

## Section 2 General Information

### Description

The Thermo Scientific ThermoChill LR recirculating chiller is 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.

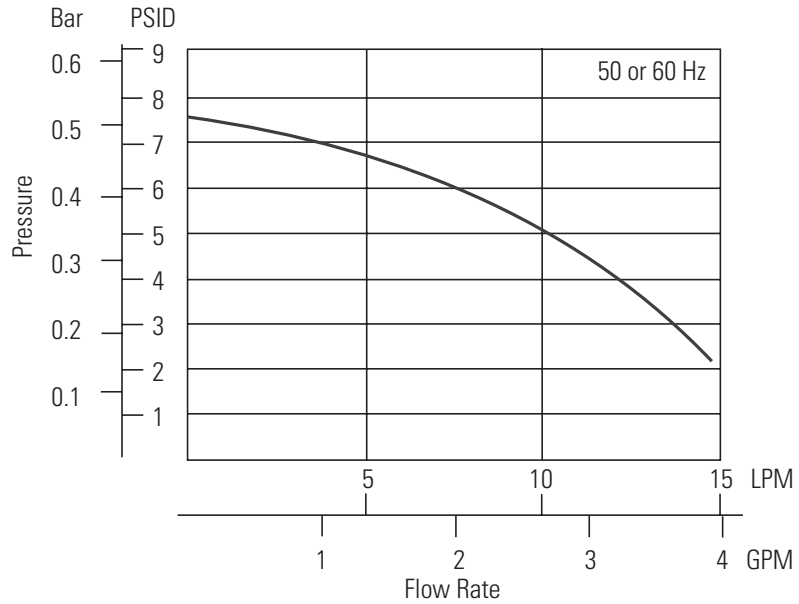
### Specifications

	ThermoChill LR I	ThermoChill LR II	ThermoChill LR III
<b>Process Fluid Temperature and 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 62.0 x 36.1 x 60.0	24.4 x 14.2 x 23.6 62.0 x 36.1 x 60.0	28.6 x 17.3 x 23.6 72.7 x 44.0 x 60.0
<b>Chiller 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 - Magnetic Drive 60 Hz 50 Hz		2.0 gpm @ 11 psid (7.6 lpm @ 0.8 bar) 2.0 gpm @ 11 psid (7.6 lpm @ 0.8 bar)	

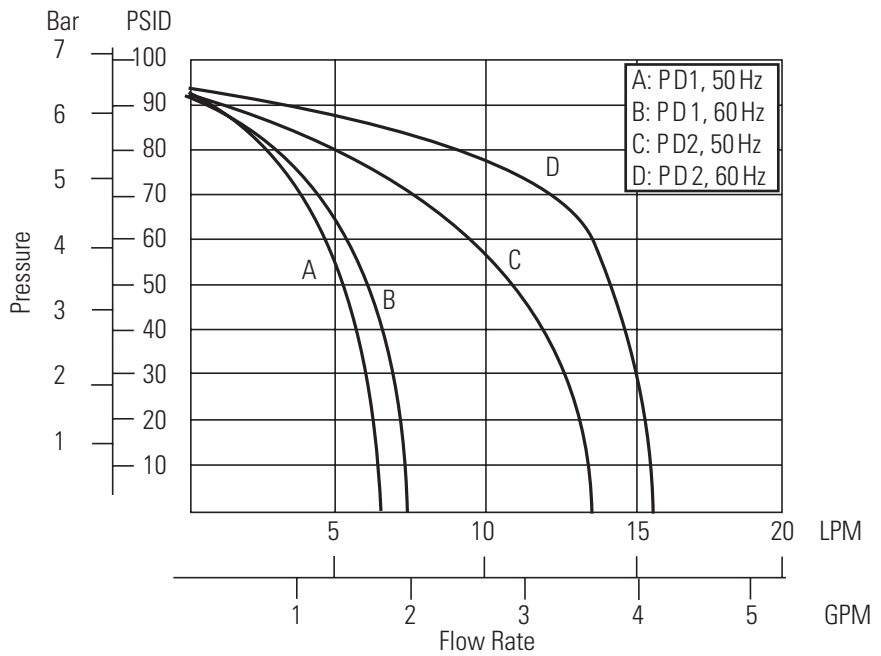
\* ThermoChill LR I has PD 1 only, ThermoChill LR III has PD 1 and PD 2 only. Pumping capacity pressure values are differential pressures between the inlet and the outlet of the chiller.

- 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.
- 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.
- 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.
- Thermo Fisher Scientific reserves the right to change specifications without notice.

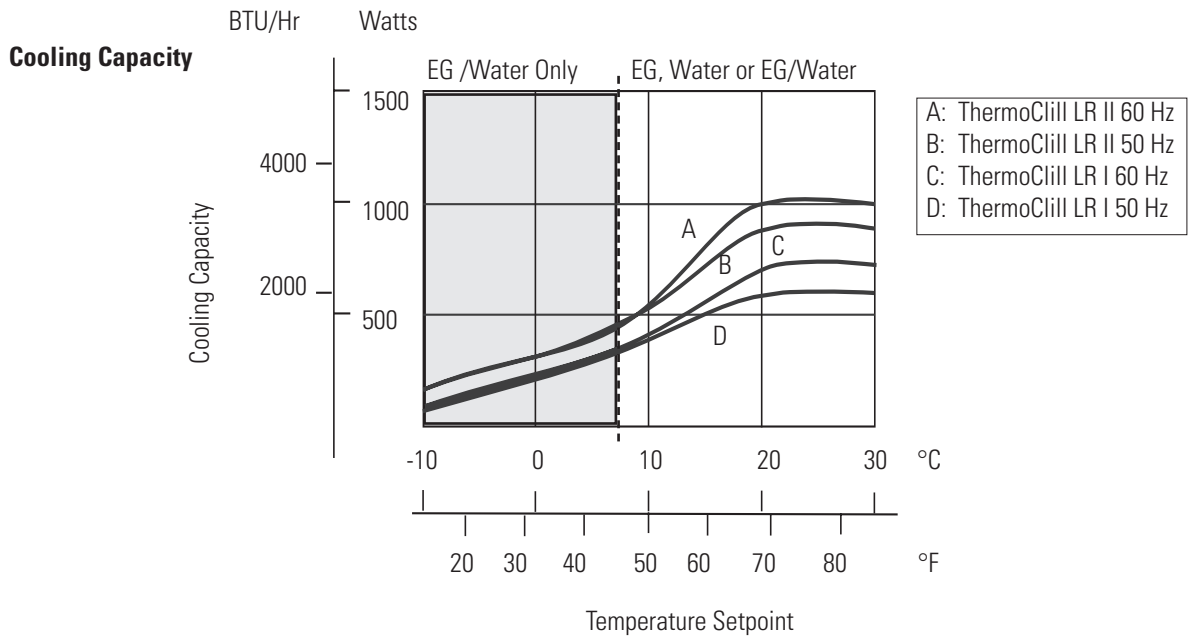
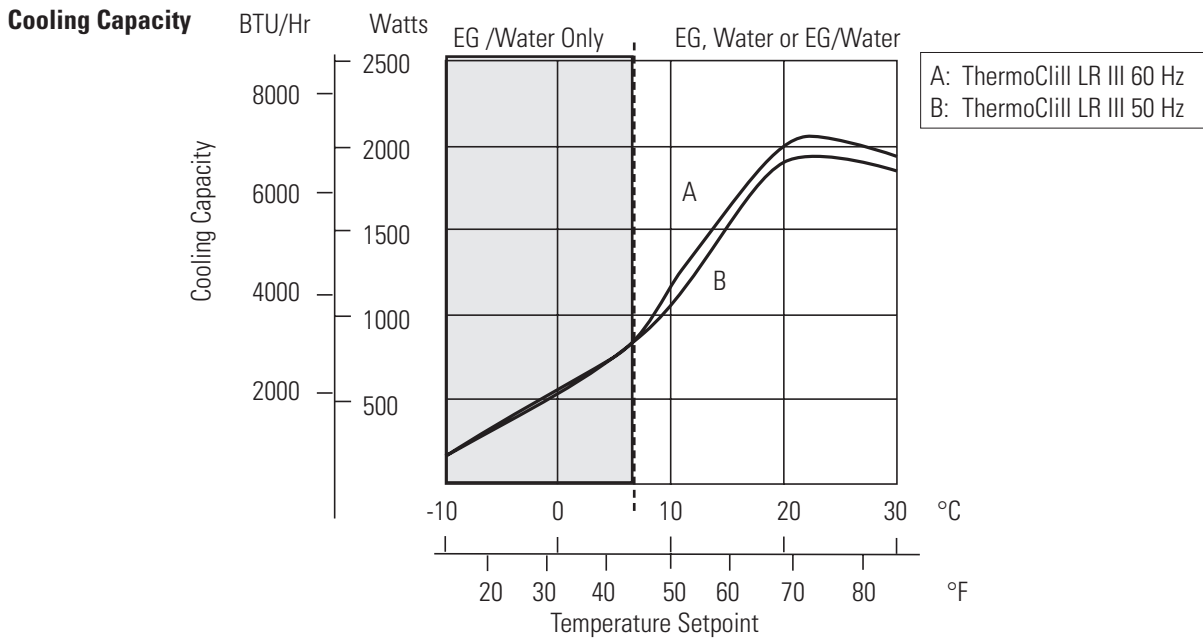
**Pumping Capacity  
Magnetic Drive Pump**



**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. See Section 3.
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- 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.