

**DAIHAN® -30+200°C Precise Refrigerated Heating External Circulator "MaXircu™ WHR", Fill-10 · 18 · 25 Lit**  
 Ideal for Evaporator/Reactor &c. Heating & Cooling Line, with Pre-Cooling Sys, Used with External Direct Contact K-type Temp. Probe(Optional)  
 With High Quality Magnetic Pump, Flow 20 · 40 · 60 Lit/min, Lift 38m, ±0.2°C, 정밀 고온/냉동 겸용 외부 써큘레이터



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



"MaXircu™ WHR" in the Reactor System.

※ Note : Cooling Transfer Fluid Should be an Antifreezing Solution

- Made in Korea
- PL (Product Liability) Insurance
- Max. Lift : 38m
- 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-Dial Control System and Digital LCD with Back-Light Function.
- \* 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.)
- \* With High Quality Shock-proof Caster for Convenient and Safe Moving.
- \* Embedded External Nozzle Part for the Prevention of Nozzle Damaged.
- \* Stainless-steel Internal Bath for Prevention of Corrosion.
- \* Independently 3-systems : Refrigerating System, Heating System, Pre-Cooling System.
- \* 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.



Connection Ports

**Specifications & Ordering information**

Spec.	Model	"MaXircu™ WHR-20" Useful for 5~20Lit Reactor	"MaXircu™ WHR-50" Useful for 20~50Lit Reactor	"MaXircu™ WHR-100" Useful for 50~100Lit Reactor
<b>Temp. Range &amp; Stability</b>		-30°C~ +200°C-Range, ±0.2°C(at 15°C)-Stability		
<b>Heat-Fluid Filling Volume</b>		10 Lit max	18 Lit max	25 Lit max
<b>Useful for 5~100Lit Reactor</b>		for 5~20Lit Reactor	for 20~50Lit Reactor	for 50~100Lit Reactor
<b>Refrigerator Capacity</b>		4.5 kW	7.5 kW	18 kW
<b>Heater</b>		2.5 kW	6.0 kW	12 kW
<b>Lid &amp; Top Opening Dia.</b>		φ80 mm		
<b>Fluid In/Out-let Connector</b>		ISO RC 1" (English System AG 1") Thread, Stainless-steel		
<b>Pump Power, Lift Height, m</b>		Max. Pressure : 4 bar, Max. Lift : 38m		
<b>Cooling Capacity</b>	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
<b>External Dimension</b>		600×750×h1100 mm	650×850×h1300 mm	750×900×h1500 mm
<b>Optional External Temp. Sensor K-type Probe</b>		Can be used with External Direct Contact K-type Temp. Probe. (Optional)		
<b>Material</b>		Internal : Stainless-steel, External : Powder Coated steel		
<b>Electrical Reqts.</b>		3Phase 380V		
<b>Cat. No.</b>	60Hz	DH.WHR0020	DH.WHR0050	DH.WHR0100
	50Hz	DH.WHR0025	DH.WHR0055	DH.WHR0150
<b>Price, Each. W</b>				

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

※ 운임 약 ₩ 20,000 별도!



**Insulated Silicone & Teflon PFA Circulation Hose, Id φ 10 ~ 19mm, L1/1.5m**

- Supplied by SciLab Korea
- \* φ 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
- \* 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	Spec.	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	Spec.	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 φ 17mm, L1m, 360°C**

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

**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
- \* Do not use for Silicone Tube
- \* 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 W
SL.CirD12.2	(2) "Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 18Lit	18ℓ .dh pk W
SL.CirD12	"Therminol D12" Cool/Heat Transfer Fluid, -85 +230°C, 200Lit/Drum	Drum Price, ₩
		200Lit

※ 운임 약 ₩ 25,000 별도!



Heating Transfer Fluid, 20Lit

**SYN THERM 22L® -5+320°C Heating Transfer Fluid, Synthetic Alkylbenzene Derivative**  
 For Low- & High-Temp Circulation, 알킬벤젠계 합성열매

- Made in Korea
- \* Hazards Identification of MSDS(Material Safety Data Sheet) :
  - H315 Causes Skin Irritation
  - H319 Causes Serious Eye Irritation
  - H335 May Cause Respiratory Irritation
  - H336 May Cause Drowsiness or Dizziness
- \* Kinematic Viscosity & Density :
  - (1) at 0°C : 22.7cSt, 0.885kg/ℓ
  - (2) at 40°C : 21.80cSt, 0.859kg/ℓ
  - (3) at 80°C : 6.09cSt, 0.834kg/ℓ
  - (4) at 140°C : 6.09cSt, 0.795kg/ℓ
  - (5) at 200°C : 1.10cSt, 0.756kg/ℓ
  - (6) at 260°C : 0.74cSt, 0.718kg/ℓ

SL.SYN22L	SYN THERM 22L® Heating Transfer Fluid -5 +320°C, 20Lit	Pk. Price, ₩
		20Lit