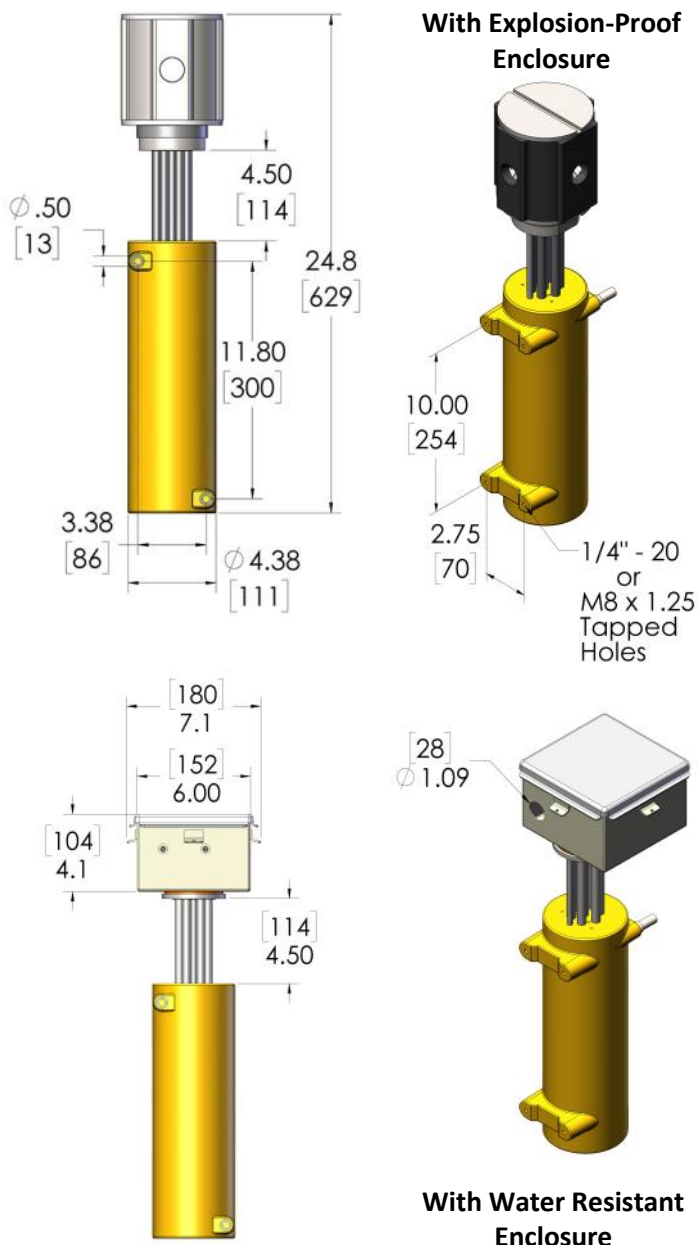


CAST-X High Temp 2000 Circulation Heater



SPECIFICATIONS:

Power:

- 1 - 6 kW
- Voltage Range: 120 - 480 V

Tubing:

- .50" OD (1/2") (12.7 mm) .065" Wall (1.7 mm)
- Overall Process Tube Length: 150" (381 cm)
- Inconel 600 material
- Max Pressure: See below chart

| Flow-Tube Max Operating Pressures <i>Pressure ratings vary depending on operating temp.</i> | | | |
|--|--------|------|-----|
| °F | °C | psi | bar |
| 200-800 | 93-427 | 5118 | 353 |
| 900 | 482 | 4094 | 282 |
| 1000 | 538 | 2712 | 187 |
| 1100 | 593 | 768 | 53 |

Note: Data taken from Circor/Hoke Flareless Tube Fittings Tubing Data Charts.

Heater Body Material:

- Cast Bronze

Enclosures:

- Explosion-Proof Enclosure, certified to:
 - Class 1, Div. 1 & 2, Groups A, B, C, D
 - Class 2, Div. 1 & 2, Groups E, F, G
 - Class 3, Div. 1 & 2
 CSA, with US and Canada Mark
- Water-Resistant Enclosure, certified to:
 - NEMA/EEMAC Type 4, 12, 13
 - CSA, File No. 42184: Type 4, 12
 - IEC 60529, IP66 Ingress Protection*Certifications are for enclosure only.*

Max Heater Operating Temperatures:

- With Water Resistant Enclosure: 1112°F (600°C)
- With Explosion Proof Enclosure: 1112°F (600°C)

Temperature Sensors:

- 2 Thermowells in Heater Body (up to 2 temp sensors)
- K or J Type Thermocouple
- RTD, 100 ohm, 3 wire

Available Accessories:

- Insulating Jacket
- Compression Fittings

**CAST-X High Temp 2000
With Optional
Insulating Jacket**



**CAST ALUMINUM
Solutions**

CAST-X High Temp 2000 Circulation Heater

Features and Benefits

CAST-X HT 2000 is available with a certified moisture-resistant terminal enclosure (seen here) or with an explosion-proof rated enclosure. Both are mounted in a "standoff" position, away from the heater body's high temps.

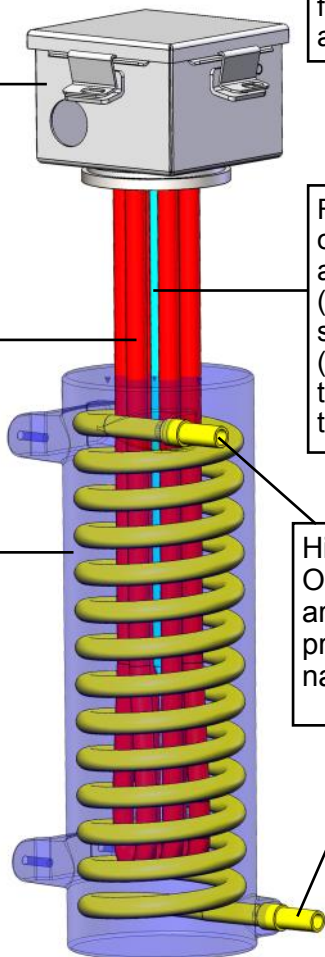
600°C / 1112°F Max Operating Temp: CAST-X High Temp 2000 is one of very few circulation heaters capable of achieving such temperatures.

The heating element's exposed portion, standing above the heater body, is not heated, a key safety feature on HT-2000.

For optimal temperature control and over-temp protection, HT 2000 units are available with RTDs or thermocouples (single or dual-junction). Temperature sensors are mounted in thermowells (2 available) located in the heater body, to generate a very accurate operating temperature signal.

CAST-X HT heater bodies are made from cast bronze, for thermal and structural integrity over a long lifespan.

High Pressure Compatible Flow-Tubes: Our Inconel 600 seamless flow-tubes are compatible with high pressure gas processing applications, including natural gas and cryogas vaporization.



Cast Aluminum Solutions. LLC

1310 Kingsland Drive
Batavia, IL 60510 - USA

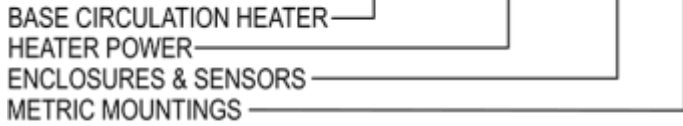
Tel: 630-879-2696
Toll Free: 888-367-3992

www.CastAluminumSolutions.com



CAST ALUMINUM
Solutions

HT13J4G AAAA-BBB-C



Electropolished Flow-Tubes = Add "EP" to end of Part Number
 Passivated Flow-Tubes = Add "P" to end of Part Number
 For both, add "EP-P"

Building a CAST-X HIGH TEMP 2000 Part Number
 Use the graphs below to build your CAST-X HT 2000.
 Assigning numbers for sections AAAA and BBB.
 If you need metric mountings, assign "M" to section C.
 If metric mounts are not required, leave sec. C blank.
 For assistance or special orders, contact CAS directly.

| VOLTAGE, POWER, CIRCUIT TYPE | | | | |
|---|--|------------------|-------------------|-----------------|
| <i>Volts refers to line volts (VL). Amps refers to line current (IL).</i> | | | | |
| Section "AAAA" | Circuit Type <small>(all are single circuit)</small> | Volts (V) | Watts (kW) | Amps (A) |
| 30SA | THREE PHASE DELTA | 480 | 6.0 | 7.2 |
| | | 440 | 5.0 | 6.6 |
| | | 415 | 4.5 | 6.3 |
| | | 400 | 4.2 | 6.0 |
| | | 380 | 3.8 | 5.7 |
| | | 240 | 1.5 | 3.6 |
| | | 230 | 1.4 | 3.5 |
| | | 220 | 1.3 | 3.3 |
| | | 208 | 1.1 | 3.1 |
| 30SB | THREE PHASE WYE | 575 | 2.9 | 2.9 |
| | | 480 | 2.0 | 2.4 |
| | | 415 | 1.5 | 2.1 |
| | | 400 | 1.4 | 2.0 |
| | | 380 | 1.2 | 1.9 |
| | | 240 | 0.5 | 1.2 |
| | | 230 | 0.4 | 1.2 |
| | | 220 | 0.4 | 1.1 |
| | | 208 | 0.3 | 1.1 |
| 30SC | SINGLE PHASE | 480 | 6.0 | 12.5 |
| | | 415 | 4.5 | 10.8 |
| | | 400 | 4.2 | 10.4 |
| | | 380 | 3.8 | 9.9 |
| | | 347 | 3.1 | 9 |
| | | 240 | 1.5 | 6.3 |
| | | 230 | 1.4 | 6.0 |
| | | 220 | 1.2 | 5.7 |
| | | 208 | 1.1 | 5.4 |
| 30SD | SINGLE PHASE | 120 | 0.4 | 3.1 |
| | | 480 | 4.0 | 8.3 |
| | | 415 | 3.0 | 7.2 |
| | | 400 | 2.8 | 6.9 |
| | | 380 | 2.5 | 6.6 |
| | | 347 | 2.1 | 6.0 |
| | | 240 | 1.0 | 4.2 |
| | | 230 | 0.9 | 4.0 |
| | | 220 | 0.8 | 3.8 |
| 30SE | SINGLE PHASE | 208 | 0.7 | 3.6 |
| | | 120 | 0.3 | 2.1 |
| | | 480 | 2.0 | 4.2 |
| | | 415 | 1.5 | 3.6 |
| | | 400 | 1.4 | 3.5 |
| | | 380 | 1.2 | 2.3 |
| | | 347 | 1.0 | 3.0 |
| | | 240 | 0.5 | 2.1 |
| | | 230 | 0.4 | 2.0 |
| 220 | 0.4 | 1.9 | | |
| 208 | 0.3 | 1.8 | | |
| | | 120 | 0.1 | 1.0 |

| | | | | |
|------|-------------------|-----|---------------------|------|
| 30SF | THREE PHASE DELTA | 240 | 6.0 | 14.5 |
| | | 230 | 5.5 | 13.8 |
| | | 220 | 5.0 | 13.2 |
| | | 208 | 4.5 | 12.5 |
| 30SG | THREE PHASE WYE | 415 | 6.0 | 8.3 |
| | | 400 | 5.5 | 8.0 |
| | | 380 | 5.0 | 7.6 |
| | | 240 | 2.0 | 4.8 |
| 30SH | SINGLE PHASE | 208 | 1.5 | 4.2 |
| | | 240 | 6.0 | 25 |
| | | 230 | 5.5 | 24 |
| | | 220 | 5.0 | 22.9 |
| 30SJ | SINGLE PHASE | 208 | 4.5 | 21.7 |
| | | 120 | 1.5 | 12.5 |
| | | 240 | 4.0 | 16.7 |
| | | 230 | 3.7 | 16 |
| 30SK | SINGLE PHASE | 220 | 3.4 | 15.3 |
| | | 208 | 3.0 | 14.4 |
| | | 120 | 1.0 | 8.3 |
| | | 240 | 2.0 | 8.3 |
| 30SL | SINGLE PHASE | 230 | 1.8 | 8.0 |
| | | 220 | 1.7 | 7.6 |
| | | 208 | 1.5 | 7.2 |
| | | 120 | 0.5 | 4.2 |
| 30SM | SINGLE PHASE | 240 | 1.5 Same as 300C | 6.3 |
| 30SN | SINGLE PHASE | 240 | 1.0 Same as 300D | 4.2 |
| 30SP | SINGLE PHASE | 120 | 1.5 Same as 300H | 12.5 |
| 30SQ | SINGLE PHASE | 120 | 1.0 Same as 300J | 8.3 |
| 30SR | THREE PHASE DELTA | 208 | 4.5 Same as 300F | 12.5 |
| 30SS | THREE PHASE WYE | 208 | 1.5 Same As 300G | 4.2 |
| 30ST | SINGLE PHASE | 208 | 4.5 Same as 300H | 21.7 |
| 30SU | SINGLE PHASE | 208 | 3.0 Same as 300J | 14.4 |
| 30SV | SINGLE PHASE | 208 | 1.5 Same as 300K | 7.2 |
| 30SW | THREE PHASE DELTA | 208 | 6.0 | 16.7 |
| | | 120 | 2.0 | 9.6 |
| 30SX | THREE PHASE WYE | 380 | 6.6 | 10.1 |
| | | 208 | 2.0 | 5.6 |
| 30SY | THREE PHASE DELTA | 208 | 3.0 | 8.3 |
| | | 120 | 1.0 | 4.8 |
| 30SZ | SINGLE PHASE | 208 | 6.0 | 28.8 |
| | | 120 | 2.0 | 16.6 |

| ENCLOSURES AND TEMPERATURE SENSORS | | | |
|--|-------------------------------------|-----------------------|------------------|
| <i>All thermocouples are ungrounded, for optimal performance</i> | | | |
| Section "BBB" | Description | No. of Sensors | Enclosure |
| W00 | NO SENSOR | 0 | WATER RESISTANT |
| W0J | J-TYPE THERMOCOUPLE IN THERMOWELL | 1 | WATER RESISTANT |
| W0K | K-TYPE THERMOCOUPLE IN THERMOWELL | 1 | WATER RESISTANT |
| W0R | RTD, SINGLE, 3 WIRE, 100 OHMS | 1 | WATER RESISTANT |
| WJJ | J-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | WATER RESISTANT |
| WKK | K-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | WATER RESISTANT |
| WRR | RTDs, EACH IS 3 WIRE, 100 OHMS | 2 | WATER RESISTANT |
| E00 | NO SENSOR | 0 | EXPLOSION PROOF |
| E0J | J-TYPE THERMOCOUPLE IN THERMOWELL | 1 | EXPLOSION PROOF |
| E0K | K-TYPE THERMOCOUPLE IN THERMOWELL | 1 | EXPLOSION PROOF |
| E0R | RTD, SINGLE, 3 WIRE, 100 OHMS | 1 | EXPLOSION PROOF |
| EJJ | J-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | EXPLOSION PROOF |
| EKK | K-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | EXPLOSION PROOF |
| ERR | RTDs, EACH IS 3 WIRE, 100 OHMS | 2 | EXPLOSION PROOF |

| METRIC MOUNTING HOLES | |
|--|--|
| <i>Place an "M" In section D if metric mounting holes are required. If standard Imperial mounting holes are desired, section D can be left blank</i> | |
| Section "D" | Metric Mounting Holes |
| M | M8 X 1.25 METRIC TAPPED MOUNTING HOLES |

| ACCESSORIES | |
|--|---|
| <i>These PNs are totally separate from the PNs for the heater.</i> | |
| Part Number | Component |
| 274-55-6-5 | COMPRESSION FITTINGS (HIGH PRESSURE) / PAIR (SHIPPED LOOSE) |
| 307-0-29-1 | INSULATION JACKET, MAXIMUM TEMPERATURE 1472°F (800°C) |

| VALUE ADDED OPTIONS FOR FLOW-TUBES | |
|--|---|
| <i>If you need electropolished or passivated flow-tubes, add these letters to the end of your part number. For both, indicate "EP-P"</i> | |
| PN Adder | Additional Service |
| P | PASSIVATION: TO CLEAN FLOW-TUBE ID (USES A DILUTED NITRIC ACID FLUSH) |
| EP | ELECTROPOLISHED TUBE ID: RA VALUE: 10 MICROINCHES (.254 MICROMETERS) |

| CUSTOM DESIGNS & COMPONENTS | |
|---|--|
| <i>For these options, please call a CAS Representative for a quote.</i> | |
| THICK WALL TUBES FOR HIGH PRESSURE APPLICATIONS | |
| SPECIAL TUBE FITTINGS | |