

Gas & Liquid Heaters For Wafer Processing Applications



Cast Aluminum Solutions manufactures a wide array of inline heaters designed to fit critical wafer processing and wet bench applications. Our unique designs have features developed through years of working with the industry's leading system providers.

Whether you need 120 kW to heat your entire facility's nitrogen supply, or just a workbench solvent heater, CAS can help. And the CAS Team is always available to help ensure you get the right model, at the right wattage, with the features you need.

High-Performance Heaters to Fit Key Processes

- **Solvent Heating**

CAS offers several models compatible with heating solvents. With our "no contact design" its just a matter of selecting your purity level, and wattage. Heaters can be configured to safely handle flammable, low-flashpoint solvents and acids.

- **DI Water Heating**

For water in the higher mega-ohm range, our CAST-X 316 stainless steel tube heaters work well: the tubes can be electropolished and passivated to enhance compatibility. For lower resistivity water, the tube material can be switched to Hastelloy or another alloy. PUR-X Heaters are also appropriate for DI Water, as they have a PFA tube.

- **Gas for Wafer Drying Applications**

CAST-X 500 and 2000 Models equipped with EP and Passivated ID tubes are popular choices for heating N2 for wafer drying. If a non-metal tube is required, our PUR-X 1000 is an excellent choice.

- **High Temp Gas Vaporization & Heating**

Semi engineers and scientists are constantly developing new vaporizing and catalytic applications, which often involve very high temps. The CAST-X High Temp line of heaters supports these innovations with operating temps to 600°C.

- **Warming of Carrier Gases**

The PUR-Therm Heater was specifically designed for heating chamber carrier gases. The flow-tube meets Semi F-70 purity standards, and has orbitally-welded VCR fittings, for easy inline integration.



CAST ALUMINUM
Solutions



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A Wide Range of Designs & Capabilities

CAST-X Heaters



CAST-X 500	1500 W Max	1/4" (6.3 mm)
CAST-X 1000	3 kW Max	5/16" (7.9 mm)
CAST-X 2000	6 kW Max	1/2" (12.7 mm)
CAST-X 2500	15 kW Max	5/8" (15.9 mm)
CAST-X 3000	27 kW Max	3/4" (19.1 mm)
CAST-X 4000	60 kW Max	1" (25.4 mm)

CAST-X Tubes are 316 Seamless Stainless Steel with options for Electropolished ID, with Passivation or Pickling.

Custom Alloys are available for Compatibility with DI Water or Corrosives media.

CAST-X High Temp



CAST-X HT 500	1500 W Max	1/4" (6.3 mm)
CAST-X HT 2000	6 kW Max	1/2" (12.7 mm)
CAST-X HT 2500	11 kW Max	1/2" (12.7 mm)

Maximum Continuous Operating Temp: 600°C (1110°F)

The only heater on the market combining the "Isolated Fluid Path" with an extremely high temperature capacity.

PUR=X Heaters



PUR-X 1000	4.5 kW Max	3/8" (9.52 mm)
PUR-X 2000	7.8 kW Max	3/8" (9.52 mm)

Removeable and Replaceable Flow-Tube.

PFA (Teflon) tube allows for heating of acids and caustic fluids.

Semi F-57 compliant high-purity tube available.

PUR-Therm Gas Delivery Heater



PUR-Therm	1500 W Max	1/4" (6.3 mm)
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316 Stainless Steel Tube with High Purity, Low-Ra Electropolished ID, with Ar Gas Purge to prevent oxidation; Passivation post-casting.

VCR fittings for easy inline integration

Universal Solvent Heater



Universal Solvent Heater	8.0 kW Max	Main Tube: 3/4" (19.1 mm)
		Cooling Tube: 1/4" (6.3 mm)

Heater features small "Cooling Tube", instantly reducing the temp of low flashpoint solvents. Main Tube is Passivated, and Electropolished. A black Teflon coating helps protect the heater