Reliable, easy-to-use chillers optimized for diverse applications. Cooling capacities up to 10000 watts.

Thermo Scientific NESLAB ThermoFlex

Recirculating Chillers



Innovative Platform

The new Thermo Scientific NESLAB ThermoFlex platform was developed with customer input from concept to design. The result is an easy-to-use, easy-to-maintain high performance chiller platform configurable to the most demanding applications.

Superior Performance

- Improved cooling capacity
- Increased reliability
- Ease of maintenance

Ease of Use

- An intuitive user interface for ease of operation
- Air and water filters that can be changed while unit is in operation
- Innovative, patented packaging for rapid installation
- Quick start guide for seamless start-up in minutes

Configurable Design

- Wide range of available cooling capacities
- Variety of available options
- Installation flexibility
- Extended temperature range

Thermo s c i e n t i f i c

Ideal for diverse applications within the following markets:

• Analytical

Industrial

Medical

• Metrology

Biotech

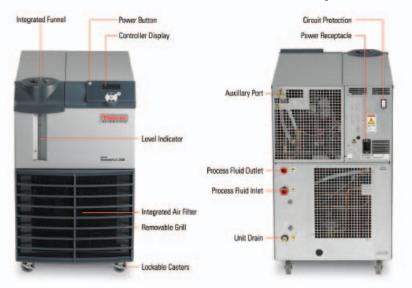
Laser

- Packaging
 - Pharmaceutical
 - Printing
 - Research

 - Semiconductor
 - University

Innovative Design

Features common to Thermo Scientific NESLAB ThermoFlex recirculating chillers



Options include:

Feature	Benefit
Pressure Relief	The pressure relief valve allows the user to set the maximum fluid pressure to meet the application requirements and is available as an internal or external option.
Pressure Relief with Flow Readout	The pressure relief valve allows the user to set the maximum fluid pressure to meet the application requirements. The flow readout allows the user to monitor the flow rate to the application and set flow alarms via the controller.
Flow Control with Flow Readout	The flow control valve allows the user to adjust the flow to the application. The flow readout allows the user to monitor the flow rate to the application and set flow alarms via the controller.
Auto Refill	Allows for automatic refilling from a customer-supplied water source to ensure the proper fluid level is maintained.
Anti Drainback	Prevents fluid from flowing back to the reservoir when the chiller is installed below the application.
DI Water	Partial flow internal DI cartridge minimizes footprint and maintains fluid resistivity between 1 and 3 megOhm.
RS232 & RS485 Digital Communication	Provides digital communication for remote operation, monitoring and data logging.
Analog I/O	Provides analog communication for remote operation and monitoring. Includes a remote sensor port which allows for remote temperature control of an application when used with a remote sensor (available as an accessory).
Global Voltage	Allows the user to select the appropriate frequency and voltage to enable operation anywhere in the world.
Air-Cooled Condenser	Uses ambient-temperature room air to remove application heat.
Water-Cooled Condenser	Uses facility water to remove application heat.
SEMI S2 Compliance	Compliant with S2-0703, S8-0705, S14-0704, F47-0706.
Deluxe Controller	LCD controller offers the ultimate in ease of use with graphical display and text. Multi-position level sensor enables user to easily monitor the fluid level on the display.
DI Control and Readout*	Allows the user to both set and readout the DI level between 1 and 3 megOhm using the controller.
High Temperature*	Allows for operation from +5°C to +90°C.

*Available with the deluxe controller option.



Standard Controller

- Single line LED Display
- Temperature alarms
- Pressure alarms
- Flow alarms (optional)



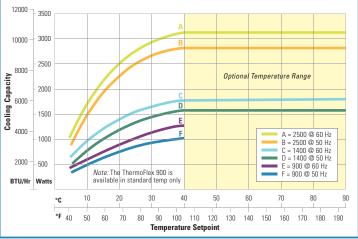
SCIENTIFIC

Deluxe Controller

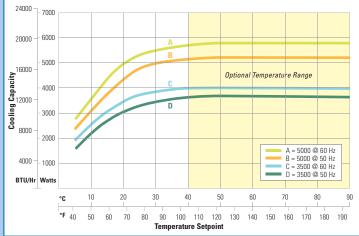
- Multi-line LCD Display
- Full alphanumeric display
- Temperature alarms
- Pressure alarms
- Fluid level readout
- Flow alarms (optional)
- DI control & readout (optional)

Cooling Capacity

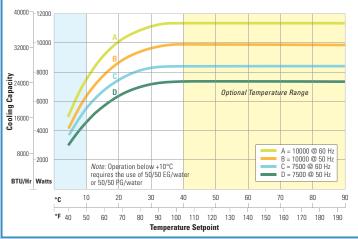
Cooling Capacity for NESLAB ThermoFlex 900, 1400 & 2500



Cooling Capacity for NESLAB ThermoFlex 3500 & 5000







Cooling capacity based on units with P2 pumps with no backpressure. Other pumps will affect cooling capacity performance.





Full flow filter ensures clean fluid to protect your application and maximize recirculation system life.



Easily removable condenser grill and air filter allow for quick and simple cleaning to optimize chiller performance and maximize component life.



Integrated funnel design allows for spill proof filling.

Thermo Scientific NESLAB ThermoFlex Recirculating Chillers

		-	
		T -	_
	A New York	Concession and Concession of C	Contraction association in the
	0 0	3 5	State of the local division of the local div
	NESLAB ThermoFlex 900	NESLAB ThermoFlex 1400	NESLAB ThermoFlex 2500
Standard Temperature Range	+5°C to +40°C	+5°C to +40°C	+5°C to +40°C
• •	(+41°F to +104°F)	(+41°F to +104°F)	(+41°F to +104°F)
ptional Temperature Range	—	+5°C to +90°C	+5°C to +90°C
Ambient Temperature Range	+10°C to +40°C	(+41°F to +194°F) +10°C to +40°C	(+41°F to +194°F) +10°C to +40°C
unbient temperature hange	(+50°F to +104°F)	(+50°F to +104°F)	(+50°F to +104°F)
emperature Stability	±0.1°C	±0.1°C	±0.1°C
tandard Cooling Capacity			
0 Hz at +20°C	900 W / 3074 BTU	1400 W / 4781 BTU	2500 W / 8538 BTU
0 Hz at +20°C Reservoir Volume	750 W / 2561 BTU 1.9 gallons (7.2 liters)	1170 W / 3996 BTU	2200 W / 7513 BTU
lefrigerant	R134A	1.9 gallons (7.2 liters) R134A	1.9 gallons (7.2 liters) R134A
hysical Dimensions (H x W x D)			
Air-Cooled	27.3 x 14.2 x 24.6 in	27.3 x 14.2 x 24.6 in	29.0 x 17.2 x 26.5 in
	(69.2 x 36.0 x 62.4 cm)	(69.2 x 36.0 x 62.4 cm)	(73.6 x 43.6 x 67.3 cm)
Vater-Cooled	—	27.3 x 14.2 x 24.6 in	29.0 x 17.2 x 26.5 in
P1 — Positive Displacement Pump		(69.2 x 36.0 x 62.4 cm)	(73.6 x 43.6 x 67.3 cm)
0 Hz	2.1 gpm @ 60 psig	2.1 gpm @ 60 psig	2.1 gpm @ 60 psig
	(7.9 lpm @ 4.1 bar)	(7.9 lpm @ 4.1 bar)	(7.9 lpm @ 4.1 bar)
0 Hz	1.7 gpm @ 60 psig	1.7 gpm @ 60 psig	1.7 gpm @ 60 psig
2 — Positive Displacement Pump	(6.4 lpm @ 4.1 bar)	(6.4 lpm @ 4.1 bar)	(6.4 lpm @ 4.1 bar)
50 Hz	4.0 gpm @ 60 psig	4.0 gpm @ 60 psig	4.0 gpm @ 60 psig
	(15.1 lpm @ 4.1 bar)	(15.1 lpm @ 4.1 bar)	(15.1 lpm @ 4.1 bar)
50 Hz	3.3 gpm @ 60 psig	3.3 gpm @ 60 psig	3.3 gpm @ 60 psig
	(12.5 lpm @ 4.1 bar)	(12.5 lpm @ 4.1 bar)	(12.5 lpm @ 4.1 bar)
'1 — Turbine Pump** 0 Hz	3.5 gpm @ 60 psid	3.5 gpm @ 60 psid	3.5 gpm @ 60 psid
0.112	(13.2 lpm @ 4.1 bar)	(13.2 lpm @ 4.1 bar)	(13.2 lpm @ 4.1 bar)
io Hz	2.5 gpm @ 60 psid	2.5 gpm @ 60 psid	2.5 gpm @ 60 psid
	(9.5 lpm @ 4.1 bar)	(9.5 lpm @ 4.1 bar)	(9.5 lpm @ 4.1 bar)
P3 — Centrifugal Pump** 50 Hz			
0112	—	—	—
0 Hz	_	_	_
P4 — Centrifugal Pump**			
io Hz	—	—	—
50 Hz	_	_	_
25 — Centrifugal Pump**			
io Hz	_	_	_
io Hz	—	—	—
Init Weight (for pump type P2 only)	130.5 lb (59.2 kg)	130.5 lb (59.2 kg)	175.5 lb (79.6 kg)
/oltage Options	Available	Available	
15 V/60 Hz & 100 V/50 Hz ^{1,2} 00 V/60 Hz & 100 V/50 Hz ^{1,2}	Available Available	Available Available	
08-230 V/60 Hz & 200 V/50 Hz ^{1,2}	Available	Available	Available
230 V/50 Hz ¹	Available	Available	Available
200-230 V/50-60 Hz Global Voltage ^{1,2}	Available	Available	Available
208-230 V/60 Hz/3 phase ^{1,2}	—	_	_
100 V/50 Hz/3 phase ¹ 160 V/60 Hz/3 & 400 V/50 Hz/3 ^{1,2}		_	
Standard Compliance		¹ CE compliant	
(for all ThermeElex regireulating chillers)		² CSΔ compliant	

(for all ThermoFlex recirculating chillers)

CE <u>C</u> <u>US 105974_C_000</u>

¹CE compliant ²CSA compliant

Specifications obtained at sea level using water as the recirculating fluid, at a +20°C process setpoint, +25°C ambient condition, at nominal operating voltage. Other fluids, process temperatures, ambient temperatures, altitude or operating voltages will affect performance. Cooling capacity based on units with P2 pumps with no backpressure. Other pumps will affect cooling capacity performance. Specifications subject to change. **Pressure values for centrifugal and turbine pumps are differential pressures between the inlet and the outlet of the unit.

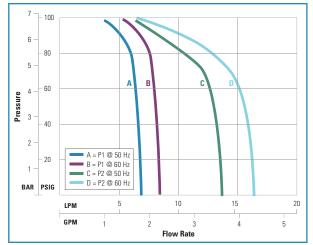
Heather Temperature Range Heat PE (± +194°F) (+41°F to +194°F) (+41°F to +194°F) (+41°F to +194°F) Ambient Temperature Stability ±01°C ±				ALL INC.	
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th></th> <th></th> <th>V</th> <th>-</th>				V	-
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th>No. of Concession, Name</th> <th>IT POINT IN THE</th> <th>1.0</th> <th></th>		No. of Concession, Name	IT POINT IN THE	1.0	
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th>-</th> <th>-</th> <th>Construction of the local division of the lo</th> <th>CONTRACTOR OF TAXABLE PARTY.</th>		-	-	Construction of the local division of the lo	CONTRACTOR OF TAXABLE PARTY.
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th>1</th> <th>1</th> <th></th> <th></th>		1	1		
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th>Name</th> <th>Prove</th> <th></th> <th></th>		Name	Prove		
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th></th> <th></th> <th>State of the local division of the</th> <th></th>				State of the local division of the	
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th></th> <th></th> <th></th> <th></th>					
ThermoPice 3800 ThermoPice 7500 ThermoPice 7500 ThermoPice 7500 Standard Temperature Range 4% to +00% (-41% to +104%) (-41% to +104%) </th <th></th> <th>6 6</th> <th>0 0</th> <th></th> <th>6 6</th>		6 6	0 0		6 6
Standard Temperature Range 4%°C to -40°C +4%°C to -40°C +40°C +40					
Interferentiation Interferentiation Interferentiation Interferentiation Interferentiation Ambient Temperature Range +0°C to +10°C +10°C to +10°C	Standard Temperature Range				
Optional Temperature Range +5°C to +30°C +6°C to +30°C +6°C to +40°C +60°C +60°C to +40°C +60°C +	Standard Temperature nange				
Ambient Temperature Bange +10°C to +40°C ±0.1°C ±0.	Optional Temperature Range				+5°C to +90°C
(+50°F to ±104°F) (+50°F to ±104°F) (+50°F to ±104°F) (+50°F to ±104°F) Standard Cooling Capacity 90.1°C ±0.1°C					
Temperature Stability 40.1°C 40.1°C 40.1°C 40.1°C 60 Hz at -20°C 3500 W / 11935 BTU 5000 W / 11007 BTU 7500 W / 2557 BTU 10000 W / 3100 BTU 50 Hz at -20°C 3050 W / 11937 BTU 6402 W / 15027 BTU 6475 W / 21910 BTU 6800 W / 28985 BTU Reservoir Volume 19 galtons (1 / 2 liters) 14 / 3 galtons (1 / 2 liters) 4 / 5 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (1 / 2 liters) 4 / 7 / 7 galtons (2 / 2 liters) 3 / 7 / 7 / 7 / 7 / 7 / 7 / 7 / 7 / 7 /	Ambient Temperature Range				
Similar Cooling Capacity 50 Hz at -20°C 3500 W / 11935 BTU 5000 W / 17076 BTU 7500 W / 2557 BTU 10000 W / 34100 BTU 90 Hz at -20°C 3050 W / 1016 BTU 4400 W / 15027 BTU 6425 W / 21910 BTU 6500 W / 28956 BTU Reservoir Volume 1.9 gallons (7.2 liters) 1.9 gallons (7.2 liters) 1.4 5 gallons (17.3 liters) A 75 gallons (17.3 liters) Refrigerant R407C R407C R407C R407C R407C Physical Dimensions (H × W x D) 38.9 x 19.3 x 30.9 in 58.9 x 19.3 x 30.9 in 152.3 x 25.2 x 33.8 in 102.7 x 63.9 x 85.6 cm) Water Cooled 38.9 x 19.3 x 30.9 in 39.8 y 19.3 x 30.9 in 45.9 x 75.2 x 33.8 in 116.5 x 63.9 x 85.6 cm) PT — Positive Displacement Pump (1.7 gm@ 60 psig — — — — 60 Hz (7.3 lpm @ 4.1 bar) (1.5 lpm @ 4.1 bar) 50 Hz 3.3 gpm @ 60 psig 4.0 gpm @ 60 psig 3.3 gpm @ 60 psig .3 gpm @ 60 ps	Temperature Stability				
80 Hz at 20°C 3500 W / 11058 BTU 5000 W / 17076 BTU 7500 W / 2575 BTU 10000 W / 34100 BTU Reservit Yolume 1.9 gallons (7.2 liters) 1.9 gallons (7.2 liters) 4.75 gallons (17.9 liters) 4.75 gallons (17.9 liters) Reservit Yolume 1.9 gallons (7.2 liters) 1.9 gallons (7.2 liters) 4.75 gallons (17.9 liters) 4.75 gallons (17.9 liters) Alr-Coolad 38.9 x 19.3 x 30.9 in 58.9 x 19.3 x 30.9 in 52.3 x 25.2 x 33.8 in 52.3 x 25.2 x 33.8 in Mater-Coolad 38.9 x 19.3 x 30.9 in 38.9 x 19.3 x 30.9 in 45.9 x 25.2 x 33.8 in 45.9 x 25.2 x 33.8 in PI — Positive Displacement Pump 60 Hz 1.7 gnm @ 40 psig — — — 60 Hz 1.7 gnm @ 40 psig — — — — — — 7.9 Imm @ 41 barl 1.7 gnm @ 60 psig 4.0 gpm @ 60 psig 4.0 gpm @ 60 psig 3.3 gmm @ 60 psig 3.5 gpm @ 60 psid 3.7 gpm @ 2.2 psid 3.7 gpm @ 2.2 psid 3.7 gpm @ 2.2 psid 3.7 g		10.1 0	10.1 0	±0.1 0	10.1 0
Beservoir Volume 1.9 gallons (7.2 liters) 1.9 gallons (7.2 liters) 4.75 gallons (17.9 liters) A75 gallons (17.9 liters) Refrigerant R407C R407C <td< td=""><td>60 Hz at +20°C</td><td></td><td></td><td></td><td></td></td<>	60 Hz at +20°C				
Refrigerant R407C				,	
Physical Dimensions (H x W x D) 38.9 x 19.3 x 30.9 in (98.7 x 48.8 x 78.4 cm) 38.9 x 19.3 x 30.9 in (98.7 x 48.8 x 78.4 cm) 52.3 x 25.2 x 33.8 in (132.7 x 63.9 x 65.6 cm) 112.7 x 63.9 x 65.6 cm) Water-Cooled 38.9 x 19.3 x 30.9 in (98.7 x 48.8 x 78.4 cm) (98.7 x 48.8 x 78.4 cm) (132.7 x 63.9 x 65.6 cm) 112.7 x 63.9 x 65.6 cm) PT — Positive Displacement Pump 60 Hz 2.1 gpm @ 00 psig (12.5 lpm @ 4.1 bar) — — — — 50 Hz 1.7 gpm @ 00 psig (15.1 lpm @ 4.1 bar) — — — — — 72 — Positive Displacement Pump 60 Hz 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) (15.1 lpm @ 4.1 bar) (15.1 lpm @ 4.1 bar) (15.1 lpm @ 4.1 bar) (12.5 lpm			<u> </u>	U	
Air-Cooled 38 9 x 19.3 x 30.9 in (98.7 x 48 x 78 4 cm) 38 9 x 19.3 x 30.9 in (92.7 x 63 y x 48 x 78 4 cm) 52.3 x 25.2 x 33.8 in (132.7 x 63 9 x 46.6 cm) Water-Cooled 38.9 x 19.3 x 30.9 in (97.7 x 48 x 78 4 cm) 52.3 x 25.2 x 33.8 in (116.6 x 63 9 x 45.6 cm) 152 x 75.2 x 33.8 in (116.6 x 63 9 x 45.6 cm) P - Positive Displacement Pump 60 Hz 2.1 gpm @ 60 psig (1.7 gpm @ 60 psig (1.6 4 lpm @ 4.1 bar) - - 50 Hz 1.7 gpm @ 60 psig (1.5 1 lpm @ 4.1 bar) - - - 72 - Positive Displacement Pump 60 Hz 4.0 gpm @ 60 psig (1.5 1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (1.5 1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (1.5 1 lpm @ 4.1 bar) - 71 - Turbine Pump** 0 gpm @ 60 psig (1.2 1 lpm @ 4.1 bar) 3.3 gpm @ 60 psig (1.2 1 lpm @ 4.1 bar) - - 60 Hz 3.5 gpm @ 60 psig (1.2 1 lpm @ 4.1 bar) 1.5 1 lpm @ 4.1 bar) (12 1 lpm @ 4.1 bar) 112 lpm @ 4.1 bar) 71 - Turbine Pump** 0 3.5 gpm @ 60 psid (1.2 2 lpm @ 4.1 bar) - - - 60 Hz 2.5 gpm @ 60 psid (1.2 2 lpm @ 4.1 bar) 1.5 gpm @ 2.2 bar) 10 gpm @ 2.2 bar)		N4U/6	n4U/6	n4U/U	N4U/6
(987 x 488 x 784 cm) (987 x 488 x 784 cm) (132 x 483 x 58 6 cm) (132 x 483 x 58 6 cm) (132 x 483 x 58 6 cm) (136 x 53 x 55 6 cm) (116 6 x 63 9 x 65 6 cm) Verte-Cooled 389 x 19 x 30 9 in 389 x 19 x 30 9 in 459 x 52 x 23 8 in (116 6 x 63 9 x 65 6 cm) (116 6 x 63 9 x 65 0 cm) (116 6 x 61 9 x 61 0 cm) (116 1 cm 6 4 1 har) (116 1 cm 6 4	•	38.9 x 19.3 x 30.9 in	38.9 x 19.3 x 30.9 in	52 3 x 25 2 x 33 8 in	52.3 x 25.2 x 33.8 in
(98.7 x 48.8 x 78.4 cm) (98.7 x 48.8 x 78.4 cm) (116.6 x 63.9 x 85.6 cm) PI — Positive Displacement Pump		(98.7 x 48.8 x 78.4 cm)	(98.7 x 48.8 x 78.4 cm)		
P1 — Positive Displacement Pump 2.1 gpm @ 60 psig 60 Hz (7.9 lpm @ 4.1 bar) 50 Hz 1.7 gpm @ 60 psig 64 lpm @ 4.1 bar) 72 — Positive Displacement Pump 4.0 gpm @ 60 psig 4.0 gpm @ 60 psig 4.0 gpm @ 60 psig 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) (12.5	Water-Cooled				
60 Hz 21 gpm @ 60 psig		(98.7 x 48.8 x 78.4 cm)	(98.7 x 48.8 x 78.4 cm)	(116.6 x 63.9 x 85.6 cm)	(116.6 x 63.9 x 85.6 cm)
(7.9 g m @ 4.1 bar) 50 Hz 1.7 gpm @ 60 psig (6.4 pm @ 4.1 bar) P2 — Positive Displacement Pump 60 Hz 4.0 gpm @ 60 psig (15.1 pm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 pm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 pm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 pm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 pm @ 4.1 bar) 4.0 gpm @ 60 psig (12.5 pm @ 4.1 bar) 4.0 gpm @ 60 psig (12.5 pm @ 4.1 bar) 15.1 pm @ 4.1 bar) (15.1 pm @ 4.1 bar) (15.1 pm @ 4.1 bar) (15.1 pm @ 4.1 bar) (12.5 pm @ 4.1 bar) (13.9 pm @ 2.2 bar) (13.9 pm @ 2.2 bar)		2.1 app @ 60 prig			
50 Hz 17 gpm @ 00 psig (6.4 lpm @ 4.1 bar) — … </td <td>00 HZ</td> <td></td> <td>—</td> <td>—</td> <td>—</td>	00 HZ		—	—	—
P2 — Positive Displacement Pump 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) 50 Hz 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) (12.5 lpm @ 4.1 bar) (13.7 lpm @ 2.2 bar) (13.7 lpm @ 2.4 bar) (14.5 lpm @ 2.4 bar) (14.5 lpm @ 2.4 bar) (14.5 lpm @ 2.4 b	50 Hz	1.7 gpm @ 60 psig	_	—	_
60 Hz 4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar) (12.5 lpm @ 4.1 bar) (13.2 lpm @ 4.1 bar) (14.2 lpm @ 4.1 bar) (15.1		(6.4 lpm @ 4.1 bar)			
(15.1 lpm @ 4.1 bar) 50 Hz 3.3 gpm @ 60 psig 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) (12.5 lpm @ 4.1 bar) 71 — Turbine Pump** 0 12.5 lpm @ 4.1 bar) (12.5 lpm @ 4.1 bar) (12.5 lpm @ 4.1 bar) 60 Hz 3.5 gpm @ 60 psid 3.5 gpm @ 60 psid - - 51 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid - - 60 Hz (13.2 lpm @ 4.1 bar) (13.2 lpm @ 4.1 bar) - - 50 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid - - - 60 Hz 10 gpm @ 3.2 psid 10 gpm @ 2.2 bar) 50 Hz 10 gpm @ 2.0 psid 10 gpm @ 2.2 bar) (37.9 lpm @ 2.2 bar) (37.9 lpm @ 2.2 bar) (37.9 lpm @ 2.2 bar) 50 Hz 10 gpm @ 3.2 psid 10 gpm @ 3.2 psid 10 gpm @ 3.2 psid 10 gpm @ 2.0 psid 10 gpm @ 2.0 psid 10 gpm @ 2.2 bar) 50 Hz 15 gpm @ 3.4 psid - - - - - - 60 Hz 15 gpm @ 3.4 psid - -		10 ann @ 60 naig	10 apm @ 60 paig	1.0 apm @ 60 paig	10 apm @ 60 poig
50 Hz 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) 3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar) TI — Turbine Pump** 50 Hz 3.5 gpm @ 60 psid (13.2 lpm @ 4.1 bar) 60 Hz 3.5 gpm @ 60 psid (13.2 lpm @ 4.1 bar) 50 Hz 2.5 gpm @ 60 psid (3.2 lpm @ 4.1 bar) 50 Hz 2.5 gpm @ 60 psid (3.9 lpm @ 2.2 bar) 60 Hz 10 gpm @ 32 psid (37.9 lpm @ 2.2 bar) 10 gpm @ 32 psid (37.9 lpm @ 2.2 bar) 10 gpm @ 2.2 bar) 50 Hz 10 gpm @ 2.0 psid (37.9 lpm @ 2.4 bar) 10 gpm @ 2.0 psid (37.9 lpm @ 1.4 bar) 10 gpm @ 2.0 psid (37.9 lpm @ 1.4 bar) 60 Hz 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) 50 Hz 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) 60 Hz 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) 50 Hz 60 Hz <td< td=""><td>00 HZ</td><td></td><td></td><td></td><td></td></td<>	00 HZ				
T1 — Turbine Pump** 60 Hz 3.5 gpm @ 60 psid 50 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid 50 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid 60 Hz (9.5 lpm @ 4.1 bar) (9.5 lpm @ 4.1 bar) 60 Hz 10 gpm @ 32 psid 10 gpm @ 32 psid 10 gpm @ 2.2 bar) (37.9 lpm @ 1.4 bar) (37.9 lpm @ 2.2 bar) (56.8 lpm @ 3.9 bar) (75.7 lpm @ 4.1 bar) (75.7 lpm @ 2.4 bar) (75.7	50 Hz		3.3 gpm @ 60 psig	3.3 gpm @ 60 psig	3.3 gpm @ 60 psig
60 Hz 3.5 gpm @ 60 psid (1.2 lpm @ 4.1 bar) (1.3 lpm @ 4.1 bar) 50 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid		(12.5 lpm @ 4.1 bar)	(12.5 lpm @ 4.1 bar)	(12.5 lpm @ 4.1 bar)	(12.5 lpm @ 4.1 bar)
(13.2 lpm @ 4.1 bar) (13.2 lpm @ 4.1 bar) 50 Hz 2.5 gpm @ 60 psid (9.5 lpm @ 4.1 bar) — P3 — Centrifugal Pump** (9.5 lpm @ 4.1 bar) (9.5 lpm @ 2.0 spid) 10 gpm @ 32 psid 10 gpm @ 32 psid 60 Hz 10 gpm @ 2.0 spid 10 gpm @ 2.2 bar) (37.9 lpm @ 1.4 bar)<		2 E ann @ CO naid	0 E ann @ C0 noid		
50 Hz 2.5 gpm @ 60 psid 2.5 gpm @ 60 psid — …	00 HZ				—
P3 — Centrifugal Pump** 10 gpm @ 32 psid 37.9 lpm @ 2.2 bar) (37.9 lpm @ 1.4 bar)	50 Hz			_	_
60 Hz 10 gpm @ 32 psid (37.9 lpm @ 2.2 bar) 10 gpm @ 32 psid (37.9 lpm @ 2.2 bar) 10 gpm @ 32 psid (37.9 lpm @ 2.2 bar) 10 gpm @ 2.2 bar) 10 gpm @ 2.2 bar) 50 Hz 10 gpm @ 20 psid (37.9 lpm @ 1.4 bar) 10 gpm @ 2.2 bar) 10 gpm @ 2.2 bar) 10 gpm @ 2.2 bar) P4 — Centrifugal Pump** 60 Hz 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) - - 50 Hz 15 gpm @ 7.2 bar) (56.8 lpm @ 3.9 bar) - - 50 Hz 15 gpm @ 7.2 bar) (56.8 lpm @ 3.9 bar) - - 50 Hz 15 gpm @ 3.4 psid 15 gpm @ 3.4 psid - - 60 Hz 15 gpm @ 2.3 bar) (56.8 lpm @ 2.3 bar) - - Volspan @ 4.1 bar) (75.7 lpm @ 4.1 bar) 50 Hz - - 20 gpm @ 60 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) (75.7 lpm @ 2.4 bar) (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psi		(9.5 lpm @ 4.1 bar)	(9.5 lpm @ 4.1 bar)		
(37.9 lpm @ 2.2 bar) 50 Hz 10 gpm @ 20 psid F4 — Centrifugal Pump** (37.9 lpm @ 1.4 bar) F4 — Centrifugal Pump** 15 gpm @ 57 psid - - - 60 Hz 15 gpm @ 3.9 bar) (56.8 lpm @ 3.9 bar) - - 50 Hz 15 gpm @ 34 psid 15 gpm @ 34 psid - - - 60 Hz 15 gpm @ 34 psid 15 gpm @ 34 psid - - - - 75.7 lpm @ 4.1 bar) (56.8 lpm @ 2.3 bar) (56.8 lpm @ 2.4 bar) (75.7 lpm @ 4.1 bar) (75.7 lpm @ 2.4 bar) (75.7 lpm @	3	10 @ 00i-l	10 @ 00id	10 mm @ 00 mil	10 @ 00
50 Hz 10 gpm @ 20 psid (37.9 lpm @ 1.4 bar) 10 gpm @ 20 psid (37.9 lpm @ 1.4 bar) 10 gpm @ 20 psid (37.9 lpm @ 1.4 bar) 10 gpm @ 20 psid (37.9 lpm @ 1.4 bar) P4 — Centrifugal Pump** 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) 50 Hz 15 gpm @ 3.4 psid (56.8 lpm @ 2.3 bar) 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) 95 — Centrifugal Pump** 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4	OU HZ				
(37.9 lpm @ 1.4 bar) P4 — Centrifugal Pump** 15 gpm @ 57 psid — — 60 Hz 15 gpm @ 3.9 bar) (56.8 lpm @ 3.9 bar) — — 50 Hz 15 gpm @ 3.4 psid 15 gpm @ 3.9 par) — — 50 Hz 15 gpm @ 3.4 psid 15 gpm @ 2.3 bar) — — P5 — Centrifugal Pump** (56.8 lpm @ 2.3 bar) (56.8 lpm @ 2.3 bar) Z0 gpm @ 60 psid Z0 gpm @ 60 psid Z0 gpm @ 60 psid (75.7 lpm @ 4.1 bar) Z0 gpm @ 35 psid Z0 Z0 Gpm @ 35 psid	50 Hz				
60 Hz 15 gpm @ 57 psid (56.8 lpm @ 3.9 bar) 15 gpm @ 3.9 bar)					
(56.8 lpm @ 3.9 bar) (56.8 lpm @ 3.9 bar) (56.8 lpm @ 3.9 bar) 50 Hz 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) P5 Centrifugal Pump** 60 Hz 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 20 gpm @ 35 psid (75.7 lpm @ 4.1 bar) 50 Hz 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} 208 230 V/50 Hz & 200 V/50 Hz ^{1.2} 208 -230 V/50 Hz & 200 V/50 Hz ^{1.2} Available Available 200 230 V/50 Hz & 200 V/50 Hz ^{1.2} Available Available 200 -230 V/50 Hz /3 phase ^{1.2} - - 208 -230 V/50 Hz /3 phase ^{1.2} - - Available Available		45 @ 57 14	45 @ 57		
50 Hz 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) 15 gpm @ 34 psid (56.8 lpm @ 2.3 bar) P5 Centrifugal Pump** 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 50 Hz 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} 100 V/60 Hz & 100 V/50 Hz ^{1.2} 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} Available 200 -230 V/50 -60 Hz Global Voltage ^{1.2} Available Available 200-230 V/50 -60 Hz Global Voltage ^{1.2} Available 208-230 V/60 Hz/3 phase ^{1.2} 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available 208-230 V/60 Hz/3 phase ^{1.2} 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Av	6U Hz			—	_
(56.8 lpm @ 2.3 bar) P5 — Centrifugal Pump** 60 Hz 60 Hz — — 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 50 Hz — — 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} — — 100 V/60 Hz & 100 V/50 Hz ^{1.2} — — — — 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} — — — — — 200-230 V/50-60 Hz & 100 V/50 Hz ^{1.2} — — — — — — 200-230 V/50 Hz ^{1.2} — — — — — — — — — 20 200 V/50 Hz ^{1.2} — — — — — 20 200 V/50 Hz ^{1.2} — — — — 20 200 V/50 Hz ^{1.2} — — — — — — 200-230 V/50-60 Hz Global Voltage ^{1.2}	50 Hz			_	_
60 Hz 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 20 gpm @ 60 psid (75.7 lpm @ 4.1 bar) 50 Hz 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} 100 V/60 Hz & 100 V/50 Hz ^{1.2} 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} Available 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available 200-230 V/50 Hz/3 phase ^{1.2} 200-230 V/50 Hz/3 phase ^{1.2} 200-230 V/50 Hz/3 phase ^{1.2} </td <td></td> <td></td> <td></td> <td></td> <td></td>					
100 V/50 Hz 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} 100 V/60 Hz & 100 V/50 Hz ^{1.2} 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} 208-230 V/50 Hz ^{1.2} Available Available 200-230 V/50 Hz ^{1.2} Available Available 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available 208-230 V/60 Hz/3 phase ^{1.2} 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available Available <td></td> <td></td> <td></td> <td></td> <td></td>					
50 Hz — — 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) 20 gpm @ 35 psid (75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) 356 lb (161.5 kg) Voltage Options	60 Hz	—	—		
(75.7 lpm @ 2.4 bar) Unit Weight (for pump type P2 only) 264 lb (120 kg) 264 lb (120 kg) 356 lb (161.5 kg) 356 lb (161.5 kg) Voltage Options 115 V/60 Hz & 100 V/50 Hz ^{1.2} — — — — 100 V/60 Hz & 100 V/50 Hz ^{1.2} — — — — — 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} Available Available — — — 208-230 V/60 Hz & 200 V/50 Hz ^{1.2} Available Available — — — 200-230 V/50 Hz ¹ Available Available — — — 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available — — 208-230 V/60 Hz/3 phase ^{1.2} — — — — — 208-230 V/60 Hz/3 phase ^{1.2} — — — — — 208-230 V/60 Hz/3 phase ^{1.2} — — — — — 208-230 V/60 Hz/3 phase ^{1.2} — — — — — 208-230 V/60 Hz/3 phase ^{1.2} — — — Available Available <	50 Hz		_		
Voltage Options					
115 V/60 Hz & 100 V/50 Hz ^{1,2} — — — — — — — — — — — … <	Unit Weight (for pump type P2 only)	264 lb (120 kg)	264 lb (120 kg)	356 lb (161.5 kg)	356 lb (161.5 kg)
100 V/60 Hz & 100 V/50 Hz ^{1,2} 208-230 V/60 Hz & 200 V/50 Hz ^{1,2} Available Available 200 - 230 V/50 Hz ¹ Available Available 200 - 230 V/50 Hz ¹ Available Available 200 - 230 V/50 Hz Global Voltage ^{1,2} Available Available 208 - 230 V/50 Hz /3 phase ^{1,2} Available 208 - 230 V/60 Hz /3 phase ^{1,2} Available Available 208 - 230 V/60 Hz /3 phase ^{1,2} Available Available Available 400 V/50 Hz /3 phase ¹ Available Available Available 460 V/60 Hz /3 & 400 V/50 Hz /3 ^{1,2} Available Available Standard Compliance C C 1CE compliant 1CE compliant	Voltage Options				
208-230 V/60 Hz & 200 V/50 Hz ^{1.2} Available Available — — 230 V/50 Hz ¹ Available Available — — 200-230 V/50-60 Hz Global Voltage ^{1.2} Available Available — — 208-230 V/60 Hz/3 phase ^{1.2} Available Available — — 208-230 V/60 Hz/3 phase ^{1.2} — — Available Available 400 V/50 Hz/3 phase ¹ — — Available Available 400 V/50 Hz/3 s 400 V/50 Hz/3 ^{1.2} — — Available Available 460 V/60 Hz/3 & 400 V/50 Hz/3 ^{1.2} — — Available Available Standard Compliance ICE compliant 1CE compliant 1 1		_			
230 V/50 Hz1 Available Available — — 200-230 V/50-60 Hz Global Voltage ^{1,2} Available Available — … <td>208-230 V/60 Hz & 200 V/50 Hz^{1,2}</td> <td>Available</td> <td>Available</td> <td></td> <td></td>	208-230 V/60 Hz & 200 V/50 Hz ^{1,2}	Available	Available		
208-230 V/60 Hz/3 phase ^{1.2} — — Available Available 400 V/50 Hz/3 phase ¹ — — Available Available 400 V/50 Hz/3 phase ¹ — — Available Available 460 V/60 Hz/3 & 400 V/50 Hz/3 ^{1.2} — — Available Available Standard Compliance ICE compliant 1CE compliant ICE compliant	230 V/50 Hz ¹	Available	Available		
400 V/50 Hz/3 phase ¹ — — Available Available 460 V/60 Hz/3 & 400 V/50 Hz/3 ^{1,2} — — Available Available Standard Compliance CC C 1°CE compliant 1°CE compliant	200-230 V/50-60 Hz Global Voltage ^{1,2}				
460 V/60 Hz/3 & 400 V/50 Hz/3 ^{1,2} — Available Available Standard Compliance C C In CE compliant In CE compliant			_		
Standard Compliance					
		4.4			
	(for all ThermoFlex recirculating chillers)		2004 compliant		

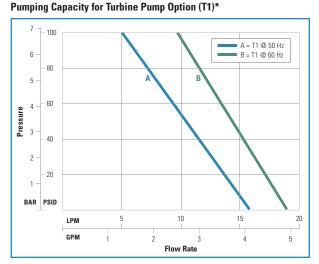
Specifications obtained at sea level using water as the recirculating fluid, at a +20°C process setpoint, +25°C ambient condition, at nominal operating voltage.

Other fluids, process temperatures, ambient temperatures, altitude or operating voltages will affect performance. Cooling capacity based on units with

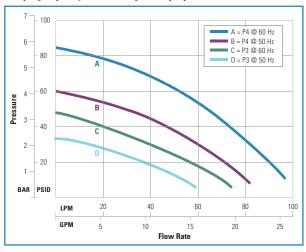
P2 pumps with no backpressure. Other pumps will affect cooling capacity performance. Specifications subject to change. **Pressure values for centrifugal and turbine pumps are differential pressures between the inlet and the outlet of the unit.



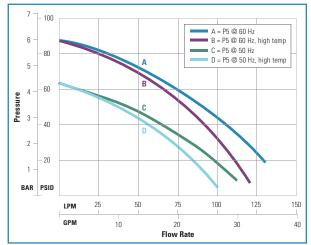












*Pressure values for turbine and centrifugal pumps are differential pressures between the inlet and the outlet of the unit. Cooling capacity based on units with P2 pumps with no backpressure. Other pumps will affect cooling capacity performance

See our comprehensive range of temperature control equipment at www.thermoscientific.com/tc

© 2011 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 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: +86 (21) 68 65 45 88 or info.tc.china@thermofisher.com; India: +91 (22) 27 78 11 01 or info.tc.in@thermofisher.com

Temperature Control

25 Nimble Road Newin 03801

Newington, NH +1 (800) 258-0830 03801 +1 (603) 422-9422 fax www.thermoscientific.com/thermoflex

