

thermo scientific

Thermo Scientific ThermoFlex Recirculating Chillers

Your success circulates at every degree



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ThermoFisher
SCIENTIFIC

Thermo Scientific

ThermoFlex recirculating chillers

Configurable Design: Choose from a wide range of cooling capacities and options to create the right fit for your application.

Innovative Platform: Developed with your input from concept to design. The result is an easy-to-use, easy-to-maintain, high performance chiller configurable to the most demanding applications.

Outstanding Performance: Optimized cooling capacity and reliability for your critical application needs.

Choose your controller

Feature	Deluxe ¹	
LED Single-line display	✓	–
LCD Multi-line display	–	✓
Alphanumeric display	–	✓
Fluid level readout	–	✓

See page 10 for accessories!

Choose your features

Feature	Benefit	Availability
Pressure Relief ²	The internal pressure relief valve allows you to limit the maximum fluid pressure to meet the application requirements.	900 to 10000
Pressure Relief with Flow Readout ²	The pressure relief valve allows you to limit the maximum fluid pressure to meet the application requirements. The flow readout allows you to monitor the flow rate to the application and set flow alarms via the controller.	900 to 10000
Flow Control with Flow Readout	The flow control valve allows you to adjust the flow to the application. Monitor flow rate to application and set flow alarms via controller.	All models
Global Voltage	Select the appropriate frequency and voltage to enable operation anywhere in the world.	900 to 10000
SEMI S2 Compliance	Compliant with S2-0703, S8-0705, S14-0704, F47-0706. Includes EMO capability/LOTO circuit breaker (GFCI available on standard temperature range).	900 to 10000
Water-Cooled Condenser	Reduces heat rejection into your workspace by using facility water.	1400 to 24000
Air-Cooled Condenser	Simplified Installation (no facility water required).	All models
Anti Drainback	Prevents fluid from flowing back to the reservoir when the chiller is installed below the application.	All models
Auto Refill	Automatic refilling from a facility-supplied water source to ensure the proper fluid level is maintained.	All models
Controlled Water De-ionization Support ³	Partial flow internal DI cartridge minimizes footprint and provides fluid resistivity between 0.2 to 3.0 MEG-Ohm / cm with DI level control/monitoring on deluxe controller.	900 to 10000
RS232 & RS485 Digital/Analog Communication	Provides analog and digital communication for remote operation, monitoring and data logging. Includes a remote sensor port which allows for remote temperature control of an application when used with a remote sensor (available as an accessory).	All models

ThermoFlex recirculating chillers support a variety of applications, from lab bench to large manufacturing processes.

Typical Applications:

- Analytical
- Biotech
- Industrial
- Laser
- Metrology
- Pharmaceutical
- Packaging
- Printing
- Research



NEW! Thermo Scientific ThermoFlex Low Noise Recirculating Chillers

Same cooling power, less noise

The ThermoFlex 900 and ThermoFlex 1400 chillers are now available in low noise models. Quiet performance (<58 dBA) promotes a safe and reduced-stress environment in your lab. These low noise models are designed to remain quiet over the entire operating range of the chiller while maintaining temperature control accuracy.

Speak to your representative today to learn more.

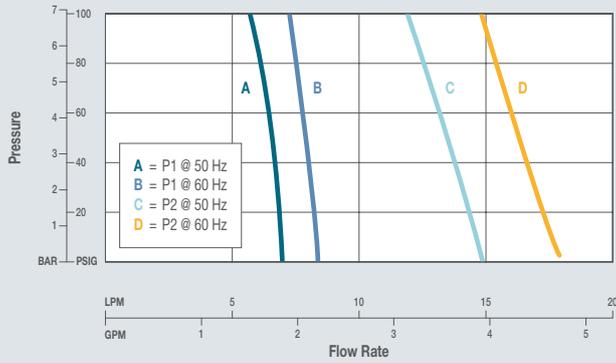
900 to 2500 watts of cooling



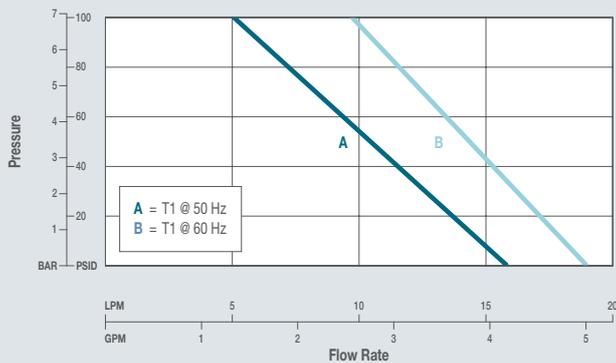
Specifications		ThermoFlex 900	ThermoFlex 1400	ThermoFlex 2500
Standard Setpoint Temperature Range		5 °C to 40 °C (41 °F to 104 °F)		
Optional High Temperature Setpoint Range		–	5 °C to 90 °C (41 °F to 194 °F)	
Optional Low Temperature Setpoint Range		–		-5 °C to 55 °C (23 °F to 131 °F)
Stability		+/- 0.1 °C		
Ambient Temperature Range		10 °C to 40 °C (50 °F to 104 °F)		
Standard Cooling Capacity	60 Hz at 20°C	900 W / 3074 BTU	1400 W / 4781 BTU	2500 W / 8538 BTU
	50 Hz at 20°C	750 W / 2559 BTU	1170 W / 3996 BTU	2200 W / 7513 BTU
Reservoir Volume		7.2 Liters (1.9 gallons)		
Refrigerant		R134A		
Physical Dimensions (H x W x D)	Air-Cooled	27.3 x 14.2 x 24.6 in (69.2 x 36.0 x 62.4 cm)	27.3 x 14.2 x 24.6 in (69.2 x 36.0 x 62.4 cm)	29.0 x 17.2 x 26.5 in (73.6 x 43.6 x 67.3 cm)
	Water-Cooled	–	27.3 x 14.2 x 24.6 in (69.2 x 36.0 x 62.4 cm)	29.0 x 17.2 x 26.5 in (73.6 x 43.6 x 67.3 cm)
P1 – Positive Displacement Pump	60 Hz	2.1 gpm @ 60 psig (7.9 lpm @ 4.1 bar)		
	50 Hz	1.7 gpm @ 60 psig (6.4 lpm @ 4.1 bar)		
P2 – Positive Displacement Pump	60 Hz	4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar)		
	50 Hz	3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar)		
T1 – Turbine Pump*	60 Hz	3.5 gpm @ 60 psid (13.2 lpm @ 4.1 bar)		
	50 Hz	2.5 gpm @ 60 psid (9.5 lpm @ 4.1 bar)		
Chiller Weight (air-cooled with P2 pump)		130.5 lb (59.2 kg)		175.5 lb (79.6 kg)
Available Heaters				
1 kW @ 208 V		–	Available	–
1.2 kW @ 230 V		–	Available	–
2.3 kW @ 208 V		–	Available	
2.8 kW @ 230 V		–	Available	
Voltage Options				
115 V/60 Hz & 100 V/50 Hz ^{1,2}		Available		–
100 V/60 Hz & 100 V/50 Hz ^{1,2}		Available		–
208-230 V/60 Hz & 200 V/50 Hz ^{1,2}		Available		
230 V/50 Hz ¹		Available		
200-230 V/50-60 Hz Global Voltage ^{1,2}		Available		
Compliance		 		

Pumping capacity

P1 & P2 Pump

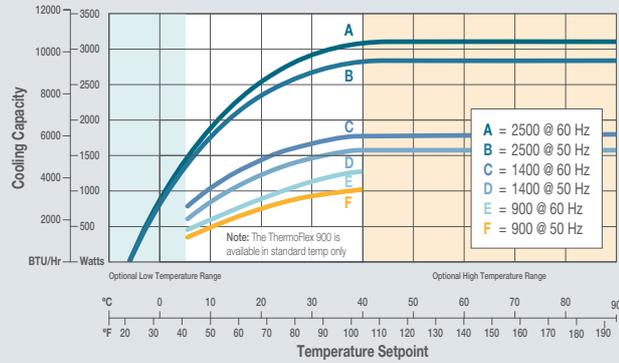


T1 Pump



Cooling capacity

ThermoFlex 900, 1400 & 2500

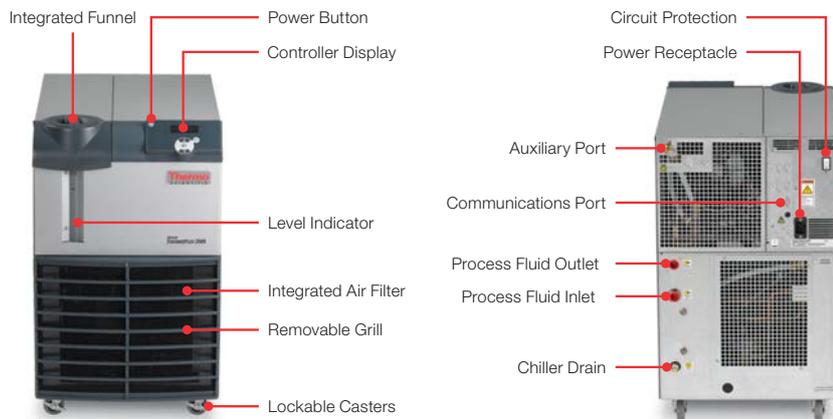


Cooling capacity based on chillers with P2 pumps with no backpressure. Other pumps will affect cooling capacity performance.

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 fill for easy filling.



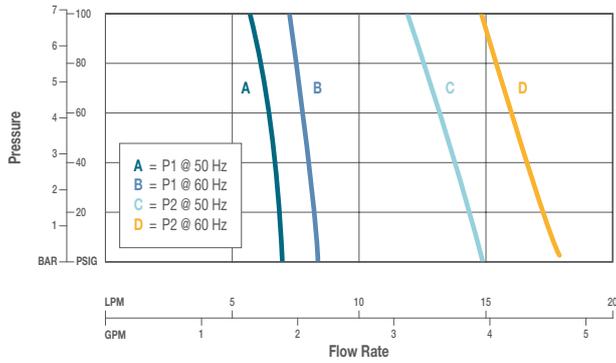
3500 to 10000 watts of cooling



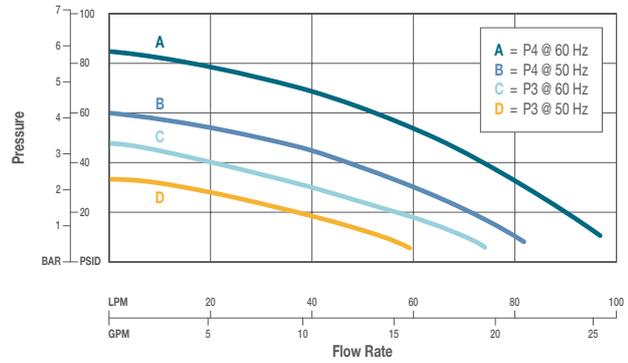
Specifications		ThermoFlex 3500	ThermoFlex 5000	ThermoFlex 7500	ThermoFlex 10000
Standard Setpoint Temperature Range		5 °C to 40 °C (41 °F to 104 °F)			
Optional High Temperature Setpoint Range		5 °C to 90 °C (41 °F to 194 °F)			
Optional Low Temperature Setpoint Range		–	-5 °C to 55 °C (23 °F to 131 °F)	–	-5 °C to 55 °C (23 °F to 131 °F)
Stability		+/- 0.1 °C			
Ambient Temperature Range		10 °C to 40 °C (50 °F to 104 °F)			
Standard Cooling Capacity	60 Hz at 20°C	3500 W / 11953 BTU	5000 W / 17076 BTU	7500 W / 25575 BTU	10000 W / 34100 BTU
	50 Hz at 20°C	3050 W / 10416 BTU	4400 W / 15027 BTU	6425 W / 21910 BTU	8500 W / 28985 BTU
Reservoir Volume		7.2 Liters (1.9 gallons)		17.9 Liters (4.75 gallons)	
Refrigerant		R407C			
Physical Dimensions (H x W x D)	Air-Cooled	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 85.6 cm)	
	Water-Cooled	38.9 x 19.3 x 30.9 in (98.7 x 48.8 x 78.4 cm)		45.9 x 25.2 x 33.8 in (116.6 x 63.9 x 85.6 cm)	
P1 — Positive Displacement Pump	60 Hz	2.1 gpm @ 60 psig (7.9 lpm @ 4.1 bar)	–		
	50 Hz	1.7 gpm @ 60 psig (6.4 lpm @ 4.1 bar)	–		
P2 — Positive Displacement Pump	60 Hz	4.0 gpm @ 60 psig (15.1 lpm @ 4.1 bar)			
	50 Hz	3.3 gpm @ 60 psig (12.5 lpm @ 4.1 bar)			
T1 — Turbine Pump*	60 Hz	3.5 gpm @ 60 psid (13.2 lpm @ 4.1 bar)		–	
	50 Hz	2.5 gpm @ 60 psid (9.5 lpm @ 4.1 bar)		–	
T5 — Turbine Pump*	60 Hz	–	7.3 gpm @ 60 psid (27.6 lpm @ 4.1 bar)		
	50 Hz	–	6.2 gpm @ 60 psid (23.5 lpm @ 4.1 bar)		
P3 — Centrifugal Pump*	60 Hz	10 gpm @ 32 psid (37.9 lpm @ 2.2 bar)			
	50 Hz	10 gpm @ 20 psid (37.9 lpm @ 1.4 bar)			
P4 — Centrifugal Pump*	60 Hz	15 gpm @ 57 psid (56.8 lpm @ 3.9 bar)		–	
	50 Hz	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)		
	50 Hz	–	20 gpm @ 35 psid (75.7 lpm @ 2.4 bar)		
Chiller Weight (air-cooled with P2 pump)		264 lb (120 kg)		356 lb (161.5 kg)	
Available Heaters					
2.3 kW @ 208 V		Available		–	
2.8 kW @ 230 V		Available		–	
5 kW @ 208 V		–		Available	
6.1 kW @ 460 V		–		Available	
Voltage Options					
208-230 V/60 Hz & 200 V/50 Hz ^{1,2}		Available		–	
230 V/50 Hz ¹		Available		–	
200-230 V/50-60 Hz Global Voltage ^{1,2}		Available		–	
208-230 V/60 Hz/3 phase & 200V/50 Hz ^{1,2}		–		Available	
460 V/60 Hz/3 phase & 400 V/50 Hz/3 phase ¹		–		Available	
Compliance		 ¹  ²			

Pumping capacity

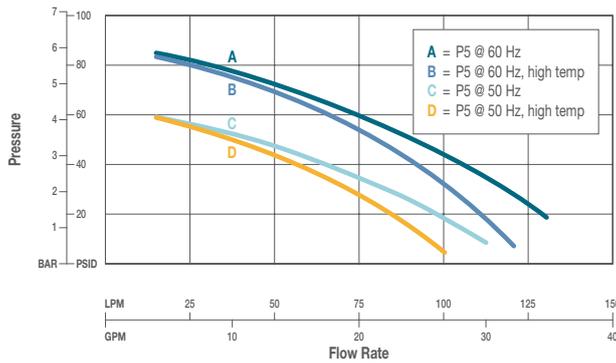
P1 & P2 Pump



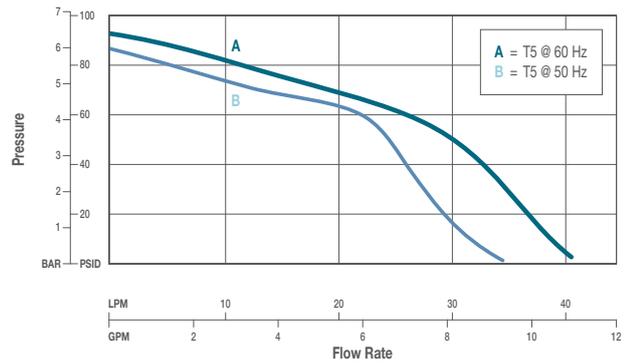
P3 & P4 Pump



P5 Pump

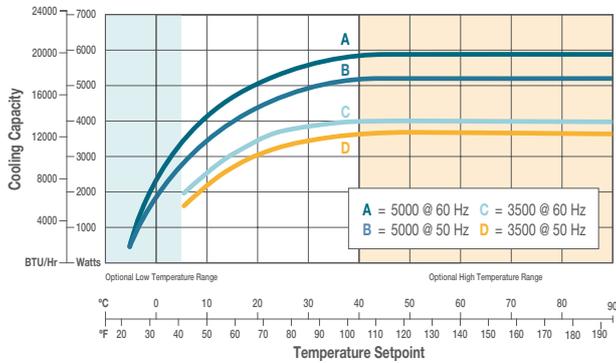


T5 Pump

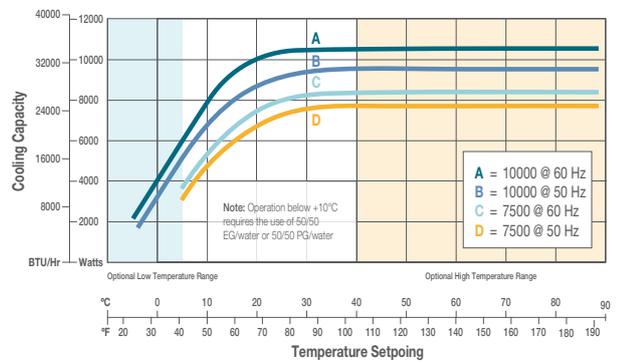


Cooling capacity

ThermoFlex 3500 & 5000



ThermoFlex 7500 & 10000



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

15000 to 24000 watts of cooling



Specifications		ThermoFlex 15000	ThermoFlex 20000	ThermoFlex 24000
Standard Setpoint Temperature Range		5 °C to 40 °C (41 °F to 104 °F)		
Optional Low Temperature Setpoint Range		-		-5 °C to 55 °C (23 °F to 131 °F)**
Stability		+/- 0.1 °C		
Ambient Temperature Range		10 °C to 40 °C (50 °F to 104 °F)		
Standard Cooling Capacity	60 Hz at 20°C	15000 W / 51228 BTU	20000 W / 68304 BTU	24000 W / 81964 BTU
	50 Hz at 20°C	12525 W / 42775 BTU	16700 W / 57043 BTU	21000 W / 71719 BTU
Reservoir Volume		17.9 liters (4.75 gallons)		
Refrigerant		R407C		
Physical Dimensions (H x W x D)	Air-Cooled	49.0 x 46.5 x 30.9 in (124.4 x 118.1 x 78.6 cm)		58.6 x 46.5 x 30.9 in (148.9 x 118.1 x 78.6 cm)
	Water-Cooled	49.0 x 46.5 x 30.9 in (124.4 x 118.1 x 78.6 cm)		
P3 — Centrifugal Pump*	60 Hz	10 gpm @ 32 psid (37.9 lpm @ 2.2 bar)		
	50 Hz	10 gpm @ 20 psid (37.9 lpm @ 1.4 bar)		
P5 — Centrifugal Pump*	60 Hz	20 gpm @ 60 psid (75.7 lpm @ 4.1 bar)		
	50 Hz	20 gpm @ 35 psid (75.7 lpm @ 2.4 bar)		
NEW! T9 -- Turbine Pump*	60 Hz	27 gpm @ 50 psid; (102.2 lpm @ 3.4 bar)		
	50 Hz	22 gpm @ 50 psid; (83.2 lpm @ 3.4 bar)		
Chiller Weight (air-cooled with P3 Pump)		550 lb (249.5 kg)		650 lb (294.8 kg)
Available Heaters				
5 kW @ 208 V		-		-
6.1 kW @ 460 V		-		-
22.5 kW @ 460 V		-		Available
Voltage Options				
208-230 V/60 Hz/3 phase ^{1,2}		Available		
460 V/60 Hz/3 phase & 400 V/50 Hz/3 phase ^{1,2}		Available		
Compliance		 		

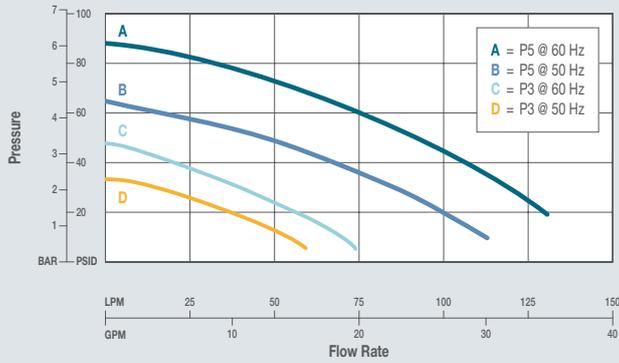
** Specifications obtained at sea level using water as the recirculating fluid, at a +20°C process setpoint, + 25°C ambient condition, at nominal operating voltage. Cooling capacity based on chillers with P3 pumps set at 10 gpm. Other pumps will affect cooling capacity performance. Specifications subject to change.

* Pressure values for centrifugal and turbine pumps are differential pressures between the inlet and the outlet of the chiller.

* CSA Pending.

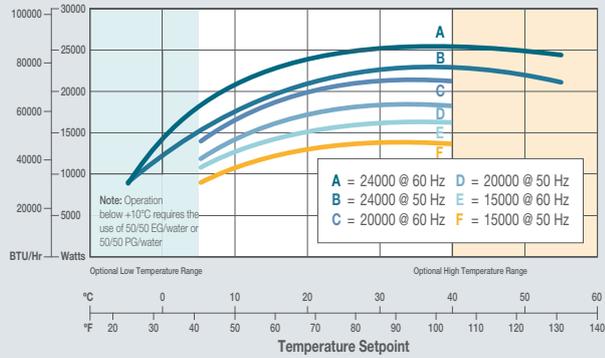
Pumping capacity

Pumping Capacity for Pump Options P3 & P5



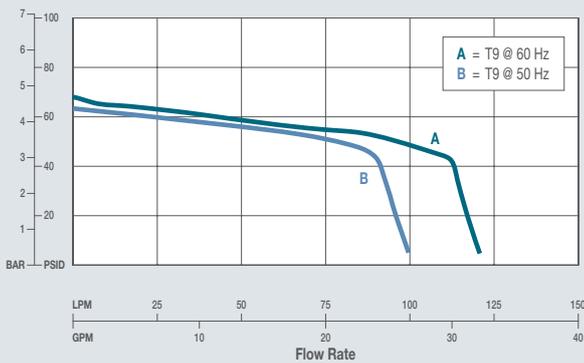
Cooling capacity

ThermoFlex 15000, 20000 & 24000



Cooling capacity based on P3 pumps set to 10 gpm.

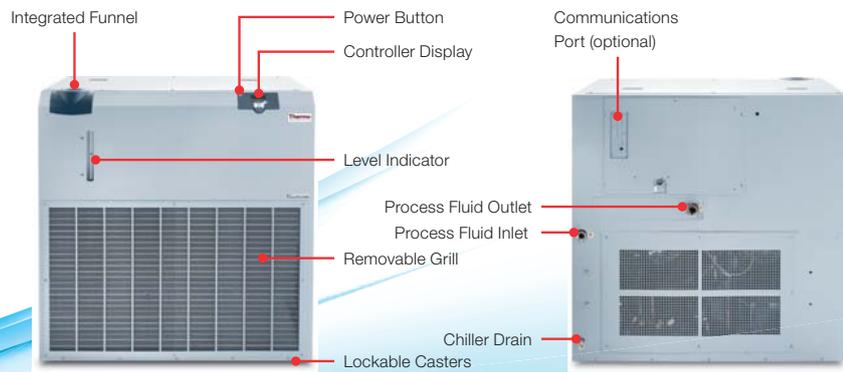
NEW! T9 Turbine Pump



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 fill for easy filling.



Accessories

Accessory	Catalog Number
Seismic Tiedowns	
Seismic Tiedown Kit for ThermoFlex 900-2500	097374
Seismic Tiedown Kit for ThermoFlex 3500 - 5000	095139
Seismic Tiedown Kit for ThermoFlex 7500 - 10000	096502
Plumbing Packages	
50' of 1"ID Polybraid hose comes with 1" hose barbs, insulation and clamps. For use with the ThermoFlex 7500 - 24000 with the P3, P5 and T5 pumps	599000000012
25' of 1"ID Polybraid hose comes with 1" hose barbs, insulation and clamps. For use with the ThermoFlex 7500 - 24000 with the P3, P5 and T5 pumps	599000000011
10m Standard Temp Plumbing Package for all ThermoFlex 3500 - 5000 with P3, P4 pumps (3/4" NPT)	611000000107
50' High Temp Plumbing Package for all ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	611000000105
25' High Temp Plumbing Package for all ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	611000000104
50' Standard Temp Plumbing Package for all ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	611000000100
25' Standard Temp Plumbing Package for all ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	611000000004
Filter Bags	
2 ea. 35 micron replacement filter bags for ThermoFlex 900 - 5000	598000000002
2 ea. 100 micron replacement filter bags for ThermoFlex 900 - 5000	598000000003
2 ea. 100 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 900 - 1400	598000000004
2 ea. 35 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 900 - 1400	598000000005
2 ea. 100 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 2500	598000000006
2 ea. 35 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 2500	598000000007
2 ea. 100 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 3500 - 5000	598000000008
2 ea. 35 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 3500 - 5000	598000000009
2 ea. 35 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 7500 - 10000	598000000013
2 ea. 100 micron replacement filter bags and 1 ea. front grill/filter for ThermoFlex 7500 - 10000	598000000014
2 ea. 35 micron replacement filter bags for ThermoFlex 7500 - 24000	611000000101
2 ea. 100 micron replacement filter bags for ThermoFlex 7500 - 24000	611000000102
2 ea. 250 micron replacement filter bags for ThermoFlex 7500 - 24000	598000000015
Fittings	
2 ea. 1/2" MPT to 3/8" ID brass hose barbs. For use with ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	598000000011
External Pressure Reducers	
External Pressure Reducer for use with ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	342000000025
External Pressure Reducer for use with ThermoFlex 3500 - 5000 with P3 or P4 pumps. (3/4" NPT)	342000000026
External Pressure Reducer for use with ThermoFlex 7500 - 24000 with P3, P5, T5 and T9 pumps (1" NPT)	342000000027
External Flow Control Kits	
External Flow Control Kit for use with ThermoFlex 900 - 10000 with P1, P2 or T1 pumps (1/2" NPT)	611000000106
External Flow Control Kit for use with ThermoFlex 3500 - 5000 with P3 or P4 pumps. (3/4" NPT)	342000000028
External Flow Control Kit for use with ThermoFlex 7500 - 24000 with P3, P5, T5 and T9 pumps (1" NPT)	342000000029
Communication Cable	
25' RS232/RS485 Communication Cable Assembly. Fits all chillers with RS232/RS485 with digital communication option	426000000044
Software	
NEScom control/monitoring PC software	422000000004
Algaecide & Corrosion Inhibitor Packages	

A complete portfolio of temperature control products for your applications

As an innovative leader in temperature control, we have the expertise to enable our customers to optimize liquid cooling and heating applications. 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 biotech and pharmaceutical to printing and semiconductor, companies around the world continue to make Thermo Scientific temperature control products the 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 leap forward in performance, configurability and technology that provide the following advantages:

A Flexible Choice: We have options to help you configure a 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, as well as, service and support capabilities, we can support you anywhere in the world.





Thermo Scientific Temperature Control Service Solutions

Protect your investment

Your process depends on consistent performance through reliable temperature control equipment. Protect your investment with Thermo Scientific™ temperature control service solutions for water baths, bath circulators, immersion circulators, recirculating chillers, heat exchangers and fog testing systems. Be proactive about your care and reap the following benefits:

- Manage your cost of operation
- Lower up-front costs
- No financial surprises
- Maximize uptime
- Lifetime extension
- Reliable performance

We provide service solutions to the complete portfolio of Thermo Scientific temperature control products, including many discontinued models. Products covered include:

- Recirculating chillers
- Refrigerated and heated bath circulators
- Fog testing systems
- Water-to-water heat exchangers
- Immersion coolers

Don't have a Thermo Scientific temperature control system? Don't worry! We support most other manufacturers' equipment as well.

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