# **CLEANSTREAM 1100**

Wide-Range Temperature Control for 5-30 Gallon Semiconductor Chemical Tanks



### Cleanstream 1100 Chemical Bath Temperature Control System

Equivalent to 2500 Watt chiller or 1100 Watt heater for

Wet-bench applications

Designed to fit inside most wet bench designs, the Cleanstream 1100 maintains temperature control at an ultra-precise  $\pm 0.05$  °C from 5-40 °C, and can do so at 10X the response time while consuming 95% less power than Freon-based chillers in near ambient applications.

Cleanstream offers a triple moisture seal for low temperature operation and PFA Teflon® surfaces on process side for ultra-high purity or corrosive fluids. And it uses ISO 14001 enabling thermoelectric technology, so no moving parts, no noise, no vibration, and no maintenance — with an MTBF greater than 80,000 hours.

A complete Cleanstream 1100 package is available including:

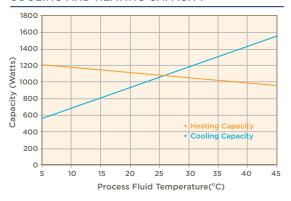
- Cleanstream 1100
- Switchback 6600 CE bipolar power supply or power supply/ temperature control unit with Yokagawa UT 55A controller
- Two 4:1 PTFE fittings
- One power cable with over-temp interlock



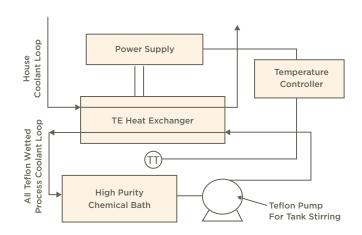
## The Right Temperature Without Fail

## Solid State Cooling Systems

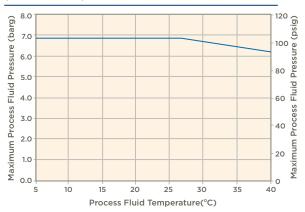
#### CLEANSTREAM 1100 COOLING AND HEATING CAPACITY



#### CLEANSTREAM POSITIONING SCHEMATIC



### CLEANSTREAM PROCESS FLUID PRESSURE RATING (ALL MODELS)

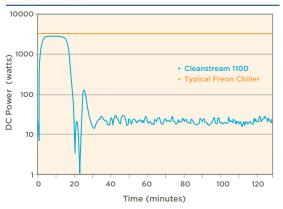


#### **SPECIFICATIONS**

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Operating Range	+5 to +40 °C
Cooling Capacity	1100 watts at 25 °C
Heating Capacity	1100 watts at 25 °C
House Fluid	Filtered treated industrial water
Process Fluid	Up to 50% HF solution, other acid solutions, organic solvents, and other PFA Teflon-compatible fluids
Flow Rate	0.5-2 or 4-10 gpm (2-8 lpm or 15-38 lpm) in process plates, 3-6 gpm in house plate
Maximum Pressure	100-psig house fluid, Process fluid pressure depends upon temperature (see graph)
Teflon Fitting Choices	3/4" or 1" Flaretek, or Teflon tube stub
Size (L x W x H)	16 x 9.75 x 3.1" (41 x 25 x 8 cm)
Weight	38 lbs (17 kg)
Power Requirements	200-240 VAC, 3Ø, 12A to Switchback 6600 CE set at: 0-144 VDC, 0-24 Amps
Material	House cooling water flows through 6063 aluminum T6 hardened with Nickel-coated interior or optional Teflon-impregnated anodized aluminum;

process fluid flows through HDPFA Teflon

#### CLEANSTREAM POWER CONSUMPTION AT 5°C BELOW AMBIENT



tubing only