Recirculating Coolers – Model 3370 Liquid-to-Air Cooler

Key Specifications

Working Temperature Range:	Ambient +5 to 70°C
Maximum Fluid Temperature:	70°C
Cooling Capacity:	4000 W based on 11°C ΔT[1] (water)
Reservoir Capacity:	1.1 gallons/4.2 liters
Overall Dimensions (L x W x H):	20.5 x 15 x 22.3" 52 x 38.1 x 56.6 cm

Features:

- An economical cooling solution for applications where cooling fluid temperature is higher than ambient and temperature control is not required
- Quiet liquid-to-air cooling
- Positive displacement or turbine pump
- Built-in low liquid level indicator

Liquid-to-air cooling uses ambient air to cool your application. Heated process fluid is pumped through the 3370's fan-cooled heat exchanger and returned to the process.

Front-mounted gauge lets you check process pressure at a glance.

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Temperature Range	Ambient to 70°C			
Cooling Capacity @ 20°C (W)	500 based on 2°C ΔT[1] 1000 based on 4°C ΔT[1] 2000 based on 8°C ΔT[1] 3000 based on 10°C ΔT[1] 4000 based on 11°C ΔT[1]			
Power Requirements (V/Hz)	120/60	240/50	120/60	240/50
Pump	1/3 HP Positive Displacement		1/3 HP Turbine Pump	
Maximum Pressure psi (bar)	100 (6.9)	100 (6.9)	62 (4.3)	50 (3.4)
Maximum Flow gpm (l/min)	2.4 (9.1)	2 (7.6)	5.4 (20.5)	4.5 (17.1)
Part Number 120 VAC/60 Hz	3370P9A11B		3370TBA11B	
Part Number 240 VAC/50 Hz	3370P9A12E		3370TBA12E	

1. ΔT = Process water temperature – ambient air temperature

See pages 124 and 125 for considerations when choosing a chiller.

Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

Recirculating Coolers – Model 4100 Liquid-to-Liquid Cooler

Key Specifications

Working Temperature Range:	Facility water +10° to 60°C
Maximum Process Temperature:	60°C
Temperature Stability:	±0.4°C
Cooling Capacity:	10,000 W based on 10°C ΔT[1]
Reservoir Capacity:	1.1 gallons/4.2 liters
Overall Dimensions (L x W x H):	27.6 x 14.5 x 22.6" 70.2 x 36.8 x 57.5 cm

Features:

- Protects precision equipment from facility water contaminants
- Quiet, energy efficient liquid-to-liquid heat removal
- Displays temperature and pressure or flow rate information
- Built-in temperature and low flow alarms

Liquid-to-liquid cooling uses your facility's water, pumped through the 4100, to remove heat from your application without risk of contamination. Heat removal capacity is dependent on the facility water temperature.

Larger capacities are available. Contact PolyScience Customer Service Department for more information.

Extra large digital readouts provide at a glance access to temperature as well as process pressure or flow rate information.

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Temperature Range	Facility water +10° to 60°C
Cooling Capacity (W/BTU)	15,000/52,855 based on 15°C ΔT[1] 10,000/34,100 based on 10°C ΔT[1] 4,500/5,345 based on 5°C ΔT[1]
Power Requirements (VAC/Hz)	200-240/ 50/60 (plug for 230V)
Standard Pump	Turbine Pump
Maximum Pressure psi (bar)	100 (6.9)
Maximum Flow gpm (l/min)	3.5 (13.2)
Part Number 200-240 VAC/50/60 Hz	4150T21A330D

1. ΔT = Process water temperature – facility water air temperature
Electrical plug for the part number listed is standard U.S. type. See page 128 for additional plug types and part numbers.
Specifications listed are for 60 Hz models. For specifications on 50 Hz models see Technical Specification pages 150 and 151.

Factory Installed Chiller Options

Description	Benchtop Chillers	6000 Series Chillers	Non-Refrigerated Coolers
Heater		O	
RS232 Communication	O	O	O
RS485 Communication		O	O
Remote On/Off (24 VDC)		O	O
Remote On/Off (Dry Contact)		O	O
External Temperature Tracking		O	O
Deionized Water Compatible		O	
Stainless Steel Reservoir		O	
No Reservoir		O	
External Water Filter	O	O	O
Reservoir Level Switch/Alarm		O	

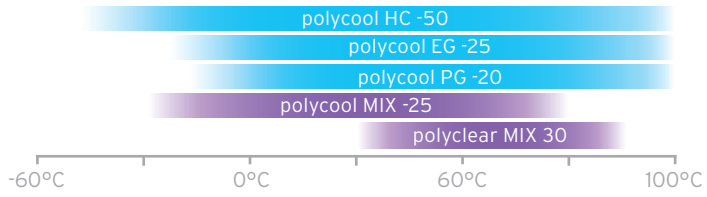
	Air-Cooled				Water-Cooled	
FACTORY INSTALLED OPTIONS: DURACHILL™ CHILLERS	1.5 HP 6800 Series	2 HP/3 HP DCA200/300	5 HP/7.5 HP DA500/750	10 HP DA1000	1.5 HP 6900 Series	3 HP DCW300
RS232 Communications Port	O	S	S	S	O	S
RS485 Communications Port	O	O	O	O	O	O
Remote On/Off (24 VDC)	O	O	O	O	O	O
Remote On/Off (Dry Contact)	O	S	S	S	O	S
Alarm Output (Dry Contact)	O	S	S	S	O	S
High or Low Ambient Tracking Package	O				O	
Deionized Water Compatibility Package	O	O	O	O	O	O
Process Fluid Shut-Off Valves		O	O	O		O
Low Fluid Level Shut-Off Switch	O	O	O	O	O	O
No Reservoir	O	O	O	O	O	O
Stainless Steel Reservoir	O	O	O	O	O	O
Process Heater	O	O	O	O	O	O
PUMPS						
0.75 HP Stainless Steel or Bronze Turbine	O	O			O	O
1.0 HP Stainless Steel Turbine	O				O	
1.5 HP Bronze Turbine		O	O			O
2.0 HP Bronze Turbine		O	O			O
3.0 HP Bronze Turbine		O	O	O		O
5.0 HP Bronze Turbine				O		
2.33 gpm Brass Positive Displacement	O				O	
3.5 gpm Brass Positive Displacement	S				S	
0.10 gpm GF Polypropylene Magnetic Drive Centrifugal	O				O	
0.75 HP Stainless Steel Centrifugal		S				S
1.0 HP Stainless Steel Centrifugal		O	S			O
2.0 HP Stainless Steel Centrifugal		O	O	S		O
3.0 HP Stainless Steel Centrifugal		O	O	O		O
No Pump	O	O	O	O	O	O

S = Standard O =Available As Option Additional options may be available.

These options should be ordered with your chiller. Most cannot be field-installed.
See page 127 for DuraChill™ Factory Installed Option descriptions.

Chiller Fluids

Fluid Type	Name	Description	Temperature Range	Benchtop Chillers	6000 Series Chiller	DuraChill™ Chillers	Non-Refrigerated Coolers	Quantity	Part Number
Cleaners	polyclean ALGAECIDE	Prevents growth of algae, keeps reservoir clean and odor-free. Concentrated: 8 oz (237 ml) treats approximately 200 gallons (757 liters)	n/a	•	•	•	•	8 oz (237 ml)	004-300040
								case = 12 x 8 oz (237 ml)	004-300041
Low Temperature Fluids	polycool HC -50	Excellent low-temperature performance without toxicity or risk to environment, equipment, or personnel. Provides low-temp properties of synthetic organic and silicone fluids with thermal properties of water-based glycols.	-50° to 100°C (-58° to 148°F)	•	•	•	•	1 gallon (3.8 L)	060330
	polycool EG -25	A common chiller antifreeze fluid. Lowers the freezing point of water to allow circulation at below freezing temperatures. Recommend mixing with distilled water for broadest temperature range.	-25° to 100°C (-13° to 212°F) when mixed 50%/50% with distilled water	•	•	•	•	1 gallon (3.8 L)	060340
	polycool PG -20	Propylene glycol is a safer alternative to ethylene glycol. Lowers freezing point of water to allow circulation at below freezing temperatures. Mix with distilled water for broadest temperature range.	-20° to 100°C (-4° to 212°F) when mixed 50%/50% with distilled water	•	•	•	•	1 gallon (3.8 L)	060320
Fluid Mixes	polycool MIX -25	Optimizes performance in refrigerated products; protects against freezing and algae growth.	-25° to 100°C (-13° to 212°F)	•	•	•	•	case = 5 x 1/2 gallon (1.9 L)	004-300060
	polyclear MIX 30	General purpose fluid for routine applications above 15°C; prevents algae growth.	15° to 90°C (59° to 194°F)		•		•	case = 5 x 1/2 gallon (1.9 L)	004-300062



Chiller Accessories

Description	L-Series Chillers	M-Series Chillers	6000 Series Chillers	DuraChill™ Chillers	MOdel 4100 Liquid-to-Liquid Coolers	Quantity	Part Number
TEMPERATURE MEASUREMENT							
Ambient Temperature Sensor			•	•	•	1 each	510-299
External PT100 Probe, 10' cable (3 m)			•	•	•	1 each	060101
External PT100 Probe, 25' cable (7.6 m)			•	•	•	1 each	060105
External PT100 Probe, 50' cable (15 m)			•	•	•	1 each	060110
FLUID FILTERS							
Filter Housing with bracket (Sediment Filters sold separately)			•	•		1 each	510-751
30 micron Sediment Filter (package of 2)			•	•		1 pack	775-848
20 micron Sediment Filter (package of 2)			•	•		1 pack	775-719
5 micron Sediment Filter (package of 2)			•	•		1 pack	775-846
50 micron Filter Kit with housing and bypass	•	•				1 each	510-520
50 micron Filter Kit with housing (no bypass)	•	•				1 each	510-519
MOBILITY							
Base with locking casters	•					1 each	505-169
BYPASS VALVE KITS							
External Pressure Reducer for chillers with Positive Displacement or Turbine pumps. Reduces chiller output to adjustable range of 10-45 psi (0.69-3.10 bar)			•			1 each	060302
External bypass for chillers with magnetic drive centrifugal pump. Connects to inlet and outlet, allowing bypass flow when application flow is stopped.			•			1 each	510-147
COMMUNICATION							
RS232 Retrofit Kit: Includes hardware, installation and operation instructions.			•			1 each	510-298







Chiller Accessories

Description	L-Series Chillers	M-Series Chillers	6000 Series Chillers	Model 4100 Liquid-to-Liquid Cooler	Model 3370 Liquid-to-Air Cooler	Quantity	Part Number
TUBING/INSULATION/CLAMPS/FITTINGS/MANIFOLDS							
Tubing. Select by temperature range. Order in continous length, multiples of 1 m (39").							
Buna N Tubing (synthetic rubber), 1/2" (13 mm) -40 to 120°C	•	•	•	•	•	1 m (39")	060308
Viton® Tubing, 1/2" (13 mm) -32 to 200°C	•	•	•	•	•	1 m (39")	060316
Viton® Tubing, 5/8" (16 mm) -32 to 200°C			•	•	•	1 m (39")	060317
Viton® Tubing, 3/4" (19 mm) -32 to 200°C			•	•	•	1 m (39")	060318
Viton® Tubing, 3/8" (10 mm) -32 to 200°C	•	•	•	•	•	1 m (39")	060319
Insulation for all 1/2" (13 mm) tubing above, 1 m (39") lengths only	•	•	•	•		1 m (39")	060311
Tube Clamp for 1/2" (13 mm), 5/8" (16 mm), 3/4" (18 mm) OD tubing	•	•	•	•	•	1 each	400-898
FITTINGS/ADAPTERS							
Fitting, 1/2" male NPT to 3/8" (9.5 mm), hose barb, brass, straight	•	•	•	•	•	1 each	776-196
Fitting, 1/2" male NPT to 3/8" (9.5 mm), hose barb, brass, elbow	•	•	•	•	•	1 each	775-047
Fitting, 1/2" male NPT x 5/8" (16 mm) hose barb, nylon, straight	•	•	•	•	•	1 each	300-131
Fitting, 1/2" male NPT x 1/2" (13 mm) hose barb, nylon, straight	•	•	•	•	•	1 each	300-096
Fitting, 1/2" male NPT to 3/4" (19 mm), hose barb, brass, straight	•	•	•	•	•	1 each	776-197
Fitting, 1/2" male NPT to M16x1 13 mm (1/2"), brass, straight	•	•	•	•	•	1 each	775-048
Manifold Kit, 2 ports with shutoffs	•	•	•	•	•	1 each	510-665
Manifold Kit, 4 ports with shutoffs	•	•	•	•	•	1 each	510-664

AIR FILTERS	Quantity	Part Number
For LM and MM Benchtop	1 each	750-798
For LS Benchtop	1 each	750-758
For 6000 Series, Model 3370, IP-100, IP-80	1 each	750-855
For 1.5 HP	1 each	750-387
For 2 and 3 HP	1 each	305-033
For 5 HP	1 each	400-598
For 7.5 HP	1 each	400-599
For 10 HP	1 each	750-264