# THERMOCUBE LIQUID-LIQUID

Distributor

info@amstechnologies.com www.amstechnologies-webshop.com



Thermoelectric Liquid-Cooled Recirculating Chiller



# **Current Customer Applications**

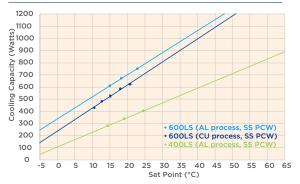
- Semiconductor fab equipment temperature control
- Laboratories with recirculating house chilled water
- Laser cooling
- Gas bottle temperature control
- Scanning electron microscopes
- and other applications



# The Right Temperature Without Fail Solid State Cooling Systems

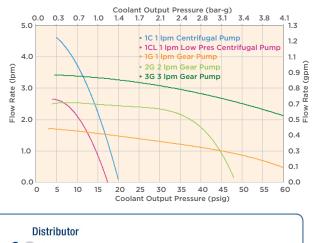


THERMOCUBE LIQUID-LIQUID COOLING CAPACITY 20°C AMBIENT, 20°C FACILITY WATER



Note: Cooling Capacity will vary with configuration

#### THERMOCUBE PUMP CURVES





## Compact, refrigerant-free and ultra-reliable

ThermoCube Liquid-Liquid delivers whisper-quiet, vibrationfree thermal control to  $\pm$  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.

### SPECIFICATIONS

Option: up to 65 °C with high temp option)Ambient Temperature10°C to 40°C non-condensingRepeatability± 0.05 °C, even near ambientCooling Capacity350 to >600 Watts @ 20°C (with 20°C facility chilled water)Noise (at 1 meter)< 48 dBA (pump dependent)Coolant/Process FluidKoolance (27% propylene glycol/water mix) or 27-50% ethylene glycol/water mix; Fluorinert/Galden or HFE options availableProcess Fluid FittingsJohn Guest std. CPC or Swagelok optionalPumps6 pump choices (see pump curves)Tank Volume300 ml with level sensorProcess Wetted MaterialsAluminum cold plate (Copper or Stainless Steel option available)Facility Wetted materialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Operating Range	5 to 50 °C (down to -10 °C with low temp
Repeatability± 0.05 °C, even near ambientCooling Capacity350 to >600 Watts @ 20°C (with 20°C facility chilled water)Noise (at 1 meter)< 48 dBA (pump dependent)Coolant/Process FluidKoolance (27% propylene glycol/water mix) or 27-50% ethylene glycol/water mix; Fluorinert/Galden or HFE options availableProcess Fluid FittingsJohn Guest std. CPC or Swagelok optionalPumps6 pump choices (see pump curves)Tank Volume300 ml with level sensorProcess Wetted MaterialsAluminum cold plate (Copper or Stainless Steel option available)Facility Wetted MaterialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)		
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Noise (at 1 meter)< 48 dBA (pump dependent)	Repeatability	± 0.05 °C, even near ambient
Coolant/Process FluidKoolance (27% propylene glycol/water mix) or 27-50% ethylene glycol/water mix; Fluorinert/Galden or HFE options availableProcess Fluid FittingsJohn Guest std. CPC or Swagelok optionalPumps6 pump choices (see pump curves)Tank Volume300 ml with level sensorProcess Wetted MaterialsAluminum cold plate (Copper or Stainless Steel option available)Facility Wetted MaterialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Cooling Capacity	0
mix) or 27-50% ethylene glycol/water mix; Fluorinert/Galden or HFE options availableProcess Fluid FittingsJohn Guest std. CPC or Swagelok optionalPumps6 pump choices (see pump curves)Tank Volume300 ml with level sensorProcess Wetted MaterialsAluminum cold plate (Copper or Stainless Steel option available)Facility Wetted MaterialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Noise (at 1 meter)	< 48 dBA (pump dependent)
Pumps6 pump choices (see pump curves)Tank Volume300 ml with level sensorProcess Wetted MaterialsAluminum cold plate (Copper or Stainless Steel option available)Facility Wetted MaterialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Coolant/Process Fluid	mix) or 27-50% ethylene glycol/water mix;
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MaterialsSteel option available)Facility Wetted MaterialsStainless Steel for improved corrosion resistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Tank Volume	300 ml with level sensor
Materialsresistance, pH 6.5 to 8.2Facility Water1 gpm recirculated, filtered, treated industrial water, 10 to 25 °CFacility FittingsMatch coolant fittings (others on request)Size (L x W x H)13" x 11" x 13" (32 x 28 x 32 cm)Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)		
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Weight28 lbs. (13 kg) (with basic options)Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Facility Fittings	Match coolant fittings (others on request)
Power InputUniversal: 100-240 VAC, 50/60 Hz, 7-5 amp maxCommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Size (L x W x H)	13" x 11" x 13" (32 x 28 x 32 cm)
CommunicationsKeypad or optional RS232 InterfaceAlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Weight	28 lbs. (13 kg) (with basic options)
AlarmsTemperature, fluid level, component or system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Power Input	Universal: 100-240 VAC, 50/60 Hz, 7-5 amp max
system failure (display and RS232 option)StandardsTUV listed to UL, CAN/CSA and EN 61010-1, CE 61010-1 (RoHS option available)	Communications	Keypad or optional RS232 Interface
CE 61010-1 (RoHS option available)	Alarms	
Warranty1-2 years (pump dependent)	Standards	
	Warranty	1-2 years (pump dependent)

#### STATE COOLING SYSTEMS

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67 MYERS CORNERS RD. WAPPINGERS FALLS, NY 12590