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