

FTS Systems Ultra-Low Temperature Wide Temperature Recirculating Chillers



Key Features

- Portable.
- Small footprint.
- Caster-mounted.
- RS232 interface.
- Mechanically refrigerated.
- Remote operation and monitoring of all system functions.
- Eliminates cost and potential hazards associated with dry ice and liquid nitrogen.

Additional Option

External High Pressure Bypass.

The External High Pressure Bypass allows the user to limit maximum process pressure.

The External High Pressure Bypass shall be mounted outside the chiller inlet and outlet fluid lines with 1/2-in NPT fitting, female.

Performance Specifications

	RC210	RC211	RC311	RC311GWT
Temperature Range	-80 to -10 °C	-80 to 75 °C	-90 to 75 °C	-75 to 150 °C
Reservoir	5 liters	5 liters	5 liters	11.6 liters
Compressor	2 @ 1 hp	2 @ 1 hp	2 @ 4 hp	2 @ 4 hp
Controller Interface	Digital / RS232	Deluxe digital / RS232	Deluxe digital / RS232	Deluxe digital / RS232
Heater (nominal 240V)	N/A	1500 W	1500 W	3500 W
Control Stability	± 0.1 °C*	± 0.1 °C*	± 0.3 °C	± 0.3 °C
Standard Pump (Centrifugal)	2 to 3 gpm @ 22 psi	2 to 3 gpm @ 22 psi	2 to 3 gpm @ 22 psi	2 to 3 gpm @ 22 psi
Optional Pump (Positive Displacement)	4 gpm @ 85 psi maximum	4 gpm @ 85 psi maximum	4 gpm @ 85 psi maximum	4 gpm @ 85 psi maximum
Air-Cooled Condenser	Standard	Standard	N/A	N/A
Water-Cooled Condenser	Requires 2 to 4 gpm; 12C to 22C	Requires 2 to 4 gpm; 12C to 22C	Requires 3 to 6 gpm; 12C to 22C	Requires 3 to 6 gpm; 12C to 22C

Notes: Specifications are dependent on fluid choice, fluid temperatures, ambient temperature and electrical supply. Please contact the SP Scientific to further discuss your requirements.

RC311 and RC311GWT are water-cooled only.

*Control Stability is process dependent.

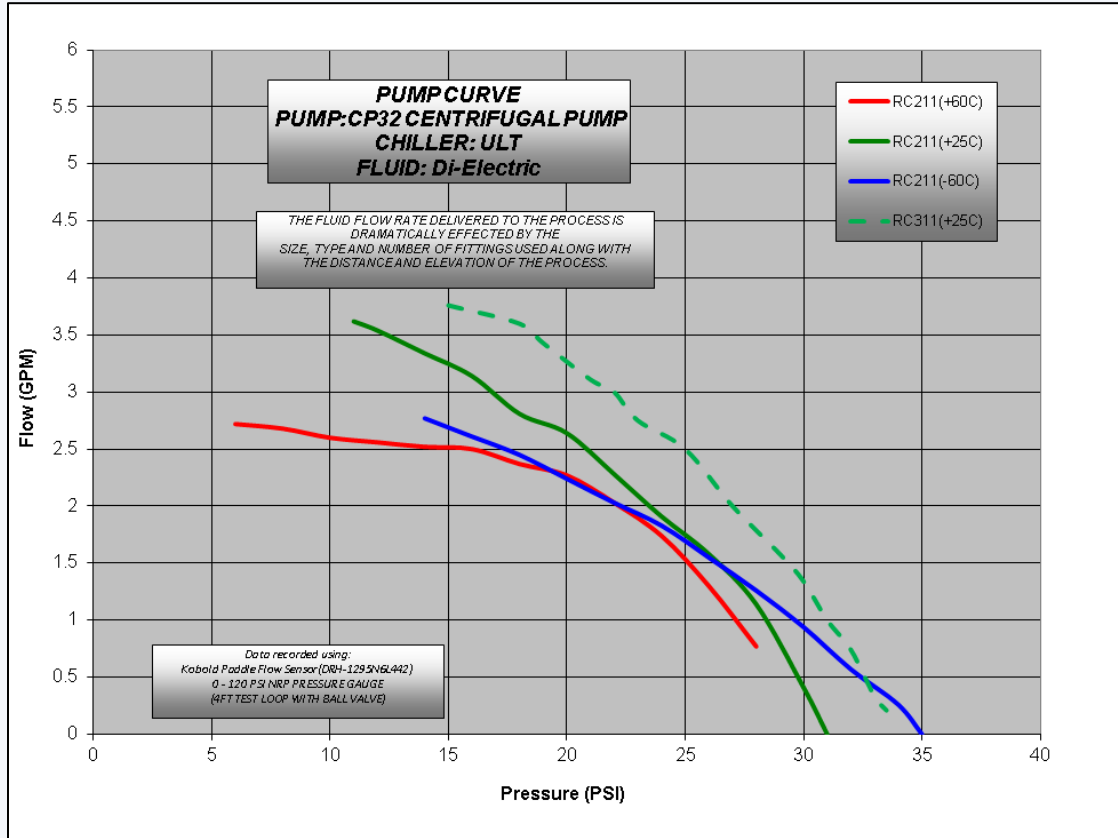
†At 50 Hz, capacity may diminish up to 17% based on conditions and application.

Heat Removal (watts/BTUs)

	RC210	RC211	RC311	RC311GWT
-20 °C	1350/4610	1350/4610	3400/11590	3400/11590
-30 °C	1250/4260	1250/4260	3000/10230	3000/10230
-40 °C	1150/3925	1150/3925	2700/9207	2700/9207
-50 °C	1000/3410	1000/3410	2400/8184	2400/8184
-60 °C	880/3005	880/3005	1800/6130	1800/6130
-70 °C	550/1877	550/1877	1200/4090	1200/4090
-80 °C	N/A	N/A	500/1705	N/A

FTS Systems Ultra-Low Temperature Wide-Temperature Recirculating Chillers

Figure 1: Pump Curve



Fluid Selection Facts

For best pumping or stirring results, choose a fluid medium with a kinematic viscosity of 20 centistokes or less over the full operating temperature range. Remember, the heat exchanger in the re-circulating cooler may be several degrees colder than your process.

Electrical Configuration

	RC210	RC211	RC311	RC311GWT
60 Hz Option	208 or 230 V	208 or 230 V	208 or 230 V, 3 Φ	208 or 230 V, 3 Φ
50 Hz Option [†]	220 V	220 V	220 V, 3 Φ	N/A

[†]At 50 Hz, capacity may diminish up to 17% based on conditions and application.

Utility Requirements

Fluid connections	1/2-in NPT fitting, male
Water connections**	1/2-in NPT fitting, female

**Water connections are for water-cooled units only.

Dimensional Data

	RC210	RC211	RC311	RC311GWT
Width	21 in (53 cm)	21 in (53 cm)	21 in (53 cm)	21 in (53 cm)
Depth	29 in (74 cm)	29 in (74 cm)	29 in (74 cm)	29 in (74 cm)
Height	48 in (122 cm)	48 in (122 cm)	57 in (145 cm)	57 in (145 cm)
Weight	390 lbs (177 kg)	390 lbs (177 kg)	500 lbs (227 kg)	500 lbs (227 kg)