The CAS PUR-X replaceable tube circulation heater provides contamination-free heating of liquids and gases.

**Target Markets**
- Semiconductor solvent heating
- High-purity liquid heating

**Specifications**
- Explosion resistant (NEMA 7) electrical enclosure
- Tubing, .375” (3/8”) O.D. x .031” wall, field replaceable
  - Standard PFA
  - High purity PFA, SEMI F57 compliant
  - 325” Long (27ft or 8.3m)
  - Tube size & length are the same for both standard PFA & high purity PFA
- Body: Aluminum 319, Teflon®-coated
- Maximum operating temperature: 200°C (392°F)
- Two sensors, for process control and process high-limit, choice of J or K type thermocouples
- Third sensor (J or K type, matching the selected process sensors) for casting & tube protection. Requires independent high limit control loop set no higher than 235°C (455°F)
- Optional insulation jacket
- Optional fittings, PFA 3/8” Straight Union, SEMI F57 compliant
- 70 psi max (480 kPa)

**Size and Weight:**
- PUR-X 2000: 4.3” O.D. (10.9cm) x 22” (55.9cm) tall, 29 lbs (13.1Kg) (includes housing)

**Applications**
- Semiconductor wet process systems
- Wafer cleaning equipment (wet bench systems)
- Heating of photo-resist removal solvents
- DI water heating for wafer rinsing
- Air and Nitrogen heating for wafer drying
- Acid heating

**Features/Benefits**
- Heating elements cast in aluminum
- Low maintenance
- Teflon®-coated for easy cleaning
- High purity heating
- Fluid path independent of heater sheath
- Non-welded construction
- Self-draining
- Replaceable tubing
HEATING PROFILE (water) Inlet water 15°C (59°F) at 200°C (392°F) set point with insulation jacket.

PRESSURE DROP PROFILE (water)
**ORDERING INFORMATION**

**BASE CIRCULATION HEATER**

**NEMA 7 ENCLOSED**

**HEATER WATTAGE**

- **10** = 240V, 3-phase delta circuit 7.9kW 19.3 Amps
- **11** = 208V, 3-phase delta circuit 6.0kW 16.7 Amps
- **12** = 415V, 3-phase wye circuit 7.9kW 11.1 Amps
- **13** = 400V, 3-phase wye circuit 7.4kW 10.7 Amps
- **14** = 380V, 3-phase wye circuit 6.6kW 10.2 Amps
- **15** = 200V, 1-phase 5.5kW 27.8 Amps
- **16** = 208V, 1-phase 6.0kW 28.9 Amps
- **17** = 230V, 1-phase 6.7kW 30.5 Amps
- **18** = 480V, 3-phase delta circuit 7.2kW 8.6 Amps
- **19** = 415V, 3-phase delta circuit 5.3kW 7.5 Amps
- **20** = 400V, 3-phase delta circuit 5.0kW 7.2 Amps

**TUBE MATERIAL**

- **00** = Standard PFA tubing 3/8” O.D., .031” wall thickness
- **01** = High Purity PFA tubing 3/8” O.D., .031” wall (SEMI F57 compliant)

**SENSOR**

- **JJ** = J type thermocouples
- **KK** = K type thermocouples

**ACCESSORIES** (ordered separately, loose packed)

- 274-131-1-3 (PFA fitting 3/8” Straight Union, SEMI F57 compliant) 2 pieces
- 515-68-1-6 replacement PFA tube
- 515-68-1-8 replacement HP PFA tube

**HEATING PROFILE (air)**

Inlet air at 21°C (70°F) and 70psi; 200°C (392°F) set point with insulation jacket.

**PRESSURE DROP PROFILE (air)**

Inlet air at 21°C (70°F) and 70psi; 200°C (392°F) set point with insulation jacket.
## COMPETITOR COMPARISON

<table>
<thead>
<tr>
<th>ATTRIBUTE</th>
<th>PUR-X</th>
<th>COMPETITIVE PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosure</td>
<td>Explosion resistant (NEMA 7) electrical enclosure</td>
<td>Requires inert gas purging</td>
</tr>
<tr>
<td>Maximum temperature</td>
<td>200°C (392°F)</td>
<td>180°C (356°F)</td>
</tr>
<tr>
<td>Heater element / construction</td>
<td>Tubular heating element, cast into aluminum 319. No contact with fluid.</td>
<td>PTFE-sheathed element, in contact with fluid.</td>
</tr>
<tr>
<td>Insulation jacket</td>
<td>Optional</td>
<td>Not available</td>
</tr>
<tr>
<td>Fluid path</td>
<td>Field-replaceable PFA tubing</td>
<td>Not an isolated fluid path - Body and heater element are in contact with fluid</td>
</tr>
</tbody>
</table>

### U.S.A. SALES REPRESENTATIVES

San Francisco  
tel: 408-754-3370  
Los Angeles  
tel: 714-935-2999  
Texas  
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### INTERNATIONAL SALES REPRESENTATIVES

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