Edwards 40/80 chiller

The BOC Edwards TCU 40/80 chiller is designed to meet the stringent requirements for the cooling of wafers during etch or other semiconductor processes. They are suited to all processes - typical applications include the cooling of electrostatic chucks, quartz windows, chamber domes and walls.

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Parameter	Conditions	Specification
Temperature ramp	Coolant short circuit conditions	
	+25 °C to +80 °C	Elapsed time: <25 minutes
	+25 °C to -30 °C	Elapsed time: <20 minutes
Cooling capacity @ process equipment 150 watt coolant line losses; coolant water @ 15 °C	Process coolant @ -40 °C	350 watts
	Process coolant @-20 °C to +80 °C,	2000 watts
Heating element		2800 watts
System flow	@20 °C, 60 psig	3 gpm (11.36 lpm)
Process temperature range		-40 °C to +80 °C
Setpoint resolution		± 0.1 °C
Temperature regulation		± 1.0 °C typical
Facility water requirements	+10 °C (-0° +2°) to +26 °C (+0° -2°)	3 to 6 gpm (11.36 to 22.71 lpm)
Power requirements	3-phase delta (balanced load) , 4 wire (3 phases & earth gnd),	30 amp outlet
Ambient operating temperature		+10 °C to +50 °C
Weight		450 pounds (204 kg)
Dimensions		22" wide x 30" deep x 35" high (56 cm x 76 cm x 89 cm)
Altitude		Up to 2000 meters (6562 ft.)
Max. relative humidity	Up to 31 °C	80%
	Above 31 °C	Derate linearly to 50% @ 50 °C,
Transient overvoltage	IEC 664, Installation Category II	2.5 kV
Pollution Degree	IEC 664	2 Π
Sound pressure level	At a distance of 1meter.	65dB(A)

The TCU 40/80 is a single-channel temperature control unit engineered for temperature control of remote heat loads. From distances up to 50 feet, the TCU 40/80 can cool the heat load generated by the process equipment. The coolant circulates through the TCU 40/80, where it is cooled or heated as required, then is transferred to the process equipment, and returns in a closed loop. The TCU 40/80 maintains supply coolant at a temperature between -40 °C and +80 °C, selectable in 0.1 °C increments, with a tolerance of ±1.0 °C.

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