

THERMOCUBE LIQUID-LIQUID

Thermoelectric Liquid-Cooled Recirculating Chiller

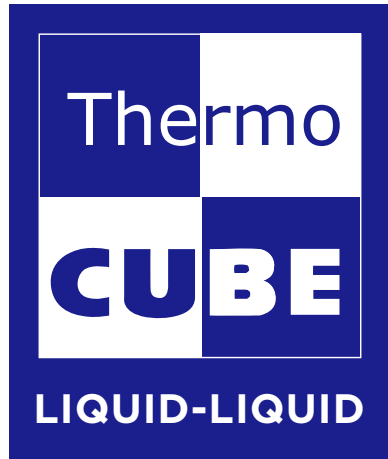


Current Customer Applications

- Semiconductor fab equipment temperature control
- Laboratories with recirculating house chilled water
- Laser cooling
- Gas bottle temperature control
- Scanning electron microscopes
- and other applications

The Right Temperature Without Fail

Solid State Cooling Systems

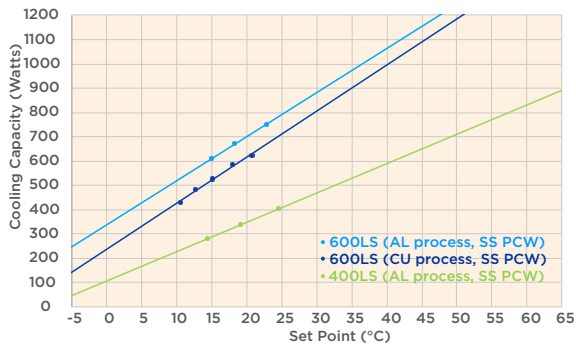


Compact, refrigerant-free and ultra-reliable

ThermoCube Liquid-Liquid delivers whisper-quiet, vibration-free thermal control to ± 0.05 °C, even near ambient. Built on a core of thermoelectric modules with lifetimes exceeding 200,000 hours, it offers worldwide power compatibility, and its variable voltage power control means you draw power only as you need it.

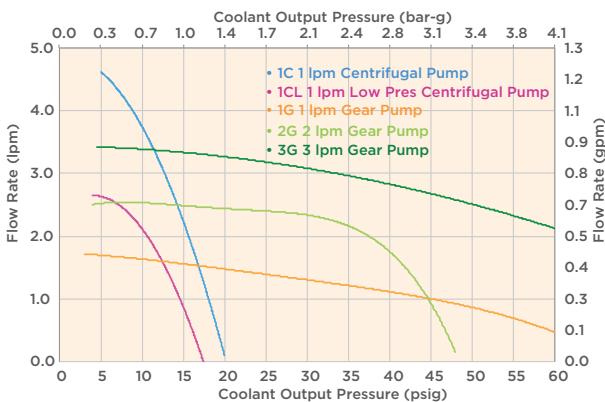
ThermoCube Liquid-Liquid can be used with glycol/water solutions or industrial water. Our standard pump is capable of delivering up to 50 psi for laser diode and other high-pressure applications. Low-pressure pumps are also available.

THERMOCUBE LIQUID-LIQUID COOLING CAPACITY
20°C AMBIENT, 20°C FACILITY WATER



Note: Cooling Capacity will vary with configuration

THERMOCUBE PUMP CURVES



SPECIFICATIONS

Operating Range	5 to 50 °C (down to -10 °C with low temp option; up to 65 °C with high temp option)
Ambient Temperature	10°C to 40°C non-condensing
Repeatability	± 0.05 °C, even near ambient
Cooling Capacity	350 to >600 Watts @ 20°C (with 20°C facility chilled water)
Noise (at 1 meter)	< 48 dBA (pump dependent)
Coolant/Process Fluid	Koolance (27% propylene glycol/water mix) or 27-50% ethylene glycol/water mix; Fluorinert/Galden or HFE options available
Process Fluid Fittings	John Guest std. CPC or Swagelok optional
Pumps	6 pump choices (see pump curves)
Tank Volume	300 ml with level sensor
Process Wetted Materials	Aluminum cold plate (Copper or Stainless Steel option available)
Facility Wetted Materials	Stainless Steel for improved corrosion resistance, pH 6.5 to 8.2
Facility Water	1 gpm recirculated, filtered, treated industrial water, 10 to 25 °C
Facility Fittings	Match coolant fittings (others on request)
Size (L x W x H)	13" x 11" x 13" (32 x 28 x 32 cm)
Weight	28 lbs. (13 kg) (with basic options)
Power Input	Universal: 100-240 VAC, 50/60 Hz, 7-5 amp max
Communications	Keypad or optional RS232 Interface
Alarms	Temperature, fluid level, component or system failure (display and RS232 option)
Standards	TUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)
Warranty	1-2 years (pump dependent)

SOLID STATE COOLING SYSTEMS