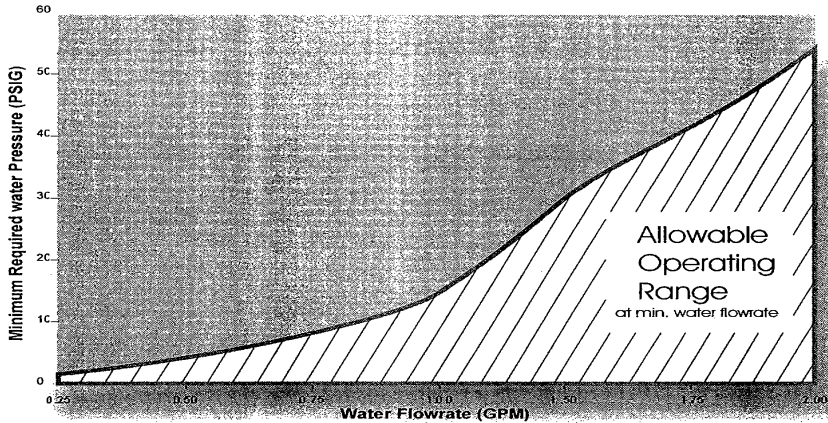




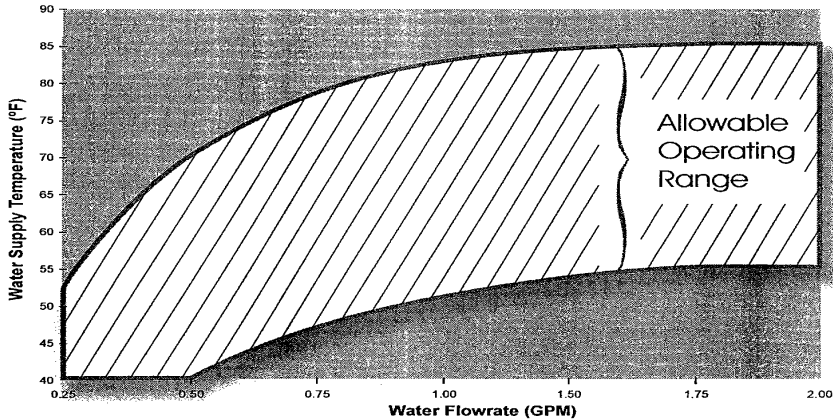
SPECIFICATIONS	CCS-950	CCS-950T	CCS-550	CCS-550T
Temperature Range	12 K - 300 K	12 K - 300 K	15 K - 300 K	15 K - 300 K
Sample Environment	Exchange Gas	Exchange Gas	Exchange Gas	Exchange Gas
Sample Change Time	2 minutes	2 minutes	2 minutes	2 minutes
Refrigeration Capacity (bare cryocooler only, no heat load)	X	X	X	X
(Initial) Cooldown Time (typical)				
60 Hz	~3 hours to 12 K	~3 hours to 12 K	~3 hours to 15 K	~3 hours to 15 K
50 Hz				
System Weight	93 kg (205 lbs.)	93 kg (205 lbs.)	87 kg (190 lbs.)	87 kg (190 lbs.)
Compressor	59 kg (140 lbs.)	59 kg (140 lbs.)	59 kg (140 lbs.)	59 kg (140 lbs.)
Expander (not including cryostat parts)				
Cold head	21 kg (45 lbs.)	21 kg (45 lbs.)	14 kg (30 lbs.)	14 kg (30 lbs.)
Optical Access		N/A		N/A
Power Supply				
Volts (VAC±5%) / Phase (Ø) / Frequency (Hz)	208/220 VAC, 1Ø, 50/60 Hz	208/220 VAC, 1Ø, 50/60 Hz	208/220 VAC, 1Ø, 50/60 Hz	208/220 VAC, 1Ø, 50/60 Hz
Power Requirements	2.0 kW, 8.5A (water-cooled) 2.1 kW, 10A (air-cooled)	2.0 kW, 8.5A (water-cooled) 2.1 kW, 10A (air-cooled)	2.0 kW, 8.5A (water-cooled) 2.1 kW, 10A (air-cooled)	2.0 kW, 8.5A (water-cooled) 2.1 kW, 10A (air-cooled)
Water-cooled Compressor Requirements				
Flow	3.8 +/- 1.9 lpm (1.0 +/- 0.5 gpm)	3.8 +/- 1.9 lpm (1.0 +/- 0.5 gpm)	3.8 +/- 1.9 lpm (1.0 +/- 0.5 gpm)	3.8 +/- 1.9 lpm (1.0 +/- 0.5 gpm)
Temperature	32 C (90 F) max, 10 C (50 F) min	32 C (90 F) max, 10 C (50 F) min	32 C (90 F) max, 10 C (50 F) min	32 C (90 F) max, 10 C (50 F) min
Chiller Requirement	N/A	N/A	N/A	N/A
Pressure	See table on Page 2.			
Vibrational Line Broadening	N/A	N/A	N/A	N/A

## Cooling Water: Flow and Pressure Requirements

Use graphs Figure 3-3: “8200 Compressor Cooling Water Flow and Pressure Requirements” and Figure 3-4: “8200 Compressor Water Cooling Requirements” to determine the minimum acceptable cooling water supply pressure at different flow rates and temperatures.



**Figure 3-3: 8200 Compressor Cooling Water Flow and Pressure Requirements**



**Figure 3-4: 8200 Compressor Water Cooling Requirements**