

thermoscientific

Thermo Scientific ThermoChill Series Recirculating Chillers

Performance, value, simplicity



ThermoFisher
SCIENTIFIC

The Ideal Fit

Temperature control products for a variety of applications

As an innovative leader in temperature control, **we have the expertise to help enable you to optimize your liquid cooling and heating applications while increasing productivity and reducing operating costs.** With over 50 years of service and countless successful installations around the world, we collaborate with you to provide product and applications expertise to meet the most demanding temperature control requirements. From bio-tech and pharmaceutical to printing and semiconductor industries, companies around the world continue to make Thermo Scientific temperature control products their ideal choice.

Typical Applications:

- Analytical
- Automotive
- Biotech
- Laboratory
- Laser
- Packaging
- Printing
- Small Industrial
- University

Select the product that is right for your application from a comprehensive portfolio of temperature control solutions that deliver scalable product offerings ranging from bench top research to large process manufacturing. Our new and innovative products – developed from customer feedback – represent a breakthrough in performance, configurability and technology that provide the following advantages:

A Flexible Choice: We have options to help you configure a flexible, cost-effective temperature control system that suits your specific requirements.

Innovation: Our research and development team is focused on designing innovative products based on your feedback.

Global Service and Support: With our extensive global footprint, as well as, service and support capabilities, we can support you anywhere in the world.

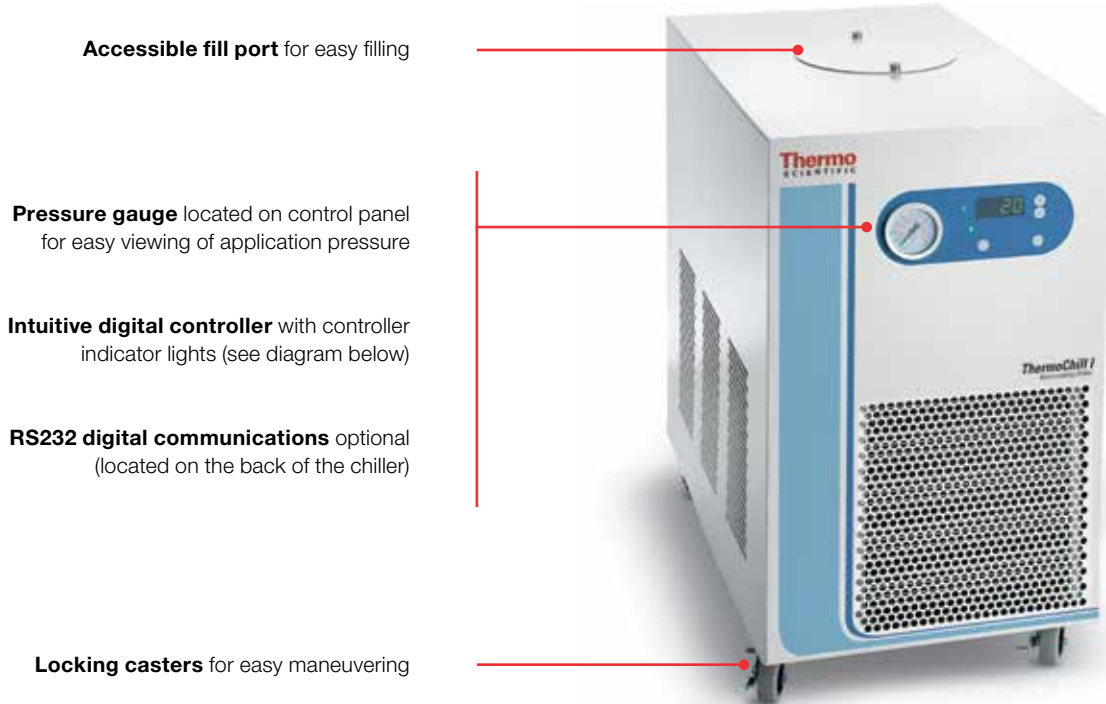


Thermo Scientific ThermoChill recirculating chiller series

Performance: with your choice of cooling and pumping capacities, and a wide temperature range, select the performance level your application requires.

Value: when you need reliable cooling support for your application, this powerful recirculating chiller offers a high quality, cost effective solution.

Simplicity: innovative and intuitive controller that is easy to use, and a plug-and-play design that allows you to be up and running in minutes.



Accessible fill port for easy filling

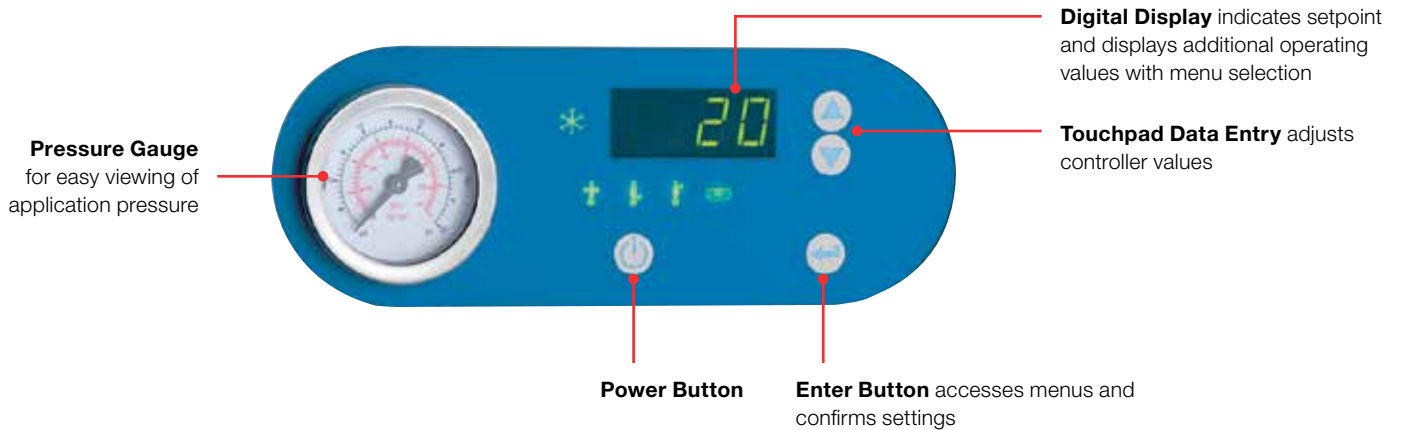
Pressure gauge located on control panel for easy viewing of application pressure

Intuitive digital controller with controller indicator lights (see diagram below)

RS232 digital communications optional (located on the back of the chiller)

Locking casters for easy maneuvering

Performance, value and simplicity



Pressure Gauge for easy viewing of application pressure

Digital Display indicates setpoint and displays additional operating values with menu selection

Touchpad Data Entry adjusts controller values

Power Button

Enter Button accesses menus and confirms settings



Cooling Light
illuminates when this chiller is cooling

Setpoint
illuminates when setpoint is being adjusted

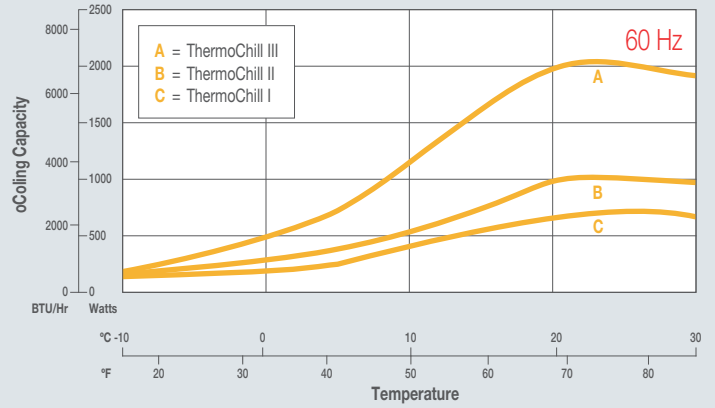
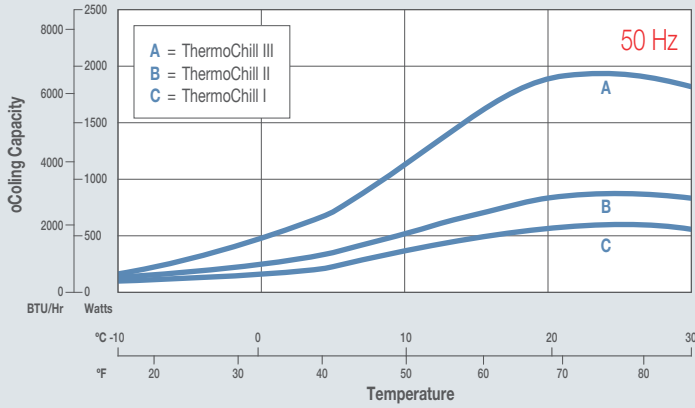
Low Temp Alarm
illuminates during adjustment or alarm

High Temp Alarm
illuminates during adjustment or alarm

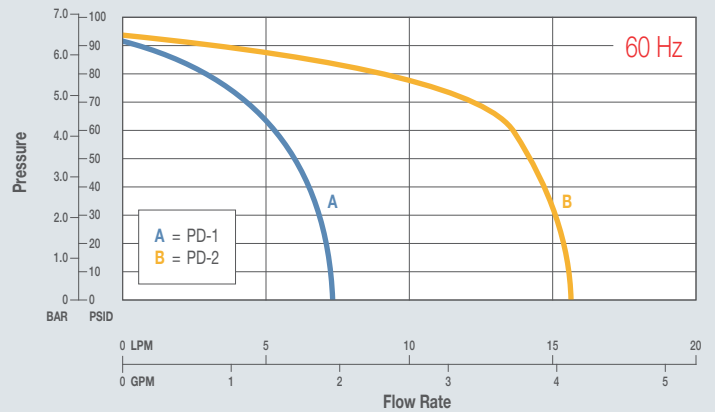
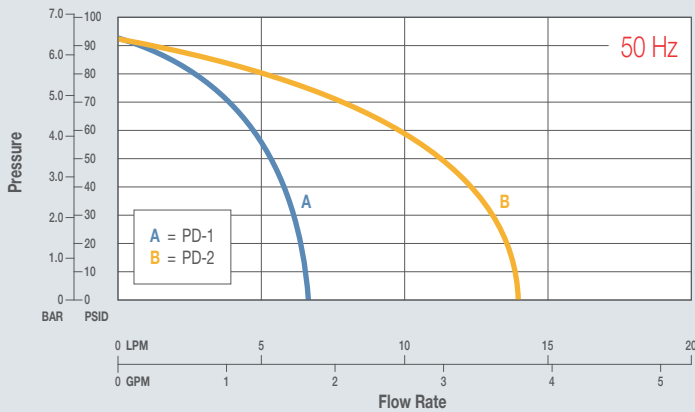
Communications
illuminates when serial communication is enabled (optional)

Performance curves

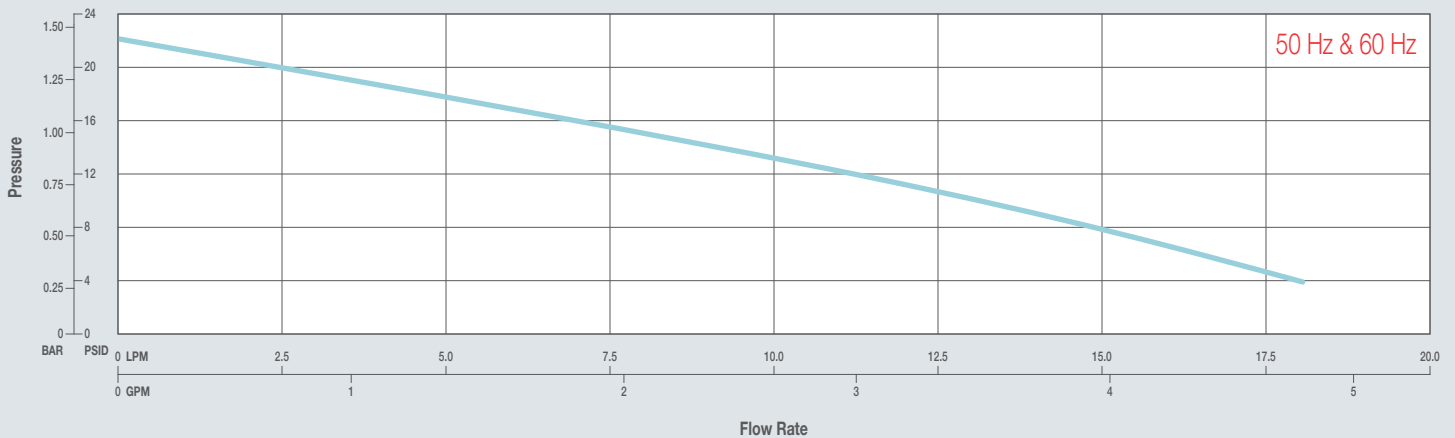
Cooling Capacity for ThermoChill I, II, & III



Pumping Capacity for Positive Displacement Pumps (PD-1 and PD-2)



Pumping Capacity for Magnetically Driven Centrifugal Pump (MDC1)



Cooling capacity based on chillers with PD-1 pumps with no backpressure. Other pumps will affect cooling capacity performance. Pressure values are differential pressures between the inlet and the outlet of the chiller. Specifications subject to change. Cooling capacity obtained using water between 8 °C to 30 °C and 50/50 Ethylene Glycol/water below 8 °C. Glycol water mixtures are required below 8 °C in order to prevent freezing of the cooling coils. Failure to follow these directions will result in a loss of cooling capacity and potential damage to the chiller.

Innovative design

The ThermoChill series of chillers is a compact line of refrigerated recirculators offering cooling capacities up to 2000 watts. Innovative design features such as minimized plumbing connections and an integrated full-flow fluid strainer maximize product reliability.

Three Pump Options

Positive Displacement Pumps (PD-1/PD-2) deliver a consistent flow over a wide pressure range making them appropriate for use with high back-pressure applications. Adding the external pressure reducer (EPR) accessory allows safe use with pressure sensitive applications.

Magnetically Driven Centrifugal Pump (MDC1) deliver high flow rates at low pressure making them ideal for use with laboratory glassware and other low back-pressure applications.

Specifications

| | ThermoChill I | ThermoChill II | ThermoChill III |
|---|--|--|--|
| Low Range Setpoint Temperature Range | -10 °C to 30 °C (14 °F to 86 °F) | | |
| Ambient Temperature Range | 10 °C to 35 °C (50 °F to 95 °F) | | |
| Temperature Stability | ±0.1 °C | | ±0.5 °C |
| Setpoint Cooling Capacity 20 °C | | | |
| 60 Hz | 700 W / 2391 BTU | 1000 W / 3415 BTU | 2000 W / 6830 BTU |
| 50 Hz | 600 W / 2049 BTU | 900 W / 3074 BTU | 1900 W / 6489 BTU |
| Reservoir Volume | 9.5 liters (2.5 gallons) | | 19.0 liters (5.0 gallons) |
| Refrigerant | R134A | | |
| Physical Dimensions (H x W x D) | 24.4 x 14.2 x 23.6 in (62 x 36.1 x 59.9 cm) | | 28.6 x 17.3 x 23.6 in (72.6 x 43.9 x 59.9 cm) |
| Positive Displacement Pump (PD-1) | | | |
| 60 Hz | 1.4 gpm @ 60 psid (5.3 lpm @ 4.1 bar) | | |
| 50 Hz | 1.2 gpm @ 60 psid (4.5 lpm @ 4.1 bar) | | |
| Positive Displacement Pump (PD-2) | | | |
| 60 Hz | – | 3.6 gpm @ 60 psid (13.6 lpm @ 4.1 bar) | |
| 50 Hz | – | 2.5 gpm @ 60 psid (9.4 lpm @ 4.1 bar) | |
| Pump (MDC1) | | | |
| 60 Hz | 2.0 gpm @ 15 psid (7.6 lpm @ 1.0 bar) | | |
| 50 Hz | 2.0 gpm @ 15 psid (7.6 lpm @ 1.0 bar) | | |
| Voltage Options | | | |
| 115 V / 60 Hz and 100 V / 50 Hz | Available | Available | – |
| 208-230 V / 60 Hz and 200 V / 50 Hz | – | – | Available |
| 230 V / 50 Hz | Available | | |
| Compliance | CE/UL ¹ | | |

Specifications obtained at sea level using water as the recirculating fluid, at a 20 °C process setpoint, 20 °C ambient condition, at nominal operating voltage. Other fluids, process temperatures, ambient temperatures, altitude or operating voltages will affect performance.

¹ UL listing applies to 60 Hz ThermoChill models only.

External Pressure Reducer (EPR) Accessory

This accessory attaches to the chiller to limit the maximum outlet pressure of the chiller. Choose this accessory when circulating to applications that are sensitive to higher pressures or when circulating through glass.

ThermoChill Plumbing Kit

The plumbing includes (2) 1/2-in x 1/2-in MPT fittings, 25 feet of 5/8-in ID Polybraid hose, (2) hose clamps & hose insulation. The plumbing kit can be used across all ThermoChill models.

Need More Capacity?

The Thermo Scientific™ Polar, Thermo Scientific™ ThermoFlex™, and Thermo Scientific™ Merlin™ recirculating chillers have additional temperature ranges, cooling capacities, and pumping capacities available to meet your specific application requirements.

Visit thermofisher.com/tempcontrolselector for more information.

Please see contact information below, if you need assistance selecting a chiller and to discuss your application.

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USA/Canada toll free +1 (800) 258-0830
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China tc.china@thermofisher.com
India LSI_Marketing@thermofisher.com
Japan info.lpg.jp@thermofisher.com

Ordering Information

| Product | Cat No. |
|---|--------------|
| ThermoChill I LR (700 W @ 60 Hz / 600 W @ 50 Hz) | |
| ThermoChill I LR 115 V / 60 Hz PD-1 | 196211010000 |
| ThermoChill I LR 115 V / 60 Hz PD-1 RS 232 | 196211120000 |
| ThermoChill I LR LR 115/60 Hz MDCI | 196214010000 |
| ThermoChill I LR LR 115/60 Hz MDCI RS232 | 196214120000 |
| ThermoChill I LR 230 V / 50 Hz PD-1 | 196221010000 |
| ThermoChill I LR 230 V / 50 Hz PD-1 RS232 | 196221120000 |
| ThermoChill I LR LR 230/50 Hz MDCI | 196224010000 |
| ThermoChill I LR LR 230/50 Hz MDCI RS232 | 196224120000 |
| ThermoChill II LR (1000 W @ 60 Hz / 900 W @ 50 Hz) | |
| ThermoChill II LR 115 V / 60 Hz PD-1 | 197211010000 |
| ThermoChill II LR 115 V / 60 Hz PD-1 RS 232 | 197211120000 |
| ThermoChill II LR 115 V / 60 Hz PD-2 | 197212010000 |
| ThermoChill II LR 115 V / 60 Hz PD-2 RS 232 | 197212120000 |
| ThermoChill II LR 115/60 Hz MDCI | 197214010000 |
| ThermoChill II LR 115/60 Hz MDCI RS232 | 197214120000 |
| ThermoChill II LR 230 V / 50 Hz PD-1 | 197221010000 |
| ThermoChill II LR 230 V / 50 Hz PD-1 RS 232 | 197221120000 |
| ThermoChill II LR 230 V / 50 Hz PD-2 | 197222010000 |
| ThermoChill II LR 230 V / 50 Hz PD-2 RS 232 | 197222120000 |
| ThermoChill II LR 230/50 Hz MDCI | 197224010000 |
| ThermoChill II LR 230/50 Hz MDCI RS232 | 197224120000 |
| ThermoChill III LR (2000 W @ 60 Hz / 1900 W @ 50 Hz) | |
| ThermoChill III LR 208-230 V / 60 Hz PD-1 | 198231010000 |
| ThermoChill III LR 208-230 V / 60 Hz PD-1 RS 232 | 198231120000 |
| ThermoChill III LR 208-230 V / 60 Hz PD-2 | 198232010000 |
| ThermoChill III LR 208-230 V / 60 Hz PD-2 RS 232 | 198232120000 |
| ThermoChill III LR 208/60 Hz MDCI | 198234010000 |
| ThermoChill III LR 208/60 Hz MDCI RS232 | 198234120000 |
| ThermoChill III LR 230 V / 50 Hz PD-1 | 198221010000 |
| ThermoChill III LR 230 V / 50 Hz PD-1 RS 232 | 198221120000 |
| ThermoChill III LR 230 V / 50 Hz PD-2 | 198222010000 |
| ThermoChill III LR 230 V / 50 Hz PD-2 RS 232 | 198222120000 |
| ThermoChill III LR 230/50 Hz MDCI | 198224010000 |
| ThermoChill III LR 230/50 Hz MDCI RS232 | 198224120000 |
| ThermoChill III LR 230 V / 50 Hz PD-2 RS 232 | 198222120000 |
| External Pressure Reducer (EPR) Accessory | |
| EPR Kit for ThermoChill I or ThermoChill II | 196000000000 |
| EPR Kit for ThermoChill III | 196000000001 |
| ThermoChill Plumbing Kit | |
| ThermoChill Plumbing Kit | 611000000108 |

Find out more at thermofisher.com/tc