

TECHNICAL BULLETIN

DESCRIPTION:

TB#: 1049

ThermoRack 1200 End of Life Notification

DATE: September 16, 2016

DISCUSSION:



ThermoRack 1201

As part of our ongoing focus to continually improve the quality and performance of our products, in 2015 we introduced the ThermoRack 1201 family of thermoelectric-based recirculating chillers (see attached product sheet). The ThermoRack 1201 is functionally identical to the ThermoRack 1200. The primary difference in the new family is that we redesigned the thermoelectric power system to dramatically improve the reliability and lifetime of the unit.

We now have almost 100 ThermoRack 1201 systems running in the field, with very positive feedback. Since the unit is functionally equivalent, these units can replace ThermoRack 1200 units on the same process tool with no retuning required.

Based on the success we have had with the introduction of the ThermoRack 1201, we are now declaring end of life and last time buy on the ThermoRack 1200 and Enhanced ThermoRack 1200 products. Although we will encourage all customers to purchase ThermoRack 1201 systems whenever they need a new unit, the ThermoRack 1200 units will still be available for purchase through March 31, 2017.

Since we have a large install base of ThermoRack 1200 systems, we will continue to service these units and sell spare parts, at least through December 31, 2021

**If you have any questions please contact Mark Logan,
Phone: 1-845-296-1300 ext 318, email: mlogan@sscooling.com**

THERMORACK 1201

The Ultimate Rack Mount Chiller for Plasma Etch



Optimized for Plasma Etch Control:

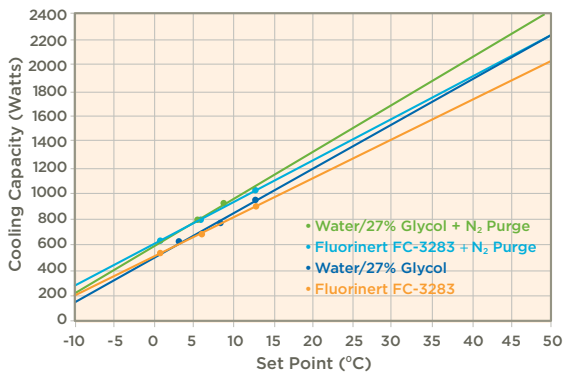
- Up to 1340 Watts of cooling capacity
- -10°C to 80°C operating range
- $\pm 0.05^\circ\text{C}$ repeatability
- 80% less power consumption than compressor-based chillers
- Compact size: Up to 6 TR1201 systems fit in the space of 1 compressor chiller
- Improves wafer to wafer repeatability
- Lam, AMAT CHX or TEL Unity interfaces

The Right Temperature Without Fail

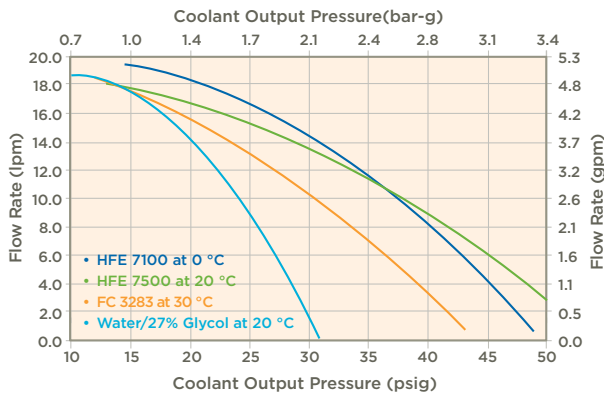
Solid State Cooling Systems



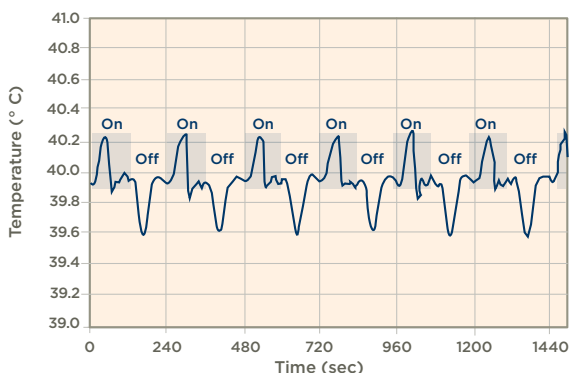
THERMORACK 1201 COOLING CURVES
20°C AMBIENT, 20°C FACILITY WATER @ 2 GPM



THERMORACK 1201 PUMP CURVES



THERMORACK 1201 CONTROL W/CYCLING LOAD
1000 WATT PLASMA LOAD (2 MIN ON / 2 MIN OFF)



Precise, Reliable Temperature Control

Providing up to 1340 Watts of cooling capacity with $\pm 0.05^\circ\text{C}$ stability at constant load, ThermoRack 1201 provides precise temperature control with 80% less power. With only two moving parts and no compressor, this thermoelectric-based chiller is known for high reliability and long life. The ThermoRack 1201 reduces environmental impacts by consuming less power, using 60% less facility water, reducing air conditioning load by 85% and not requiring any Freon or other chemical refrigerants.

SPECIFICATIONS

Operating Range	5 °C to 80 °C (-10°C to 80°C with N2 option)
Ambient Temperature	10 °C to 40 °C
Repeatability	± 0.05 °C
Cooling Capacity (Typical)	1200 Watts @ 20°C with 20°C facility water (See graph)
Coolant/Process Fluid	Glycol/water mix, Fluorinert/Galden or HFE
Process Fluid Fittings	1/2" Swagelok
Pump	Brushless DC magnetically driven centrifugal
Tank Volume	5.7 liter (1.5 gal) w/ 2 level sensors
Facility Cooling Water	4-8 lpm (1-2 gpm) @ 10-35°C filtered, treated recirculating facility cooling water, pH 6.5 to 8.2
Facility Fittings	1/2" Swagelok
N₂/CDA purge (optional)	500 sccm -30 °C dew point or lower CDA or N ₂ , 30-60 psig (2-4 bar) for low temperature operation
Wetted Materials	Process: Al, SS and polymers Facility: Teflon impregnated anodized Al and SS
Size (W x D x H)	19" x 24" x 8.7" 5U (48 x 61 x 22 cm)
Weight	70 lbs (31 kg) dry
Power Input	200-240 VAC, 1 phase, 50/60 Hz, 10 amps max
Communications	Lam analog, AMAT CHX and TEL Unity
Standards	Semi S2-0200, F47 compliant, CE, TUV listed to UL, CAN/CSA and EN 61010-1
Warranty	2 years

SOLID STATE COOLING SYSTEMS

SSCOOLING.COM (845) 296-1300 167 MYERS CORNERS RD. WAPPINGERS FALLS, NY 12590