Product Specifications

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 spectometers
- 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 (± 0.1°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.

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.

Versatile, Flexible Configurations

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

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.

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
Standard temperature range			
C	5° to 35°	5° to 35°	5° to 35°
F	41° to 95°	41° to 95°	41° to 35°
Optional temperature range	5° to 90° (1Kw heater @ 208VAC)	5° to 90° (2.5Kw heater @ 208VAC)	5° to 90° (5 Kw heater at 208VAC)
Ambient temperature range			
C	13° to 35°	13° to 35°	13° to 35°
F	55° to 95°	55° to 95°	55° to 95°
Stability			
C	+/- 0.1°	+/- 0.1°	+/- 0.1°
F	+/- 0.2°	+/- 0.2°	+/- 0.2°
Condenser	air or water cooled	air or water cooled	air or water cooled
Reservoir size	5 Gallons/18.9 Liters	8 Gallons/ 30.3 Liters	15 Gallons/ 56.8 Liters
Cooling capacity			
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
Pump performance			
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)
Power requirements			
60 Hz	208-230V1ø	208-230V1ø	208-230 V3ø
50 Hz	220-240V1ø	220-240V1ø	380-415 V3ø
Unit dimensions			
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
Plumbing connections			
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
Plumbing connection			
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
Refrigerant			
60 Hz	R22	R22	R22
50 Hz	R134A	R134A	R134A
Compliance			
50 Hz units	CE	CE	CE
Unit weight			
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
Auto-refill	Allows for self-filling of the chiller to ensure that the proper level in the reservoir is maintained
Stainless steel reservoir	Convenient easy cleaning. Compatible with a wide range of fluids
Temperature stability of +/- 0.1°C	Keeps your process stable giving you consistent, reliable results
High and low temperature safeties	Can be configured as warnings or, will shut the unit down to keep your application safe
Auto-restart	In the event of power failure, the unit will automatically restart, upon power restoration which ensures productivity
Low level safety	Alarms you if the reservoir level is too low
Hot gas by-pass	Refrigeration design that allows for tight temperature stability and longer compressor life
Compact footprint	Efficient design keeping your valuable floor space to a minimum
15-Pin analog control port	Allows for remote status of alarms and remote on/off capabilities
Integrated fluid pressure gauge and flow control	Provides integral pressure and flow control to adjust to your process needs

Options

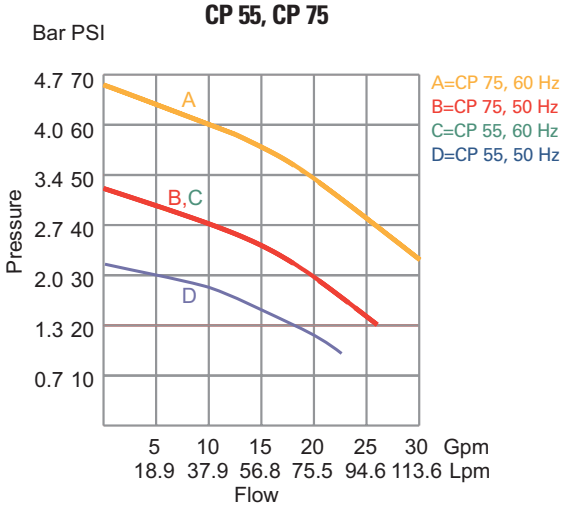
Feature	Benefit
Pump selection	Various pumps available to meet the flow and pressure requirements of your application
Air-cooled or water-cooled condenser	Configurable to your facilities needs
High temperature range	Allows heating as well as cooling and high temperature operation up to +90°C
Powerful TC 400 Controller, **• LED status indicators** **• Alarm Status** **• Low flow** **• RS-232**	User-friendly interface that allows more sophisticated monitoring and control of HX operation
Communication RS-232	Allows for control of your chiller from your PC or laptop

Accessories

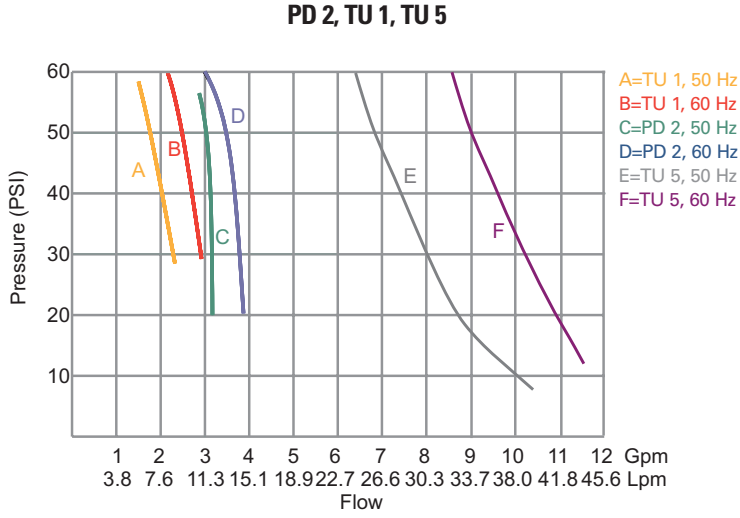
Feature	Benefit
Remote temperature probe	Allows for remote temperature control at your application
Fluid filtration 5, 25, 40, micron full flow	Maintains particulate-free operating fluid
Fluid filtration 5, 25, 40, micron partial flow	Maintains particulate-free operating fluid
DI filtration	Maintains a water resistivity level between 1 and 3 megohm/om2 for cooling applications requiring ultrapure water or electrical isolation of the application
Plumbing package	Provides tubing, insulation and plumbing connections for easy installation
Condenser filters	Keeps the condenser clean and your unit performance optimal
Ethylene glycol	Allows circulation to temperatures below 8°C

Pumping Capacity

CP 55, CP 75

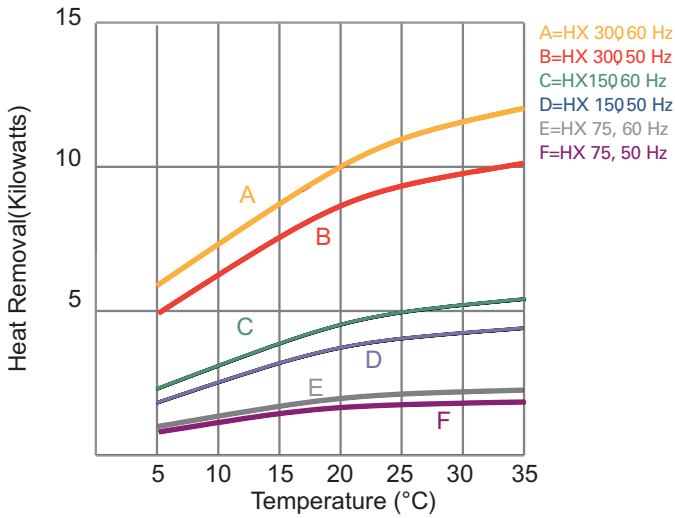


PD 2, TU 1, TU 5



Cooling Capacity

HX 75, , HX 150, HX 300



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