

HX 75, HX 150, and HX 300 process chillers provide you with years of reliable cooling for your critical process applications.

## NESLAB HX 75, HX 150 and HX 300 Series Process Chillers

Long-term reliability and flexible configurations tailored to your application



### Typical applications:

- Test equipment
- Military applications
- Lasers
- NMR
- X-ray
- Mass spectrometers
- Diffusion and cryopumps
- Blister packaging
- Semiconductors
- Reactor vessels
- MRI
- CT



### Tight Stability for Process Control

NESLAB HX 75, HX 150 and HX 300 chillers offer the tight stability ( $\pm 0.1^{\circ}\text{C}$ ) necessary to keep critical processes running at constant temperatures. Better process control keeps your equipment running at optimal levels, giving you the results you need.

### Versatile, Flexible Configurations

Depending on your facility requirements, you can select air or water-cooled condensers. Choose the TC 400 controller for advanced safety and communication features. Various pump types are available to suit a wide range of flow and pressure requirements.

### Worry-free Operation

NESLAB HX 75, HX 150 and HX 300 process chillers are easy to install and offer years of reliable cooling. These robust units are designed for trouble-free operation to maximize uptime. Panels are easy to remove for quick access to components.

### Choice of Options and Accessories

While each Thermo unit comes with many standard features, a full range of options and accessories are available to meet your specific application needs.

## System Specifications

Thermo Electron Corporation has a well-established reputation in temperature control through its NESLAB and HAAKE product lines. Formerly independent companies, NESLAB and HAAKE have joined forces within Thermo to offer you more than 75 years of industry experience in temperature control technology. Thermo professionals worldwide continue to develop and support the solutions that help you analyze, detect, measure, and control your business with increasingly advanced precision.

## Specifications

NESLAB	HX 75	HX 150	HX 300
<b>Standard temperature range</b>			
C	5° to 35°	5° to 35°	5° to 35°
F	41° to 95°	41° to 95°	41° to 35°
<b>Optional temperature range</b>	5° to 90° (1Kw heater @ 208VAC)	5° to 90° (2.5Kw heater @ 208VAC)	5° to 90° (5 Kw heater at 208VAC)
<b>Ambient temperature range</b>			
C	13° to 35°	13° to 35°	13° to 35°
F	55° to 95°	55° to 95°	55° to 95°
<b>Stability</b>			
C	+/- 0.1°	+/- 0.1°	+/- 0.1°
F	+/- 0.2°	+/- 0.2°	+/- 0.2°
<b>Condenser</b>	air or water cooled	air or water cooled	air or water cooled
<b>Reservoir size</b>	5 Gallons/18.9 Liters	8 Gallons/ 30.3 Liters	15 Gallons/ 56.8 Liters
<b>Cooling capacity</b>			
60 Hz at 20°C	2,000 W	4,500 W	10,000 W
50 Hz at 20°C	1,660 W	3,735 W	8,300 W
<b>Pump performance</b>			
60 Hz Pump 1	3.3 gpm @ 50 psig (PD2)	3.3 gpm @ 50 psig (PD2)	3.3 gpm at 50 psig (PD2)
60 Hz Pump 2	-2.6 gpm @ 42 psig (TU1)	10 gpm @ 40 psig (CP55)	9 gpm at 50 psig (TU5)
60 Hz Pump 3	N/A	N/A	19 gpm at 50 psig (CP 75)
50 Hz Pump 1	2.75 gpm @ 50 psig (PD2)	2.75 gpm @ 50 psig (PD2)	2.75 gpm at 50 psig (PD2)
50 Hz Pump 2	2.5 gpm @ 40 psig (TU1)	10 gpm @ 27 psig (CP55)	8 gpm at 25 psig (TU5)
50 Hz Pump 3	N/A	N/A	10 gpm at 40 psig (CP 75)
<b>Power requirements</b>			
60 Hz	208-230V1ø	208-230V1ø	208-230 V3ø
50 Hz	220-240V1ø	220-240V1ø	380-415 V3ø
<b>Unit dimensions</b>			
in (H x W x D)	36.75 x 23.25 x 18.75	40.625 x 26.25 x 21.125	46.875 x 33.75 x 25.25
cm (H x W x D)	93.3 x 59 x 47.6	103.2 x 66.7 x 53.7	118.9 x 85.7 x 64.1
<b>Plumbing connections</b>			
inlet/outlet process	3/4" FNPT	3/4" FNPT	3/4" FNPT(CP-75 1" FNPT)
inlet/outlet facility (W/C only)	1/2" FNPT	1/2" FNPT	1/2" FNPT
<b>Plumbing connection</b>			
drain	1/2" FNPT	1/2" FNPT	1/2" FNPT
auto refill	3/8" OD SS barb	3/8" OD SS barb	3/8" OD SS barb
<b>Refrigerant</b>			
60 Hz	R22	R22	R22
50 Hz	R134A	R134A	R134A
<b>Compliance</b>			
50 Hz units	CE	CE	CE
<b>Unit weight</b>			
lb	261	320	477
kg	118.4	145.2	216

Specification listed for standard units circulating water at 20°C fluid temperature and 20°C ambient. Other fluids, fluid temperatures, or ambient temperatures will affect performance. Cooling capacity and amperage ratings based on units with PD 2 pumps. Other pumps will affect performance. Specifications are subject to change.

## Standard Features

Feature	Benefit
<b>Auto-refill</b>	Allows for self-filling of the chiller to ensure that the proper level in the reservoir is maintained
<b>Stainless steel reservoir</b>	Convenient easy cleaning. Compatible with a wide range of fluids
<b>Temperature stability of +/- 0.1°C</b>	Keeps your process stable giving you consistent, reliable results
<b>High and low temperature safeties</b>	Can be configured as warnings or, will shut the unit down to keep your application safe
<b>Auto-restart</b>	In the event of power failure, the unit will automatically restart, upon power restoration which ensures productivity
<b>Low level safety</b>	Alarms you if the reservoir level is too low
<b>Hot gas by-pass</b>	Refrigeration design that allows for tight temperature stability and longer compressor life
<b>Compact footprint</b>	Efficient design keeping your valuable floor space to a minimum
<b>15-Pin analog control port</b>	Allows for remote status of alarms and remote on/off capabilities
<b>Integrated fluid pressure gauge and flow control</b>	Provides integral pressure and flow control to adjust to your process needs

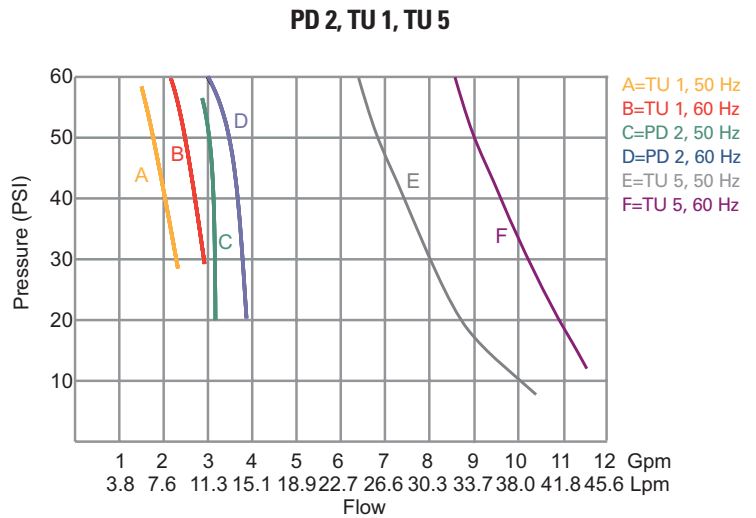
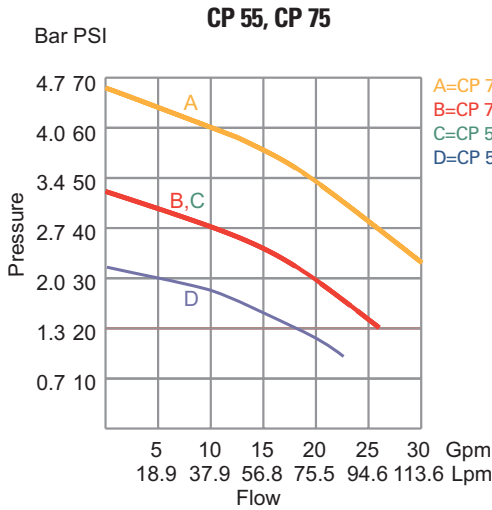
## Options

Feature	Benefit
<b>Pump selection</b>	Various pumps available to meet the flow and pressure requirements of your application
<b>Air-cooled or water-cooled condenser</b>	Configurable to your facilities needs
<b>High temperature range</b>	Allows heating as well as cooling and high temperature operation up to +90°C
<b>Powerful TC 400 Controller,</b> <ul style="list-style-type: none"><li>• LED status indicators</li><li>• Alarm Status</li><li>• Low flow</li><li>• RS-232</li></ul>	User-friendly interface that allows more sophisticated monitoring and control of HX operation
<b>Communication RS-232</b>	Allows for control of your chiller from your PC or laptop

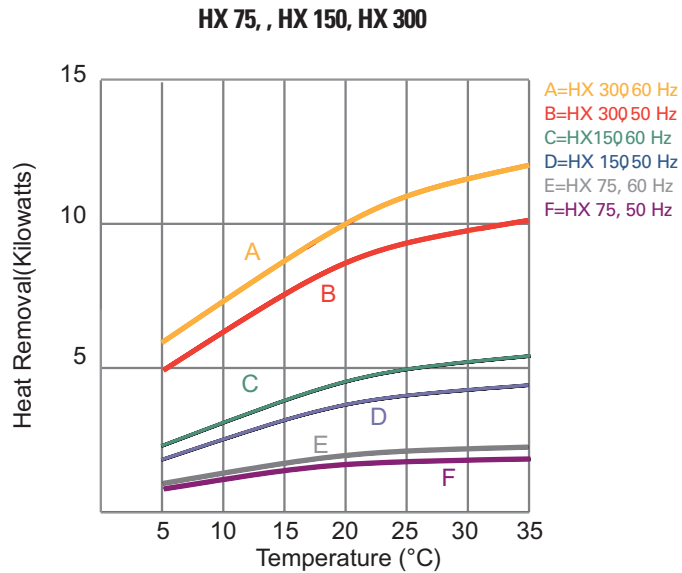
## Accessories

Feature	Benefit
<b>Remote temperature probe</b>	Allows for remote temperature control at your application
<b>Fluid filtration 5, 25, 40, micron full flow</b>	Maintains particulate-free operating fluid
<b>Fluid filtration 5, 25, 40, micron partial flow</b>	Maintains particulate-free operating fluid
<b>DI filtration</b>	Maintains a water resistivity level between 1 and 3 megohm/cm2 for cooling applications requiring ultrapure water or electrical isolation of the application
<b>Plumbing package</b>	Provides tubing, insulation and plumbing connections for easy installation
<b>Condenser filters</b>	Keeps the condenser clean and your unit performance optimal
<b>Ethylene glycol</b>	Allows circulation to temperatures below 8°C

## Pumping Capacity



## Cooling Capacity



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