



Recirculating Coolers (Chillers)

General Recirculating Coolers. (Chillers)

Selection Guide

Recirculating Cooler

Description		Working Temp. Range (°C / °F)	Bath Volume (L / cu ft)	Pump	Page
Recirculator	HX-20	+3 to 40 / +37.4 to 104	35.0 / 1.24	Magnetic	60
	HX-25			Centrifugal	
	HX-20H				
	HX-25 H				
	HX-35H				
	HX-45H				
	HX-55H		45.0 / 1.59		

Accessories & Options

Description	Page
for Recirculating Cooler	62-63



General Applications

General Applications	Recirculating Coolers
	HX-Series
Vacuum systems	•
Gas chromatographs	•
Spectrometers	•
Semiconductor industries	•
Diffusion pumps	•
AAS	•
NMR	•
Pilot plants	•
Electrophoresis chambers	•
Mass spectrometers	•
General laboratory apparatus	•
General industries	•
Plastic industries	•
Rotary evaporators	•
Autoclaves	•
Reaction vessels	•
Lasers	•
Distillation apparatus	•

* General purpose use and applications.

Technical Benefits

Safety functions

- 1) Self - protecting cut-off function and signal :
 - For over temperature, automated cut the power supply for heater and controller orderly before the unit shuts down.
 - Over - current Circuit breaker for user safety.
- 2) Low fluid level and dry - running protection :
 - Intermittent tone rings and optical signal alarm displays on the control panels.
- 3) Double service valve is provided to prevent refrigerant leakage.

Optimum control performance

- 1) Functional LCD (resolution 0.1°C) keypad type display :
 - Self-diagnostic function will identify equipment troubles.
 - Recognizable keypad type of input which is convenient and easy to use was adopted.
 - Easy-to-clean and clear temperature LCD display.
- 2) Water level can be easily identified by bright LED lamp indicator.
- 3) Adopted identifying pump pressure gauge.
- 4) RUN, Compressor, Pump operating indicator.

Ideal construction

- 1) High quality 304 stainless steel interior bath and dirt repellent powder coating external surface.
- 2) Main wetted parts are made of stainless steel, providing resistance against all usual bath fluids.
- 3) Pump pressure control are available using by-pass function. (only for H type)
- 4) Drain port : to drain bath fluid.
- 5) Removable venting grid for reducing condenser contamination and to facilitate cleaning.
- 6) Pressure gauge provide the fluid system diagnostics at a glance, and identifying the pump pressure.

General Recirculating Coolers(Chillers)

Providing a constant temperature control and high cooling efficiency.

Operating cost can be cut off by recirculating the cooling water. It is eco-friendly and cuts energy consumption off.



Operating features

- Control temperature range is 3°C~40°C.
- Sol valve ON/OFF is adopted as a control method.
- LCD (resolution 0.1°C) is adopted as a display, and keypad type of input which is convenient and easy to use was adopted.
- Water level can be easily identified even from a far distance with LED.
- User can check easily if the solution in the bath enough or not with error signals on the display and buzzer sound.
- If the equipment operates at 40°C or above due to external environment, user can identify easily with error signal on the display and buzzer sound.
- Different types of pump pressure control are available using by-pass function. (only for H type)

Constructional features

- Refrigerating system is optimized to maximize energy saving and refrigerating efficiency.
- Eco-friendly R-404A refrigerant is used to prevent environmental pollution. Double service valve is provided to prevent refrigerant leakage.
- Removable venting grid is provided to reduce condenser contamination and to facilitate cleaning.
- A plastic solution inlet is provided to allow user to easily and safely handle and use.
- Pressure gauge provide the fluid system diagnostics at a glance, and identifying the pump pressure.
- Wheels attached on the product allow it to move freely.
- Compact and beautiful design will satisfy the customers.
- Different types of pumps and valves are provided to allow user to easily operate at the same refrigerating efficiency.
- Various accessories are provided to meet user's different environment. (refer to accessories)

Testing in accordance with DIN EN 12876

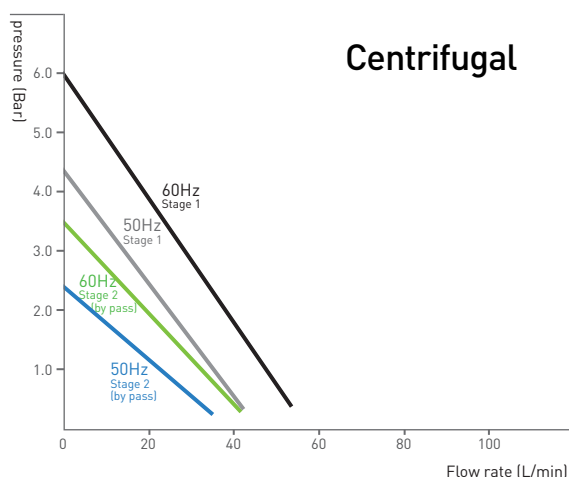
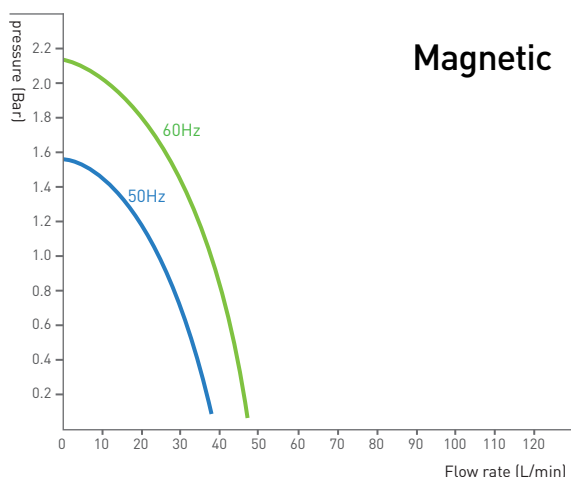
Optional Accessories

• see page 62-63

- Fittings, Adapters
- Tubing, Insulations
- Tube clamps
- Bath fluid

General Recirculating Coolers(Chillers)

Pumping Capacities (Bath fluid : water)



Specifications & Ordering Informations



Model		HX-20	HX-20H	HX-25	HX-25H	HX-35H	HX-45H	HX-55H
Temperature (bath fluid : water)	Working temperature range (°C / °F)	+3 to 40 / +37.4 to 104						
	Temperature stability at 15°C ¹⁾ (± °C / °F)	1 / 1.8						
Cooling capacity (bath fluid : water) for 50Hz	at 20°C (kW)	1.9	1.9	2.4	2.4	3.6	4.7	7.1
	at 10°C (kW)	1.4	1.4	1.7	1.7	3.1	3.6	5.1
	at 5°C (kW)	1.0	1.0	1.4	1.4	2.4	2.9	4.2
Pump(50Hz)	Max. flow rate (L / min, gal / min)	38 / 10.03	45 / 11.89	38 / 10.03	45 / 11.89	45 / 11.89	45 / 11.89	45 / 11.89
	Max. pressure (bar / psi)	1.58 / 22.92	4.3 / 62.37	1.58 / 22.92	4.3 / 62.37	4.3 / 62.37	4.3 / 62.37	4.3 / 62.37
Dimension	Max. filling capacity (L / cu ft)	35 / 1.24	35 / 1.24	35 / 1.24	35 / 1.24	45 / 1.59	45 / 1.59	45 / 1.59
	For tubing dia (mm / inch)	20 / 0.79	20 / 0.79	20 / 0.79	20 / 0.79	20 / 0.79	20 / 0.79	20 / 0.79
	Overall (W×L×H, mm / inch)	610×670×970 / 24.0×26.4×38.2					740×730×1065 / 29.1×28.7×41.9	
	Net weight (kg / lbs)	93 / 205	97 / 214	101 / 223	105 / 231	120 / 265	130 / 287	140 / 309
Electrical Requirements (220V, 60Hz)		8.5A	9A	9A	9.5A	15A		
Cat. No.		AAA64011	AAA64111	AAA64021	AAA64121	AAA64131	-	-
Electrical Requirements (230V, 50Hz)		7A	10.5A	7.6A	11A	17A		
Cat. No.		AAH64012K	AAH64112K	AAH64022K	AAH64122K	AAH64132K	-	-
Electrical Requirements (120V, 60Hz)								
Cat. No.		AAH64013U	-	AAH64023U	-	-	-	-
Electrical Requirements (380V, 60Hz)							10A	11.5A
Cat. No.		-	-	-	-	-	AAA64149	AAA64159
Electrical Requirements (380V, 50Hz)							7A	8.5A
Cat. No.		-	-	-	-	-	AAH64148K	AAH64158K

1) Technical data (according to DIN 12876)

* Above spec can be changed without prior notice.

* The performance values refer to +20°C(68°F) ambient temperature.

* Product performance will be affected by ambient temperatures.

Accessories & Options

Recirculating Coolers



Barbed fittings



Connectors / Adapters



One touch adapters set



Flexible fittings

Barbed fittings

These fitting systems are made for quick and convenient combination with various size tubes. It is economically using pipe fittings, tube fittings, and hose fittings without tools.

Cat. No.	Description
HXE1066	3/4" Male to barbed fitting for tubing 1" inner dia
HXE1067	3/4" Male to barbed fitting for tubing 3/4" inner dia
HXE1068	3/4" Male to barbed fitting for tubing 5/8" inner dia
HXE1069	3/4" Male to barbed fitting for tubing 1/2" inner dia
HXE1070	3/4" Male to barbed fitting for tubing 3/8" inner dia
AAA64501	1" Barbed fittings set with Ball valve
AAA64502	3/4" Barbed fittings set with Ball valve
AAA64503	5/8" Barbed fittings set with Ball valve
AAA64504	1/2" Barbed fittings set with Ball valve
AAA64505	3/8" Barbed fittings set with Ball valve
AAA64506	1" Barbed fittings set with Gate valve
AAA64507	3/4" Barbed fittings set with Gate valve
AAA64508	5/8" Barbed fittings set with Gate valve
AAA64509	1/2" Barbed fittings set with Gate valve
AAA64510	3/8" Barbed fittings set with Gate valve

Connectors / Adapters

Cat. No.	Description
HXE1105	3/4" Male to 3/4" Female
HXE1106	3/4" Male to 5/8" Female
HXE1107	3/4" Male to 1/2" Female
HXE1108	3/4" Male to 3/8" Female
HXE1109	3/4" Male to 3/4" Male
HXE1110	3/4" Male to 5/8" Male
HXE1111	3/4" Male to 1/2" Male
HXE1112	3/4" Male to 3/8" Male

One touch adapters set

One-handed connect and exchange rigid tubing easily.

Cat. No.	Description
HXE1075	12mm One touch adapter
HXE1076	10mm One touch adapter
HXE1077	8mm One touch adapter
HXE1078	6mm One touch adapter
AAA64531	12mm Adapters set with Ball valve
AAA64532	10mm Adapters set with Ball valve
AAA64533	8mm Adapters set with Ball valve
AAA64534	6mm Adapters set with Ball valve

Flexible fittings

Stainless tubing is designed for Superior flexibility and good chemical resistance.

Cat. No.	Description
HXE1071	3/4" Male to 3/4" Flexible fitting
HXE1072	3/4" Male to 1/2" Female with 1/2" Male to 1/2" Flexible fitting
AAA64521	3/4" Flexible fittings set with Ball valve
AAA64522	1/2" Flexible fittings set with Ball valve
AAA64523	3/4" Flexible fittings set with Gate valve
AAA64524	1/2" Flexible fittings set with Gate valve

Accessories & Options

Recirculating Coolers



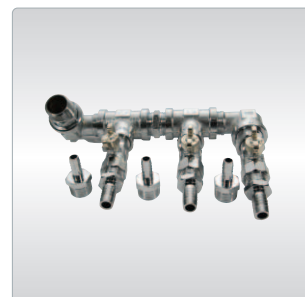
Tubing



Tubing insulations



Tube clamps



Distributing fittings

Tubing

Cat. No.	Description	
HXE1079	1m 12mm Urethane tubing	id9.0mm, od12.0mm
HXE1080	1m 10mm Urethane tubing	id6.5mm, od10.0mm
HXE1081	1m 8mm Urethane tubing	id5.5mm, od8.0mm
HXE1082	1m 6mm Urethane tubing	id4.0mm, od6.0mm
HXE1083	1m 1" PVC tubing with thread	id25.0mm, od31.0mm
HXE1084	1m 3/4" PVC tubing with thread	id19.0mm, od24.0mm
HXE1085	1m 5/8" PVC tubing with thread	id16.0mm, od20.5mm
HXE1086	1m 1/2" PVC tubing with thread	id12.0mm, od16.0mm
HXE1087	1m 3/8" PVC tubing with thread	id10.0mm, od14.0mm
HXE1088	1m 1" PVC tubing with wire	id25.0mm, od33.0mm
HXE1089	1m 3/4" PVC tubing with wire	id19.0mm, od26.0mm
HXE1090	1m 5/8" PVC tubing with wire	id15.0mm, od22.0mm
HXE1091	1m 1/2" PVC tubing with wire	id12.0mm, od18.0mm
HXE1092	1m 3/8" PVC tubing with wire	id9.0mm, od15.0mm

Tubing insulations

EPDM Insulation is used to abstain from heat loss, and to reduce condensation from cold-water plumbing, chilled water, and refrigeration lines.

Cat. No.	Description
HXE1093	EPDM Insulation, 16mm inner dia.(9T)
HXE1094	EPDM Insulation, 19mm inner dia.(9T)
HXE1095	EPDM Insulation, 25mm inner dia.(9T)
HXE1096	EPDM Insulation, 28mm inner dia.(9T)
HXE1097	EPDM Insulation, 35mm inner dia.(9T)

Flexible tubing

Cat. No.	Description
HXE1073	3/4" Flexible tubing (sus304, m)
HXE1074	1/2" Flexible tubing (sus304, m)

Tube clamps

Cat. No.	Description
HXE1098	1" Clamp
HXE1099	3/4" Clamp
HXE1100	5/8" Clamp
HXE1101	1/2" Clamp
HXE1102	3/8" Clamp

Bath fluid

Those fluids suited for application with recirculating cooler whenever water cannot be used.

Cat. No.	Description
HXE1113	Distilled water (20L)
HXE1114	Ethylene glycol (4L)
HXE1115	Ethylene glycol (20L)

Distributing fittings

Connect even the small tubing with barbed fitting advantages, also multiple styles to fit your needs.

Cat. No.	Description
AAA64541	3-Way distributing barbed fittings set (1/4")
AAA64542	3-Way distributing barbed fittings set (3/8")