

# Datasheet - Extreme Temperature Recirculating Chillers



## Extreme Temperature Recirculating Chillers



Extreme temperature recirculating chillers are the ideal solution when you need extreme cooling as well as temperature stability. The chiller line offers process fluid temperatures as low as  $-80^{\circ}\text{C}$  and as high as  $200^{\circ}\text{C}$  with temperature stability as tight as  $\pm 0.5^{\circ}\text{C}$  ( $\pm 0.9^{\circ}\text{F}$ ). The extreme temperature chillers are compatible with a variety of fluids depending on operating temperatures, including HFE-7100, HFE-7500, Baysilone® Fluid M 20, and clean water/EGW /PGW.

### Features and Benefits

- Offers process fluid temperatures as low as  $-80^{\circ}\text{C}$  and as high as  $200^{\circ}\text{C}$
- Compatible with a variety of process fluids depending on operating temperatures
- Dual voltage allows electrical to be easily switched from 60 Hz to 50 Hz
- Extreme chillers have a temperature stability of  $\pm 0.5^{\circ}\text{C}$  or  $\pm 1.0^{\circ}\text{C}$
- High reliability with a 2-year warranty

## Performance Specifications

Extreme Temperature chiller models for operation at low temperatures (-80°C to 90°C)

Configuration	RC31973G1	RC50106G1	RC50222G1	RC50050G1	RC29246G1
Cooling Capacity	550 W at -80°C	1.5 kW at -80°C	2 kW at -40°C	500 W at -40°C	2.5 kW at -20°C
Compressor Capacity	Magnetically coupled gear pump with VFD and programmable pressure controller		Magnetically coupled turbine pump		
Temperature Stability	±0.5°C (±0.9°F)	±0.5°C (±0.9°F) from -80°C (112°F) to -5°C (23°F) ±3°C (±5.4°F) from -4.9°C (23°F) to 40°C (104°F)	±0.5°C (±0.9°F)		
Fluid Connections	1/2" Swagelok®	Process 1/2" Swage-lok® Facility 3/4" FPT	Process 1/2" Swagelok® Facility 3/4" FPT	1/2" FPT	1/2" FPT
Coolant Temperature Range	-85°C to 50°C (-121°F to 122°F)	-80°C to 40°C (-112°F to 104°F) Max. return temp of coolant coming back from process is 60°C (140°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 90°C (-40°F to 194°F)	-25°C to 90°C (-13°F to 194°F)
Ambient Temperature Range	5°C to 30°C (41°F to 86°F)	5°C to 40°C (41°F to 104°F)		5°C to 35°C (41°F to 95°F)	
Dimensions (W x D x H) mm (in)	508 X 1016 X 1346 (20.0 X 40.0 X 53.0)	508 X 1016 X 1626 (20.0 X 40.0 X 64.0)	490.2 X 736.6 X 1163 (19.3 X 29.0 X 45.8)	703.6 X 487.7 X 934.7 (27.7 X 19.2 X 36.8)	492.8 X 706.1 X 972.8 (19.4 X 27.8 X 38.3)
Electrical (Amps)	208-230 V, 3 phase, 60 Hz or 200-220 V, 3 phase, 50 Hz				
Communication	RS-485	Remote set point and retransmission via 0-10 VDC signal	RS-232	9 pin D-sub RS-232	RS232/485
Process Fluid	HFE-7100		HFE-7500		Clean water (≤1 MΩ-cm)/EGW/PGW
Condenser	Air-Cooled	Water-Cooled	Water-Cooled	Air-Cooled	Air-Cooled
Compliance	Designed to the intent of UL 1995	TUV listed to UL 1995, build to the intent of SEMI 52 and F47	CE Certified and MET Tested to UL 1995		
Faciltiy Water Temp Range	5°C to 35°C (41°F to 95°F)				
Other Features	Heater 1.4 kW at 208V	Self-contained nitrogen purge (8 mm Swagelok® inlet, 3/8" QD outlet) and anti-siphon kit; Custom interface for fluid fill (1/2" QD); Heater 1700@ at 208V	Heater 2 kW at 240V	Heater and SS pressurized reservoir with fill port and air purge	Heater 4 kW at 240V

Extreme Temperature chiller models for high temperature operation (4°C to 200°)

Configuration	RC31526G1
Cooling capacity	7 kW at 20°C (68°F)
Compressor Capacity	Magnetically coupled turbine pump
Temperature Stability	±0.5°C (±0.9°F)
Fluid Connections	1/2" FPT
Coolant Temperature Range	4°C to 90°C (39°F to 194°F)
Ambient Temperature Range	5°C to 35°C (41°F to 95°F)
Dimensions (W x D x H) mm (in)	487.7 X 703.6 X 934.7 (19.2 X 27.7 X 36.8)
Electrical (Amps)	208-230 V, 3 phase, 60 Hz or 200-220 V, 3 phase, 50 Hz
Communication	25 pin D-sub connector with interlock flow, temp, level, and high/low refrigerant
Process Fluid	Clean water (≤1 MΩ-cm)/ EGW/PGW
Condenser	Air-Cooled
Compliance	CE Certified and MET tested to UL 1995 and SEMI 52/F47
Facility Water Temp Range	5°C to 35°C (41°F to 95°F)
Other Features	Heater 4 kW at 240V

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