaft(φ 8mm or Less) and Chuck grip φ 3~10mm, Flex-Coupling φ 6~12mm, up to 50,000 mPas  
 디지털 고속 교반기, 저/중점도용, 사용교반봉 ; ①기본은 φ 3~10mm, ②관통은 φ 3~8mm, & ③별도의 Flex-Coupling 활용시 φ 6~12mm



Max. 10 Lit. (H<sub>2</sub>O) Hi-Speed Digital Overhead Stirrer “HS-30D -Set”

- Made in Korea ■ CE Certified ■ PL(Product Liability) Insurance
- Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- “Push-Through” Shafts(φ 8mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - “Adjustable Height of Shaft”
- Ideal for Low-/Middle-Viscosity ■ Patented Jog-Shuttle Control System
- \* Smooth Start and Change of the Stirring Speed \* Stainless-steel Chuck : Grip φ 3~10mm

Specifications & Ordering information

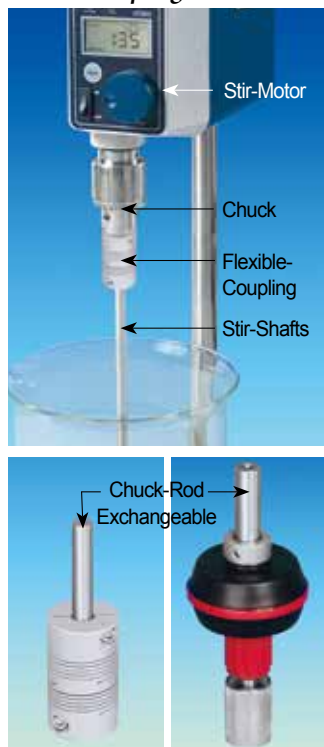
Spec.	Models	(1) “HS-30D”	(2) “HS-100D”
Stirring Capacity		Max. 10 Lit. (H <sub>2</sub> O)	Max. 20 Lit. (H <sub>2</sub> O)
Maximum Viscosity / Torque		10,000 mPas / 85 Ncm	50,000 mPas / 145 Ncm
Speed Range & Resolution		200 ~ 3,000 rpm, 1 rpm-Display / 1 rpm-Control	
Motor / Safety		Device Direct Driven DC Motor / Overload & Heat Protector for Motor	
Motor Rating (Input / Output)		83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Controller / Display		Digital Feedback Controller / Digital LCD with Back-Light Function	
Chuck Grip Capa. φ mm		dia φ 3~10mm Shafts	
“Push-Through” Shafts		dia φ 8mm or Less	
Permissible Temp. & Humidity		0 ~ 40°C, 80%	
Material		ABS and Aluminum	
Dimension & Weight		90 × 145 × h180mm, 4.5 kg	90 × 145 × h180mm, 5.3 kg
Packing Size & Gross Weight		320 × 300 × h180mm, 5 kg	320 × 300 × h180mm, 8 kg
Power Consumption		85 W	130 W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Stand Package-set			
Cat. No.	230V	DH.WOS01016	DH.WOS01026
	120V	DH.WOS02016	DH.WOS02026
Price, Each. ₩			
Unit-only			
Cat. No.	230V	DH.WOS01015	DH.WOS01025
	120V	DH.WOS02015	DH.WOS02025
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

- \* “HS-30D” Package-set : Complete with ① “HS-30D” Stirrer Unit, ② “S721” Stainless-steel Impeller (Rod φ 8 × L500mm, 3-Blade φ 50mm), ③ “CL200” Clamp, and ④ “ST110” Standard Plate Stand(Rod φ 16 × L800mm, Base w20 × d35cm)
- \* “HS-100D” Package-set : Complete with ① “HS-100D” Stirrer Unit, ② “S723” Stainless-steel Impeller (Rod φ 8 × L650mm, 3-Blade φ 80mm), ③ “CL200” Clamp, and ④ “ST120” Wide Plate Stand(Rod φ 23 × L1,000mm, Base w30 × d40cm)

The Figure ;  
Use of Coupling



(1) Hi-flex Metal ; (2) Rubber Based for φ 6~12 Shafts ; for φ 7~10 Shafts

Flexible Couplings, for Safety Stirring of φ 6~12mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링

■ Used to Compensate Any Vibrations Between The Motor and Stirring Shafts

(1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for φ 6~12mm Stir-Shafts  
Ideal for Low/High Viscosity and High/Low Speed

- \* Made in Korea \* Shaft Fastening by Screw Clamp Band \* Made of DURALUMIN
- \* with Exchangeable STS Chucking Rod φ 8 & 10mm, L40mm

SL.StiC011	Stir-Coupling, Hi-flex, φ 8mm Chuck-rod , for-φ 6mm Stir-Shaft , 56g, φ 25 × h44mm	Ea.	Price, ₩
SL.StiC012	-φ 8mm Stir-Shaft , 53g, φ 25 × h44mm		
SL.StiC013	-φ 10mm Stir-Shaft, 49g, φ 25 × h44mm		
SL.StiC014	Stir-Coupling, Hi-flex, φ 10mm Chuck-rod, for-φ 8mm Stir-Shaft , 49g, φ 25 × h44mm		
SL.StiC015	-φ 10mm Stir-Shaft, 43g, φ 25 × h44mm		
SL.StiC016	-φ 12mm Stir-Shaft, 33g, φ 25 × h44mm		

(2) Very Flexible Rubber Based Coupling, for φ 7~10mm Shafts  
Especially, Ideal for GLASS Shafts and Low/Middle Viscosity & High Speed

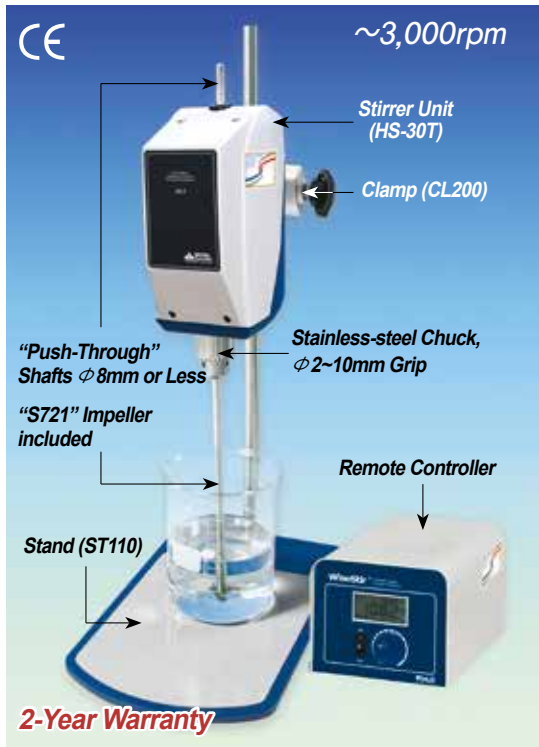
- \* Made in Germany \* Shaft Fastening by Screw Compression Rubber Ring Pad.
- \* with φ 10 × L40mm Exchangeable Stainless-steel Chucking Rod

WL.1445000	Stir-Coupling, Rubber Based, for φ 7~φ 10mm Shafts, 72.5g, Body φ 46 × h80mm	Ea.	Price, ₩

※ Note! Details of Wide-Range Couplings : See the “Stirrer Accessories”

Cat. No	Description	Articles
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**DAIHAN-brand® Remote Controlled High-Speed Digital Overhead Stirrer “HS-T”, for Low-/Middle-Viscosity, Max. 3,000 rpm with “Push-Through” Shaft(φ 8mm or Less) and Chuck grip φ 3~10mm, Flex-Coupling φ 6~12mm, up to 50,000 mPas**  
 원격조절식 디지털 고속 교반기, 저/중점도용, 사용교반봉 ; ①기본은 φ 3~10mm, ②관통은 φ 3~8mm, & ③별도의 Flex-Coupling 활용시 φ 6~12mm



Max. 10 Lit. (H<sub>2</sub>O) Hi-Speed Digital Overhead Stirrer, with Remote Controller “HS-30T” Package-set

- Made in Korea ■ CE Certified ■ PL (Product Liability) Insurance
- Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- “Push-Through” Shafts(φ 8mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - “Adjustable Height of Shaft”
- Ideal for Low-/Middle-Viscosity ■ Patented Jog-Shuttle Control System
- \* Smooth Start and Change of the Stirring Speed \* Stainless-steel Chuck : Grip φ 3~10mm

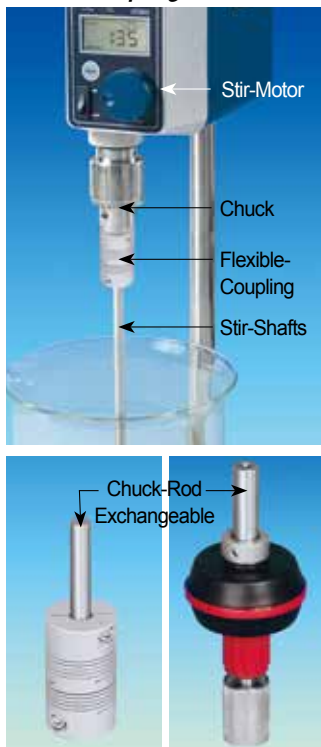
**Specifications & Ordering information**

Spec.	Model	(1) “HS-30T”	(2) “HS-100T”
Stirring Capacity		Max. 10 Lit. (H <sub>2</sub> O)	Max. 20 Lit. (H <sub>2</sub> O)
Maximum Viscosity / Torque		10,000 mPas / 85 Ncm	50,000 mPas / 145 Ncm
Speed Range & Motor		200 ~ 3,000 rpm, Direct Driven DC Motor	
Motor Rating (Input / Output)		83 / 75 W, 1/10 HP	130 / 120 W, 1/6 HP
Timer & Alarm		99hr 59min (with Continuous run.), Timer-end Alarm	
Controller / Display		Digital Feedback Controller / Digital LCD with Back-Light Function	
Chuck Grip Capa. φ mm		dia φ 3~10mm Shafts	
“Push-Through” Shafts		dia φ 8mm or Less	
Permissible Temp. & Humidity		0 ~ 40°C, 80%	
Safety Device / Material		Overload & Heat Protector for motor / ABS and Aluminum	
Dimension & Weight*		90 × 100 × h180mm, 3 kg	90 × 100 × h180mm, 3.8 kg
Packing Size & Gross Weight		580 × 340 × h230mm, 5 kg	580 × 340 × h230mm, 8 kg
Power Consumption		75 W	120 W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

Stand Package-set			
Cat. No.	230V	DH.WOS01036	DH.WOS01046
	120V	DH.WOS02036	DH.WOS02046
Price, Each. ₩			
Unit & Remote Controller			
Cat. No.	230V	DH.WOS01035	DH.WOS01045
	120V	DH.WOS02035	DH.WOS02045
Price, Each. ₩			

\* Weight of Remote Controller = 2.5kg \*\* Other Specifications are available upon Customer's Request.

**The Figure ; Use of Coupling**



(1) Hi-flex Metal ; (2) Rubber Based for φ 6~12 Shafts ; for φ 7~10 Shafts

- \* “HS-30T” Package-set : Complete with ① “HS-30T” Stirrer Unit with Remote Controller, ② “S721” Stainless-steel Impeller(Rod φ 8 × L500mm, 3-Blade φ 50mm), ③ “CL200” Clamp, and ④ “ST110” Standard Plate Stand(Rod φ 16 × L800mm, Base w20 × d35cm)
- \* “HS-100T” Package-set : Complete with ① “HS-100T” Stirrer Unit with Remote Controller, ② “S723” Stainless-steel Impeller(Rod φ 8 × L650mm, 3-Blade φ 80mm), ③ “CL200” Clamp, and ④ “ST120” Wide Plate Stand(Rod φ 23 × L1,000mm, Base w30 × d40cm)

**Flexible Couplings, for Safety Stirring of φ 6~12mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링**

■ Used to Compensate Any Vibrations Between The Motor and Stirring Shafts

(1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for φ 6~12mm Stir-Shafts  
 Ideal for Low/High Viscosity and High/Low Speed

- \* Made in Korea \* Shaft Fastening by Screw Clamp Band \* Made of DURALUMIN
- \* with Exchangeable STS Chucking Rod φ 8 & 10mm, L40mm

SL.StiC011	Stir-Coupling, Hi-flex, φ 8mm Chuck-rod , for-φ 6mm Stir-Shaft , 56g, φ 25 × h44mm	Ea.	Price, ₩
SL.StiC012	-φ 8mm Stir-Shaft , 53g, φ 25 × h44mm		
SL.StiC013	-φ 10mm Stir-Shaft, 49g, φ 25 × h44mm		
SL.StiC014	Stir-Coupling, Hi-flex, φ 10mm Chuck-rod, for-φ 8mm Stir-Shaft , 49g, φ 25 × h44mm		
SL.StiC015	-φ 10mm Stir-Shaft, 43g, φ 25 × h44mm		
SL.StiC016	-φ 12mm Stir-Shaft, 33g, φ 25 × h44mm		

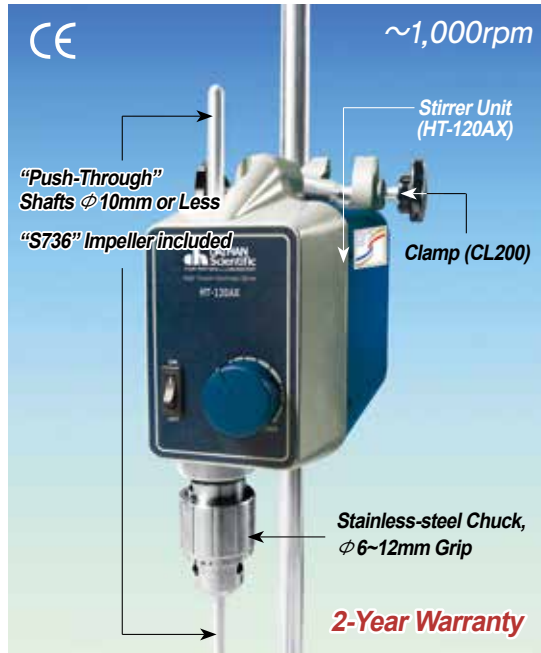
(2) Very Flexible Rubber Based Coupling, for φ 7~10mm Shafts  
 Especially, Ideal for GLASS Shafts and Low/Middle Viscosity & High Speed

- \* Made in Germany \* Shaft Fastening by Screw Compression Rubber Ring Pad.
- \* with φ 10 × L40mm Exchangeable Stainless-steel Chucking Rod

WI.1445000	Stir-Coupling, Rubber Based, for φ 7~φ 10mm Shafts, 72.5g, Body φ 46 × h80mm	Ea.	Price, ₩

※ Note! Details of Wide-Range Couplings : See the “Stirrer Accessories”

DAIHAN-brand® High-Torque Analog Overhead Stirrer "HT-AX", for Middle-/High-Viscosity, Max.50-/80-Lit, Max.1,000rpm with "Push-Through" Shaft( $\phi$  10mm or Less) and Chuck grip 6~12mm, Flex-Coupling  $\phi$  6~16mm, 150,000 mPas  
 아날로그 중/고점도용 강력교반기, 사용교반봉; ①기본은  $\phi$  6~12mm, ②관통은  $\phi$  6~10mm, & ③별도의 Flex-Coupling 활용시  $\phi$  6~16mm



Max. 80 Lit. (H<sub>2</sub>O) Hi-Torque Analog Overhead Stirrer, "HT-120AX"

- Made in Korea
  - CE Certified
  - PL(Product Liability) Insurance
  - Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - 3.5:1 Ratio Worm-gear Motor
  - "Push-Through" Shafts( $\phi$  10mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - "Adjustable Height of Shaft"
- \* Ideal for Middle-/High-Viscosity      \* Easy-to-use Dial for Speed Setting  
 \* Smooth Start and Change of the Stirring Speed      \* Stainless-steel Chuck : Grip  $\phi$  6~12mm

### Specifications & Ordering information

Spec.	Model	(1) "HT-50AX"	(2) "HT-120AX"
Stirring Capacity		Max. 50 Lit. (H <sub>2</sub> O)	Max. 80 Lit. (H <sub>2</sub> O)
Maximum Viscosity / Torque		100,000 mPas / 300 Ncm	150,000 mPas / 500 Ncm
Speed Range & Motor		0 ~ 1,000 rpm, Worm-Geared DC Motor (3.5:1 Ratio)	
Motor Rating (Input / Output)		83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Controller		Analog Phase Controller	
Chuck Grip Capa. $\phi$ mm		dia $\phi$ 6~12mm Shafts	
"Push-Through" Shafts		dia $\phi$ 10mm or Less	
Permissible Temp. & Humidity		0 ~ 40°C, 80%	
Safety Device / Material		Over Heat Protector for motor / ABS and Aluminum	
Dimension & Weight		90×180×h130mm, 3.5 kg	90×210×h130mm, 4 kg
Packing Size & Gross Weight		320×300×h180mm, 5 kg	320×300×h180mm, 8 kg
Power Consumption		85 W	130 W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	

#### Stand Package-set

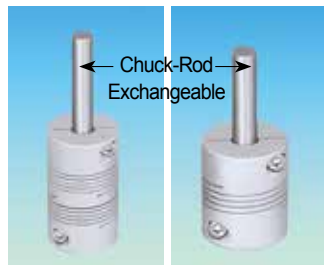
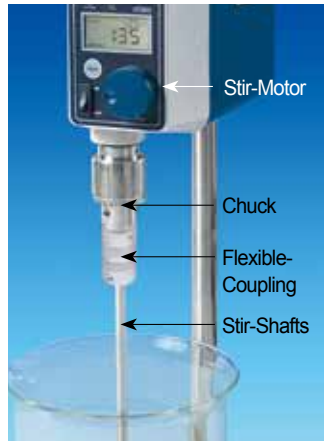
Cat. No.	230V	DH.WOS01252	DH.WOS01272
	120V	DH.WOS02252	DH.WOS02272
Price, Each. ₩			

#### Unit-only

Cat. No.	230V	DH.WOS01251	DH.WOS01271
	120V	DH.WOS02251	DH.WOS02271
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

The Figure ;  
Use of Coupling



(1) Hi-flex Metal ; (2) Heavy-duty Metal  
for  $\phi$  6~16 Shafts; for  $\phi$  10~16 Shafts

※ Details of Wide-Range Couplings :  
See the "Stirrer Accessories"

- \* "HT-50AX" Package-set : Complete with ① "HT-50AX" Stirrer Unit, ② "S732" Stainless-steel Impeller(Rod  $\phi$  8×L500mm, 4-Blade  $\phi$  70mm), ③ "CL200" Clamp, and ④ "KA1177" Safety Stand(Rod  $\phi$  23×L800mm, Base w34×d29cm)
- \* "HT-120AX" Package-set : Complete with ① "HT-120AX" Stirrer Unit, ② "S736" Stainless-steel Impeller(Rod  $\phi$  10×L650mm, 4-Blade  $\phi$  90mm), ③ "CL200" Clamp, and ④ "KA1177" Safety Stand(Rod  $\phi$  23×L800mm, Base w34×d29cm)

### Flexible Couplings, for Safety Stirring of $\phi$ 6~16mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링

- Used to Compensate Any Vibrations Between The Motor and Stirring Shafts \* Shaft Fastening by Screw Clamp Band
- \* Made in Korea \* Made of DURALUMIN \* with Exchangeable STS Chucking Rod  $\phi$  8 / 10 / 12mm, L40mm

#### (1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for $\phi$ 6~16mm Stir-Shafts Ideal for Low/High Viscosity and High/Low Speed

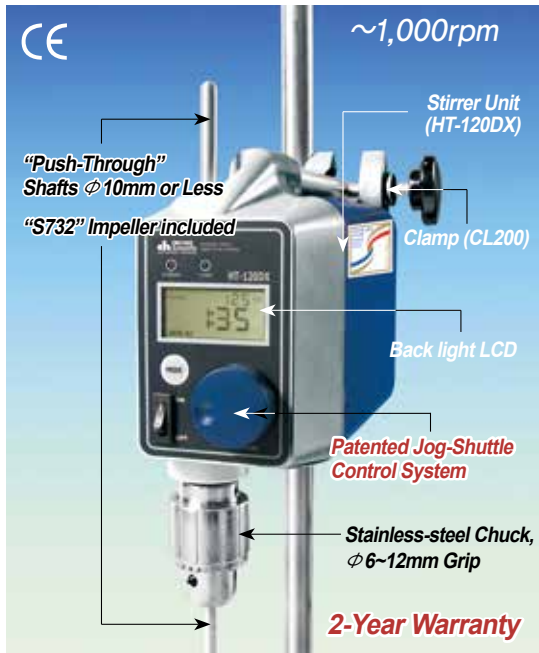
SL.StiC011	Stir-Coupling, Hi-flex, $\phi$ 8mm Chuck-rod, for- $\phi$ 6mm Stir-Shaft, 56g, $\phi$ 25×h44mm	Ea.	Price, ₩
SL.StiC012	- $\phi$ 8mm Stir-Shaft, 53g, $\phi$ 25×h44mm		
SL.StiC013	- $\phi$ 10mm Stir-Shaft, 49g, $\phi$ 25×h44mm		
SL.StiC014	Stir-Coupling, Hi-flex, $\phi$ 10mm Chuck-rod, for- $\phi$ 8mm Stir-Shaft, 49g, $\phi$ 25×h44mm		
SL.StiC015	- $\phi$ 10mm Stir-Shaft, 43g, $\phi$ 25×h44mm		
SL.StiC016	- $\phi$ 12mm Stir-Shaft, 33g, $\phi$ 25×h44mm		
SL.StiC017	Stir-Coupling, Hi-flex, $\phi$ 12mm Chuck-rod, for- $\phi$ 10mm Stir-Shaft, 33g, $\phi$ 25×h44mm		
SL.StiC018	- $\phi$ 12mm Stir-Shaft, 123g, $\phi$ 32×h60mm		
SL.StiC019	- $\phi$ 14mm Stir-Shaft, 120g, $\phi$ 32×h60mm		
SL.StiC020	- $\phi$ 16mm Stir-Shaft, 118g, $\phi$ 32×h60mm		

#### (2) Heavy-duty Metal Coupling, with Short Flex-band, for $\phi$ 10~16mm Stir-Shafts Low-Flexible type, Ideal for High Viscosity and Middle/Low Speed

SL.StiC023	Stir-Coupling, Low-flex, $\phi$ 10mm Chuck rod, for- $\phi$ 10mm Stir-Shafts., 45g, $\phi$ 25×h30	Ea.	Price, ₩
SL.StiC024	- $\phi$ 12mm Stir-Shafts., $\phi$ 25×h30		
SL.StiC025	Stir-Coupling, Low-flex, $\phi$ 12mm Chuck rod, for- $\phi$ 12mm Stir-Shafts., 105g, $\phi$ 32×h38		
SL.StiC026	- $\phi$ 14mm Stir-Shafts., $\phi$ 32×h38		
SL.StiC027	- $\phi$ 16mm Stir-Shafts., $\phi$ 32×h38		

Cat. No	Description	Articles
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DAIHAN-brand® High-Torque Digital Overhead Stirrer “HT-DX”, for Middle-/High-Viscosity, Max.50-/80-Lit, Max.1,000rpm with “Push-Through” Shaft(φ 10mm or Less) and Chuck grip 6~12mm, Flex-Coupling φ 6~16mm, 150,000 mPas  
 디지털 중/고점도용 강력교반기, 사용교반용 ; ①기본은 φ 6~12mm, ②관통은 φ 6~10mm, & ③별도의 Flex-Coupling 활용시 φ 6~16mm



Max. 80 Lit. (H<sub>2</sub>O) Hi-Torque Digital Overhead Stirrer, “HT-120DX” Package-set

- Made in Korea
- CE Certified
- PL(Product Liability) Insurance
- Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- 3.5:1 Ratio Worm-gear Motor
- “Push-Through” Shafts(φ 10mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - “Adjustable Height of Shaft”
- Patented Jog-Shuttle Control System \* Ideal for Middle-/High-Viscosity

Specifications & Ordering information

Spec.	Model	(1) “HT-50DX”	(2) “HT-120DX”
Stirring Capacity		Max. 50 Lit. (H <sub>2</sub> O)	Max. 80 Lit. (H <sub>2</sub> O)
Maximum Viscosity / Torque		100,000 mPas / 300 Ncm	150,000 mPas / 500 Ncm
Speed Range & Resolution		50 ~ 1,000 rpm, 1 rpm-Display / 1 rpm-Control	
Motor		Worm-Geared DC Motor (3.5:1 Ratio)	
Motor Rating (Input / Output)		83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Controller / Display		Digital Feedback Controller / Digital LCD with Back-Light Function	
Chuck Grip Capa. φ mm		dia φ 6~12mm Shafts	
“Push-Through” Shafts		dia φ 10mm or Less	
Permissible Temp. & Humidity		0 ~ 40 °C, 80%	
Safety Device / Material		Overload & Heat Protector for Motor / ABS and Aluminum	
Dimension & Weight		90 × 180 × h130mm, 3.5 kg	90 × 210 × h130mm, 4 kg
Packing Size & Gross Weight		320 × 300 × h180mm, 5 kg	320 × 300 × h180mm, 8 kg
Power Consumption		85 W	130 W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	



HT-120DX

Stand Package-set			
Cat. No.	230V	DH.WOS01052	DH.WOS01072
	120V	DH.WOS02052	DH.WOS02072
Price, Each. ₩			
Unit-only			
Cat. No.	230V	DH.WOS01051	DH.WOS01071
	120V	DH.WOS02051	DH.WOS02071
Price, Each. ₩			

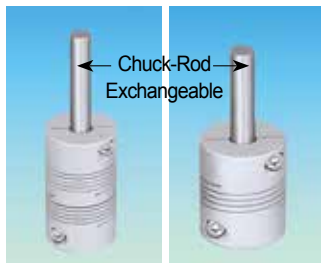
- \* “HT-50DX” Package-set : Complete with ① “HT-50DX” Stirrer Unit, ② “S732” Stainless-steel Impeller (Rod φ 8 × L500mm, 4-Blade φ 70mm), ③ “CL200” Clamp, and ④ “ST120” Wide Plate Stand (Rod φ 23 × L1000mm, Base w30 × d40cm)
- \* “HT-120DX” Package-set : Complete with ① “HT-120DX” Stirrer Unit, ② “S736” Stainless-steel Impeller (Rod φ 10 × L650mm, 4-Blade φ 90mm), ③ “CL200” Clamp, and ④ “ST200” Deluxe Safety Stand (Rod φ 23 × L1200mm, Base w39 × up to 75cm)

Flexible Couplings, for Safety Stirring of φ 6~16mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링

- Used to Compensate Any Vibrations Between The Motor and Stirring Shafts \* Shaft Fastening by Screw Clamp Band
- \* Made in Korea \* Made of DURALUMIN \* with Exchangeable STS Chucking Rod φ 8 / 10 / 12mm, L40mm

(1) UTILITY High-Flex. Metal Coupling, with 2 × Flex-band, for φ 6~16mm Stir-Shafts  
 Ideal for Low/High Viscosity and High/Low Speed

	Ea.	Price, ₩
SL.StiC011	Stir-Coupling, Hi-flex, φ 8mm Chuck-rod , for-φ 6mm Stir-Shaft , 56g , φ 25 × h44mm	
SL.StiC012	-φ 8mm Stir-Shaft , 53g , φ 25 × h44mm	
SL.StiC013	-φ 10mm Stir-Shaft, 49g , φ 25 × h44mm	
SL.StiC014	Stir-Coupling, Hi-flex, φ 10mm Chuck-rod, for-φ 8mm Stir-Shaft , 49g , φ 25 × h44mm	
SL.StiC015	-φ 10mm Stir-Shaft, 43g , φ 25 × h44mm	
SL.StiC016	-φ 12mm Stir-Shaft, 33g , φ 25 × h44mm	
SL.StiC017	Stir-Coupling, Hi-flex, φ 12mm Chuck-rod, for-φ 10mm Stir-Shaft, 33g , φ 25 × h44mm	
SL.StiC018	-φ 12mm Stir-Shaft, 123g, φ 32 × h60mm	
SL.StiC019	-φ 14mm Stir-Shaft, 120g, φ 32 × h60mm	
SL.StiC020	-φ 16mm Stir-Shaft, 118g, φ 32 × h60mm	



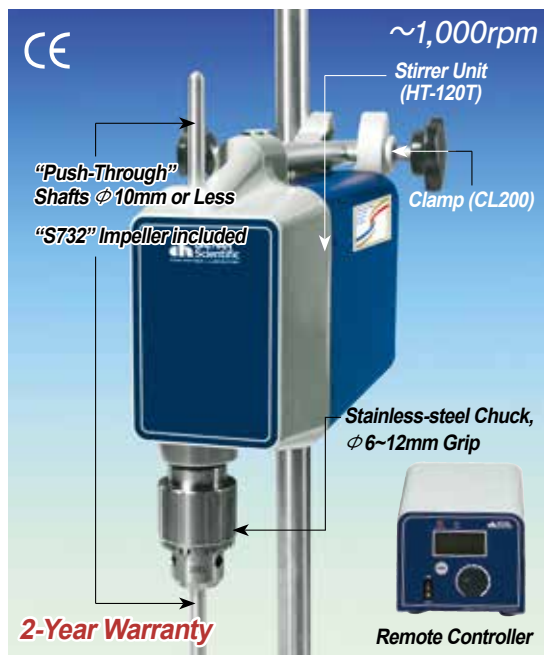
(1) Hi-flex Metal ; (2) Heavy-duty Metal for φ 6~16 Shafts; for φ 10~16 Shafts

(2) Heavy-duty Metal Coupling, with Short Flex-band, for φ 10~16mm Stir-Shafts  
 Low-Flexible type, Ideal for High Viscosity and Middle/Low Speed

	Ea.	Price, ₩
SL.StiC023	Stir-Coupling, Low-flex, φ 10mm Chuck rod, for-φ 10mm Stir-Shafts., 45g , φ 25 × h30	
SL.StiC024	-φ 12mm Stir-Shafts., , φ 25 × h30	
SL.StiC025	Stir-Coupling, Low-flex, φ 12mm Chuck rod, for-φ 12mm Stir-Shafts., 105g, φ 32 × h38	
SL.StiC026	-φ 14mm Stir-Shafts., , φ 32 × h38	
SL.StiC027	-φ 16mm Stir-Shafts., , φ 32 × h38	

※ Details of Wide-Range Couplings : See the “Stirrer Accessories”

DAIHAN-brand® Remote Control Hi-Torque Digital Overhead Stirrer “HT-T”, for Middle-/High-Viscosity, Max.50-/80-/100-Lit with “Push-Through” Shaft( $\phi$  10mm or Less) and Chuck grip 6~12mm, Flex-Coupling  $\phi$  6~16mm, 160,000 mPas, Max.1,000rpm  
 원격조절식 디지털 중/고점도용 강력교반기, 사용교반봉 ; ①기본은  $\phi$  6~12mm, ②관통은  $\phi$  6~10mm, & ③별도의 Flex-Coupling 활성시  $\phi$  8~16mm



Digital High-Torque Overhead Stirrer with Stirring Speed Remote Controller “HT-120T-Set”

- Made in Korea    ■ CE Certified    ■ PL (Product Liability) Insurance
- Ensure Minimize RPM Fluctuation : Very Stable Stirring Speed(RPM) Performance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System    ■ 3.5:1 Ratio Worm-gear Motor
- “Push-Through” Shafts( $\phi$  10mm or Less) ; Ideal for Raising or Lowering of the Stir-Shafts without Moving the Motor Head - “Adjustable Height of Shaft”
- Patented Jog-Shuttle Control System    \* Ideal for Middle-/High-Viscosity
- Included Remote-type Digital Feedback Controller :
  - “HT-50T”, “HT-120T” model : Included Stirring-speed Remote Controller
  - “HT-140T” model : Ideal for Reaction System.
 Included Stirring-speed Control and Temperature Display Remote Controller for Reactor Module.  
 (Can be Controlled Stirring Speed and Temperature Display of vessel)

Specifications & Ordering information

Spec.	Model	“HT-50T”	“HT-120T”	“HT-140T”
Stirring Capacity(H <sub>2</sub> O)		Max. 50 Lit.	Max. 80 Lit.	Max. 100 Lit.
Maximum Viscosity / Torque		100,000 mPas / 300 Ncm	150,000 mPas / 500 Ncm	160,000 mPas / 550 Ncm
Speed Range & Motor		50 ~ 1,000 rpm Worm-Geared Motor(3.5:1 Ratio)		50 ~ 800 rpm
Motor Rating (Input / Output)		83 / 75 W, 1/10 HP	130 / 120 W, 1/6 HP	
Timer & Alarm		99hr 59min (with Continuous run.), Timer-end Alarm		
Controller / Display		Digital Feedback Remote Controller / Digital LCD with Back-Light Function		
		Stirring Speed Remote Controller		Stirring Speed & Temp. Display Remote Controller
Max. Impeller Shaft Diameter		$\phi$ 10 mm		
Permissible Temp. & Humidity		0 ~ 40°C, 80%		
Safety Device		Overload & Heat Protector for motor		
Material		ABS and Aluminum		
Dimension & Weight*		155 × 180 × h110mm, 3.5 kg	155 × 230 × h110mm, 4 kg	
Packing Size & Gross Weight		580 × 340 × h230mm, 5 kg	580 × 340 × h230mm, 8 kg	
Power Consumption		75 W	120 W	
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz		



“HT-140T” Digital High-Torque Overhead Stirrer, (included Stirring Speed Remote Controller and Temp. Display) with Modular Reactor System

Stand Package-set				
Cat. No.	230V	DH.WOS01066	DH.WOS01076	-
	120V	DH.WOS02066	DH.WOS02076	-
Price, Each. ₩				-
Unit & Remote Controller				
Cat. No.	230V	DH.WOS01065	DH.WOS01075	DH.WOS01085
	120V	DH.WOS02065	DH.WOS02075	DH.WOS02085
Price, Each. ₩				

\* Weight of Remote Controller = 2.5kg    \*\* Other Specifications are available upon Customer's Request.

- \* “HT-50T” Package-set : Complete with ① “HT-50T” Stirrer Unit with Remote Controller ② “S732” Stainless-steel Impeller (Rod  $\phi$  8 × L500mm, 4-Blade  $\phi$  70mm) ③ “CL200” Clamp, and ④ “ST120” Wide Plate Stand(Rod  $\phi$  23 × L1000mm, Base w30 × d40cm)
- \* “HT-120T” Package-set : Complete with ① “HT-120T” Stirrer Unit with Remote Controller ② “S736” Stainless-steel Impeller (Rod  $\phi$  10 × L650mm, 4-Blade  $\phi$  90mm) ③ “CL200” Clamp, and ④ “ST200” Deluxe Safety Stand (Rod  $\phi$  23 × L1,200mm, Base 39 × up to 75cm)

※ Details of Wide-Range Couplings : See the “Stirrer Accessories”



Cat. No	Description	Articles
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DAIHAN-brand® Digital Jar Tester “JT-M6C”, 6-Paddle Stirrer for Flocculation Test, 300 rpm, with Certi. & Traceability with Programmable Digital Feedback Control, 6 Impellers, 6 Independent Light Source, up to 6 × 1Lit. Beakers  
 프로그램/디지털 자 테스터, 정밀 직류 기어드 모터와 특화된 타이밍벨트, 디지털 피드백 컨트롤



Jar Tester, φ8×L400mm Shaft “JT-M6C”

- Made in Korea    ■ CE Certified    ■ PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Ideal for Flocculation Testing in Water Treatment Laboratories
- 6 Independent Light Source for Each Stirring Point

- \* Deciding on Coagulant Chemistries    \* Digital Display for RPM, Power Bar-Graph and Status
- \* Digital Feedback Control using Microprocessor : Stable and Accurate Stirring Speed
- \* Geared DC Motor and Specially Designed Timing Belt used
- \* Stable and Accurate Stirring Speed by Feedback Control
- \* Digital LCD with Back-Light Function    \* Programmable Operation : 10 Steps, 6 Programs

Specifications & Ordering information

Spec.	Model	“JT-M6C”
6×Paddler (Stainless steel Shaft)		φ8×L400mm
		Straight Blade w75×h25mm
Stirring Capacity		6×1 Liter Beaker
Motor & Power		Geared DC Motor with Timing Belt (10:1 ratio), 40W
Speed & Accuracy		20~300 rpm, ±5 rpm
Timer		99hr 59min 59sec (Programmable)
Display		Digital LCD with Back-Light for RPM, Power Bar-Graph and Status
Controller		Programmable Digital Feedback Controller with Jog-Shuttle Switch (Turn + Push)
Program Function		10 Steps, 6 Programs, and Storage for Set Values : RPM and Timer
Florescent Lamp		20W×6 (Independent Light Source for Each Sample)
Dimension (w×d×h) (mm)		1,000×310×535
Safety Device		Overload & Over Heat Protector for motor
Others		CE Certified, PL(Product Liability) Insurance and Storage Function (RPM, Timer)
Packing and Gross Weight		1,120×430×h740mm, 69 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz

Cat. No.	230V	DH.WJT06020
Price, Each. ₩	120V	DH.WJT06021

※ 운임 약 ₩ 18,000 별도!



Geared DC Motor with Special Timing Belt

Stirrers, Accessories



SciLab® DURAN glass Stirring Rods, with Round Ends, φ7 ~ φ10, L200 ~ 650mm  
 Borosilicate Glass α 3.3, 글라스앤디 교반봉, 끝부분이 둥근모양, 긁힘방지

- Made of DURAN® Glass Rod : by SciLab Korea.    \* Rounded Ends for Extra Safety    \* Non-Scratching

(1) L200~350mm Length

SL.StiS201	Glass Rod, φ7, L200mm	Ea. Price, ₩
SL.StiS202	, L250mm	
SL.StiS203	, L300mm	
SL.StiS204	Glass Rod, φ8, L300mm	Ea. Price, ₩
SL.StiS205	, L350mm	

(2) L400~650mm Length

SL.StiS206	Glass Rod, φ8, L400mm	Ea. Price, ₩
SL.StiS207	, L500mm	
SL.StiS208	Glass Rod, φ10, L450mm	Ea. Price, ₩
SL.StiS209	, L500mm	
SL.StiS210	, L650mm	



Glass Double-ended Stirring Rods

SciLab® DURAN glass Double-ended Stirring Rods, φ6 ~ φ10mm, L200 ~ L500mm  
 Useful for Crushing Clumped Powder and Solids, Borosilicate Glass α 3.3

- Made of DURAN® Borosilicate Glass 3.3 Rod : by SciLab Korea.

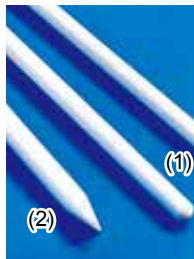
- \* With Rounded Button and Paddle Ends for Extra Safety and to Minimize Scratching
- \* Button End is Useful for Crushing Clumped Powder and Solids

(1) L200~300mm Length

SL.StiS211	2-end Rod, φ6, L200mm	Ea. Price, ₩
SL.StiS212	, L250mm	
SL.StiS213	, L300mm	
SL.StiS214	2-end Rod, φ9, L300mm	Ea. Price, ₩

(2) L350~500mm Length

SL.StiS215	2-end Rod, φ9, L350mm	Ea. Price, ₩
SL.StiS216	, L400mm	
SL.StiS217	2-end Rod, φ10, L450mm	Ea. Price, ₩
SL.StiS218	, L500mm	



**Cowie® PTFE Handy Stirring Rod, with Steel-core or Solid PTFE,  $\phi 6/8 \times L200 \sim 400$ mm with Steel-core or Solid PTFE,  $-200^{\circ}\text{C} \sim +280^{\circ}\text{C}$ , Teflon 핸디 교반봉**

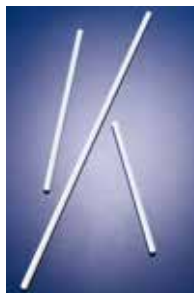
■ **Made in U.K.** \* Can be Bent into a Permanent Shape

(1) With PTFE/Steel Core

	Ea.	Price, ₩
<b>CW.003.250</b> PTFE/Steel Rod, $\phi 6 \times L250$ mm		
<b>CW.003.300</b> , $\phi 6 \times L300$ mm		
<b>CW.003.350</b> , $\phi 6 \times L350$ mm		
<b>CW.003.400</b> , $\phi 6 \times L400$ mm		

(2) With Solid PTFE, Tapered End

	Ea.	Price, ₩
<b>CW.003.1200</b> PTFE Rod, $\phi 8 \times L200$ mm		
<b>CW.003.1250</b> , $\phi 8 \times L250$ mm		
<b>CW.003.1300</b> , $\phi 8 \times L300$ mm		



**Azlon® PTFE Handy Stirring Rods,  $\phi 6$ mm, L150~400mm**

with Steel-Core, Heat/Corrosion Resistance,  $-200^{\circ}\text{C} \sim +260^{\circ}\text{C}$ , PTFE 핸디 교반봉

■ **Made in U.K.** \* Suitable for Stirring Even the Most Corrosive Liquids  
 \* Will Withstand  $260^{\circ}\text{C}$  \* PTFE Covered with Plain Ends  
 \* 6mm Diameter

	Ea.	Price, ₩
<b>Az.SWN542</b> PTFE/Steel Rod, $\phi 6 \times L150$ mm		
<b>Az.SWN544</b> , $\phi 6 \times L200$ mm		
<b>Az.SWN546</b> , $\phi 6 \times L250$ mm		

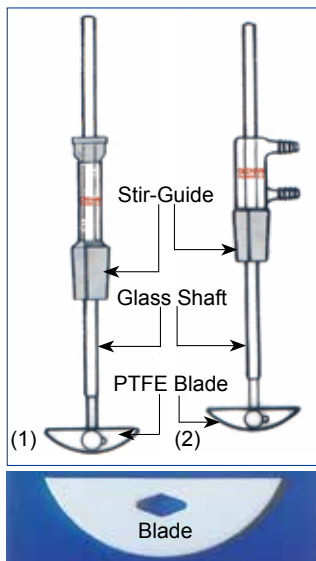
	Ea.	Price, ₩
<b>Az.SWN548</b> PTFE/Steel Rod, $\phi 6 \times L300$ mm		
<b>Az.SWN550</b> , $\phi 6 \times L350$ mm		
<b>Az.SWN552</b> , $\phi 6 \times L400$ mm		



**Hammacher® Stainless-steel String-Rods, for Bacteriological Applications, L195/150mm Anti-magnetic / Rustless / Acid resistant, 삼각 교반봉 / Drigalski-스패출러 겸용**

■ **Made in Germany** \* For even Spreading or Better Distribution Across Media  
 \* Made of Wironit™, 18/12 Stainless-steel (STS), Anti-magnetic, Rustless, Acid resistant, MP 1,400°C  
 \* Used to Mix Different Liquids together to Get a Homogen Liquid

	Ea.	Price, ₩
<b>HA.HWN072.19</b> Stirring-Rod, STS, single-ended, L195 mm		
<b>HA.HWN074.15</b> , L150 mm		



**SciLab® DURAN glass Stir-Guide Set, with PTFE Blade/Impeller for 50~10000ml stirring Glass, 유리 교반봉 셋트**

■ **Made of Original DURAN® Borosilicate Glass 3.3 : by SciLab Korea.**  
 \* Stir-Guide : od.  $\phi 15 \times$  id.  $\phi 10$ mm, internal Ground \* Shaft / Rod :  $\phi 10$ mm Ground.

(1) General-type

	Ea.	Price, ₩
<b>SL.StiS221</b> for-50~500 ml, L : 400 mm, ₩24/40, Blade w52 $\times$ h14 mm		
<b>SL.StiS222</b> -500~5000 ml, L : 450 mm, ₩24/40, Blade w76 $\times$ h19 mm		
<b>SL.StiS223</b> -500~5000 ml, L : 450 mm, ₩34/45, Blade w75 $\times$ h25 mm		
<b>SL.StiS224</b> -2000~10000 ml, L : 500 mm, ₩45/50, Blade w125 $\times$ h25 mm		

(2) Water Cooled-type

	Ea.	Price, ₩
<b>SL.StiS226</b> for-500~5000 ml, L : 450 mm, ₩24/40, Blade w76 $\times$ h19 mm		
<b>SL.StiS227</b> -500~5000 ml, L : 450 mm, ₩34/45, Blade w75 $\times$ h25 mm		
<b>SL.StiS228</b> -2000~10000 ml, L : 500 mm, ₩45/50, Blade w125 $\times$ h25 mm		

Spare ₩ Stirrer-Guide(Seal), with Internal Ground  $\phi 10$ mm

	Ea.	Price, ₩
<b>SL.StiS231</b> Stir-Guide, id $\phi 10 \times 2.5$ mm, ₩24/40		
<b>SL.StiS232</b> , ₩29/42		
<b>SL.StiS233</b> , ₩34/45		



**SciLab® DURAN glass Lubri-Stir-Guide/Seals, for  $\phi 8$  &  $\phi 10$ mm shafts, ₩24/40 & ₩34/45 with Red PBT Opentop Screwcap & PTFE/Silicone O-ring Seal, 루부리 교반 씬**


■ **Made of Original DURAN® PBT Screw Seal Kit / Borosilicate Glass 3.3 : by SciLab Korea**  
 \* The Cup : To Accept a Suitable Sealing Lubricants <Ex.> : Glycerol, Liquid Paraffin, Spindle Oil, etc.

(1) for  $\phi 8$ mm Stir-Shafts

	Ea.	Price, ₩
<b>SL.StiS235</b> Lubri-Stir-Guide, for $\phi 8$ mm Rod, GL18, ₩24/40		
<b>SL.StiS236</b> , GL25, ₩34/45		

(2) for  $\phi 10$ mm Stir-Shafts

	Ea.	Price, ₩
<b>SL.StiS237</b> Lubri-Stir-Guide, for $\phi 10$ mm Rod, GL18, ₩24/40		
<b>SL.StiS238</b> , GL25, ₩34/45		

Cat. No	Description	Articles
<b>SciLab® Vacuum Stirrer-Guide, with DURAN® PBT Opentop Cap &amp; PTFE/ Silicone O-Ring Seal and <math>\text{K}24/- \sim 45/-</math> Glass joints for <math>\phi 8 \sim 14</math>mm Shafts, with Red PBT Screw Grip System, Chemically Inert, 200°C Stable, 스크류 교반 싹</b>		
<b>■ Made of DURAN® Borosilicate Glass <math>\alpha 3.3</math> and Seal Kit with PBT GL-Opentop Screwcap / PTFE-Silicone O-Ring Seal : by SciLab Korea.</b>		
	(1) with ASTM $\text{K}24/40 \sim 45/50$ Joints	Ea. Price, ₩
	SL.StiS241 for $\phi 8$ mm Rod, GL25, 24/40	
	SL.StiS242, 29/42	
	SL.StiS243, 34/45	
	SL.StiS245 for $\phi 10$ mm Rod, GL25, 24/40	
	SL.StiS246, 29/42	
	SL.StiS247, GL32, 34/45	
	SL.StiS251 for $\phi 12$ mm Rod, GL32, 34/45	
	SL.StiS252, 45/50	
	SL.StiS253 for $\phi 14$ mm Rod, GL32, 34/45	
	SL.StiS254, 45/50	
	(2) with DIN $\text{K}24/29 \sim 45/40$ Joints	Ea. Price, ₩
	SL.StiS241D for $\phi 8$ mm Rod, GL25, 24/29	
	SL.StiS242D, 29/32	
SL.StiS243D, 34/35		
SL.StiS245D for $\phi 10$ mm Rod, GL25, 24/29		
SL.StiS246D, 29/32		
SL.StiS247D, GL32, 34/35		
SL.StiS251D for $\phi 12$ mm Rod, GL32, 34/35		
SL.StiS252D, 45/40		
SL.StiS253D for $\phi 14$ mm Rod, GL32, 34/35		
SL.StiS254D, 45/40		

SciLab-brand® PTFE Stirrer-Guide/Seals, for  $\phi 8 \sim \phi 14$ mm Shafts, with  $\text{K}24/-$ ,  $\text{K}29/-$ , and  $\text{K}34/-$ Joints with 2 Bearings / Screw-Retainer / Viton O-ring, All PTFE,  $-180 \sim +260^\circ\text{C}$  Stable, PTFE 교반 싹



■ Made in Korea ■ Common-use : to ASTM & DIN-type Socket Joints

(1) for  $\phi 8$ mm Stir-Shafts

	Ea. Price, ₩
SL.Ada405 for $\phi 8$ mm Rod, $\text{K}24/40$	
SL.Ada406, $\text{K}29/42$	
SL.Ada407, $\text{K}34/45$	

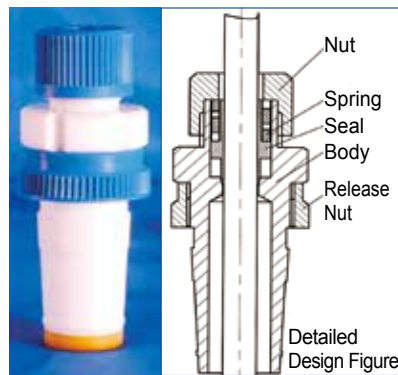
(2) for  $\phi 10$ mm Stir-Shafts

	Ea. Price, ₩
SL.Ada409 for $\phi 10$ mm Rod, $\text{K}24/40$	
SL.Ada410, $\text{K}29/42$	
SL.Ada411, $\text{K}34/45$	

(3) for  $\phi 12$  &  $14$ mm Stir-Shafts

	Ea. Price, ₩
SL.Ada413 PTFE Stir-Guide, for $\phi 12$ mm Rod, $\text{K}34/45$	
SL.Ada415, for $\phi 14$ mm Rod, $\text{K}34/45$	

$\text{K}$ Joint-Screw-NPT-PTFE/PEEK High-class Vacuum Stirrer Guide, with ASTM/DIN  $\text{K}$ Glass Cone Joint, for  $\phi 8 \sim 16$ mm Shafts Ideal for Middle/Low-Vacuum, 500/800rpm, Chemically Inert,  $-200^\circ\text{C} \sim +280^\circ\text{C}$  stable, 고품질 진공  $\text{K}$ 교반 싹



for Low/Middle Vacuum/Pressure

■ Made of UK. ■ Suitable for Glass Same Size Socket of ASTM or DIN

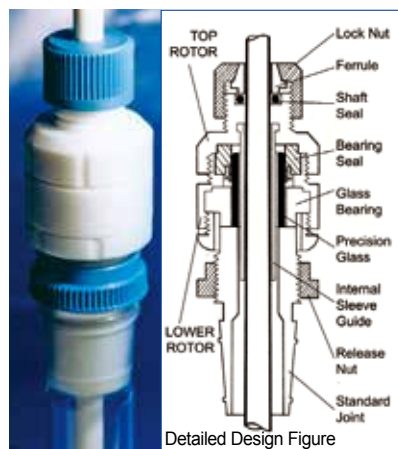
\* PTFE in the only Media Contact Material

(1) for ASTM Socket Joint Sizes ; for  $\phi 8 \sim \phi 16$ mm Shaft

	Ea. Price, ₩
CW.005.0.0824 Stirrer Seal, USA-type, for- $\phi 8$ mm Shafts, $\text{K}24/40$ Joint	
CW.005.0.1024 - $\phi 10$ mm Shafts, $\text{K}24/40$ Joint	
CW.005.0.1034 - $\phi 10$ mm Shafts, $\text{K}34/45$ Joint	
CW.005.0.1434 - $\phi 14$ mm Shafts, $\text{K}34/45$ Joint	
CW.005.0.1634 - $\phi 16$ mm Shafts, $\text{K}34/45$ Joint	

(2) for DIN/ISO Socket Joint Sizes ; for  $\phi 8 \sim \phi 16$ mm Shaft

	Ea. Price, ₩
CW.005.00.0824 Stirrer Seal, EUROPE-type, for- $\phi 8$ mm Shafts, $\text{K}24/29$ Joint	
CW.005.00.1029 - $\phi 10$ mm Shafts, $\text{K}29/32$ Joint	
CW.005.00.1045 - $\phi 10$ mm Shafts, $\text{K}45/40$ Joint	
CW.005.00.1434 - $\phi 14$ mm Shafts, $\text{K}34/35$ Joint	
CW.005.00.1645 - $\phi 16$ mm Shafts, $\text{K}45/40$ Joint	



for High Vacuum / Pressure

Cowie® High-Vacuum / Pressure Stirrer Guides,  $\text{K}$  PTFE/PEEK/Glass-Bearing Seal for  $\phi 8 \sim 16$ mm Shafts, Useable up to 800rpm, 280°C stable, 고진공/압력용 교반 싹

■ Made in U.K. ■ High Vacuum 5mmHg & Pressure 3~5psi Performance

\* Anti-Whip, Reduced Vibration, No-Shedding, Self-Releasing Joint Ring, Totally Inert.

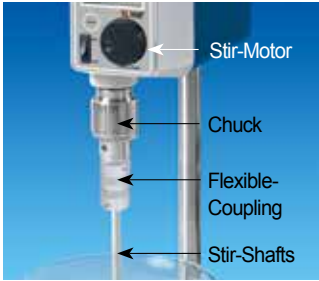
\* Specially Fabricated Glass Ball-Bearing & PTFE/PEEK Seal : Useable up to 800rpm

(1) for ASTM Socket Joint Sizes ; for  $\phi 8 \sim 16$  mm Shafts

	Ea. Price, ₩
CW.005.1047 Stirrer Seal, USA-type, for- $\phi 8$ mm Shafts, $\text{K}24/40$ Joint	
CW.005.1057 - $\phi 10$ mm Shafts, $\text{K}24/40$ Joint	
CW.005.1067 - $\phi 10$ mm Shafts, $\text{K}29/42$ Joint	
CW.005.1097 - $\phi 14$ mm Shafts, $\text{K}34/45$ Joint	
CW.005.1117 - $\phi 16$ mm Shafts, $\text{K}34/45$ Joint	

(2) for DIN/ISO Socket Joint Sizes ; for  $\phi 10 \sim 16$  mm Shafts

	Ea. Price, ₩
CW.005.2067 Stirrer Seal, EUROPE-type, for- $\phi 10$ mm Shafts, $\text{K}29/32$ Joint	
CW.005.2077 - $\phi 10$ mm Shafts, $\text{K}34/35$ Joint	
CW.005.2097 - $\phi 14$ mm Shafts, $\text{K}34/35$ Joint	
CW.005.2127 - $\phi 16$ mm Shafts, $\text{K}45/40$ Joint	



**Flexible Couplings, for Safety Stirring of  $\phi$  6~16mm Shafts of Overhead Stirrers for Stirrers between Stirring Motor and Shaft, 안전교반용 유연성 커플링**

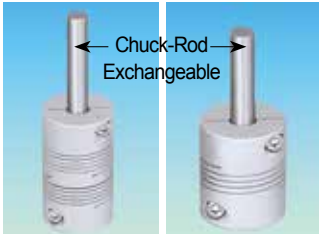
■ **Used to Compensate Any Vibrations Between The Motor and Stirring Shafts**

\* Made in Korea \* Shaft Fastening by Screw Clamp Band \* Made of DURALUMIN  
\* with Exchangeable STS Chucking Rod  $\phi$  8 / 10 / 12mm, L40mm

**(1) UTILITY High-Flex. Metal Coupling, with 2  $\times$  Flex-band, for  $\phi$  6~16mm Stir-Shafts  
Ideal for Low/High Viscosity and High/Low Speed**

SL.StiC011	Stir-Coupling, Hi-flex, $\phi$ 8mm Chuck-rod, for- $\phi$ 6mm Stir-Shaft, 56g, $\phi$ 25 $\times$ h44mm
SL.StiC012	- $\phi$ 8mm Stir-Shaft, 53g, $\phi$ 25 $\times$ h44mm
SL.StiC013	- $\phi$ 10mm Stir-Shaft, 49g, $\phi$ 25 $\times$ h44mm
SL.StiC014	Stir-Coupling, Hi-flex, $\phi$ 10mm Chuck-rod, for- $\phi$ 8mm Stir-Shaft, 49g, $\phi$ 25 $\times$ h44mm
SL.StiC015	- $\phi$ 10mm Stir-Shaft, 43g, $\phi$ 25 $\times$ h44mm
SL.StiC016	- $\phi$ 12mm Stir-Shaft, 33g, $\phi$ 25 $\times$ h44mm
SL.StiC017	Stir-Coupling, Hi-flex, $\phi$ 12mm Chuck-rod, for- $\phi$ 10mm Stir-Shaft, 33g, $\phi$ 25 $\times$ h44mm
SL.StiC018	- $\phi$ 12mm Stir-Shaft, 123g, $\phi$ 32 $\times$ h60mm
SL.StiC019	- $\phi$ 14mm Stir-Shaft, 120g, $\phi$ 32 $\times$ h60mm
SL.StiC020	- $\phi$ 16mm Stir-Shaft, 118g, $\phi$ 32 $\times$ h60mm

Ea.	Price, ₩
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(1) Hi-flex Metal for  $\phi$  6~16 Shafts ; (2) Heavy-duty Metal for  $\phi$  10~16 Shafts

**(2) Heavy-duty Metal Coupling, with Short Flex-band, for  $\phi$  10~16mm Stir-Shafts  
Low-Flexible type, Ideal for High Viscosity and Middle/Low Speed**

SL.StiC023	Stir-Coupling, Low-flex, $\phi$ 10mm Chuck rod, for- $\phi$ 10mm Stir-Shafts., 45g, $\phi$ 25 $\times$ h30
SL.StiC024	- $\phi$ 12mm Stir-Shafts., $\phi$ 25 $\times$ h30
SL.StiC025	Stir-Coupling, Low-flex, $\phi$ 12mm Chuck rod, for- $\phi$ 12mm Stir-Shafts., 105g, $\phi$ 32 $\times$ h38
SL.StiC026	- $\phi$ 14mm Stir-Shafts., $\phi$ 32 $\times$ h38
SL.StiC027	- $\phi$ 16mm Stir-Shafts., $\phi$ 32 $\times$ h38

Ea.	Price, ₩
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(3) Rubber Based for  $\phi$  7~10 Shafts

**(3) Very Flexible Rubber Based Coupling, for  $\phi$  7~10mm Shafts  
Especially, Ideal for GLASS Shafts and Low/Middle Viscosity & High Speed**

\* Made in Germany \* Shaft Fastening by Screw Compression Rubber Ring Pad.  
\* with  $\phi$  10 $\times$ L40mm Exchangeable Stainless-steel Chucking Rod

**WL.1445000** Stir-Coupling, Rubber Based, for  $\phi$  7~ $\phi$  10mm Shafts, 72.5g, Body  $\phi$  46 $\times$ h80mm

Ea.	Price, ₩
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**SciLab® Stainless-steel Stirring Shafts, for Lab & Industrial Overhead Stirrers, Rod  $\phi$  8~12  $\times$  L500~1000mm  
Ideal for Universal-use of Wide-range Speed & Viscosity, 스텐레스 교반봉 / 임펠러**



(1) 3-bladed Propeller-type Universal-use

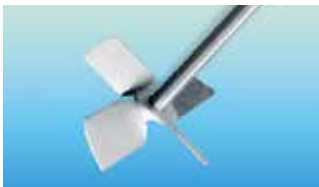
■ **Made in Korea** ■ **Made of Rustless Stainless-steel #304**  
■ **Recommended to use with Flexible Coupling for Gentle Stirring & Safety Working**  
■ **The Rod may be Cut to Any Length with a Hacksaw**  
■ **Good Finished : Surface & Stirring Center**

**(1) 3-bladed Propeller-type, ideal for Universal-use in Middle/High Speed  
with Rod  $\phi$  8~12  $\times$  L500~1000, Rotor  $\phi$  50~140 mm, and Good for Low/Middle Viscosity**

\* Designed for Efficient Flow : mixed from Top to Bottom of Vessel  
\* Minimum Shearing

SL.StiS721	Stir-Shaft, "S721", #304, Rod- $\phi$ 8 $\times$ L500, Rotor- $\phi$ 50 $\times$ h15mm
SL.StiS722	, "S722", - $\phi$ 8 $\times$ L500, - $\phi$ 60 $\times$ h15mm
SL.StiS723	, "S723", - $\phi$ 8 $\times$ L650, - $\phi$ 80 $\times$ h20mm
SL.StiS724	, "S724", - $\phi$ 8 $\times$ L650, - $\phi$ 100 $\times$ h24mm
SL.StiS726	Stir-Shaft, "S726", #304, Rod- $\phi$ 10 $\times$ L500, Rotor- $\phi$ 60 $\times$ h15mm
SL.StiS727	, "S727", - $\phi$ 10 $\times$ L650, - $\phi$ 80 $\times$ h20mm
SL.StiS728	, "S728", - $\phi$ 10 $\times$ L800, - $\phi$ 100 $\times$ h24mm
SL.StiS729	Stir-Shaft, "S729", #304, Rod- $\phi$ 12 $\times$ L1000, Rotor- $\phi$ 140 $\times$ h30mm

Ea.	Price, ₩
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(2) 4-bladed Propeller-type Standard-model

**(2) Standard 4-bladed Propeller-type, ideal for Low/Middle Speed & Viscosity  
Popular-model, with Rod  $\phi$  8~12  $\times$  L500~1000, Rotor  $\phi$  50~140 mm, 45° Angled**

SL.StiS731	Stir-Shaft, "S731", #304, Rod- $\phi$ 8 $\times$ L500, Rotor- $\phi$ 50 $\times$ h20mm
SL.StiS732	, "S732", - $\phi$ 8 $\times$ L500, - $\phi$ 70 $\times$ h25mm
SL.StiS733	, "S733", - $\phi$ 8 $\times$ L650, - $\phi$ 90 $\times$ h35mm
SL.StiS734	, "S734", - $\phi$ 8 $\times$ L650, - $\phi$ 110 $\times$ h35mm
SL.StiS736	Stir-Shaft, "S736", #304, Rod- $\phi$ 10 $\times$ L650, Rotor- $\phi$ 90 $\times$ h35mm
SL.StiS737	, "S737", - $\phi$ 10 $\times$ L800, - $\phi$ 110 $\times$ h40mm
SL.StiS738	, "S738", - $\phi$ 10 $\times$ L1000, - $\phi$ 110 $\times$ h40mm
SL.StiS739	Stir-Shaft, "S739", #304, Rod- $\phi$ 12 $\times$ L1000, Rotor- $\phi$ 140 $\times$ h40mm

Ea.	Price, ₩
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Cat. No	Description	Articles
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<Continued From...SciLab® Stainless-steel Stirring Shafts>

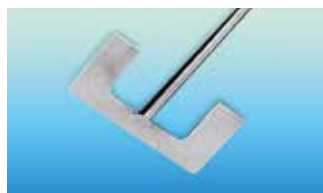


(3) 4-bladed Dissolver Diamond-type

(3) 4-bladed Dissolver Diamond-type, Good for Particle Reduction in Middle/High Speed with Rod  $\phi$  8 & 10  $\times$  L500~650, Rotor  $\phi$  70~110 mm, and Good for Low/Middle Viscosity

SL.StiS741	Stir-Shaft, "S741", #304, Rod- $\phi$ 8 $\times$ L500, Rotor- $\phi$ 70 $\times$ h20mm
SL.StiS742	, "S742", - $\phi$ 8 $\times$ L500, - $\phi$ 90 $\times$ h25mm
SL.StiS743	, "S743", - $\phi$ 8 $\times$ L650, - $\phi$ 110 $\times$ h25mm
SL.StiS744	Stir-Shaft, "S744", #304, Rod- $\phi$ 10 $\times$ L650, Rotor- $\phi$ 110 $\times$ h25mm

Ea. Price, ₩



(4) Heavy-duty Anchor-type

(4) Heavy-duty Anchor-type, ideal for Middle/High Viscosity, Rod  $\phi$  8~12mm Good for Low/Middle Speed, Rotor  $\phi$  70~180 mm

SL.StiS751	Stir-Shaft, "S751", #304, Rod- $\phi$ 8 $\times$ L500, Rotor- $\phi$ 70 $\times$ h14mm
SL.StiS752	, "S752", - $\phi$ 8 $\times$ L650, - $\phi$ 90 $\times$ h16mm
SL.StiS753	Stir-Shaft, "S753", #304, Rod- $\phi$ 10 $\times$ L650, Rotor- $\phi$ 90 $\times$ h16mm
SL.StiS754	, "S754", - $\phi$ 10 $\times$ L800, - $\phi$ 140 $\times$ h25mm
SL.StiS755	, "S755", - $\phi$ 10 $\times$ L1000, - $\phi$ 160 $\times$ h30mm
SL.StiS757	Stir-Shaft, "S757", #304, Rod- $\phi$ 12 $\times$ L1000, Rotor- $\phi$ 180 $\times$ h30mm

Ea. Price, ₩



(5) Heavy-duty Helical Ribbon-type

(5) Heavy-duty Helical Ribbon-type, ideal for Middle/High Viscosity and Lab~Industry **NEW** with Rod  $\phi$  8~12mm, L500~1000, Rotor  $\phi$  60~190mm, Good for Reaction-system.

- \* Patented Helical Ribbon High Efficient Mixing Performance
- \* Generates Axial Flow.
- \* Designed for Middle / High Viscosity. High Flow Rate and Efficient Mixing.
- \* For Homogeneous Mixing and Medium is Conveyed from the Bottom upwards.

SL.Sti761	Stir-Shaft, "S761", #304, Rod- $\phi$ 8 $\times$ L500, Rotor- $\phi$ 60 $\times$ h70mm
SL.Sti762	, "S762", - $\phi$ 8 $\times$ L650, - $\phi$ 80 $\times$ h90mm
SL.Sti763	Stir-Shaft, "S763", #304, Rod- $\phi$ 10 $\times$ L650, Rotor- $\phi$ 115 $\times$ h130mm
SL.Sti764	, "S764", - $\phi$ 10 $\times$ L800, - $\phi$ 125 $\times$ h165mm
SL.Sti765	, "S765", - $\phi$ 10 $\times$ L1000, - $\phi$ 160 $\times$ h215mm
SL.Sti766	Stir-Shaft, "S766", #304, Rod- $\phi$ 12 $\times$ L1100, Rotor- $\phi$ 190 $\times$ h400mm

Ea. Price, ₩

SciLab® PTFE Stirring Shafts, with Stainless-steel Insert, for Lab & Industrial Overhead Stirrers, Rod  $\phi$  8~14  $\times$  L500~1100mm  
Ideal for PURE Working & Universal-use of Wide-range Speed & Viscosity, Chemically Inert, -200°C +280°C-stable, PTFE 교반봉/임펠러

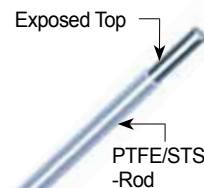
■ Made in Korea ■ Recommended to Use with a Flexible Coupling for Gentle Stirring & Safety Working.

- The PTFE Rod with Stainless Steel Insert : (1) OD  $\phi$  8mm with  $\phi$  6mm Steel Insert-" $\phi$  8/6", (2) OD  $\phi$  10mm with  $\phi$  8mm Steel Insert-" $\phi$  10/8", (3) OD  $\phi$  12mm with  $\phi$  10mm Steel Insert-" $\phi$  12/10", and OD  $\phi$  14mm with  $\phi$  12mm Steel Insert-" $\phi$  14/12".

■ Rod may be Cut to Any Length with a Hacksaw.

■ Ideal for PURE-Working / Chemically Inert / Non-Contaminating / Thermally Stable, -200°C +280°C-stable.

■ Exposed Top Rod 4~5cm (Stainless steel Core) : For Strong Clamping in the Stir-Chuck or Flexible Coupling. ⇒



(1) 2-bladed Centrifugal-type  
Good for Narrow-Neck  
<ex>  $\mathbb{F}$ 24/- &  $\mathbb{F}$ 34/-Joint neck

(1) 2-bladed Centrifugal-type, ideal for  $\mathbb{F}$ 24/- &  $\mathbb{F}$ 34/-Joints(Narrow) Necks & Low Viscosity with Rod  $\phi$  8 & 10  $\times$  L500~650, Rotor  $\phi$  50~100 mm, and Good for Middle/High Speed

SL.StiS403	Stir-Shaft, PTFE, Rod- $\phi$ 8/6 $\times$ L500, Swingrotor- $\phi$ 50 $\times$ h14mm, fit to $\mathbb{F}$ 24/-joints
SL.StiS404	- $\phi$ 8/6 $\times$ L500, - $\phi$ 70 $\times$ h17mm, fit to $\mathbb{F}$ 24/-joints
SL.StiS405	- $\phi$ 8/6 $\times$ L650, - $\phi$ 100 $\times$ h24mm, fit to $\mathbb{F}$ 34/-joints
SL.StiS406	Stir-Shaft, PTFE, Rod- $\phi$ 10/8 $\times$ L650, Swingrotor- $\phi$ 100 $\times$ h24mm, fit to $\mathbb{F}$ 34/-joints

Ea. Price, ₩



(2) Standard 4-bladed Propeller-type

(2) Standard 4-bladed Propeller-type, ideal for Low/Middle Speed and High Viscosity Good for Reactors, with Rod  $\phi$  8~14  $\times$  L500~1100 and Rotor  $\phi$  50~140 mm, 45° Angled

- \* Standard Stirring Shafts.
- \* Designed for Efficient Mixing : from Top to Bottom of Vessel

SL.StiS410	Stir-Shaft, PTFE, Rod- $\phi$ 8/6 $\times$ L500, Rotor- $\phi$ 50 $\times$ h20mm
SL.StiS411	- $\phi$ 8/6 $\times$ L500, - $\phi$ 70 $\times$ h25mm
SL.StiS412	- $\phi$ 8/6 $\times$ L650, - $\phi$ 70 $\times$ h25mm
SL.StiS413	Stir-Shaft, PTFE, Rod- $\phi$ 10/8 $\times$ L650, Rotor- $\phi$ 90 $\times$ h35mm, Good for 5~10 Lit Vessels
SL.StiS414	- $\phi$ 10/8 $\times$ L800, - $\phi$ 90 $\times$ h35mm, Good for 10~20 Lit Vessels
SL.StiS415	- $\phi$ 10/8 $\times$ L1000, - $\phi$ 90 $\times$ h35mm, Good for 20~50 Lit Vessels
SL.StiS416.1	Stir-Shaft, PTFE, Rod- $\phi$ 12/10 $\times$ L800, Rotor- $\phi$ 110 $\times$ h40mm, Good for 10~20 Lit Vessels
SL.StiS416.2	- $\phi$ 12/10 $\times$ L1000, - $\phi$ 110 $\times$ h40mm, Good for 30~50Lit Vessels
SL.StiS416.3	- $\phi$ 12/10 $\times$ L1000, - $\phi$ 140 $\times$ h40mm, Good for 30~80Lit Vessels <b>New</b>
SL.StiS417	Stir-Shaft, PTFE, Rod- $\phi$ 14/12 $\times$ L1100, Exchangeable Rotor- $\phi$ 140 $\times$ h40mm, Good for 50~100Lit Reactors

Ea. Price, ₩

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<Continued From...SciLab® PTFE Stirring Shafts>



(3) with 2-Rotors, Propeller-type

(3) with 2-Exchangeable Rotors of 4-bladed Propeller-type, for 20~100Lit Reaction Vessels  
Ideal for High Viscosity/ Large Volume Stirring, with Rod  $\phi$  12 & 14  $\times$  L 800~1100 mm

\* Translucent PFA Shaft with Stainless-steel Insert, Totally Chemical Inert

		Ea. Price, ₩
SL.StiS416.4	Stir-Shaft, PTFE, for 20~30Lit, Rod- $\phi$ 12/10 $\times$ L800, 2-Rotors of (1) Exchangeable <b>New</b> 1st Rotor $\phi$ 110 $\times$ h40 and (2) Bottom Rotor $\phi$ 110 $\times$ h40mm	
SL.StiS418	Stir-Shaft, PTFE, for 30~80Lit, Rod- $\phi$ 12/10 $\times$ L1000, 2-Rotors of (1) Exchangeable 1st Rotor $\phi$ 110 $\times$ h40 and (2) Bottom Rotor $\phi$ 140 $\times$ h40mm	
SL.StiS419	Stir-Shaft, PTFE, for 50~100Lit, Rod- $\phi$ 14/12 $\times$ L1100, 2-Rotors of (1) Exchangeable 1st Rotor $\phi$ 140 $\times$ h40 and (2) Bottom Rotor $\phi$ 140 $\times$ h40mm	



(4) Heavy-duty Anchor-type

(4) Heavy-duty Anchor-type, ideal for Middle/High Viscosity, Rod  $\phi$  8~12mm  
Good for Low/Middle Speed, Rotor  $\phi$  80~140 mm ■ **Made in UK.**

		Ea. Price, ₩
CW.005.340.82	Shaft, $\phi$ 8 $\times$ L400mm Rod, $\phi$ 80mm Anchor	
CW.005.350.82	, $\phi$ 8 $\times$ L500mm Rod, $\phi$ 80mm Anchor	
CW.005.355.2	, $\phi$ 10 $\times$ L550mm Rod, $\phi$ 100mm Anchor	
CW.005.0365.102	, Ex-type, $\phi$ 10 $\times$ L650mm Rod, $\phi$ 140mm Anchor	
CW.005.0375.102	, $\phi$ 10 $\times$ L750mm Rod, $\phi$ 140mm Anchor	
CW.005.0375.122	, $\phi$ 12 $\times$ L750mm Rod, $\phi$ 140mm Anchor	
CW.005.03100.122	, $\phi$ 12 $\times$ L1000mm Rod, $\phi$ 140mm Anchor	



(1) Glass-shafts



(2) PTFE-shafts

**GLASS and PTFE/Steel Cored Shafts and PTFE Blades, Exchangeable**  
Ideal for  $\text{ㄱ}24/-$  &  $\text{ㄱ}34/-$ Joint (Narrow) Necks, 교체형 글라스 & PTFE 교반봉과 임펠러

\* Glass Shafts : DURAN Borosilicate Glass 3.3 Rod  $\phi$  8 & 10mm : Made in Korea

\* PTFE Encapsulated Stainless-steel Shafts  $\phi$  8 & 12mm, -200 $^{\circ}$ C +280 $^{\circ}$ C Stable : Made in U.K.

(1) GLASS-Shafts,  $\phi$  8/10, L400~600mm

		Ea. Price, ₩		Ea. Price, ₩
SL.StiS260	Glass-Shaft, $\phi$ 8, L400mm		SL.StiS265	Glass-Shaft, $\phi$ 10, L400mm
SL.StiS261	, L500mm		SL.StiS266	, L500mm
SL.StiS262	, L600mm		SL.StiS267	, L600mm

(2) Cowie® PTFE/Steel Cored Shafts,  $\phi$  8 & 12mm, L400~750mm, without Blade

\* The Rod may by Cut to Any Length with a Hacksaw

		Ea. Price, ₩		Ea. Price, ₩
CW.005.540.81	Shaft, PTFE, $\phi$ 8 $\times$ L400mm		CW.005.565.1	Shaft, PTFE, $\phi$ 10 $\times$ L650mm
CW.005.550.81	, $\phi$ 8 $\times$ L500mm		CW.005.0575.101	, $\phi$ 10 $\times$ L750mm
CW.005.555.1	, $\phi$ 10 $\times$ L550mm		CW.005.0575.121	, $\phi$ 12 $\times$ L750mm



(3) PTFE Blade, with  $\phi$  6.5 Connect-hole

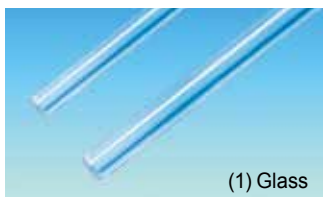
(3) Cowie® PTFE Stir-Blades, Thick-3.2mm, Ideal for  $\text{ㄱ}24/-$  &  $\text{ㄱ}34/-$ Joint Necks

① with Square End, Fit to  $\text{ㄱ}24/-$ Joints

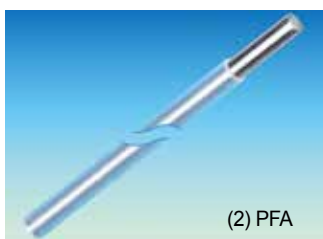
		Ea. Price, ₩
CW.002.052.1	Blade, Squ. 52 $\times$ h14mm	
CW.002.076.1	. 76 $\times$ h19mm	
CW.002.090.1	. 90 $\times$ h28mm	

② with Plain End, Fit to  $\text{ㄱ}34/-$ Joints

		Ea. Price, ₩
CW.002.1065.1	Blade, Pla. 65 $\times$ h25mm	
CW.002.1075.1	. 75 $\times$ h25mm	
CW.002.1105.1	. 105 $\times$ h25mm	
CW.002.1125.1	. 125 $\times$ h25mm	
CW.002.1150.1	. 150 $\times$ h25mm	



(1) Glass



(2) PFA

**Glass & PFA (Stainless-steel Insert) PLAIN Shafts, for Exchangeable Rotors**  
for Exchangeable Rotors, 글라스 및 스텐심 PFA 교반봉

■ **Made in Korea**

(1) DURAN® Glass Shaft, Round Ends, Boro. Glass 3.3,  $\phi$  8 & 10, L400~650mm

\* Good for Eco-Pure Work

		Ea. Price, ₩		Ea. Price, ₩
SL.StiS206	Glass Shaft, $\phi$ 8 $\times$ L400mm		SL.StiS208	Glass Shaft, $\phi$ 10 $\times$ L450mm
SL.StiS207	, $\phi$ 8 $\times$ L500mm		SL.StiS209	, $\phi$ 10 $\times$ L550mm
			SL.StiS210	, $\phi$ 10 $\times$ L650mm

(2) PFA with Stainless-steel Insert Shafts,  $\phi$  8~14 $\times$ L500~1100mm

\* The Rod may by Cut to Any Length with a Hacksaw

\* Translucent PFA, Totally Chemical Inert, -200 $^{\circ}$ C +260 $^{\circ}$ C

		Ea. Price, ₩		Ea. Price, ₩
SL.StiS451	Shaft, PFA, $\phi$ 8/6 $\times$ L500mm		SL.StiS455	Shaft, PFA, $\phi$ 10/8 $\times$ L800mm
SL.StiS452	, $\phi$ 8/6 $\times$ L650mm		SL.StiS456	, $\phi$ 12/10 $\times$ L800mm
SL.StiS453	, $\phi$ 8/6 $\times$ L800mm		SL.StiS457	, $\phi$ 12/10 $\times$ L1000mm
SL.StiS454	, $\phi$ 10/8 $\times$ L650mm		SL.StiS458	, $\phi$ 14/12 $\times$ L1100mm

Cat. No	Description	Articles
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(1) "Screw Propeller" only  
φ50 ~ φ140mm



(2) "Turbine" Rotor Only  
φ50 ~ φ150mm

### All PTFE Adjustable / Exchangeable Rotors, for Shaft φ8~16mm for Shaft φ8~16mm, PTFE 교체형/조절식 교반 임펠러

■ The Exchangeable Rotors fit to φ8~16mm Rods and Lock in place with Screw Nut

(1) SciLab® Exchangeable "Screw Propeller" Rotor, 45° Angled 4 Blade

\* Made in Korea

Code	Description	Ea.	Price, ₩
SL.StiS461	Rotor, PTFE, for Shaft-φ8, Rotor-φ50×h20mm		
SL.StiS462	-φ70×h25mm		
SL.StiS463	, for Shaft-φ10, Rotor-φ70×h25mm		
SL.StiS464	-φ90×h35mm		
SL.StiS465	, for Shaft-φ12, Rotor-φ110×h40mm		
SL.StiS466	, for Shaft-φ14, Rotor-φ140×h40mm		

(2) Cowie® Exchangeable "Turbine" Rotor only, φ50~150mm

\* Made in UK.

Code	Description	Ea.	Price, ₩
CW.005.90850	PTFE Turbine, for Shaft-φ8mm, Rotor-φ50mm		
CW.005.90875	-φ75mm		
CW.005.91075	, for Shaft-φ10mm, Rotor-φ75mm		
CW.005.910100	-φ100mm		
CW.005.912100	, for Shaft-φ12mm, Rotor-φ100mm		
CW.005.916150	, for Shaft-φ16mm, Rotor-φ150mm		



(1) (2) (3) (4)

### Kartell® PP & PVC Plastic Stirring Shafts, PP-Blade, PVC-Rod with Steel Core, Rod φ8×L350mm Good for Acid & Chemicals resistance, PP & PVC 플라스틱 교반봉/임펠러

■ Supplied by Kartell® in Italy

■ Ideal for Acids, Chemicals and Anti-corrosion

■ Material : PP-Blade, PVC-Rod with Steel Core: φ8×L350 mm

Code	Description	Ea.	Price, ₩
KA.428	(1) Stirring Paddle, with 2 fixed blade (w39×h15 mm), Rod φ8×L350mm		
KA.430	(2) , "U" shaped blade (w65×h78 mm), Rod φ8×L350mm		
KA.431	(3) , with 2 flexible paddle (Swing w57 mm), Rod φ8×L350mm		
KA.432	(4) , with 2 flexible paddle (Swing w98 mm), Rod φ8×L350mm		



(1) "ST110"

(2) "ST120"

### DAIHAN-brand® Premium Plate Stand, High Quality with Stainless-steel Rod φ16/23mm

■ Made in Korea

■ High-Quality Plate-type Stand with Support Rod

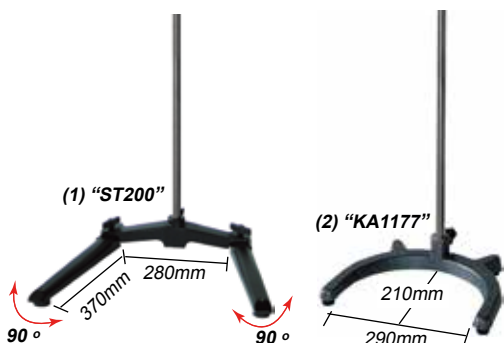
■ Wide and Thick Steel Plate for Safety Mechanism

■ Silicon Rubber Pad adhered

■ with 1.5P Screwed Support Rod made of Stainless-steel specially designed

Code	Description	Ea.	Price, ₩
DH.WOS501510	(1) "ST110" Standard Steel Plate Stand, Powder Coated, with Base Plate/Silicone Pad, for Stirrer and Homogenizer, Base Plate w20×35cm "RD 511" 1.5P Screw Rod, φ16×h800 mm		

Code	Description	Ea.	Price, ₩
DH.WOS501515	(2) "ST120" Wide Steel Plate Stand, Powder Coated, with Base Plate/Silicone Pad, for Stirrer and Homogenizer, Base Plate w30×40 cm "RD 522" 1.5P Screw Rod, φ23×h1000 mm		



(1) "ST200"

(2) "KA1177"

### DAIHAN-brand® Heavy Duty Safety Stand, High Safety with Stainless-steel Rod φ23mm

■ Made in Korea

■ Never Fall Down by Safety Mechanism.

■ High-Safety H-/U-type Stand with Stainless-steel Support Rod

■ Adjustable Foot Distance (ST200)

(1) Adjustable Foot Distance Deluxe Safety Stand

Code	Description	Ea.	Price, ₩
DH.WOS501520	Deluxe Safety Stand, "ST200", H-type Base w39~75cm adjust, Rod φ23×h1200mm		

(2) U-type Safety Stand

Code	Description	Ea.	Price, ₩
DH.WOS1177	Safety Stand, "KA1177", U-type Base w34/29×27/21cm, Rod φ23×h800mm		



Clamp "CL200"

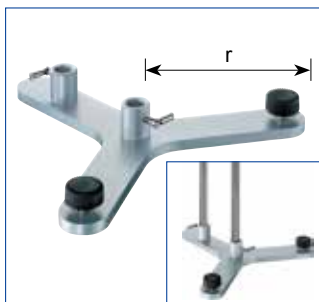
**SciLab-brand® Universal Jumbo Clamp Holder, for Stand/Rod**

■ **Made in Korea**

- \* Cast-Aluminium
- \* Ideal for Reactor Flame

**SL.Cla8011** Clamp Holder, "CL200", Cast Aluminum, Grip Capacity,  $\phi$ 23mm for Stand/Rod

Ea.	Price, ₩



Steel Retort Base Duo Stand

**Steel Retort Base Duo Stand, for 2 × Plain Rods of up to  $\phi$  16mm, without Rods with Hinged Set Screw M6, Nonskid Feet equipped, 2 × Level Screw Nut, and Base Thick-8mm**

■ **Made in Germany**

- \* Can Fix Rods up to 2ea (Below  $\phi$  16mm)

Retort Stand Base only

**US.2040** Stand Base only, "US2040", r =150mm  
**US.2041** , "US2041", r =185mm

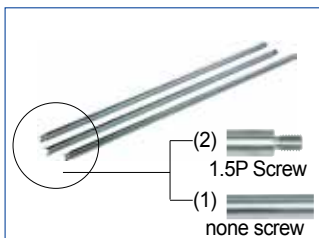
Ea.	Price, ₩

Optional Stainless-steel Rod of  $\phi$  16mm, without Screw

**DH.WOS502001** Stainless-steel Rod, "RD501",  $\phi$  16 × h800mm, non-screw  
**DH.WOS502002** , "RD502",  $\phi$  16 × h1000mm, non-screw  
**DH.WOS502003** , "RD503",  $\phi$  16 × h1200mm, non-screw

Ea.	Price, ₩

**DAIHAN-brand®  $\phi$  16 & 23mm High-Quality Stainless-steel (#304) Rods, for Stand Bases**



Stainless-steel Rods  
With or Without 1.5P Screw

(1) Plain-type  $\phi$  16mm Rod, without Screw

**DH.WOS502001** Stainless-steel Rod, "RD501",  $\phi$  16 × h800mm, non-screw  
**DH.WOS502002** , "RD502",  $\phi$  16 × h1000mm, non-screw  
**DH.WOS502003** , "RD503",  $\phi$  16 × h1200mm, non-screw  
**DH.WOS502031** Stainless-steel Rod, "RD531",  $\phi$  23 × h800mm, non-screw  
**DH.WOS502033** , "RD533",  $\phi$  23 × h1200mm, non-screw

Ea.	Price, ₩

(2) 1.5P Screw-type  $\phi$  16 & 23mm Rod

**DH.WOS502011** Stainless-steel Rod, "RD511",  $\phi$  16 × h800mm, 1.5P Screw  
**DH.WOS502012** , "RD512",  $\phi$  16 × h1000mm, 1.5P Screw  
**DH.WOS502013** , "RD513",  $\phi$  16 × h1200mm, 1.5P Screw  
**DH.WOS502021** Stainless-steel Rod, "RD521",  $\phi$  23 × h800mm, 1.5P Screw  
**DH.WOS502022** , "RD522",  $\phi$  23 × h1000mm, 1.5P Screw  
**DH.WOS502023** , "RD523",  $\phi$  23 × h1200mm, 1.5P Screw

Ea.	Price, ₩



# Ultrasonic Cleaners

**Ultrasonic Cleaners - Analog** ..... P. 258  
**- Digital** ..... P. 259  
**- Remote Control, Large Capacity** ... P. 260

## • Analog Ultrasonic Cleaners



“WUC-A”

## • Digital Ultrasonic Cleaner



“WUC-D”



## • Large Capacity Ultrasonic Cleaners



“WUC-N”



Wire Basket  
(Optional)



Remote  
Generator

DAIHAN-brand® Analog Ultrasonic Cleaners “WUC-A”, Timer/Temp. Output Controller, with Certi. & Traceability with Stainless-steel Flat Lid, Highly Effective Cleaning, up to 85°C, 0~30min, 28/40kHz Frequency, without Basket  
초음파 세척기, 온도 및 시간 설정, 고효율, 다용도, 리드 포함



Analog Ultrasonic Cleaner with Flat Lid  
“WUC-A10H”



Analog Ultrasonic Cleaner with Flat Lid  
“WUC-A06H”

- Made in Korea
- CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Made of Stainless-steel, Finished Surface
- Analog Controller, Timer, Temperature and Output Control
- PL (Product Liability) Insurance

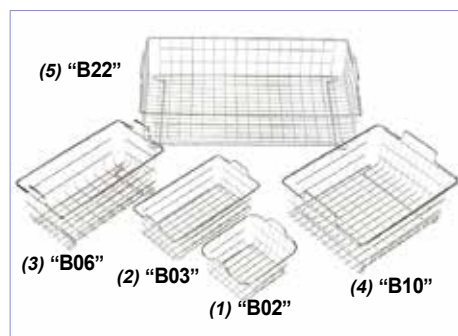
- \* Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab Instruments by Ultrasonic Frequency
- \* Made of Stainless-steel, Finished Surface
- \* Analog Controller, Timer, Temperature and Output Control
- \* Temperature Range from Ambient to 85°C. (1.2 & 1.8 Lit. : 65°C Fixed)
- \* Convenient Preset Function : Heating and Timer
- \* HF-Frequency : 40kHz
- \* Bottom-Mounted Drain (WUC-A10H and WUC-A22H)
- \* Maximum 30 minutes of Cleaning Time (Except WUC-A10H)

### Specifications & Ordering information

Spec.	Model	“WUC-A01H”	“WUC-A02H”	“WUC-A03H”	“WUC-A06H”	“WUC-A10H”	“WUC-A22H”
Capacity		1.2 Lit.	1.8 Lit.	3.3 Lit.	6 Lit.	10 Lit.	22 Lit.
Frequency		40kHz					
HF-Peak Out		72 W	75 W	124 W	168 W	265 W	379 W
Heating Temp.		65°C Fixed	65°C Fixed	ambient to 85°C	ambient to 85°C	ambient to 85°C	ambient to 85°C
Heating Power		86 W	86 W	172 W	172 W	258 W	275 W
Timer		None	0~30 min.	0~30 min.	0~30 min.	0~30 min.	0~30 min.
Drain-Valve		None	None	None	None	1/2" NPT	1/2" NPT
Tank Size inner (w×d×h) (mm)		150×135×60	150×135×100	240×140×100	290×150×150	290×240×150	500×300×150
Weight		1.8 kg	2.5 kg	4 kg	5.3 kg	7 kg	11 kg
Packing Dimension (w×d×h) (cm)		20×20×19	20×20×24	32×20×29	37×22×35	43×32×36	64×38×37
Gross Weight		3 kg	4 kg	5 kg	6 kg	7 kg	11 kg
Power Consumption		158 W	161 W	296 W	340 W	523W	654 W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz					
Cat. No.	230V	DH.WUC.A01H	DH.WUC.A02H	DH.WUC.A03H	DH.WUC.A06H	DH.WUC.A10H	DH.WUC.A22H
	120V	DH.WUC.A101H	DH.WUC.A102H	DH.WUC.A103H	DH.WUC.A106H	DH.WUC.A110H	DH.WUC.A122H
Price, Each. ₩							

\* Other Specifications are available upon Customer's Request.

### Optional Stainless-steel Wire Baskets



Stainless-steel Wire Baskets (Optional)

- |            |  |
|------------|--|
| DH.WUC.B02 | (1) Basket, Wire, “B02”, for 1.8 Lit., 120×105×h65mm |
| DH.WUC.B03 | (2) , “B03”, for 3.3 Lit., 215×115×h65mm             |
| DH.WUC.B06 | (3) , “B06”, for 6 Lit., 247×123×h96mm               |
| DH.WUC.B10 | (4) , “B10”, for 10 Lit., 262×206×h93mm              |
| DH.WUC.B22 | (5) , “B22”, for 22 Lit., 452×263×h93mm              |

Ea. Price, ₩

Cat. No	Description	Articles
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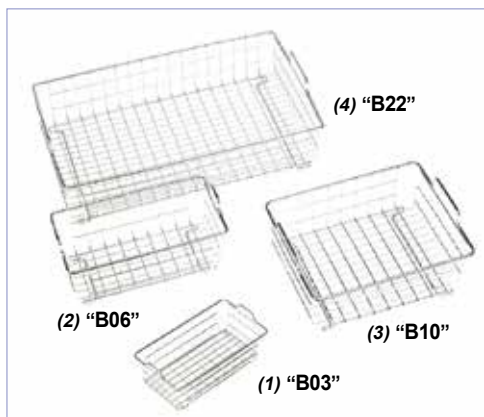
DAIHAN-brand® Digital Ultrasonic Cleaner-set “WUC-D”, Microprocessor Control, 3.3-/6-/10-/22-Lit with Stainless-steel Wire Basket & Flat Lid, Highly Effective Cleaning, up to 80°C, 0~60min, 40kHz Frequency  
 디지털 초음파 세척기 세트, 와이어 바스켓 및 리드 포함, 마이크로프로세서 제어



Digital Ultrasonic Cleaner Set, “WUC- D10H” with Flat Lid and Wire Basket



Digital Ultrasonic Cleaner Set, “WUC- D03H” with Flat Lid and Wire Basket



Stainless-steel Wire Baskets (included)

- Made in Korea      ■ CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab Instruments by Ultrasonic Frequency
- Microprocessor Control : Timer, Temperature and Output Control
- PL(Product Liability) Insurance
- \* Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab instruments by Ultrasonic Frequency
- \* Microprocessor Control : Timer, Temperature and Output Control
- \* Multi-Frequency Sonication Body
- \* HF-Frequency : 40kHz
- \* Temperature Range from Ambient to 80°C
- \* Convenient Preset Function : Heating and Timer
- \* Drain is mounted in the bottom (WUC-D10H, WUC-D22H)
- \* Maximum 60 minutes of Cleaning Time
- \* Very Strong Cleansing Degassing Function

Specifications & Ordering information

Spec.	Model	“WUC-D03H”	“WUC-D06H”	“WUC- D10H”	“WUC-D22H”
Capacity		3.3 Lit.	6 Lit.	10 Lit.	22 Lit.
Frequency		40kHz	40kHz	40kHz	40kHz
HF-peak out		100W	253W	407W	528W
Heat temp.		ambient to 80°C	ambient to 80°C	ambient to 80°C	ambient to 80°C
Heating Power		172W	172W	258W	344W
Timer		0~30 min.	0~60 min.	0~60 min.	0~60 min.
Display		FND			
Drain-valve		None	None	1/2" NPT	1/2" NPT
Tank Size inner (w×d×h) (mm)		240×140×100	290×150×150	290×240×150	500×300×150
Weight net		3.4 kg	5.8 kg	8 kg	12.9 kg
Packing Dimension (w×d×h) (mm)		320×200×290	360×220×350	440×320×360	640×380×370
Gross Weight		3.7 kg	6.3 kg	8.5 kg	13.4 kg
Power Consumption		290W	425W	665W	872W
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz			
Cat. No.	230V	DH.WUC.D03H	DH.WUC.D06H	DH.WUC.D10H	DH.WUC.D22H
	120V	DH.WUC.D103H	DH.WUC.D106H	DH.WUC.D110H	DH.WUC.D122H
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

Spare Wire Baskets, Stainless-steel

- |                   |  |  |  |  |
|-------------------|--|--|--|--|
| <b>DH.WUC.B03</b> | (1) Basket, Wire, “B03”, for 3.3 Lit., 215×115×h65mm |  |  |  |
| <b>DH.WUC.B06</b> | (2) , “B06”, for 6 Lit., 247×123×h96mm               |  |  |  |
| <b>DH.WUC.B10</b> | (3) , “B10”, for 10 Lit., 262×206×h93mm              |  |  |  |
| <b>DH.WUC.B22</b> | (4) , “B22”, for 22 Lit., 452×263×h93mm              |  |  |  |

Ea.	Price, ₩

DAIHAN-brand® Large Capacity Ultrasonic Cleaner-set “WUC-N”, Remote Control System, 30~74 Lit with Digital Remote Generator/Stainless-steel Flat Lid/Drain Valve, Highly Effective Cleaning, without Basket, up to 105 °C, 40kHz  
대용량 초음파 세척기 세트, 리모트 제너레이터 · 리드 · 드레인 밸브 포함



Large Capacity Ultrasonic Cleaner-set Without Basket “WUC-N47H”

- Made in Korea
  - CE Certified
  - with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
  - Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab Instruments by Ultrasonic Frequency
  - Remote Generator : Power Control and Timer Function with LCD
  - PL (Product Liability) Insurance
- \* Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab Instruments by Ultrasonic Frequency.
  - \* Remote Generator : Power Control and Timer Function with LCD
  - \* BTL Sonicator Installed : Robust and Stable Running
  - \* Sweep Function can Realize Complete Cleaning by the Dispersion of Ultrasound
  - \* Auto Optimization of Frequency as various Water Level and Temperature.
  - \* Foot Switch Control
  - \* HF-Frequency : 40kHz
  - \* Temperature Range from Ambient to 105 °C
  - \* Supply Full Set with Lid, Foot Switch and Generator (Basket excluded)
  - \* Drain is mounted in the bottom
  - \* Maximum 99minutes of Cleaning Time

#### Specifications & Ordering information

Spec.	Model	“WUC-N30H”	“WUC-N47H”	“WUC-N60H”	“WUC-N74H”
Capacity		30 Lit.	47 Lit.	60 Lit.	74 Lit.
HF-frequency		40kHz	40kHz	40kHz	40kHz
HF-peak out		704W	990W	1,210W	1,430W
Heat temp.		ambient to 105 °C	ambient to 105 °C	ambient to 105 °C	ambient to 105 °C
Heating Power		990W			
Timer (min)		0~99 min.	0~99 min.	0~99 min.	0~99 min.
Tank Size inner (w×d×h) (mm)		400×300×250	450×350×300	500×400×300	550×450×300
Tank Size external (w×d×h) (mm)		480×380×400	530×430×450	530×430×450	580×480×450
Power Consumption		1,694W	1,980W	2,200W	2,420W
Weight net		26kg	31kg	36kg	41kg
Packing Dimension (w×d×h) (mm)		620×520×640	670×570×710	720×620×710	770×670×710
Gross Weight		32 kg	37 kg	42 kg	47 kg
Remote Generator	Display LCD	FND			
	Power	600W	900W	1,200W	1,500W
	Weight	9kg	10kg	10kg	10kg
Cat. No.	230V	DH.WUC.N30H	DH.WUC.N47H	DH.WUC.N60H	DH.WUC.N74H
	120V	DH.WUC.N130H	DH.WUC.N147H	DH.WUC.N160H	DH.WUC.N174H
Price, Each. ₩					

\* Other Specifications are available upon Customer's Request.

#### Optional Wire Baskets, Stainless-steel

SL.Bas7021	Basket, Wire, “Bas7021”, for 30Lit., 340×240×h150mm	Ea. Price, ₩
SL.Bas7022	“Bas7022”, for 47Lit., 390×290×h200mm	
SL.Bas7023	“Bas7023”, for 60Lit., 440×340×h200mm	
SL.Bas7024	“Bas7024”, for 74Lit., 490×390×h200mm	



Stainless-steel Wire Basket (Optional)

# ViscoMeter

<b>Multi-speed Rotary Viscometer-full Set</b> .....	P. 263
<b>Portable Rotary Viscometer-full Set</b> .....	P. 266
<b>Programmable Rotary Viscometer-full Set</b> .....	P. 264
<b>Remote Temp. Control Rotary Viscometer-full Set</b> .....	P. 265
<b>Standard Rotary Viscometer-full Set</b> .....	P. 262

**Standard Rotary Viscometer**

“WVP” model



**Programmable Rotary Viscometer**

“WVS” model



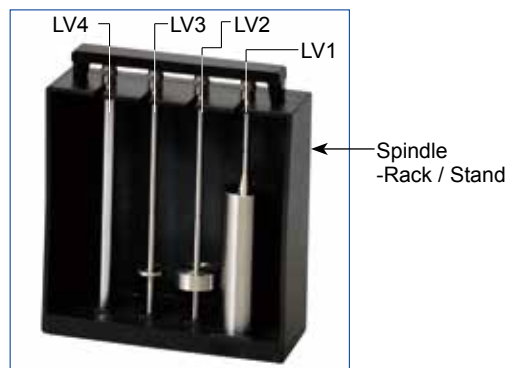
**Remote Temp. Control Rotary Viscometer**  
“WVT” model

DAIHAN-brand® Standard Rotary Viscometer-full Set “WVS-0.1M” & “WVS-2M”, with Calibration Certificate, 1~2,000,000 cP with Standard Spindle-kit(LV1~4), Lifting Stand, Hand Handling Case, 0.3~60rpm, 표준형 디지털 회전 점도계-플세트



(1) for 1~100,000cP, “WVS-0.1M” Full set  
(2) for 1~2,000,000cP, “WVS-2M” Full set

- Included Easy to Use Lifting Stand
  - Ideal for measuring the Viscosity of Various Liquid such as Grease, Painting, Foodstuff, Dope, Paper making, Cosmetics, Chemical industry, Capsule Stickiness Agent and Medicines.
  - Included ASTM Standard Spindle-kit of 4 Ea. : LV1 : 15~20K, LV2 : 50~100K, LV3 : 200~400K, LV4 : 1K~2M
  - Direct Readout of all Measurement Parameters on an illuminated LCD.
  - The Viscometer is equipped with many Pre-sets speeds : (“WVS-0.1M” : 6- / 12- / 30- / 60- RPM, “WVS-2M” : 0.3- / 0.6- / 1.5- / 3- / 6- / 12- / 30- / 60-RPM)
  - Auto Range Function to determine the Maximum Viscosity with each Spindle / Speed Combination.
  - Safety Protection Against Sudden Rises in the Power Supply.
- \* Data on screen : • Speed Selected : RPM • Spindle Selected : S.P.  
• Viscosity Reading : cP(mPa.s) • Percentage of Full Scale : %  
• Sample Temperature : °C
- \* Viscosity Reading: Dynamic Viscosity (cP or mPa.s)  
\* The Viscometer and the PT100 can be calibrated by the User.  
\* Ultra-sensitive Front Keyboard that allows Easy Input of all Parameters.  
\* Error Message in the Screen with Sound Alarm when the Viscosity of the Test Material exceeds the Full Scale of the selected Combination(SP / rpm.)  
\* Sound Alarm if the Equipment is Working at Under 20% of Selected full Scale  
\* Direct reading in cP(mPa.s) \* without Limits  
\* Can be Use with Various Optional Accessories : RTD Temp. Probe, Micro Printer



(3) LV1 ~ 4 Spindle kit :  
Included for “WVS-0.1M” & “WVS-2M” Meter



(4) RTD Temp. Probe



(5) Micro Printer, w/Cable

Specifications & Ordering information

Spec.	Model	(1) “WVS-0.1M”	(2) “WVS-2M”
Viscosity Range, cP(mPa.s)		1 ~ 100,000 cP	1 ~ 2,000,000 cP
Speed Range (RPM)		6, 12, 30, 60	0.3, 0.6, 1.5, 3, 6, 12, 30, 60
Certificate		with Individual Calibration Certificate	
ASTM Standard Spindle-kit & Measure Viscosity Range : cP		Included Standard Spindle-kit(LV1~LV4), Stainless-steel ① LV1 : 15 ~ 20,000cP    ② LV2 : 50 ~ 100,000cP ③ LV3 : 200 ~ 400,000 cP    ④ LV4 : 1,000 ~ 2,000,000cP	
Measurement Error		± 5% (Newton Liquid)	
Accuracy		± 1.0% of range	
Repeatability		± 0.5%	
Ambient Temperature		5 °C ~ 35 °C Relative Humidity : ≤80%	
Weight		4 kg	
Electrical Reqts.		AC 230V, 50/60Hz	
Cat. No.	230V	DH.WV1011	DH.WV1012
Price, Each. ₩			

\* K=1,000 cP(mPa.s), M =1,000,000 cP(mPa.s)

Spare Spindle-kit

- DH.WV2011 (3) Standard LV Spindle kit, LV1 ~ 4,  
LV1 : 15~20K, LV2 : 50~100K, LV3 : 200~400K, LV4 : 1K~2M  
※ LV0 Spindle for 1~20cP : Option

Ea. Price, ₩

Optional Temp. Probe/Printer

- DH.WV2041 (4) RTD Temp. Probe, 0.0~100.0 °C, Accu. ± 0.1, Resolution 0.1 °C  
DH.WV2043 (5) Micro Printer, with RS-232, USB 1.5m Cable  
(Print Information : Temp., RPM, Spindle, Torque, Viscosity)

Ea. Price, ₩

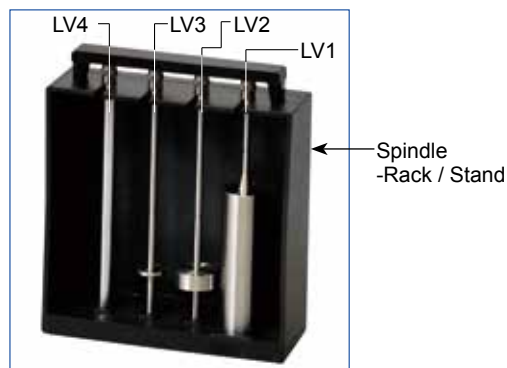
Cat. No	Description	Articles
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**DAIHAN-brand® Multi-speed Rotary Viscometer-full Set “WVM-0.6M” & “WVM-6M”, 1~6,000,000 cP with Cal. Certi. & Spindle kit(LV1~4), Lifting Stand, Hand Handling Case, 0.1~60-/100-rpm, 멀티 스피드 디지털 회전 점도계**



(1) for 1~600,000cP, “WVM-0.6M” Full Set  
 (2) for 1~6,000,000cP, “WVM-6M” Full Set

- **Included Easy to Use Lifting Stand**
  - **Ideal for measuring the Viscosity of Various Liquid such as Grease, Painting, Foodstuff, Dope, Paper making, Cosmetics, Chemical industry, Capsule Stickiness Agent and Medicines.**
  - **Included ASTM Standard Spindle-kit of 4 Ea. : LV1 : 15~20K, LV2 : 50~100K, LV3 : 200~400K, LV4 : 1K~2M**
  - **Direct Readout of all Measurement Parameters on an illuminated LCD.**
  - **Available Pre-sets speeds, 0.1~100 rpm**
  - **Auto Range Function to determine the Maximum Viscosity with each Spindle / Speed Combination.**
  - **Safety Protection Against Sudden Rises in the Power Supply.**
- \* Data on screen :  
 • Speed Selected : RPM  
 • Viscosity Reading : cP(mPa.s)  
 • Sample Temperature : °C  
 • Spindle Selected : S.P.  
 • Percentage of Full Scale : %
- \* Viscosity Reading: Dynamic Viscosity (cP or mPa-s)  
 \* The Viscometer and the PT100 can be calibrated by the User.  
 \* Ultra-sensitive Front Keyboard that allows Easy Input of all Parameters.  
 \* Error Message in the Screen with Sound Alarm when the Viscosity of the Test Material exceeds the Full Scale of the selected Combination(SP / rpm.)  
 \* Sound Alarm if the Equipment is Working at Under 20% of Selected full Scale  
 \* Direct reading in cP(mPa.s) \* without Limits  
 \* Can be Use with Various Optional Accessories : RTD Temp. Probe, Micro Printer, Small Sample Adapter



(3) LV1 ~ 4 Spindle kit :  
 Included for “WVM-0.6M” & “WVM-6M” Meter

**Specifications & Ordering information**

Spec.	Model	(1) “WVM-0.6M”	(2) “WVM-6M”
Viscosity Range cP(mPa.s)		1 ~ 600,000cP	1 ~ 6,000,000cP
Speed Range (RPM)		1 ~ 60	0.1 ~ 100
Certificate		with Individual Calibration Certificate	
Certificate		Included Standard Spindle-kit(LV1~LV4), Stainless-steel ① LV1 : 15 ~ 20,000cP    ② LV2 : 50 ~ 100,000cP ③ LV3 : 200 ~ 400,000 cP    ④ LV4 : 1,000 ~ 2,000,000cP	
Measurement Error		± 5% (Newton Liquid)	
Accuracy		± 1.0% of range	
Repeatability		± 0.5%	
Ambient Temperature		5°C ~ 35°C Relative Humidity : ≤80%	
Weight		4 kg	
Electrical Reqts.		AC 230V, 50/60Hz	

Cat. No.	230V	DH.WV1021	DH.WV1022
Price, Each. ₩			

\* K=1,000 cP(mPa.s), M =1,000,000 cP(mPa.s)

**Spare Spindle-kit**

- DH.WV2011** (3) Standard LV Spindle kit, LV1~4,  
 LV1 : 15~20K, LV2 : 50~100K, LV3 : 200~400K, LV4 : 1K~2M  
 ※ LV0 Spindle for 1~20cP : Option

Ea. Price, ₩

**Optional Temp. Probe/Sample Adapter/Printer**

- DH.WV2041** (4) RTD Temp. Probe, 0.0~100.0°C, Accu. ±0.1, Resolution 0.1°C  
**DH.WV2042** (5) Small Sample Adapter, Stainless-steel, 2~16ml  
**DH.WV2043** (6) Micro Printer, with RS-232, USB 1.5m Cable  
 (Print Information : Temp., RPM, Spindle, Torque, Viscosity)

Ea. Price, ₩



(4) RTD Temp. Probe



(5) Small Sample Adapter



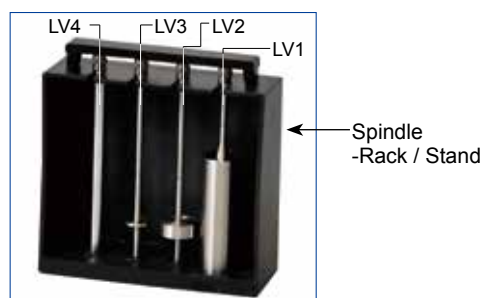
(6) Micro Printer, w/Cable

**DAIHAN-brand® Programmable Rotary Viscometer-full Set “WVP-6M” & “WVP-40M”, 1~40,000,000cp with Calibration Certificate & Spindle-kit(LV1~4) & (RV2~7), Lifting Stand, 0.1~200rpm, 프로그램식 디지털 회전 점도계**

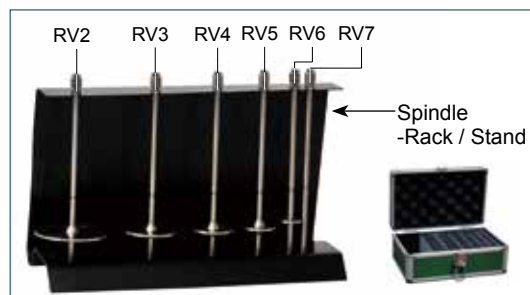


- Available Pre-sets speeds, 0.1~200 rpm
  - Ideal for measuring the Viscosity of Various Liquid : Grease, Painting, Foodstuff, Dope, Paper making, Cosmetics, Chemical industry, Capsule Stickiness Agent, Medicines.
  - Included ASTM Standard Spindle-kit of 4 or 6 Ea. :  
 “WVP-6M” model - LV1, LV2, LV3, LV4  
 “WVP-40M” model - RV2, RV3, RV4, RV5, RV6, RV7
  - Auto Test of the Equipment by scanning at Different Speeds, with Audible and Visual warning if it is not Operating Properly.
  - Datalogger Function of the obtained results when an Experiment is performed
  - Safety Protection Against Sudden Rises in the Power Supply.
  - Auto Range Function to determine the Maximum Viscosity with each Spindle / Speed Combination.
- \* Data on screen :  
 • Speed Selected : RPM  
 • Viscosity Reading : cP (mPa.s)  
 • Sample Temperature : °C  
 • Spindle Selected : S.P.  
 • Percentage of Full Scale : %
- \* Shear Rate (with special spindles) : SR  
 \* Shear Stress (with special spindles) : SS
- \* Determination of Relative Viscosity and Absolute Viscosity  
 \* Viscosity Reading: Dynamic Viscosity (cP or mPa.s)  
 \* Determination of Shear Rate and Shear Stress with Coaxial Spindles.  
 \* The Viscometer and the PT100 can be calibrated by the User.  
 \* Ultra-sensitive front Keyboard that allows Easy Input of all Parameters.  
 \* Error Message in the Screen with Sound Alarm when the Viscosity of the Test Material exceeds the Full Scale of the selected Combination(SP/rpm.)  
 \* Sound Alarm if the Equipment is working at under 10% of selected Full Scale.  
 \* Can be Use with Various Optional Accessories : RTD Temp. Probe, Micro Printer, Small Sample Adapter

(1) for 1~6,000,000cP, “WVP-6M” full set  
 (2) for 100~40,000,000cP, “WVP-40M” full set



(3) LV1 ~ 4 Spindle kit :  
 Included for “WVS-0.1M” & “WVS-2M” Meter



(4) RV2~7 Spindle kit : Included for (2)“WVP-40M” Meter



(5) RTD Temp. Probe



(6) Small Sample Adapter



(7) Micro Printer, w/Cable

**Specifications & Ordering information**

Spec.	Model	(1) “WVP-6M”	(2) “WVP-40M”
Viscosity Range cP(mPa.s)		1 ~ 6,000,000cP	100 ~ 40,000,000cP
Using Spindle Kit		(3) LV1 ~ 4	(4) RV2 ~ 7
Speed Range (RPM)		0.1 ~ 200	
Certificate		with Individual Calibration Certificate	
ASTM Standard Spindle-set & Measure Viscosity Range : cP		Included ASTM Standard Spindle-set, Stainless-steel	
	① LV1 : 15 ~ 20,000cP	① RV2 : 100 ~ 80,000cP	
	② LV2 : 50 ~ 100,000cP	② RV3 : 100 ~ 200,000cP	
	③ LV3 : 200 ~ 400,000cP	③ RV4 : 200 ~ 400,000cP	
	④ LV4 : 1,000 ~ 2,000,000cP	④ RV5 : 400 ~ 800,000cP	
		⑤ RV6 : 1,000 ~ 2,000,000cP	
		⑥ RV7 : 4,000 ~ 8,000,000cP	
Measurement Error		±5% (Newton Liquid)	
Accuracy / Repeatability		±1.0% of range / ±0.5%	
Ambient Temperature		5°C ~ 35°C Relative Humidity : ≤80%	
Weight		4 kg	
Electrical Reqts.		AC 230V, 50/60Hz	
Cat. No.	230V	DH.WV1031	DH.WV1032
Price, Each. ₩			

\* K=1,000 cP(mPa.s), M =1,000,000 cP(mPa.s)

**Spare Spindle-kit**

- DH.WV2011 (3) Standard LV Spindle kit, LV1~4,  
 LV1 : 15~20K, LV2 : 50~100K, LV3 : 200~400K, LV4 : 1K~2M  
 ※ LV0 Spindle for 1~20cP : Option
- DH.WV2021 (4) Standard RV Spindle kit, RV2 ~RV7  
 RV2 : 100~80K, RV3 : 100~200K, RV4 : 200~400K,  
 RV5 : 400~800K, RV6 : 1K~2M, RV7 : 4K~8M  
 ※ RV0 Spindle for 1~20cP : Option

Ea. Price, ₩

**Optional Temp. Probe/Sample Adapter/Printer**

- DH.WV2041 (5) RTD Temp. Probe, 0.0~100.0°C, Accu. ±0.1, Resolution 0.1°C  
 DH.WV2042 (6) Small Sample Adapter, Stainless-steel, 2~16ml  
 DH.WV2043 (7) Micro Printer, with RS-232, USB 1.5m Cable  
 (Print Information : Temp., RPM, Spindle, Torque, Viscosity)

Ea. Price, ₩



Cat. No	Description	Articles
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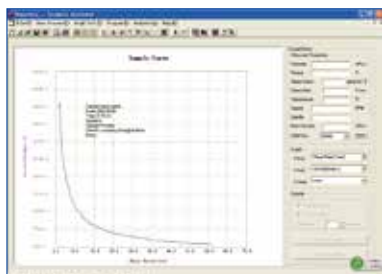
DAIHAN-brand® Remote Temp. Control Rotary Viscometer-full Set “WVT-0.33M” & “WVT-3.3M”, 5~3,300,000cp with Calibration Certificate & Spindle-kit(LV1~4) & (RV2~7), Lifting Stand, 0.1~100rpm, 온도조절 디지털 회전 점도계



(1) for 10~330,000cP, “WVT-0.33M” full set  
(2) for 50~3,300,000cP, “WVT-3.3M” full set

- Only need 2~16ml Sample Amount
- Ideal for measuring the Viscosity of Various Liquid such as Grease, Painting, Foodstuff, Dope, Paper making, Cosmetics, Chemical industry, Capsule Stickiness Agent and Medicines.
- Included ASTM Standard Spindle-kit of 4 Ea. :  
 “WVT-0.33M” model - SC4(LV Range)  
 21 : 5~15K, 27 : 25~250K, 28 : 50~500K, 29 : 100~1M  
 “WVT-3.3M” model - SC4(RV Range)  
 21 : 50~50K, 27 : 250~2.5M, 28 : 500~5M, 29 : 1K~10M
- Built-in High Precision Automatic Optimization Programmable Temperature Control Instrument
- Heating and Cooling, 0.1~8℃ / Minute Arbitrary Adjustable
- Special Spindle, Guarantee Good Mixing Effect, No Precipitation
- Measurement Process and Data Analysis All Rely on the Computer Automatically
- The Disassembling Spindle and Measuring Cylinder Structure, Easy to Clean
- Available Pre-sets Speeds, 0.1~100 rpm
- Manual Lifting Positioning System, Ensure the Liquid Level Height Repeatability
- Special Spindle, Guarantee Good Mixing Effect, No Precipitation

- \* Data on screen :
  - Speed Selected : RPM
  - Viscosity Reading : cP (mPa.s)
  - Sample Temperature : ℃
  - Spindle Selected : S.P.
  - Percentage of Full Scale : %
- \* Shear Rate (with special spindles) : SR
- \* Shear Stress (with special spindles) : SS
- \* Determination of Relative Viscosity and Absolute Viscosity
- \* Viscosity Reading: Dynamic Viscosity (cP or mPa.s)
- \* Determination of Shear Rate and Shear Stress with Coaxial Spindles.
- \* The Viscometer and the PT100 can be calibrated by the User.
- \* Ultra-sensitive front Keyboard that allows Easy Input of all Parameters.
- \* Error Message in the Screen with Sound Alarm when the Viscosity of the Test Material exceeds the Full Scale of the selected Combination(SP/rpm.)
- \* Sound Alarm if the Equipment is working at under 10% of selected Full Scale.



Viscosity Curve Analysis Software for “WVT-0.33M & 3.3M” Meter

Specifications & Ordering information

Spec.	Model	(1) “WVT-0.33M”	(2) “WVT-3.3M”
Viscosity Range cP(mPa.s)		5 ~ 330,000cP	50 ~ 3,300,000cP
Speed Range (RPM)		0.1 ~ 100	
Certificate		with Individual Calibration Certificate	
ASTM Standard Spindle-kit & Measure Viscosity Range : cP		Included ASTM Standard Spindle-kit, Stainless-steel	
		LV Range ① SC4-21 : 5 ~ 5,000cP ② SC4-27 : 25 ~ 250,000cP ③ SC4-28 : 50 ~ 500,000cP ④ SC4-29 : 100 ~ 1,000,000cP	RV Range ① SC4-21 : 50 ~ 50,000cP ② SC4-27 : 250 ~ 2,500,000cP ③ SC4-28 : 500 ~ 5,000,000cP ④ SC4-29 : 1000 ~ 10,000,000cP
Temperature Range		-1℃ ~ 150℃ (Precision ±1.0℃)	
Measurement Error		± 5% (Newton Liquid)	
Accuracy / Repeatability		± 1.0% of range / ± 0.5%	
Ambient Temperature		5℃ ~ 35℃ Relative Humidity : ≤80%	
Weight		14 kg	
Electrical Reqts.		Input AC 100~240V, 50/60Hz, Output DC17V 1.2A	
Cat. No.	230V	DH.WV1041	DH.WV1042
Price, Each. ₩			

\* K=1,000 cP(mPa.s), M=1,000,000 cP(mPa.s)



(3) SC4 Spindle kit : Included for “WVT-0.33M & 3.3M” Meter



(4) Micro Printer, w/Cable

Spare Spindle-kit

DH.WV2031 (3) Standard SC4 Spindle kit, 21~29  
 LV Range - SC4-21 : 5~5K, 25 : 25~250K, 28 : 50~500K, 29 : 100~1M  
 RV Range - SC4-21 : 50~50K, 25 : 250~2.5M, 28 : 500~5M, 29 : 1K~10M

Ea. Price, ₩

Optional Temp. Probe/Printer

DH.WV2043 (4) Micro Printer, with RS-232, USB 1.5m Cable  
 (Print Information : Temp., RPM, Spindle, Torque, Viscosity)

Ea. Price, ₩

DAIHAN-brand® Portable Rotary Viscometer-full Set “WVH-0.15M” & “WVH-0.3M”, 25~300,000cp with Calibration Certificate & Spindle-kit(B1~4), Hand Handling Case, Up to 200rpm, 포터블 디지털 회전 점도계



(1) for 25~150,000cP, “WVH-0.15M” full set  
(2) for 50~300,000cP, “WVH-0.3M” full set

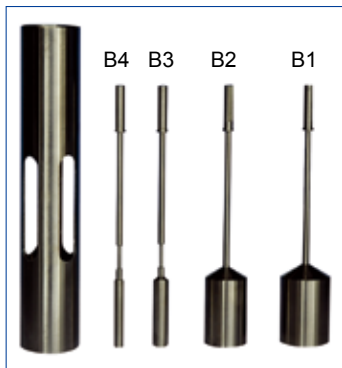
- Microcomputer Control Technique, User Friendly Interface
  - Ideal for Measuring the Viscosity of Various Liquid such as Grease, Painting, Foodstuff, Dope, Paper making, Cosmetics, Chemical industry, Capsule Stickiness Agent and Medicines.
  - Brand New and Humanized Design, Easy Operation, Accurate and Fast Measurement
  - Calibration of Full Scale, Every Level Linearity
  - New Design, Liquid Crystal Display, Prevent Slippery Handle, Overrange Alarm
  - Display Temperature, Viscosity, Rotate Speed, Torsion in Percentage Serial Number of Rotor and the Maximum Viscosity of selected Rotor in Current Speed on LCD
  - Unique Structure Design, Insure Useful Life and Measurement Accuracy
  - AC / DC Power Supply in Two Design, Lithium Batteries Continuous Measuring Eight Hours without Charging
- \* Data on screen : • Speed Selected : RPM • Spindle Selected : S.P.  
• Viscosity Reading : cP(mPa.s) • Percentage of Full Scale : %  
• Sample Temperature : °C
- \* Shear Rate (with special spindles): SR • Shear Stress (with special spindles): SS  
\* Determination of Relative Viscosity and Absolute Viscosity  
\* Viscosity Reading : Dynamic Viscosity (cP or mPa-s)  
\* Error Message in the Screen with Sound Alarm when the Viscosity of the Test Material exceeds the Full Scale of the selected Combination(SP/rpm.)  
\* Sound Alarm if the Equipment is working at under 10% of selected Full Scale.



Lift Mode



Portable Mode



(3) B1~4 Standard Spindle kit :  
Included for “WVH-0.15M & 0.3M” Meter

Specifications & Ordering information

Spec.	Model	(1) “WVH-0.15M”	(2) “WVH-0.3M”
Viscosity Range cP(mPa.s)		25 ~ 150,000cP	50~300,000cP
Speed Range (RPM)		60 / 100 / 150 / 200	
Certificate		with Individual Calibration Certificate	
ASTM Standard Spindle-kit & Measure Viscosity Range : cP		Included ASTM Standard Spindle-kit, Stainless-steel	
	① B1 : 25 ~ 883cP	① B1 : 50 ~ 1,666cP	
	② B2 : 90 ~ 3,000cP	② B2 : 180 ~ 6,000cP	
	③ B3 : 165 ~ 55,000cP	③ B3 : 330 ~ 110,000cP	
	④ B4 : 450 ~ 150,000cP	④ B4 : 900 ~ 300,000cP	
Measurement Error		±5% (Newton Liquid)	
Accuracy / Repeatability		±2.0% of range / 1.0%	
Ambient Temperature		5°C ~ 35°C Relative Humidity : ≤80%	
Weight		3 kg	
Electrical Reqts.		AC 220V, 50/60Hz, Lithium Battery	
Cat. No.	230V	DH.WV1051	DH.WV1052
Price, Each. ₩			

\* K=1,000 cP(mPa.s), M =1,000,000 cP(mPa.s)

Spare Spindle-kit

DH.WV2011 (3) Standard Spindle kit, B1~4,

Ea. Price, ₩

MaXcrub™

# Glass/Labware Washer

Ideal for Laboratory, etc.

## Glass/Labware Washer

High Performance Cleaning

User Safety

Program Cycle

### High-performance Cleaning

- Outstanding fast cycle and high-performance cleaning results from efficient direct injection washing.
- High performance pump ensure high flow rate of water.
- Efficient water spray pressure bring about better and faster cleaning.
- Water, liquid detergent and distilled water automatically injected by program washing cycle.

### Safety Door Lock

- Door is automatically locked for user safety when washing cycle starts.

### Compact, Robust Design & Efficient Construction

- Compact design for space saving and maximize working capacity in laboratory.
- Double layer structure ensures soundproof and heatproof during operation.
- Built-in steam condenser prevents steam to enter into the laboratory.
- Telescopic sliding rails ensures safe and easy to load and unload.

### Efficient Washing Cycle Program

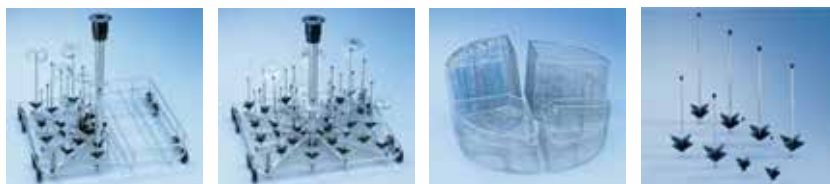
- Provide 7 program washing cycles : Pre-set 6 programs & customized 1 program.

#### Pre-set 6 Program Cycles Setting Value

Pre-set 6 Washing Cycle	PreWash	Light Wash	Standard Wash	Light Demi	Standard Demi	Intense Wash
Tap Water Wash	3min	-	-	-	-	-
Detergent Wash	-	60°C / 8min	75°C / 8min	60°C / 5min	75°C / 5min	90°C / 10min
Rinse Wash	-	75°C / 5min	90°C / 5min	75°C / 3min	90°C / 3min	90°C / 5min
Distilled Water Wash	-	-	-	3min	3min	2min

### Various Interchangeable Racks & Baskets

- Included 1ea STS wire basket.
- Customizable various rack, Basket, Pipette rack, Volumetric flask rack, Direct injection kit, etc.



Irrigation Nozzle



Spray Arm

“MaXcrub™ T1” Glass/Labware Washer, Max 95 °C, Washing Surface 0.52m<sup>2</sup>, 400Lit/min, Max 5bar with 1 × STS Wire Basket, Water-/Detergent-/Distilled Water-Auto Injection, Program Washing Cycle, Double Wall, Telescopic Rail, **초자 세척기**



Glass/Labware Washer “MaXcrub™ T1”

2-Year Warranty

- Made in Korea
- PL(Product Liability) Insurance.
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System.
- Ideal for Clinical, Pharmaceutical, Bioresearch, Chemical Research, etc.
- Outstanding Fast Washing Cycle and High-performance Cleaning Results from Efficient Direct Injection Washing.
- Water-/Detergent-/Distilled Water- Automatically Injected into Wash Chamber via Pumps.
- Double Layer Wall ensures Soundproof and Heatproof.
- Automatic Door Lock system for User Safety.
- Special Steam Condensing Mechanism for User Safety.

- \* Built-in Telescopic Sliding Rail for Safety and Easy to Use.
- \* Provides Efficient Program Washing Cycle : Pre-set 6Programs and Customizable 1Program.
- \* Built-in Steam Condenser Prevents Steam to enter into the Laboratory.
- \* Included 1ea STS Wire Basket .
- \* Customizable Various Rack, Basket, Pipette Rack, Volumetric Flask Rack, Direct Injection Kit, etc.

Specifications & Ordering information

Spec.	Model	“MaXcrub™ T1”	
Total Washing Surface		0.52m <sup>2</sup>	
Temp. Range		Room Temp +5°C to 95°C	
Display		Digital LCD with Back-Light Function	
Controller		Digital Fuzzy-Control System (Fully Automatic), Touch Button UI	
Programmable Function		Pre-set 6 Programs & Customizable 1 Programs	
Wash Pump		Recirculation : 400Lit/min, Water Pressure : 3~5bar, Water Consumption : 8~10Lit.	
Rack		Included 1ea Stainless-steel Standard Rack	
Safety Circuit		Over-Temp./-Pressure/-Current protection, Sensor Error Detection	
Material		Stainless-steel (#304)-Internal, Stainless steel (#304)-External	
Dimension (w × d × h)	Interior	508 × 515 × h407 mm	
	Exterior	600 × 625 × h870 mm	
Power Consumption		5 kW	
Net Weight		95 kg	
Electric Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	60Hz	230V	DH.WGW0400
		120V	DH.WGW0401
	50Hz	230V	DH.WGW5400
Price, Each. ₩			

\* Other Specifications are available upon Customer's Request.

※ Note! Freight and Installation Charges Separately.



(1) (Included) STS Wire Basket



(2) Optional STS Injection Rack

Spare Stainless-steel Standard Rack

DH.WGW01001 (1) STS Wire Basket, for Rail, 495 × 510mm

Ea. Price, ₩	
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Optional Stainless-steel Injection Rack for Various Vessel

DH.WGW01002 (2) STS Injection Rack for Various Vessel, 495 × 510mm **New**

Ea. Price, ₩	
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Optional Liquid Cleaning Detergent & Rinse

DH.WGW02010 (3) Potassium Hydroxide Liquid Cleaning Detergent, 18Lit.  
DH.WGW02011 (4) Nonionic Surfactant Liquid Rinse, 18Lit.

Ea. Price, ₩	
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(3) Cleaner (4) Rinse

Optional Liquid Detergents

Optional Customizable Various Rack/Basket/Direct Injection Kit



# Water Purification

**Basic Water Still *New*** ..... P. 270~271

**Water Purification System** ..... P. 272~274

- Reverse Osmosis(RO) ..... P. 272
- Ultra Pure(UP) ..... P. 273
- Ultra Pure(UP) & Pure(RO) ..... P. 274

## » Basic Water Stills

**“W4L”** model ●  
4Lit. Basic Water Still,  
with 304 Stainless-steel Heater



**“WCS”** model ●  
4 & 8Lit. Cabinet Water Still,  
With Pure Silica / Quartz Heater



**“WWS-S”** model  
With Stainless-steel 100 mesh Prefilter  
4, 8, & 12- Lit./hr.



**“WWS-P”** model ●  
With PP 1µm pore Cartridge Prefilter  
4, 8, & 12- Lit./hr.

## » Water Purification System



Reverse Osmosis(RO)  
“New-P.NIX RO”



Ultra Pure(UP)  
“New-P.NIX UP”

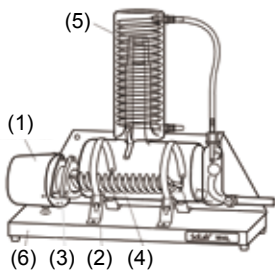


Ultra Pure(UP) & Pure(RO)  
“New-P.NIX Power”

SciLab-brand® Laboratory Basic Water Still, with 304 Stainless-steel Heater, 4 Lit./hr, 3.0 ~ 4.0  $\mu\text{S}/\text{cm}$  **NEW**  
 Suitable for Bench & Wall Mounting, Borosilicate Glass Boiler, 랩용 증류수 제조기



4Lit. Basic Water Still, with 304 Stainless-steel Heater



- Supplied by SciLab Korea
- Connect and Operate Directly from Tap Water
- Heat Resistant Borosilicate Glass Boiler fitted with 3kW 304 Stainless-steel Heater.
- \* High Efficiency Coil Condenser ensures Low Temperature, High Output Quality Distillate of Conductivity 3 to 4  $\mu\text{S}/\text{cm}$ .
- \* Compact Construction Suitable for Bench and wall Mounting
- \* Built-in Constant Level Device with Schott Vendura-Nova Valve for Drainage provides Easy Descaling without Dismantling
- \* Safety Thermostat Built into the Heater protects the Water Still in the Event of Water Supply Failure and Automatically Resets when the Water Supply is restored.
- \* Borosilicate Glass Boiler and High-efficiency Condenser ensure the Highest in Distillate Purity.

Spec.	Model	W4L
Distillate Output		4 Liters/hour
Quality of Distillate : pH / Conductivity Resistivity / Temperature Pyrogen Content		5.0 ~ 6.5 pH / 3.0 ~ 4.0 $\mu\text{S}/\text{cm}$ 0.25 ~ 0.30 $\text{M}\Omega\cdot\text{cm}$ / 25 ~ 35°C Pyrogen Free
Water Supply Requirement		1 Liter/min, minimum 3psi (0.2 bar)
Power Supply		220/240V, 50/60Hz, 3kW
Dimensions (W×D×H), Weight		500×150×h450 mm, 5.25kg
Cat. No.		SL.Wat201
Price, Each. ₩		

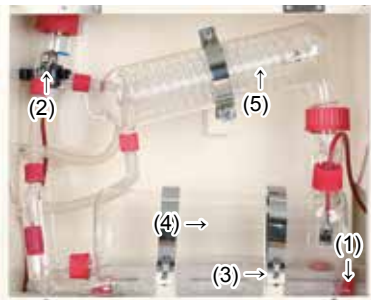
Spare Accessories

	Ea. Price, ₩		Ea. Price, ₩
SL.Wat201.1 (1) Stainless-steel Heater		SL.Wat201.4 (4) Glass Boiler	
SL.Wat201.2 (2) Strap		SL.Wat201.5 (5) Condenser	
SL.Wat201.3 (3) Metal Flange		SL.Wat201.6 (6) Support Stand	

SciLab-brand® Cabinet Water Still, with Silica / Quartz Heater, Pyrogen-free, 4 & 8 Lit./hr., 1.2 ~ 2.0  $\mu\text{S}/\text{cm}$  **NEW**  
 Suitable for Bench & Wall Mounting, Heat Resistant Borosilicate Glass Boiler, 케비닛형 증류수 제조기



4 & 8Lit. Cabinet Water Still, with Pure Silica / Quartz Heater.



- Supplied by SciLab Korea
- Excellent Quality Glassware made from Borosilicate Glass
- Safety Circuits cut off Electrical Power to Heaters and Trigger Audible and Visual Alarms in the Event of Water Supply Failure or High Boiler Temperature
- \* Robustly built Epoxy-coated Steel Cabinet as Protective Housing adds a Touch Elegance to the Exquisite Water Still
- \* Horizontal Thick Walled, Heat Resistant Borosilicate Glass Boiler fitted with two 1.5kW Silica Heaters
- \* High Efficiency Coil Condenser ensures Low Temperature, High Output Quality Distillate
- \* Screwthread Connectors enable Easy Fitting or Removal of Houses Safely and Leak Free Operation
- \* Built-in Constant Level Device with Schott Vendura-Nova valve for Drainage provides Efficient Boiler operation, Over Flow Protection and Easy Descaling without Dismantling
- \* Visual Flow Control Valve for Setting Water Supply Input for Maximum Operation Efficiency
- \* Float Switch activates Safety Circuits in the Event of Water Supply Failure. Automatically resets when Water Supply is restored
- \* Temperature-sensitive Thermal Switch as Back-up Protection which Activates Safety Circuits in the event of Abnormally High Boiler Temperature. Automatically resets when Boiler Temperature returns to Normal
- \* High Quality Electrical Components from Reputable Manufacturers meeting International Specifications and Standards

Spec.	Model	WCS4L	WCS8L
Distillate Output		4 Liters/hour	8 Liters/hour
Quality of Distillate : pH Conductivity Pyrogen Content Temperature		5.0 ~ 6.5 pH 1.2 ~ 2.0 $\mu\text{S}/\text{cm}$ Pyrogen Free 25 ~ 35°C	
Water Supply Requirement		1 Liter/min, minimum 3psi (0.2 bar)	
Power Supply		220/240V, 50/60Hz, 3kW	220/240V, 50/60Hz, 6kW
Dimensions (W×D×H) , Weight		500×225×h395 mm, 14.90kg	500×330×h395 mm, 17.90kg
Cat. No.		SL.Wat203	SL.Wat205
Price, Each. ₩			

Spare Accessories for 4 & 8 Lit Common Use

	Ea. Price, ₩		Ea. Price, ₩
SL.Wat203.1 (1) Silica Heater		SL.Wat203.4 (4) Glass Boiler	
SL.Wat203.2 (2) Vertical Float Switch		SL.Wat203.5 (5) Condenser	
SL.Wat203.3 (3) Foam Strap			

Cat. No	Description	Articles
---------	-------------	----------

DAIHAN-brand® Electric Classic Water Stills, “WWS”, Built-in Prefilter & Auto. On/Off system for Laboratory Water, pyrogen-free, 0.3MΩ·cm(resistivity), pH5.4 to 7.3, Capa. 4-/8-/12-Lit./hr.

(1) with Stainless-steel 100 mesh Prefilter, (2) with PP 1μm pore Cartridge Prefilter, 필터부착형 증류수 제조기



(1) with Stainless-steel 100 mesh Prefilter, “WWS-S”: 4, 8, & 12- Lit./hr.



(2) with PP 1μm pore Cartridge Prefilter, “WWS-P”: 4, 8, & 12- Lit./hr.

- Made in Korea    ■ 2-Year Warranty
- High-performance / All Stainless-steel (SUS-430/304) models : Designed for the Durability & Consistent Quality
- “WWS-S” models, Built-in Stainless-steel(SUS-304) Prefilter Kit, interchangeable 100 mesh (150μm) : Remove Particles & Scale-forming impurity.
- “WWS-P” models, Built-in PP(Polypropylene) 1μm Prefilter / Cartridge Kit, interchangeable : Remove Rust, Particles & Scale-forming impurity.
- All Models, Complete Set with :
  - (1) Stainless-steel Unit Kit , (2) External Consistent-Level Device,
  - (3) Drain Valve, (4) Prefilter Kit,
  - (5) 2m Feeding Water Tubing (Silicone) Assembly for Connection of Water Tap φ15 or φ19 mm,
  - (6) PP Un-equal Tapered Connector φ8,10,12 / 14,16mm-for Different Diameter Tubings
- Auto On/Off with Water Level Sensor/Micro Level Sensor.
  - \* This space-saving horizontal condenser was designed for durability and consistent quality
  - \* Energy saving features include a condenser that preheats the feedwater and a double-walled evaporator.
  - \* A low water cutoff protects heating elements from burn-out when water supply is interrupted
  - \* Stainless-steel Heater Built-in 0.4mm Ni/Cr. Element, Boiler, Efficient Energy and Water Consumption.
  - \* Sealing : Silicone O-ring packing.



Ex> Installation of Water Still

Specifications & Ordering information

Spec.	Model	(1) With Stainless steel 100 mesh Prefilter			(2) With PP 1μm pore Cartridge Prefilter		
		“WWS-S4”	“WWS-S8”	“WWS-S12”	“WWS-P4”	“WWS-P8”	“WWS-P12”
Capacity(Water)		4 Lit./hr	8 Lit./hr	12 Lit./hr	4 Lit./hr	8 Lit./hr	12 Lit./hr
Filter	Function Material Housing Pore size Heat-resisting	Remove Particles & Scale-forming impurity Stainless-steel, SUS304 POM(Polyoxymethylene) 150μm(100 mesh) -29℃ ~ +85℃			Remove Rust, Particles & Scale-forming impurity PP(Polypropylene) PE(Polyethylene) 1μm 85℃		
Water Purity		0.3MΩ·cm (resistivity), pH5.4 to 7.3					
Level Sensor		Auto On/Off with Water Level Sensor / Micro Level Sensor					
Material	Boiler Condenser Base	SUS-430 SUS-304 SUS-430	SUS-430 SUS-304 Aluminum	SUS-430 SUS-304 SUS-304	SUS-430 SUS-304 Aluminum	SUS-430 SUS-304 Aluminum	
Size	Condenser(only)	φ85 × L375	φ120 × L430	φ120 × L490	φ85 × L375	φ120 × L430	φ120 × L490
	Body	φ350 × h670	φ350 × h760	φ350 × h760	φ400 × h670	φ400 × h760	φ400 × h760
Heater		3kW	6kW (3kW×2Ea)	9kW (3kW×3Ea)	3kW	6kW (3kW×2Ea)	9kW (3kW×3Ea)
Plug Style		Plug Code “C”		Plug Code “F”	Plug Code “C”		Plug Code “F”
Electrical Reqts.		1 Phase, AC 220 V, 60 Hz					
Cat. No.	220V	DH.WWS01004	DH.WWS01008	DH.WWS01012	DH.WWS02004	DH.WWS02008	DH.WWS02012
Price, Each. ₩							

Spare or Optional Prefilters & Storage Bottle

- DH.WWS10101 (a) Spare, Stainless-steel 100 mesh Prefilter Kit, “SF101”, POM Housing φ36×h61mm, SUS-304 Filter only φ22×h46mm
- DH.WWS10102 (b) Spare, PP 1μm pore Cartridge Prefilter & Housing Kit, “PF102”, PE Housing φ110×h300mm, PP Filter only φ60×h252mm
- DH.WWP.10PF Spare, PP 1μm pore Prefilter Cartridge, “PF103”, φ(od.) PP Filter 60×φ(id.) 30×h 252mm
- DH.WWS10104 Spare, PE Housing only, “PF104”, φ110×h 300mm
- Az.BNP05A Bottle, Aspiration, PP, 5 Lit., Screw 45 mm, w220×h270mm
- Az.BNP10A , 10 Lit., Screw 90 mm, w280×h360mm
- Az.BNP20A , 20 Lit., Screw 90 mm, w350×h420mm

Ea.	Price, ₩

## “New-P.NIX® RO(Reverse Osmosis)” Water Purification System, 15- / 25- / 35-L/Hr. with Pretreatment System, 2-Steps of Filter Exchange Indicator, (RO) Product 0.2 ~ 30 $\mu$ S/cm, 순수 제조장치



Pretreatment System 'HMC-PT1'



5~50 Lit

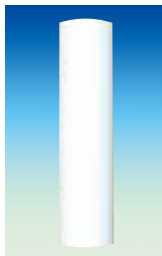
5~50 Lit

(1) White, HDPE Aspiration Bottle

(2) Amber, HDPE Aspiration Bottle



(3) 14" Super A/C Filter



(4) 10" Prefilter



(5) P.NIX RO Pack I



(6), (7) P.NIX RO Pack II, III

- Made in Korea
- Certified CE, ISO 9001, ISO 14001
- Built-In RS 232C Port and Volumetric Dispensing Function by Timer, Included Level sensor
- Auto Regular Recycling to Maintain the Optimum water Quality Level
- Programming by 2 Steps for the Filter Exchange
- Filter Replace Message Indicating by LCD Display & Blinking LED Light
- \* Microprocess One Touch Technology Controller \* 16 $\times$ 4 Characters Backlight LCD Digital Display
- \* Awarded the Korean Excellent Products
- \* Included Pretreatment System HMC-PT1, 14" Super A/C Filter, RO Pack

### Specifications & Ordering information

Spec.	Model	New-P.NIX RO 180	New-P.NIX RO 280	New-P.NIX RO 380
Certified Mark		CE, ISO 9001, ISO 14001		
Product Flow Rate(RO)		Max. 15L/Hr.	Max. 25L/Hr.	Max. 35L/Hr.
Daily Volume		60L/day	100L/day	120L/day
Product Water Quality		0 to 30 $\mu$ S/cm		
Water Quality Display		• RO Product : 0.2 to 250.0 $\mu$ S/cm • Feed water : 10 to 1000 $\mu$ S/cm • Temperature : 0 to 99.9 $^{\circ}$ C		
Display		16 $\times$ 4 Characters Backlight LCD Digital Display		
Controller		Microprocess One Touch Technology		
Dimensions (w $\times$ d $\times$ h)		300 $\times$ 460 $\times$ h 470mm		
Power		210~230V, 50/60 Hz, 60W		
Cat. No.		DH.WWP.RO180	DH.WWP.RO280	DH.WWP.RO380
Price, Each. ₩				

### Optional Accessories

- |  | Ea. | Price, ₩ |
|--|-----|----------|
| SL.Bot3102 (1) Bottle, HDPE, Aspiration, White, 5L, Neck id- $\phi$ 70, $\phi$ 200 $\times$ h360mm |     |          |
| SL.Bot3103 , 10L, - $\phi$ 70, $\phi$ 250 $\times$ h460mm  |     |          |
| SL.Bot3104 , 20L, - $\phi$ 95, $\phi$ 300 $\times$ h555mm  |     |          |
| SL.Bot3105 , 50L, - $\phi$ 95, $\phi$ 380 $\times$ h700mm  |     |          |
| SL.Bot3106 (2) Bottle, HDPE, Aspiration, Amber, 5L, Neck id- $\phi$ 70, $\phi$ 200 $\times$ h360mm |     |          |
| SL.Bot3107 , 10L, - $\phi$ 70, $\phi$ 250 $\times$ h460mm  |     |          |
| SL.Bot3108 , 20L, - $\phi$ 95, $\phi$ 300 $\times$ h555mm  |     |          |
| SL.Bot3109 , 50L, - $\phi$ 95, $\phi$ 380 $\times$ h700mm  |     |          |

### Spare Filters

Cat. No.	Description	Filter Replace Period	Ea. Price, ₩
DH.WWP.PR14AC	(3) 14" Super A/C Filter	Approx. 3~4 Month	
DH.WWP.10PF	(4) 10" Prefilter	20 ~ 40 Day	
DH.WWP.ROM1	(5) P.NIX RO Pack I for DH.WWP.RO180	Approx. 1 Year	
DH.WWP.ROM2	(6) P.NIX RO Pack II for DH.WWP.RO280		
DH.WWP.ROM3	(7) P.NIX RO Pack III for DH.WWP.RO380		

• The above mentioned Filter replacement period can be changed according to various factors such as feed water condition, producing volume and so on.





## “New-P.NIX® Power” Ultra Pure(UP) & Pure(RO) Water Purification All-in-One System, Up-to 15L/Hr.

with Pretreatment System, 2-Steps of Filter Exchange Indicator, (RO) 0.2 ~ 250 $\mu$ s/cm, (UP) Up to 18.3M $\Omega$ -cm, 초순수/순수 제조장치



- Made in Korea
- Certified CE, ISO 9001, ISO 14001
- Built-In RS 232C Port and Volumetric Dispensing Function by Timer, Included Level sensor
- Auto Regular Recycling to Maintain the Optimum water Quality Level
- Programming by 2 Steps for the Filter Exchange
- Filter Replace Message Indicating by LCD Display & Blinking LED Light
- Self-Diagnosis for Ext- & Int-System, Auto Cleaning, Auto Sensor Calibration

- \* Microprocess One Touch Technology Controller
- \* Awarded the Korean Excellent Products
- \* Included Pretreatment System HMC-PT-3, RO Pack, UP Pack, 0.2 $\mu$ m Final Filter
- \* 16 $\times$ 4 Characters Backlight LCD Digital Display

### Specifications & Ordering information

Spec.	Model	New-P.NIX Power I			
		Scholar-type	UV-type	Bio-type	Integrate-type
Certified Mark		CE, ISO 9001, ISO 14001			
Product Flow Rate (RO & UP)		Max. 15L/Hr.			
Product Water Quality		(RO) 0.2 ~ 250 $\mu$ s/cm, (UP) Up to 18.3M $\Omega$ -cm			
Water Quality Display		• Pure water(RO) : 0.2 ~ 250 $\mu$ s/cm • Ultra Pure water(UP) : Up to $\leq$ 18.3M $\Omega$ -cm • Feed water : 0 to 990 $\mu$ s/cm • Temperature : 0 to 99.9 $^{\circ}$ C			
Filter Composition		• Pretreatment System HMC-PT-3 • RO Pack • 0.2 $\mu$ m Final Filter • UP Pack(Scholar)	• Pretreatment System HMC-PT-3 • RO Pack • 0.2 $\mu$ m Final Filter • UP Pack(S-UV) • 254/185 UV Lamp	• Pretreatment System HMC-PT-3 • RO Pack • 0.2 $\mu$ m Final Filter • UP Pack(BIO) • MW5000UF filter(M)	• Pretreatment System HMC-PT-3 • RO Pack • 0.2 $\mu$ m Final Filter • UP Pack(INT) • 254/185 UV Lamp • MW5000UF filter(M)
Display		16 $\times$ 4 Characters Backlight LCD Digital Display			
Controller		Microprocess One Touch Technology			
Dimensions (w $\times$ d $\times$ h)		395 $\times$ 500 $\times$ h 470mm			
Power		210~230V, 50/60 Hz			
Cat. No.		DH.WWP.POWER.S	DH.WWP.POWER.U	DH.WWP.POWER.B	DH.WWP.POWER.I
Price, Each. ₩					

- TOC monitoring system is also available on Request. (TOC monitoring display range : 0~200ppb)
- Product Flow Rate 25L/Hr. and 35L/Hr. are also available on Request.

### Optional Accessories

SL.Bot3102	(1) Bottle, HDPE, Aspiration, White,	5L, Neck id- $\phi$ 70, $\phi$ 200 $\times$ h360mm
SL.Bot3103		, 10L, - $\phi$ 70, $\phi$ 250 $\times$ h460mm
SL.Bot3104		, 20L, - $\phi$ 95, $\phi$ 300 $\times$ h555mm
SL.Bot3105		, 50L, - $\phi$ 95, $\phi$ 380 $\times$ h700mm
SL.Bot3106	(2) Bottle, HDPE, Aspiration, Amber,	5L, Neck id- $\phi$ 70, $\phi$ 200 $\times$ h360mm
SL.Bot3107		, 10L, - $\phi$ 70, $\phi$ 250 $\times$ h460mm
SL.Bot3108		, 20L, - $\phi$ 95, $\phi$ 300 $\times$ h555mm
SL.Bot3109		, 50L, - $\phi$ 95, $\phi$ 380 $\times$ h700mm

Ea.	Price, ₩

### Spare Filters & UV Lamp

Cat. No.	Description	Filter Replace Period	Ea. Price, ₩
DH.WWP.PR10AC	(3) 10" A/C Filter	Approx. 3~4 Month	
DH.WWP.10PF	(4) 10" Prefilter	20 ~ 40 Day	
DH.WWP.ROM1	(5) P.NIX RO Pack I	Approx. 1 Year	
DH.WWP.0.2CF	(6) 0.2 $\mu$ m Final Capsule Filter	Approx. 6~8 Month	
DH.WWP.UPS	(7) P.NIX UP Pack, Scholar/Bio	Approx. 1 Year	
DH.WWP.UPU	(8) P.NIX UP Pack, Scholar-UV/ Integrate	Approx. 1 Year	
DH.WWP.MWM	MW5000UF Filter (M)	Approx. 6~8 Month	
DH.WWP.UV	UV Lamp	Using time : 2000 Hrs	

- The above mentioned Filter replacement period can be changed according to various factors such as feed water condition, producing volume and so on.

# 2018 DAIHAN Scientific Laboratory & Measuring Instruments "Overview"

## Autoclaves



Autoclave



Autoclave, Bench-top

## Balances



Balance - Analytical



Balance - Electronic Lab

## Balances



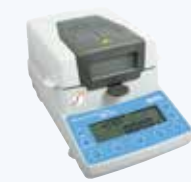
Bench Scale - Industry



Bench Scale - Platform



Body Composition Analyzer InBalance

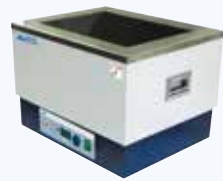


Moisture Analyzer

## Baths



Basic Water Bath, 100 °C



Basic Water Bath, 250 °C



Extraction Water Bath



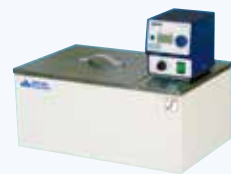
Shaking Water Bath

## Baths



Viscosity Bath

## Bath Circulators



Circulation Water bath



Cold Trap



High-Temp. Bath Circulator

## Bath Circulators



Refrigerated / Heating

## Centrifuges



Mini-micro Centrifuge



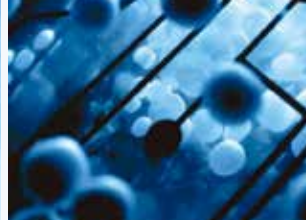
Pro-micro Centrifuge



Table Top Centrifuge

<Continued on next page>

# 2018 DAIHAN Scientific Laboratory & Measuring Instruments "Overview"



## Centrifuges



Table Top Microprocessor

## Chiller/Cooling Circulator



Chiller / Refrigerated External

## Desiccator Cabinets



Desiccator Cabinets

## Electrophoresis



Gel Documentation System

## Electrophoresis



Portable Gel Documentation

## Evaporators



Rotary Vacuum Evaporator

## Freeze Dry System



Bench-top Freeze Dryer

## Fume Hoods



Clean Bench-Ductless



Fume Hood-Ducted

## Furnaces



Muffle Furnace



Muffle Furnace, High-Temp.

## Furniture



Laboratory Assembly

## Heating Block / Dry Bath Incubator



Heating Block



Heating & Cooling Block

## Heating Circulator



Refrigerated Heating External

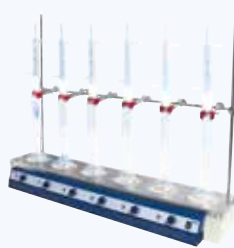
## Heating Mantles



Heating Mantles, Al-case



Heating Mantles, Fabric



Multi Heating Mantles

## Homogenizers



Analog Control Homogenizer

<Continued on next page>

**Homogenizers**



**Digital Control Homogenizer**

**Hotplates**

**New**



**500 °C High-Temp. Hotplate**



**380 °C Hotplate, Digital**



**380 °C Hotplate, Premium Analog**

**Hotplates**



**350 °C Large Plate Hotplate**

**Hotplate Stirrers**

**New**



**500 °C Hi-Temp. Hotplate Stirrer**

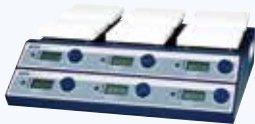


**380 °C Hotplate Stirrer, Digital**



**380 °C Hotplate Stirrer, Premium**

**Hotplate Stirrers**



**Multi Hotplate Stirrer**

**Incubators**



**General Incubator**

**Smart-Lab™**



**General Incubator**



**General Incubator, Multi-room**

**Incubators**

**Smart-Lab™**



**Humidity / Temp. Chamber**

**Smart-Lab™**



**Humidity / Temp. Chamber**



**Low Temp (B.O.D) Incubator**

**Smart-Lab™**



**Low Temp (B.O.D) Incubator**

**Incubators**

**Smart-Lab™**



**Plant Growth Chamber**



**Shaking, Front Door**



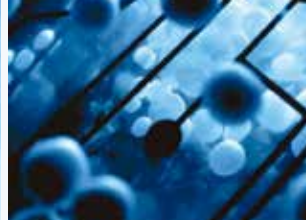
**Shaking, Top Door**



**Shaking, Top Door**

<Continued on next page>

# 2018 DAIHAN Scientific Laboratory & Measuring Instruments "Overview"



## Incubators



Shaking Multi-Stack

## Magnifier



Light Magnifier

## Measuring



Anemometer / Air Flow



Gas Detector / Monitor

## Measuring



Manometer



Salinity Meter



Soil Thermometer



Sound Level(Noise)Meter

## Measuring



Tachometer



Thermo-Hygrometer



Thermometer, Digital Infra-Red "IR"



Thermometer, Digital K-type

## Measuring



Thermometer, Digital NTC-type



Thermometer, Digital Pt100



Thermometer, Digital WBGT

## Mills



Ball Mill

## Mills



Mill Mixer



Pin Mill & Cutting Mill

## Ovens



General Oven



General Oven

<Continued on next page>

### Ovens



High Clean Air Oven



Industrial Forced-air Oven



Vacuum Oven



Vacuum Oven

### Reactor Complete Sets



All for Glass Reaction System for Lab & Pilot Plant

### Refrigerators



Blood Bank Refrigerator



Pharmaceutical Refrigerator

### Refrigerators



Smart Laboratory Refrigerator



Laboratory Freezer

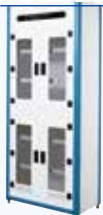


ULT Freezer, -86°C



ULT Freezer, -95°C

### Safety Cabinets



Cabinets - Chemicals



Cabinets - Flammable

### Shakers



Mixer/Rocker



Mixer/Rotor

### Shakers



Mixer/Vortex



Mixer/Vortex, Mini



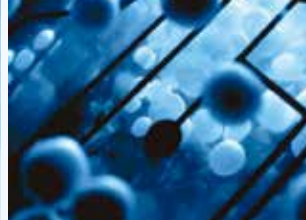
Orbital-/Reciprocating-Shaker



Rocker

<Continued on next page>

# 2018 DAIHAN Scientific Laboratory & Measuring Instruments "Overview"



## Shakers



Rotator

## Stirrers



Multi-point Magnetic Stirrer



Overhead High-speed Analog



Overhead High-speed Digital

## Stirrers



Overhead High-speed Remote



Overhead High-torque, Analog



Overhead High-torque, Digital



Overhead High-torque, Remote

## Ultrasonic Cleaners



Ultrasonic Cleaner

## Viscosity



Rotary Viscometers

## Washers



Glass / Labware Washer

## Water Purification



Basic Water Still

## Water Purification



Classic Water Still



Water Purification System RO/UP

**DAIHAN Scientific**  
YOUR PARTNER in LABORATORY

## DAIHAN Scientific Laboratory & Measuring Instruments

Your Partner in Laboratory

Customer Satisfaction  
Everything about Laboratory & Industry





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Horizontal dashed lines for writing.



# CERTIFICATES

- ✓ Quality      ✓ Safety
- ✓ Environment Management

- **CE**                      **EMC & LVD Compliance**  
The Certified DAIHAN Laboratory Instruments are Specified in this Catalog
- **UL**                      **UL Certification**  
**Laboratory-use Electrical Equipment**  
for General-type Incubators & Oven, B.O.D Incubators, Vacuum Ovens
- **GD (Good Design) Mark**
- **GMP**                      **GMP Certification**  
**Good Manufacturing Practices of Medical Device**
- **ISO 9001**                **System Certification**  
**Design, Development, Manufacture & Servicing**  
for All DAIHAN Laboratory Instruments
- **ISO 13485**              **System Certification**  
**Design, Development, Manufacture & Servicing**  
for All DAIHAN Laboratory Instruments
- **SQ (Service Qualification) Certification**



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**CE Certified**  
**Excellent Service Quality - Certified**  
**Global Small Giant Corp. of Korea**  
**GMP Certified for Medical Instruments**  
**ISO 9001 Certified**  
**ISO 13485 Certified for Medical Instruments**  
**UL Certified**  
**PL Insurance**  
**Validation (IQ & OQ) Service**  
**Patented(No. 10-0554098)**  
**Jog Dial Control System**

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**Cat 230 (09 Apr. 2018)**

**Distributor**