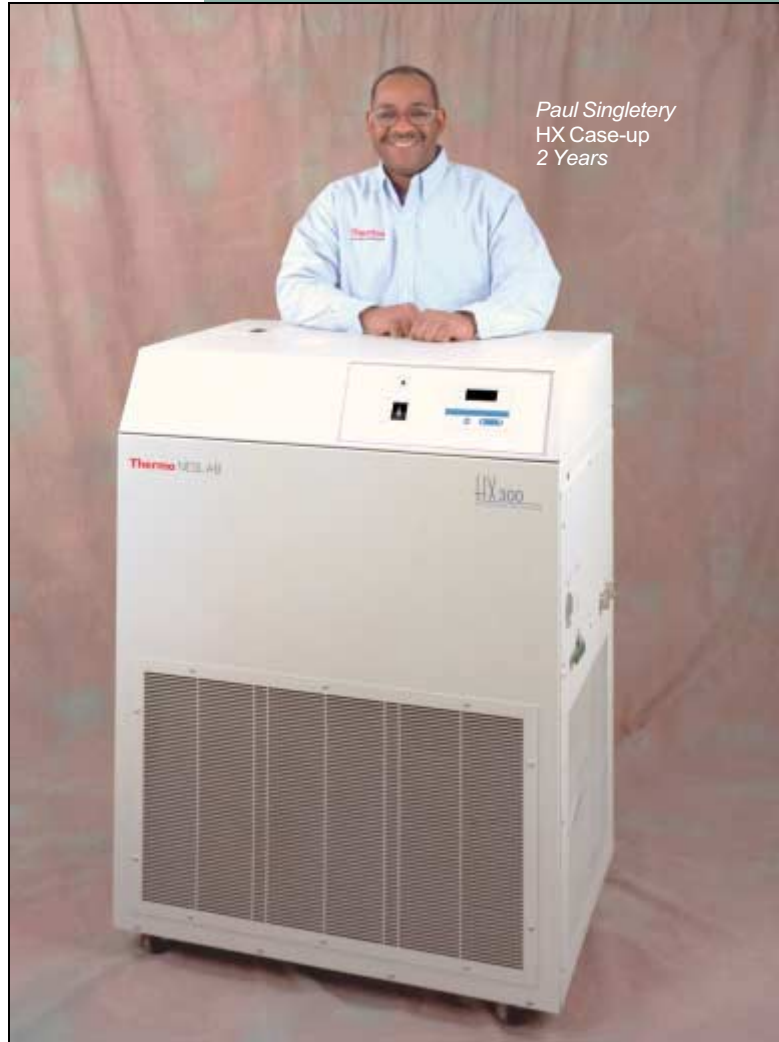


Powerful
Versatile



Paul Singletery
HX Case-up
2 Years

RECIRCULATING CHILLERS

Applications

- Lasers
- Analytical Instrumentation
- Semiconductor Manufacturing
- Medical Imaging Equipment
- Process Cooling
- Reaction Vessels
- Condensers

HX Series

HX Series HX Series

Overview



The HX Series of chillers are Thermo NESLAB's versatile, highly configurable chiller series that can go from a simple workhorse to a highly sophisticated chiller via the many options available. This makes it perfectly suitable for use in laboratory, laser, industrial, semiconductor, or medical applications. The HX Series offers dependable performance, use of the highest quality materials, and a design that will be trouble free for many years.

Accessories

- Air Filters
- Fluid Filters
- Deionized Water Pkgs.
- Plumbing Kits
- Fluids
- External Pressure Reducer
- Remote Controller



2,000 Watts to 75,000 Watts
2,000 Watts to 75,000 Watts

Features



Hinged top opens for easy access to internal components

Pressure Gauge for fluid system diagnostics at a glance

Flow Control Valve

RECIRCULATING CHILLERS

HX Series

HX Series

Specifications

Model	HX-75	HX-150	HX-300
Cooling Capacity			
60 Hz	2000 Watts at 20°C 6820 BTU/hr at 20°C 1720 Kcal/hr at 20°C	4500 Watts at 20°C 15345 BTU/hr at 20°C 3870 Kcal/hr at 20°C	10000 Watts at 20°C 34100 BTU/hr at 20°C 8593 Kcal/hr at 20°C
50 Hz	1660 Watts at 20°C 5560 BTU/hr at 20°C 1428 Kcal/hr at 20°C	3735 Watts at 20°C 12735 BTU/hr at 20°C 3212 Kcal/hr at 20°C	8300 Watts at 20°C 28303 BTU/hr at 20°C 7132 Kcal/hr at 20°C
Temperature Range	+5°C to +35°C	+5°C to +35°C	+5°C to +35°C
Stability	±0.1°C	±0.1°C	±0.1°C
Pump	Specify from pump graphs		
Reservoir Volume	5 Gallons/18.9 Liters	8 Gallons/30.3 Liters	15 Gallons/56.8 Liters
Dimensions (H x W x D)			
In.	36 ³ / ₄ x 23 ¹ / ₄ x 18 ³ / ₄	40 ⁵ / ₈ x 26 ¹ / ₄ x 21 ¹ / ₈	46 ⁷ / ₈ x 33 ³ / ₄ x 25 ¹ / ₄
Cm.	93.3 x 59.0 x 47.6	103.2 x 66.7 x 53.7	118.9 x 85.7 x 64.1
Power Requirements	208-230V, 60 Hz, 12 Amps 220-240V, 50 Hz, 11 Amps	208-230V, 60 Hz, 17 Amps 220-240V, 50 Hz, 14 Amps	208-230V, 60 Hz, 21 Amps, 3Ø 380-420V, 50 Hz, 12 Amps, 3Ø
Shipping Weight	261 Lbs, 118.4 Kgs	320 Lbs, 145.2 Kgs	477 Lbs, 216.4 Kgs

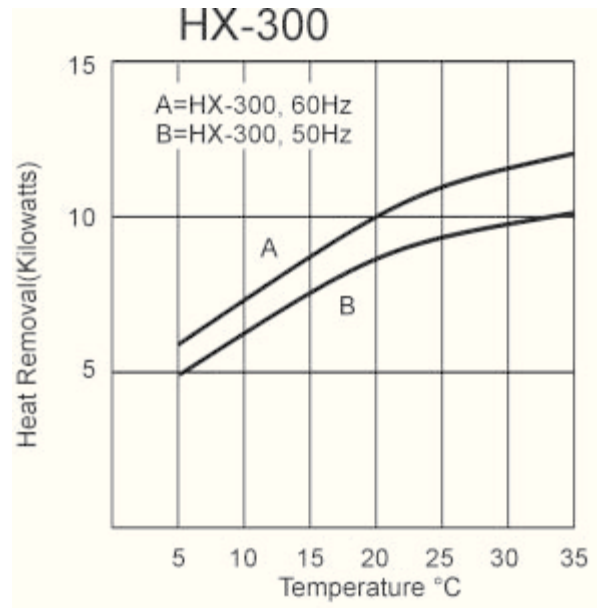
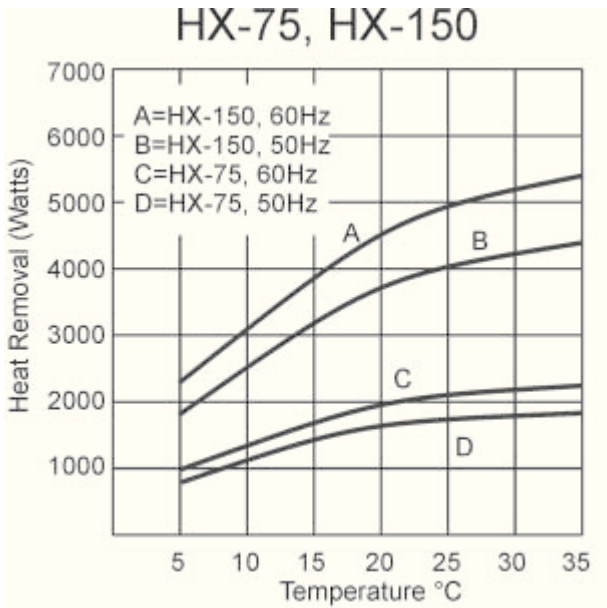
Specifications listed for standard units circulating 20°C water at 20°C ambient. Specifications will be affected by changes in temperature, ambient, or coolant. Cooling capacity and amperage ratings based on units with CP-25 pump, may be affected by optional pumps. Specifications subject to change.

2,000 Watts to 10,000 Watts

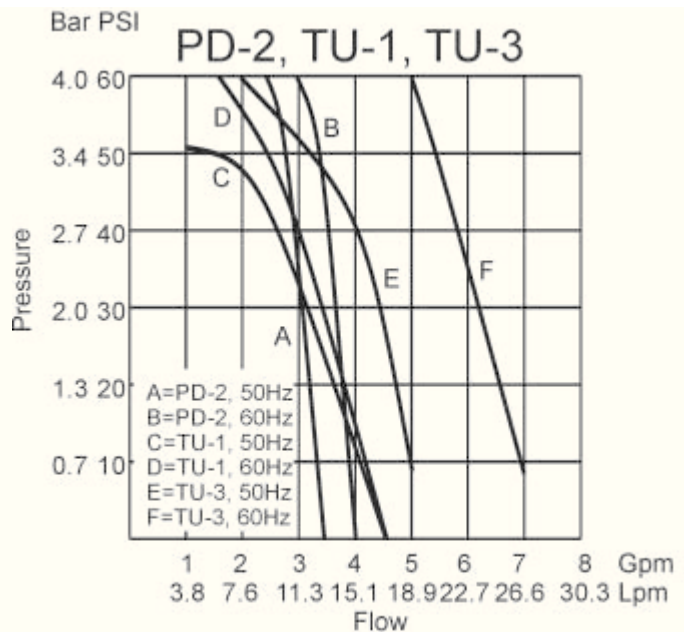
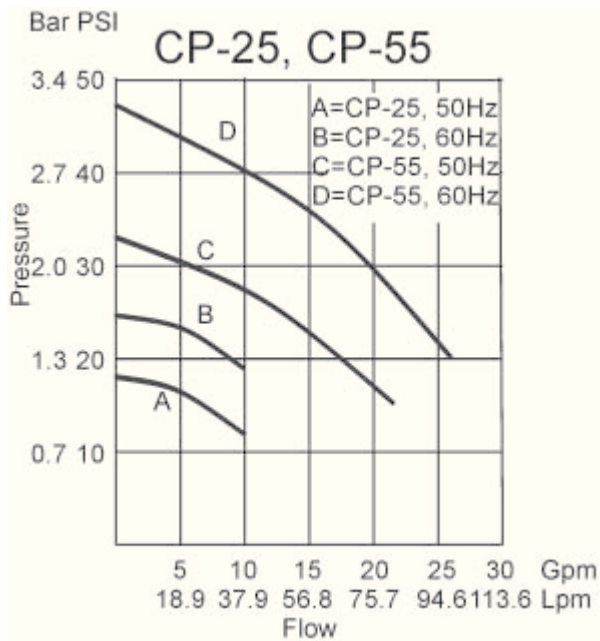
2,000 Watts to 10,000 Watts

Graphs

Cooling Capacity



Pumping Capacity



HX Series HX Series

Specifications

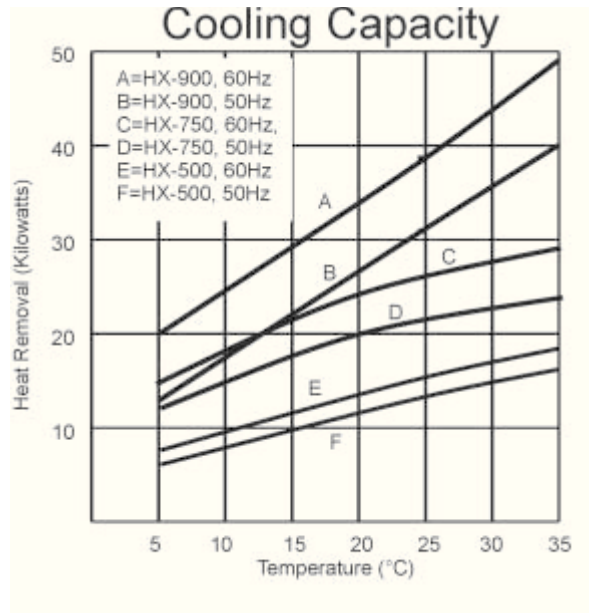
Model	HX-500	HX-750	HX-900
Cooling Capacity			
60 Hz	15,700 Watts at 20°C 53,500 BTU/hr at 20°C 13,502 Kcal/hr at 20°C	24,000 Watts at 20°C 81,840 BTU/hr at 20°C 20,640 Kcal/hr at 20°C	34,000 Watts at 20°C 115,940 BTU/hr at 20°C 29,240 Kcal/hr at 20°C
50 Hz	13,030 Watts at 20°C 44,430 BTU/hr at 20°C 11,206 Kcal/hr at 20°C	19,920 Watts at 20°C 67,925 BTU/hr at 20°C 17,131 Kcal/hr at 20°C	28,200 Watts at 20°C 96,160 BTU/hr at 20°C 24,250 Kcal/hr at 20°C
Temperature Range	+5°C to +35°C	+5°C to +35°C	+5°C to +35°C
Stability	±0.1°C	±0.1°C	±0.1°C
Pump	Specify from pump graphs		CP-100 38 gpm at 40 psi CP-100 28 gpm at 30 psi
50 Hz			
Reservoir Volume	28 Gallons/106 Liters	40 Gallons/151.4 Liters	15 Gallons/56.8 Liters
Dimensions (H x W x D)			
In.	51 ⁵ / ₈ x 46 x 28 ³ / ₄	64 ³ / ₄ x 46 x 29*	64 ³ / ₄ x 46 x 29*
Cm.	131.1 x 116.8 x 73	164.5 x 116.8 x 73.7*	164.5 x 116.8 x 73.7*
Power Requirements			
	208-230V, 60 Hz, 38 Amps, 3Ø 380-420V, 50 Hz, 17 Amps, 3Ø	208-230V, 60 Hz, 40 Amps, 3Ø 380-420V, 50 Hz, 21 Amps, 3Ø	208-230V, 60 Hz, 67 Amps, 3Ø 380-420V, 50 Hz, 30 Amps, 3Ø
Shipping Weight	746 Lbs, 338.4 Kgs	971 Lbs, 440.4 Kgs	1250 Lbs, 567 Kgs

Specifications listed for standard units circulating 20°C water at 20°C ambient. Specifications will be affected by changes in temperature, ambient, or coolant. Cooling capacity and amperage ratings based on units with CP-25 pump, may be affected by optional pumps. *Water cooled dimensions same as HX-500. Specifications subject to change.

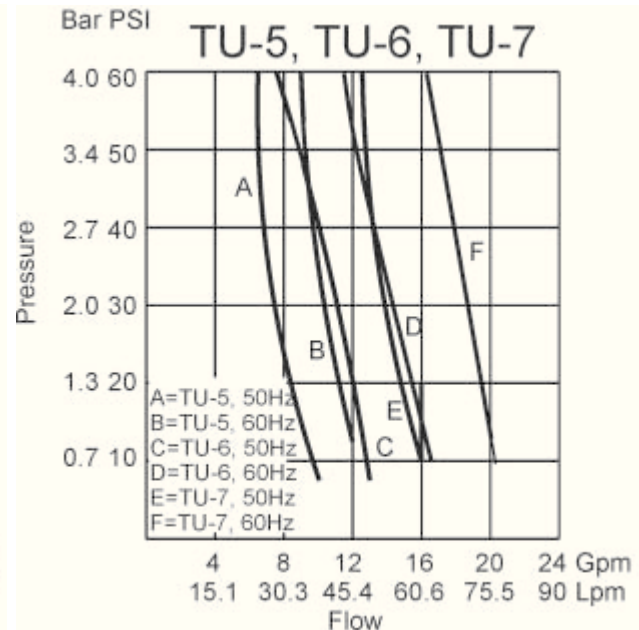
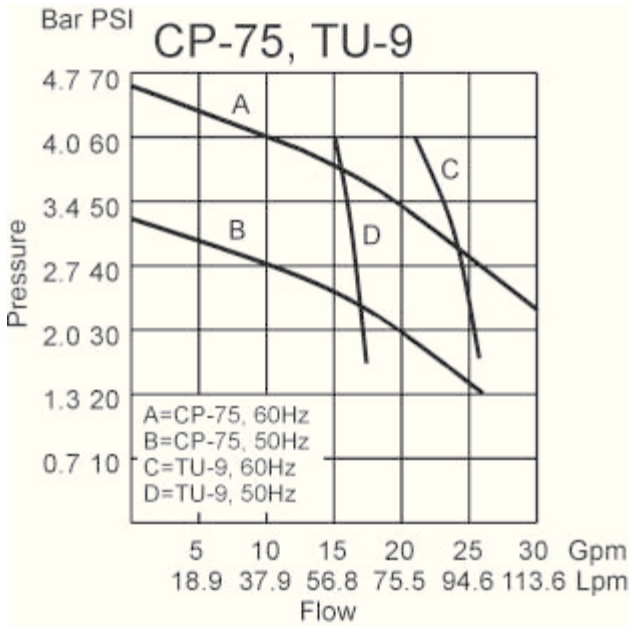
15,700 Watts to 34,000 Watts

15,700 Watts to 34,000 Watts

Graphs



Pumping Capacity



HX Controllers

HX Controllers

TC-200



Standard

- Large LED for easy viewing
- User adjustable low and high temperature alarm limits
- Low reservoir fluid level safety
- Visual fault indication

OPTIONS

Sentry One Package (adds)

- Remote start and stop
- Status relay
- Auto off safety shut down

Sentry Two Package (adds)

- Remote start and stop
- Status relay
- Auto off safety shut down
- Low Flow detection

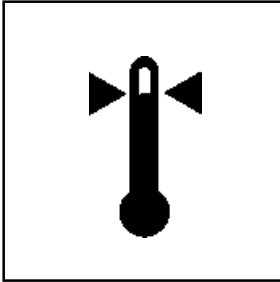
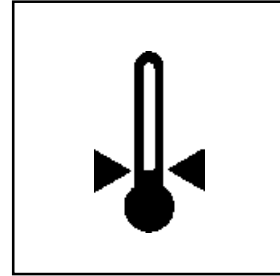


TC-400

- Vacuum fluorescent display with a resolution of 0.1°C
- 14 status LED's for quick diagnostics
- User adjustable low/high temperature, low level, and low flow safeties with audible alarm
- Process flow rate readout
- Analog interface
- Remote sensor port
- RS-232 or RS-485 interface (optional)
- Fluid resistivity readout (optional)

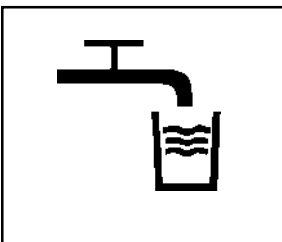
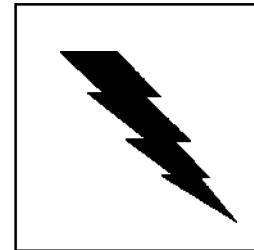
HX Options HX Options

-15°C Extended Low Temperature Range



-15°C to +90°C Extended High/Low Temperature Range

High voltage - 460 volts, 60 Hz, 3 phase



Automatic Reservoir Refill

Should the fluid level become low, the HX reservoir will refill when connected to a pressurized water source.

Remote Condenser

Ideal when heat rejection is an issue or when a supply of water for a water cooled condenser is not available. The HX's waste heat will be rejected by the remote condenser which can be placed outdoors.



HX Accessories

HX Accessories



Remote TC-400 Controller

Fully control and monitor your HX remotely. Connects to the HX's optional RS-485 port and is available in a variety of cable lengths.

DEI Package

For cooling applications requiring ultra pure water, will maintain a water resistivity level between 1 and 3 megohm/cm². Filter good/no good LED indication or use with the optional TC-400 resistivity readout.



Air Filter

Protect your chiller from dusty environments.

Fluid Filter Package

Available with 5, 10, 25, 40 micron filters. Choice of full or partial flow through.





External Pressure Reducer

Adjusts exiting fluid pressure as low as 15 psi to protect sensitive equipment

Fluids

Ethylene Glycol or Silicone oil in 5 gallon containers



Plumbing Packages

25 feet of tubing and insulation and 4 hose clamps

Remote Sensor

Allows remote temperature control of an external vessel when circulating externally



HX All-Weather **HX All-Weather**

Overview



Thermo NESLAB's weather protected chillers WORK in extreme conditions and environments. Designed to withstand ambient temperatures as low as -20°F and as high as $+120^{\circ}\text{F}$, these robust chillers will keep your equipment perfectly temperature controlled even if the environment is not.

10,000 Watts to 75,000 Watts 10,000 Watts to 75,000 Watts

Features



ALL-WEATHER CHILLERS

HX All-Weather Series

HX All-Weather Series

Specifications

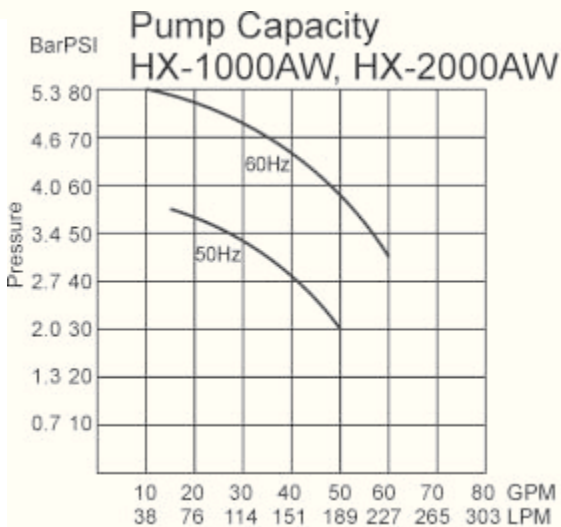
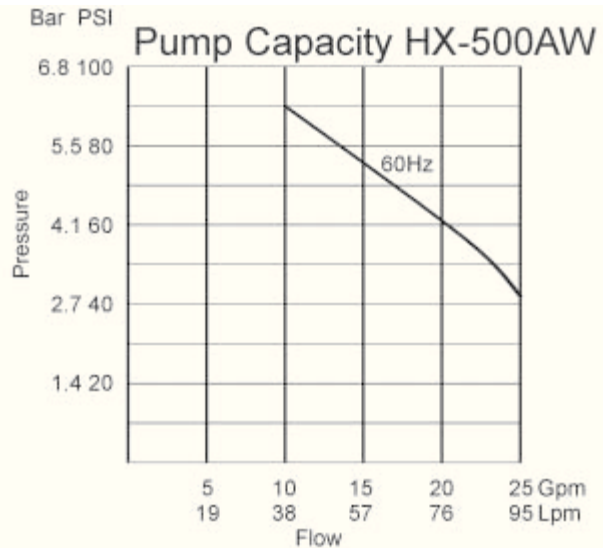
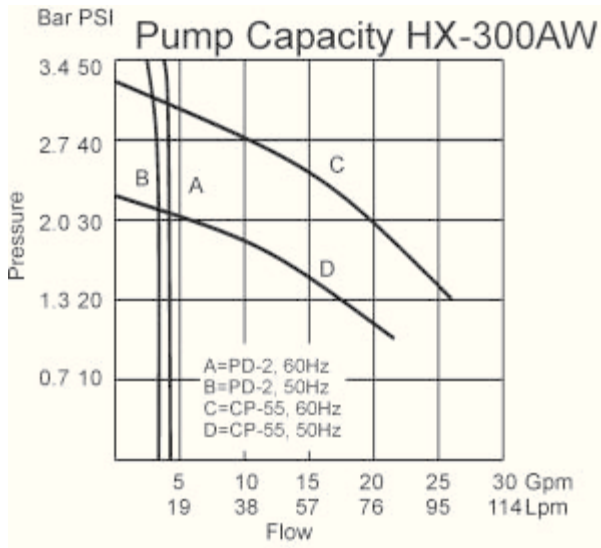
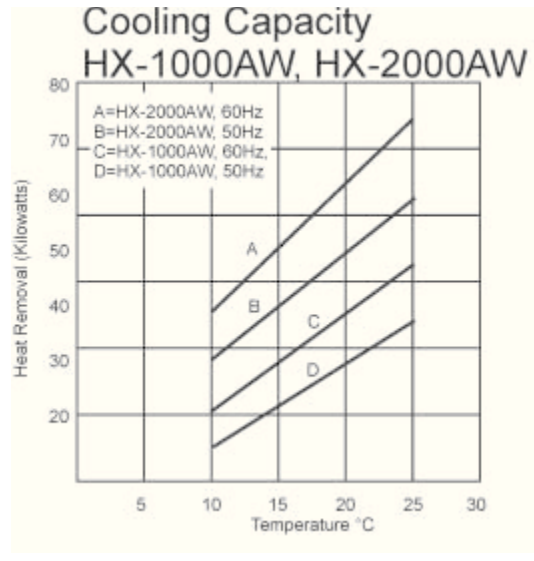
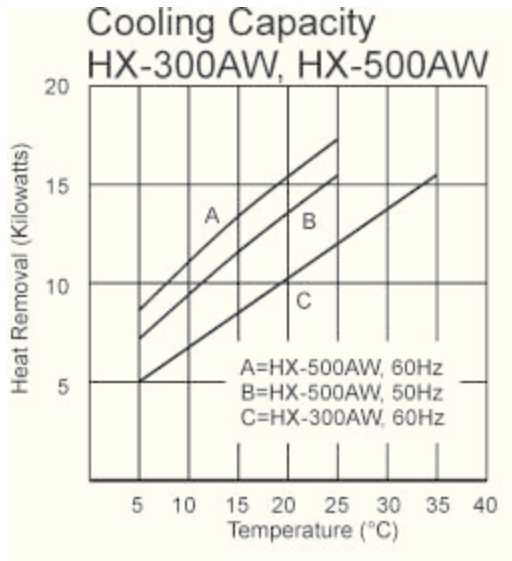
Model	HX-300AW	HX-500AW	HX-1000AW	HX-2000AW
Temperature Range	+5° C to +35° C	+5° C to +35° C	+10° C to +25° C	+10° C to +25° C
Ambient Temp. Range	-20° F to +120° F -29° C to +49° C	-20° F to +125° F -29° C to +51° C	-10° F to +110° F -23° C to +43° C	-10° F to +110° F -23° C to +43° C
Stability	+/- 1.0° C	+/- 1.0° C	+/-1.0° C	+/-1.0° C
Cooling Capacity 60 Hz	10,000 Watts at 20° C 34,000 BTU/Hr at 20° C 8,600 Kcal/hr at 20° C	16,000 Watts at 20° C 54,560 BTU/Hr at 20° C 13,760 Kcal/hr at 20° C	53,000 Watts at 25° C 180,730 BTU/hr at 25° C 45,544 Kcal/hr at 25° C	75,000 Watts at 25° C 255,750 BTU/hr at 25° C 64,450 Kcal/hr at 25° C
50 Hz	8,500 Watts at 20° C 29,000 BTU/Hr at 20° C 7,310 Kcal/hr at 20° C	13,500 Watts at 20° C 46,035 BTU/Hr at 20° C 11,610 Kcal/hr at 20° C	43,990 Watts at 25° C 150,005 BTU/hr at 25° C 37,800 Kcal/hr at 25° C	62,250 Watts at 25° C 212,270 BTU/hr at 25° C 53,490 Kcal/hr at 25° C
Pump	PD-2 or CP55	Multi-stage CP	CP-100	CP-100
Reservoir Volume	15 Gallons/56.8 Liters	16 Gallons/49 Liters	14 Gallons/53 Liters	14 Gallons/53 Liters
Dimensions (HxWxD)				
In.	59 x 50 x 39 ¹ / ₂	75 x 56 x 33	73 ¹ / ₂ x 58 x 30	76 x 67 ¹ / ₄ x 34
Cm.	149.9 x 127.0 x 100.3	190.5 x 142.2 x 83.9	186.7 x 147.3 x 76.2	193 x 170.8 x 86.4
Electrical Requirements	208-230V, 60Hz, 3Ø 460V, 60 Hz, 3Ø 400V, 50 Hz, 3Ø	208-230V, 60 Hz, 3Ø 190V, 50 Hz, 3Ø	440-480V, 60 Hz, 37A, 3Ø 380-420V, 50 Hz, 33A, 3Ø	440-480V, 60 Hz, 58A, 3Ø 380-420V, 50 Hz, 54A, 3Ø
Shipping Weight	971 Lbs, 440 Kgs	1677 Lbs, 761 Kgs	1612 Lbs, 731 Kgs	2302 Lbs, 1044 Kgs

Specifications determined using a 50/50 mixture of ethylene glycol and water at 21°C ambient. HX-1000 and HX-2000 cooling capacity determined at 25°C. Specifications will be affected by changes in temperature, ambient, or fluids. Specifications subject to change.

10,000 Watts to 75,000 Watts

10,000 Watts to 75,000 Watts

Graphs



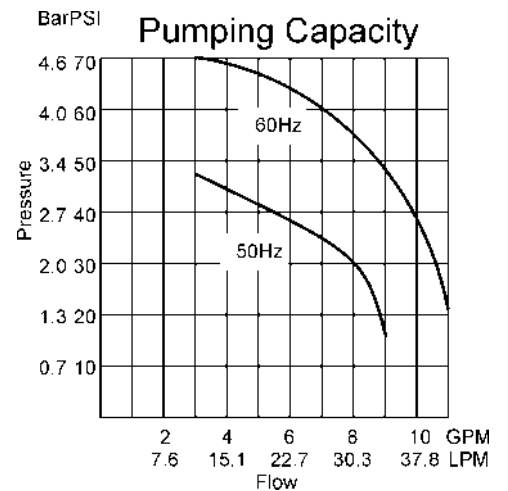
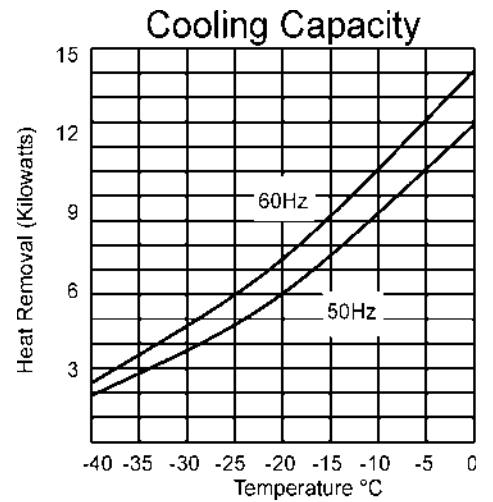
HX540

-40°C to +25°C
-40°C to +25°C



The HX-540 low temperature chiller is ideal for applications requiring high heat removal at low temperatures. Standard features include a stainless steel reservoir, plate style heat exchanger, NEMA 4 electrical enclosure, and hot gas bypass temperature control. The HX-540 is perfect for use in a variety of applications. Reaction vessels in the chemical and pharmaceutical industries, quenching of cables in the fiber optics industry, and many chip manufacturing and testing processes in the semiconductor industry are just a few of the many applications where the HX-540 has become useful.

Model	HX-540
Cooling Capacity	
60 Hz	7500 Watts at -20° C 25575 BTU/hr at -20° C
50 Hz	6000 Watts at -20° C 20460 BTU/hr at -20° C
Temperature Range	-40° C to +25° C
Temperature Stability	+/-0.5° C
Pump	
60 Hz	TU-3/6 gpm, 65 psi
50 Hz	18.8 Lpm, 3.1 bar
Reservoir Volume	5 Gallons/18.4 Liters
Dimensions (H x W x D)	
In.	44 x 34 x 25 1/2
Cm.	111.8 x 86.4 x 64.8
	add 9" to depth for electrical enclosure
Power Requirements	
60 Hz	440-480V, 15 Amps, 3Ø
50 Hz	380-420V, 17 Amps, 3Ø
Shipping Weight	915 Lbs/415 Kgs



Specifications listed for units circulating 60% Ethylene Glycol, 20% water, and fluid with specific heat of .6. Specifications will be affected by changes in temperature, ambient or fluids. Specifications subject to change.