

## Section 2 General Information

### Description

The Thermo Scientific ThermoChill and ThermoChill LR recirculating chillers are designed to provide a continuous supply of fluid at a constant temperature and flow rate. The chiller consists of an air-cooled refrigeration system, reservoir tank evaporator coil, recirculating pump, polyethylene reservoir, and a microprocessor controller.

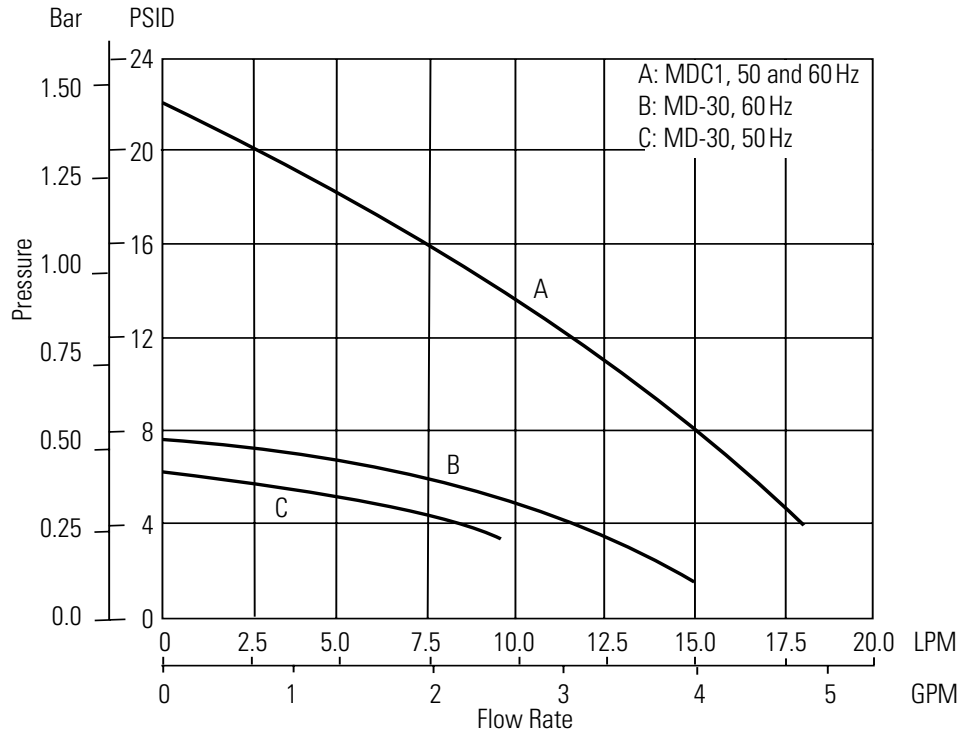
### Specifications

	ThermoChill I	ThermoChill II	ThermoChill III
<b>Standard Process Fluid Temperature Setpoint Range</b>	+5°C to +30°C +41°F to +86°F	+5°C to +30°C +41°F to +86°F	+5°C to +30°C +41°F to +86°F
<b>Low Range Process Fluid Temperature Setpoint Range</b>	-10°C to +30°C +14°F to +86°F	-10°C to +30°C +14°F to +86°F	-10°C to +30°C +14°F to +86°F
<b>Ambient Temperature Range</b>	+10°C to +35°C +50°F to +95°F	+10°C to +35°C +50°F to +95°F	+10°C to +35°C +50°F to +95°F
<b>Temperature Stability</b>	±0.1°C	±0.1°C	±0.5°C
<b>Cooling Capacity at 20°C</b> 60 Hz 50 Hz	700 W (2391 BTU) 600 W (2049 BTU)	1000 W (3415 BTU) 900 W (3074 BTU)	2000 W (6830 BTU) 1900 W (6489 BTU)
<b>Refrigerant</b>	R134A	R134A	R134A
<b>Reservoir Volume</b> Gallons/Liters	2.5/9.5	2.5/9.5	5.0/19.0
<b>Footprint or Dimensions (H x W x D)</b> Inches Centimeters	24.4 x 14.2 x 23.6 61.7 x 36.1 x 59.9	24.4 x 14.2 x 23.6 61.7 x 36.1 x 59.9	28.6 x 17.3 x 23.6 72.6 x 43.9 x 59.9
<b>Weight PD 1 Pump (empty)</b> lb/kg	90.0/40.8	90.0/40.8	160.0/72.6
<b>Pumping Capacity*</b>			
PD 1 - Positive Displacement 60 Hz 50 Hz		1.4 gpm @ 60 psid (5.3 lpm @ 4.1 bar) 1.2 gpm @ 60 psid (4.5 lpm @ 4.1 bar)	
PD 2 - Positive Displacement 60 Hz 50 Hz		3.6 gpm @ 60 psid (13.6 lpm @ 4.1 bar) 2.5 gpm @ 60 psid (9.4 lpm @ 4.1 bar)	
MD-30 - Centrifugal 60 Hz 50 Hz		2.0 gpm @ 6.0 psid (7.6 lpm @ 0.4 bar) 2.0 gpm @ 4.2 psid (7.6 lpm @ 0.3 bar)	
MDC1 - Centrifugal 50/60 Hz		1.5 gpm @ 17.0 psid (5.5 lpm @ 1.2 bar)	

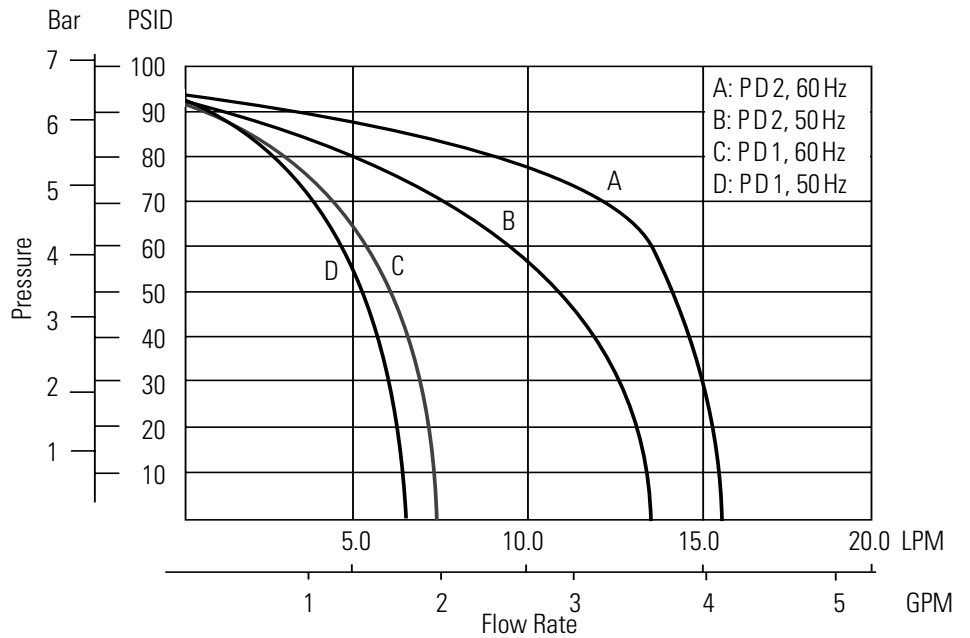
\* All ThermoChills have a PD 1/PD 2 option. All ThermoChill Low Range also have MDC1 option. Only ThermoChill I Standard Range (60Hz) and ThermoChill II Standard Range have MD-30 option. Pumping capacity pressure values are differential pressures between the chiller's inlet and outlet.

- Cooling capacity based on PD 1 pump with no backpressure. Heat input from the pump will result in a reduction in cooling capacity. Cooling capacity reduction will vary based on the pump as well as pump backpressure and flow. Keep the reservoir full at all times. Low fluid levels will result in loss of cooling capacity if the fluid level is allowed to drop below the cooling coils.
- 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, fluid temperatures, ambient temperatures, altitude or operating voltages will affect performance. See Section 3.
- Thermo Fisher Scientific reserves the right to change specifications without notice.

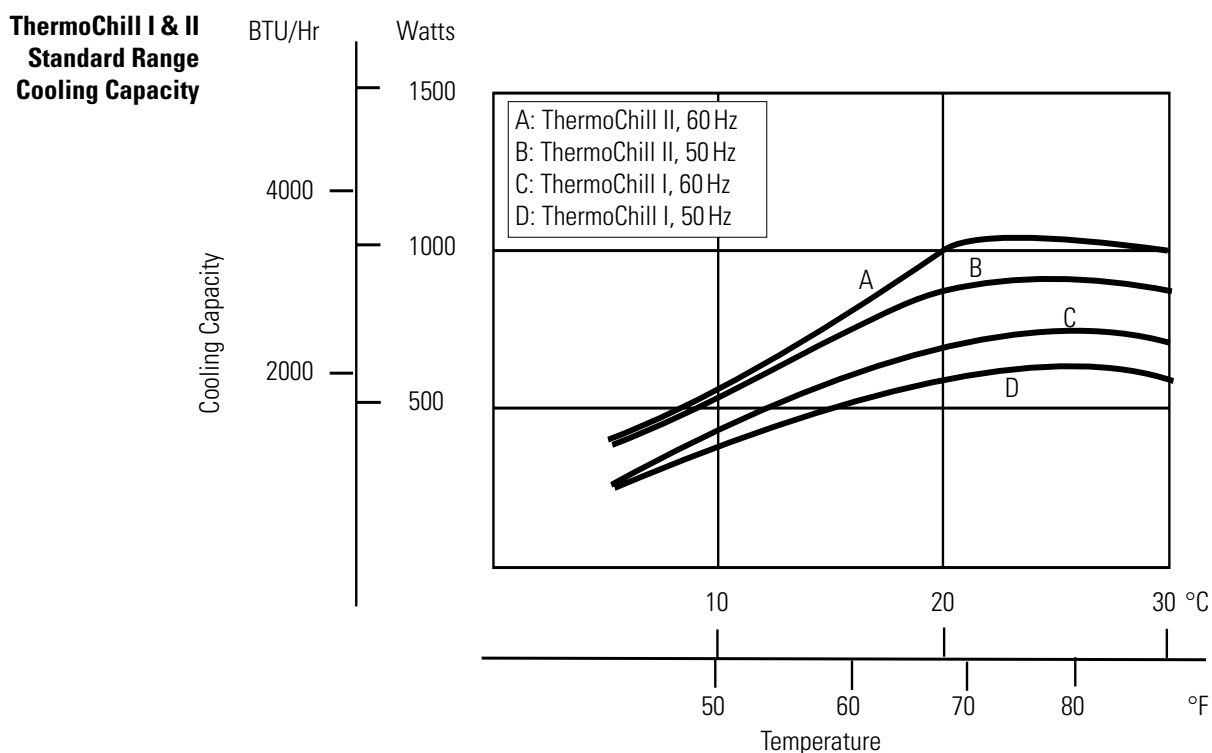
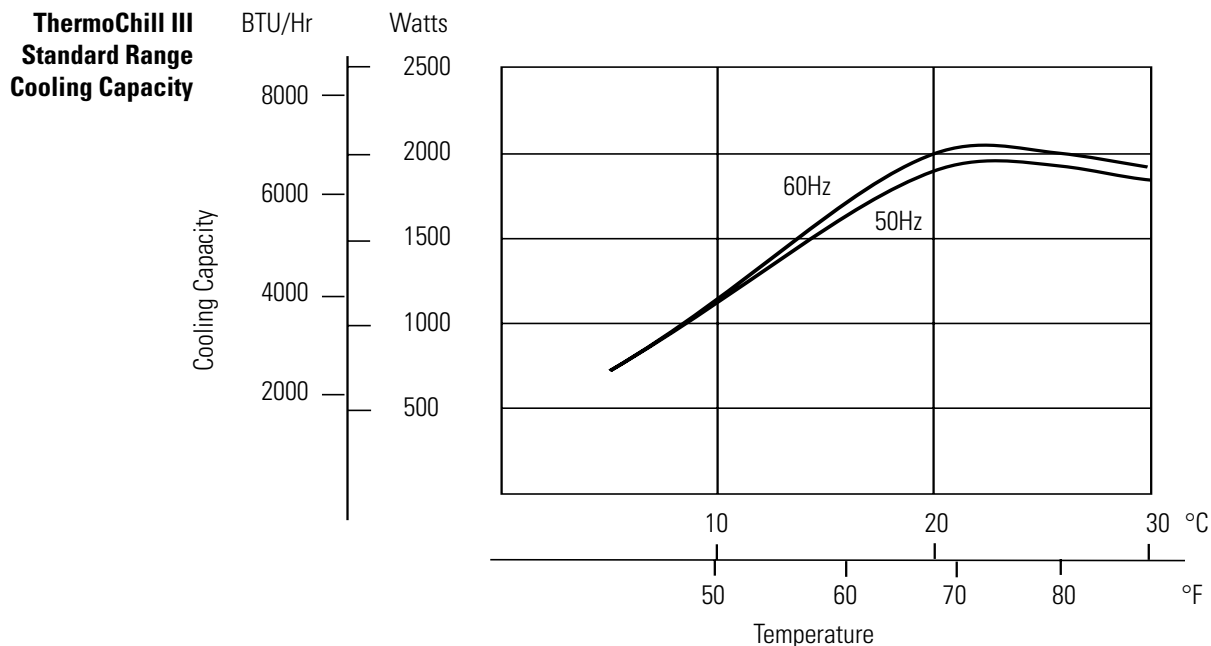
**Pumping Capacity  
Centrifugal Pump  
MDC1/MD-30**



**Pumping Capacity  
Positive Displacement Pumps  
Pumps PD1/PD2**

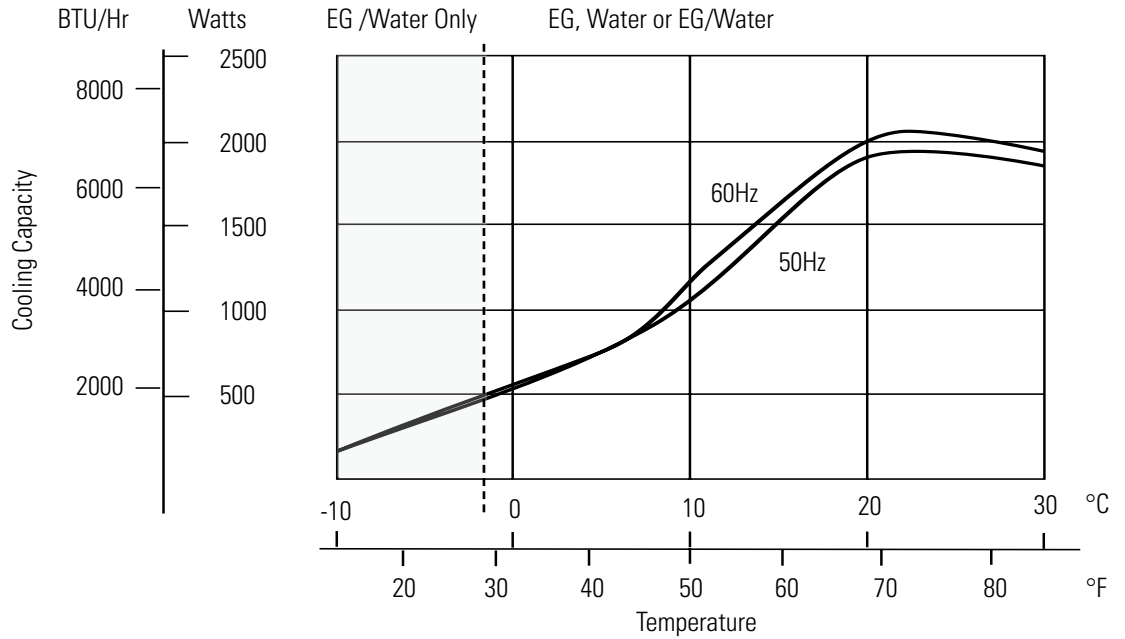


- Pump curves are nominal values. Pressure values are differential pressures between the inlet and the outlet of the chiller.
- Pump performance results were obtained with no restrictions on the return to the system or with any options installed.
- Specifications obtained at sea level using water as the recirculating fluid, at a 20°C process setpoint, 20°C ambient condition, at nominal operating voltage. Other fluids, fluid temperatures, ambient temperatures, altitude or operating voltages will affect performance.
- Thermo Fisher Scientific reserves the right to change specifications without notice.

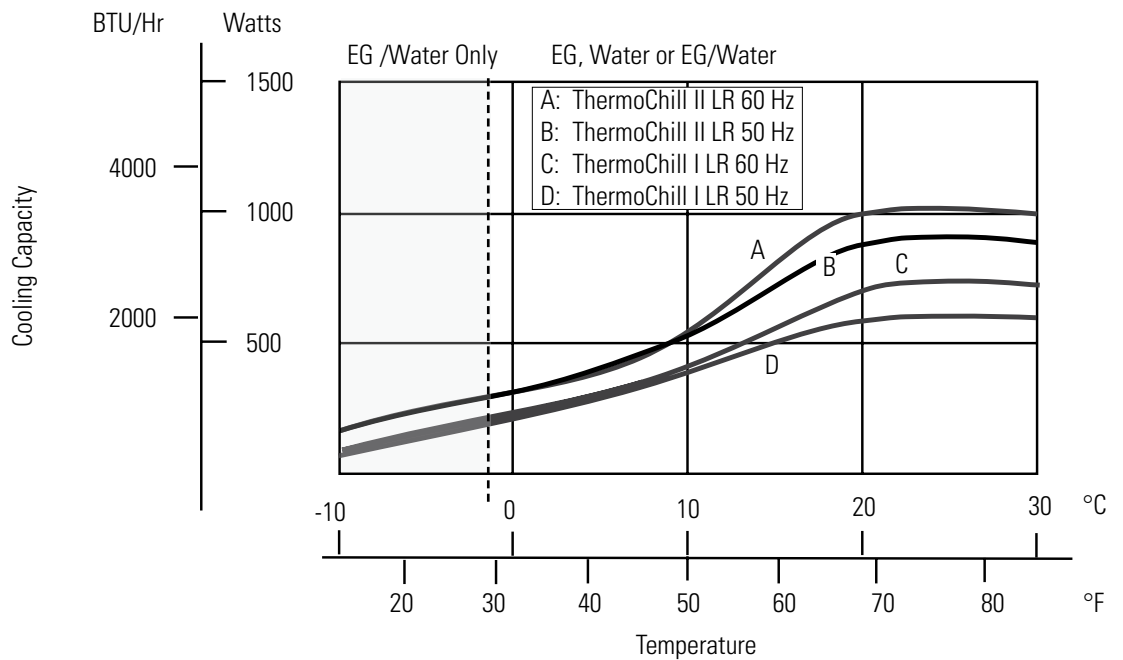


- Cooling capacity reflects the usage of water used as a cooling medium between 8°C to 30°C and 50/50 EG/water below 8°C. Other fluids, fluid temperatures, ambient temperatures, altitude, operating voltages or pumps will affect performance. See Section 3.
- Glycol or Glycol water mixtures are required 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.
- Thermo Fisher Scientific reserves the right to change specifications without notice.

**ThermoChill III LR  
Cooling Capacity**



**ThermoChill I LR & II LR  
Cooling Capacity**

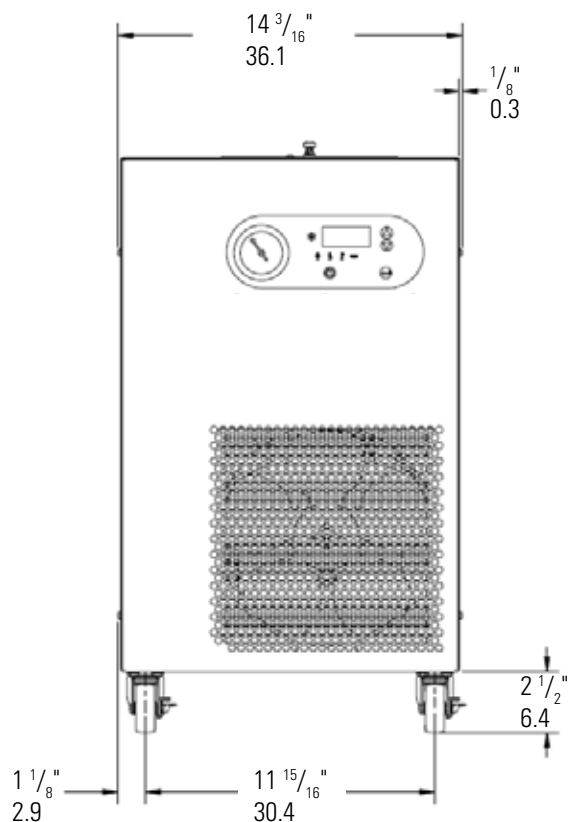


- Cooling capacity based on PD 1 pump with no backpressure. Heat input from the pump will result in a reduction in cooling capacity. The cooling capacity reduction will vary based on the pump chosen as well as pump backpressure and flow.
- Cooling capacity reflects using water as a cooling medium between 8°C to 30°C and 50/50 EG/water below 8°C. Other fluids, fluid temperatures, ambient temperatures, altitude, operating voltages or pumps will affect performance. See Section 3.
- Glycol or 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.
- Thermo Fisher Scientific reserves the right to change specifications without notice.

**ThermoChill I/II**  
**ThermoChill I LR/II LR**  
**Dimensions**  
 (inches/centimeters)

H x W x D  
 24.4 x 14.2 x 23.6 in  
 (61.7 x 36.1 x 59.9 cm)

Front View



Side View

