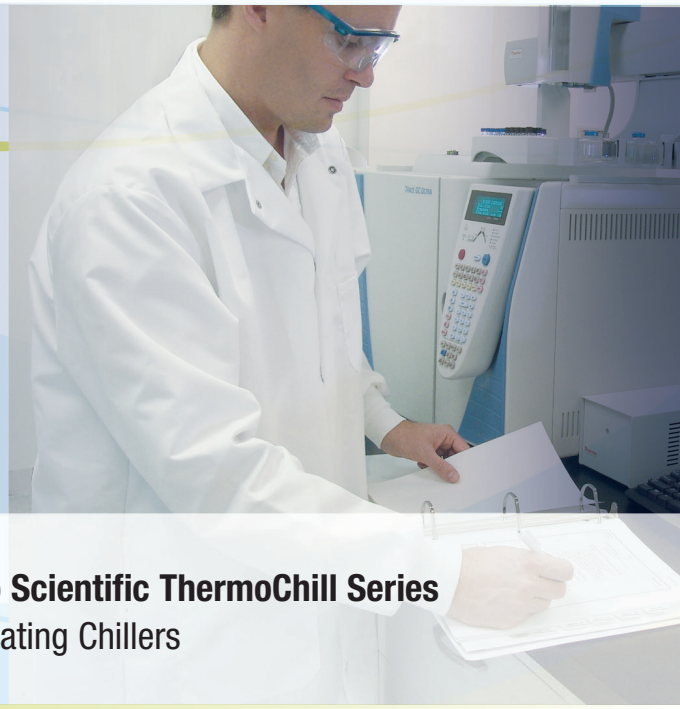
Typical Applications

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



Thermo Scientific ThermoChill Series
Recirculating Chillers

Performance,
value and simplicity

Thermo
SCIENTIFIC

The Perfect Fit

Temperature control products for any application

As an innovative leader in temperature control, **we have the expertise to 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, companies around the world continue to make Thermo Scientific temperature control products their ideal choice.

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 Perfect Fit: Whatever your application or your budget, you can configure the most 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, service and support are readily available by phone or the web.

Thermo Scientific ThermoChill recirculating chiller series

Performance: enjoy peace of mind for critical applications where quality, reliable liquid cooling equipment is a necessity.

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.

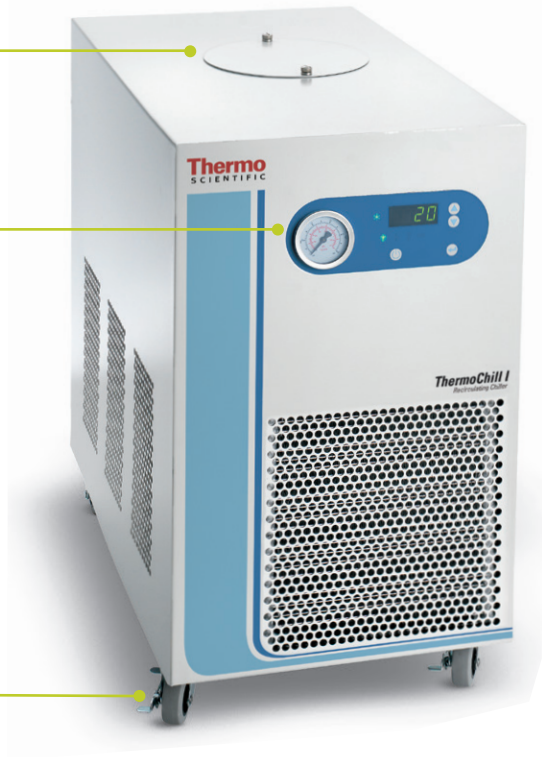
Accessible fill port
for easy filling

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

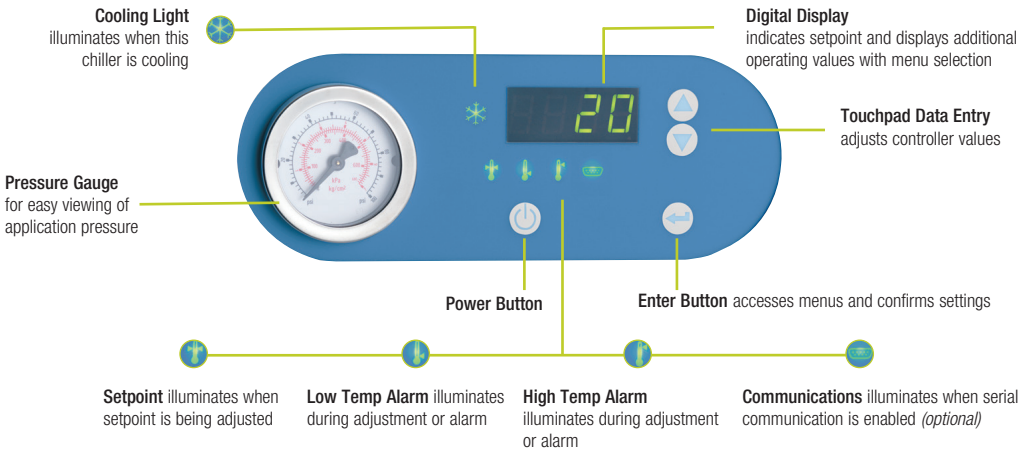
Intuitive digital controller
with controller indicator lights
(see diagram below)

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

Locking casters
for easy maneuvering

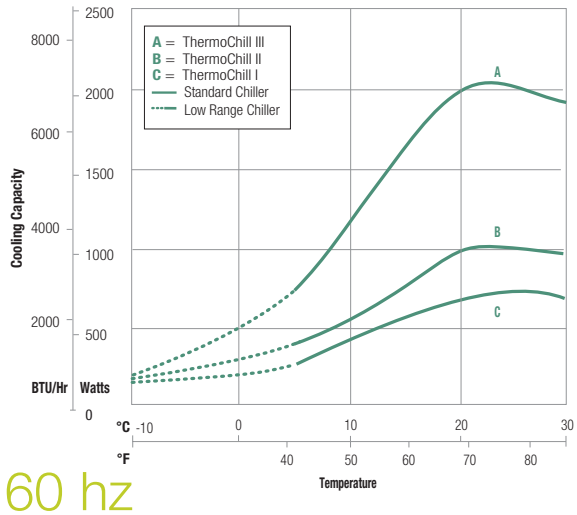


Performance, value and simplicity

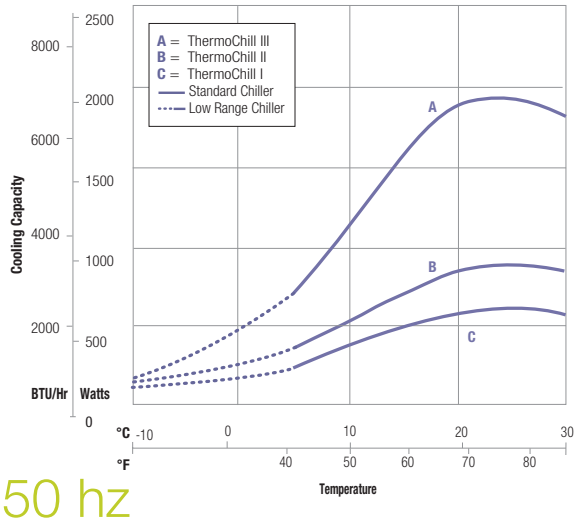


Performance curves

Cooling Capacity for ThermoChill I, II, & III

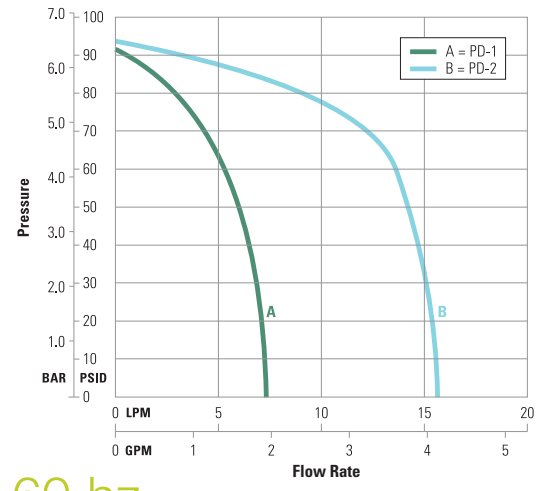


60 hz

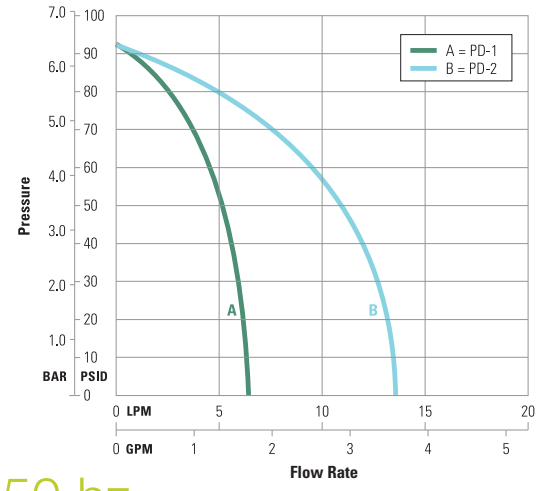


50 hz

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

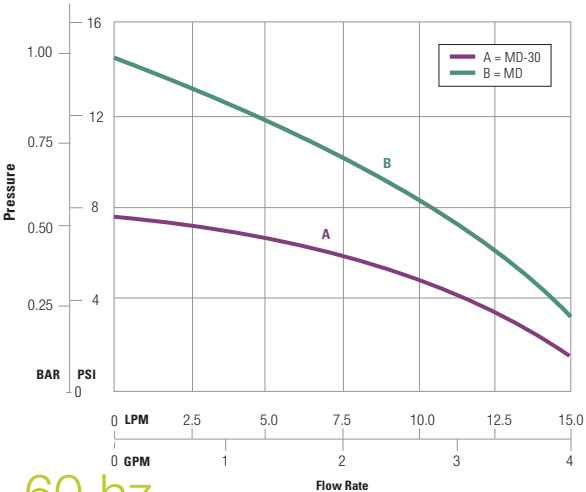


60 hz

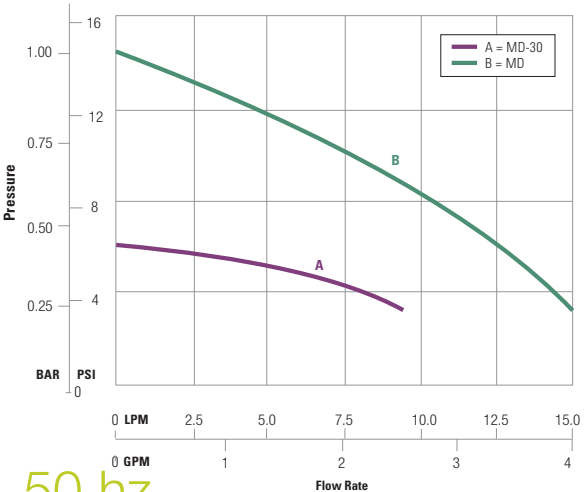


50 hz

Pumping Capacity for Centrifugal Pump (MD and MD-30)



60 hz



50 hz

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 EG/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.

Four 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.

Centrifugal Pump (MD/MD-30) Magnetically driven pumps 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
Standard Setpoint Temperature Range	5 °C to 30 °C (41° F to 86 °F)		
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)	
Centrifugal Pump (MD)[1]			
60 Hz	—	2.0 gpm @ 6 psid (7.6 lpm @ 0.4 bar)	—
50 Hz	—	2.0 gpm @ 10 psid (7.6 lpm @ 0.7 bar)	—
Centrifugal Pump (MD-30)[2]			
60 Hz	2.0 gpm @ 6 psid (7.6 lpm @ 0.4 bar)		—
50 Hz	—	2.0 gpm @ 4.2 psid (7.6 lpm @ 0.3 bar)	—
Weight	90.0 lb (40.8 kg)		160.0 lb (72.6 kg)
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[3]		

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] MD Pump for use with Low Range models only

[2] MD-30 Pump for use with Standard models only

[3] UL listing applies to 60Hz ThermoChill models only

Low Range vs Standard
Thermo Scientific ThermoChill Models

What's the difference?

Standard chillers have a temperature range of 5 °C to 30 °C, while our Low Range (LR) chillers support applications requiring temperatures of -10 °C to 30 °C.

Ordering Information

ThermoChill I (700 W @ 60 Hz / 600 W @ 50 Hz)	ThermoChill Low Range Part Number	ThermoChill Standard Part Number
ThermoChill I 115 V / 60 Hz PD-1	196211010000	196111010000
ThermoChill I 115 V / 60 Hz PD-1 RS 232	196211120000	196111120000
ThermoChill I 230 V / 50 Hz PD-1	196221010000	196121010000
ThermoChill I 230 V / 50 Hz PD-1 RS232	196221120000	196121120000
ThermoChill I 115 V / 60 Hz MD-30	N/A	196113010000

ThermoChill II (1000 W @ 60 Hz / 900 W @ 50 Hz)	ThermoChill Low Range Part Number	ThermoChill Standard Part Number
ThermoChill II 115 V / 60 Hz PD-1	197211010000	197111010000
ThermoChill II 115 V / 60 Hz PD-1 RS 232	197211120000	197111120000
ThermoChill II 115 V / 60 Hz PD-2	197212010000	197112010000
ThermoChill II 115 V / 60 Hz PD-2 RS 232	197212120000	197112120000
ThermoChill II 115 V / 60 Hz MD	197213010000	N/A
ThermoChill II 115 V / 60 Hz MD RS 232	197213120000	N/A
ThermoChill II 115 V / 60 Hz MD-30	N/A	197113010000
ThermoChill II 115 V / 60 Hz MD-30 RS 232	N/A	197113120000
ThermoChill II 230 V / 50 Hz PD-1	197221010000	197121010000
ThermoChill II 230 V / 50 Hz PD-1 RS 232	197221120000	197121120000
ThermoChill II 230 V / 50 Hz PD-2	197222010000	197122010000
ThermoChill II 230 V / 50 Hz PD-2 RS 232	197222120000	197122120000
ThermoChill II 230 V / 50 Hz MD	197223010000	N/A
ThermoChill II 230 V / 50 Hz MD RS 232	197223120000	N/A
ThermoChill II 230 V / 50 Hz MD-30	N/A	197123010000
ThermoChill II 230 V / 50 Hz MD-30 RS 232	N/A	197123120000

ThermoChill III (2000 W @ 60 Hz / 1900 W @ 50 Hz)	ThermoChill Low Range Part Number	ThermoChill Standard Part Number
ThermoChill III 208-230 V / 60 Hz PD-1	198231010000	198131010000
ThermoChill III 208-230 V / 60 Hz PD-1 RS 232	198231120000	198131120000
ThermoChill III 208-230 V / 60 Hz PD-2	198232010000	198132010000
ThermoChill III 208-230 V / 60 Hz PD-2 RS 232	198232120000	198132120000
ThermoChill III 230 V / 50 Hz PD-1	198221010000	198121010000
ThermoChill III 230 V / 50 Hz PD-1 RS 232	198221120000	198121120000
ThermoChill III 230 V / 50 Hz PD-2	198222010000	198122010000
ThermoChill III 230 V / 50 Hz PD-2 RS 232	198222120000	198122120000

The External Pressure Reducer (EPR) 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.

	Part Number
EPR Kit for ThermoChill I or ThermoChill II	196000000000
EPR Kit for ThermoChill III	196000000001

ThermoChill Plumbing Kit

The kit includes (2) ½-in x ½-in mpt fittings, 25 feet of 5/8-in ID Polybraid hose, (2) hose clamps & hose insulation. Plumbing kit can be used across all ThermoChill models.

	Part Number
ThermoChill Plumbing Kit	611000000108

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 **www.thermoscientific.com/tctechlibrary** for more information.

If you need assistance selecting a chiller, call 800-258-0830 to discuss your application.

© 2015 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Results may vary under different operating conditions. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

North America: USA/Canada tollfree: +1 (800) 258-0830; USA: +1 (603) 436-9444 or info.tc.us@thermofisher.com www.thermoscientific.com/tc
Europe: Benelux: +31 (0) 76 579 55 55 or info.tc.nl@thermofisher.com; France: +33 (0) 1 60 92 48 00 or info.tc.fr@thermofisher.com; Germany: +49 (0) 721 4 09 44 44 or info.tc.de@thermofisher.com; United Kingdom: +44 (0) 1785 82 52 00 or info.tc.uk@thermofisher.com
Asia: China: +81 3 5826 1616 or info.tc.china@thermofisher.com; India: +91 (22) 27 78 11 01 or contact.lpg.in@thermofisher.com; Japan: +81-3-5826-1616 or info.lpg.jp@thermofisher.com

Thermo SCIENTIFIC
A Thermo Fisher Scientific Brand

BRTCTHERMOCHILL 0615