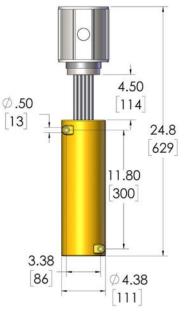
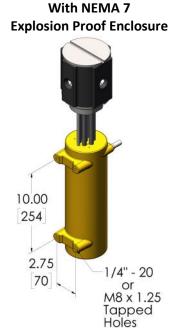
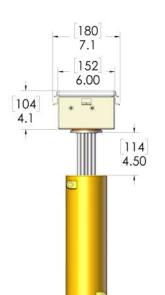
CAST-X High Temp 2000 Circulation Heater











With NEMA 4
Water Resistant Enclosure

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

Heater Body Material:

• Cast Bronze

Enclosures:

- Certified Water-Resistant (NEMA 4) NEMA/EEMAC Type 4, 12, 13
 CSA, File No. 42184: Type 4, 12
 IEC 60529, IP66
- Certified Explosion Proof
 Class 1, Div. 1 & 2, Groups A, B, C, D
 Class 2, Div. 1 & 2, Groups E, F, G
 Class 3, Div. 1 & 2

Max Heater Operating Temperatures:

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

Temperature Sensors:

- 2 Thermowells on Heater (room for 2 temp sensors)
- K or J Type Thermocouples
- RTDs, 100 ohm, 3 wires

Available Accessories:

- Insulating Jacket: Part Number 307-0-29-1
 Temp Rating: 1482°F (800°C)
- Compression Fittings: Part Number 274-55-6-5
 High Pressure Pair (shipped loose), by Swagelok,
 1/2" union compression fitting on each end.



CAST-X High Temp 2000 With Optional Insulating Jacket



CAST-X High Temp 2000 Circulation Heater

Features and Benefits

CAST-X HT 2000 is available with a NEMA 4 (moisture-resistant) housing (seen here) or a NEMA 7 (explosion-proof) enclosure. Both are mounted in "standoff" positions, away from the heater body's high temps.

The exposed portion of the heating element, standing above the body, is not heated, a key safety feature.

CAST-X HT heater bodies are made from cast bronze, for thermal and structural integrity over a long lifespan. 600°C / 1112°F Max Operating Temp: CAST-X High Temp 2000 is one of very few circulation heaters capable of achieving such temperatures.

To facilitate proper temperature control and over-temp protection, CAST-X HT units are available with dual-sensor thermocouples. The TC is located in a thermowell deep within the heater body, for accurate operating temp readings.

High Pressure Compatible Flow-Tubes: Our seamless Inconel 600 flow-tubes are rated to very high pressures, making them compatible with industrial gas, LNG, and cryogenic applications.

Cast Aluminum Solutions. LLC

1310 Kingsland Drive Batavia, IL 60510 - USA

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| <u>HT13J4G AAAA-BBB-C</u> | |
|--|--|
| BASE CIRCULATION HEATER——————————————————————————————————— | |
| | |

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.

| | | GE, POWER, CIRCU e volts (VL). Amps refers to | | |
|---------|--------------------------|--|------------|----------|
| Section | Circuit Type | | | |
| "AAAA" | (all are single circuit) | Volts (V) | Watts (kW) | Amps (A) |
| | | 480 | 6.0 | 7.2 |
| | | 440 | 5.0 | 6.6 |
| | | 415 | 4.5 | 6.3 |
| | THREE PHASE | 400 | 4.2 | 6.0 |
| 30SA | DELTA | 380 | 3.8 | 5.7 |
| | 522171 | 240 | 1.5 | 3.6 |
| | | 230 | 1.4 | 3.5 |
| | | 220 | 1.3 | 3.3 |
| | | 208 | 1.1 | 3.1 |
| | | 575 | 2.9 | 2.9 |
| | | 480 | 2.0 | 2.4 |
| | | 415 | 1.5 | 2.1 |
| | | 400 | 1.4 | 2.0 |
| 30SB | THREE PHASE WYE | 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 |
| | | 480 | 6.0 | 12.5 |
| | | 415 | 4.5 | 10.8 |
| | | 400 | 4.2 | 10.4 |
| | | 380 | 3.8 | 9.9 |
| 30SC | SINGLE PHASE | 347 | 3.1 | 9 |
| | 01110221111102 | 240 | 1.5 | 6.3 |
| | | 230 | 1.4 | 6.0 |
| | | 220 | 1.2 | 5.7 |
| | | 208 | 1.1 | 5.4 |
| | | 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 |
| 30SD | SINGLE PHASE | 347 | 2.1 | 6.0 |
| | | 240 | 1.0 | 4.2 |
| | | 230 | 0.9 | 4.0 |
| | | 220 | 0.8 | 3.8 |
| | | 208 | 0.7 | 3.6 |
| | | 120 | 0.3 | 2.1 |
| | <u> </u> | 480 | 2.0 | 4.2 |
| | | 415 | 1.5 | 3.6 |
| | <u> </u> | 400 | 1.4 | 3.5 |
| | | 380 | 1.2 | 2.3 |
| 30SE | SINGLE PHASE | 347 | 1.0 | 3.0 |
| | ON OLL I HAGE | 240 | 0.5 | 2.1 |
| | | 230 | 0.4 | 2.0 |
| | <u> </u> | 220 | 0.4 | 1.9 |
| | | 208 | 0.3 | 1.8 |
| | 1 | 120 | 0.1 | 1.0 |

| | | 240 | 6.0 | 14.5 |
|--------|------------------------|------------|---------------------|------------|
| | TUDEE DUACE | 230 | 5.5 | 13.8 |
| 30SF | THREE PHASE DELTA | 220 | 5.0 | 13.2 |
| | | 208 | 4.5 | 12.5 |
| | | 415 | 6.0 | 8.3 |
| | | 400 | 5.5 | 8.0 |
| 30SG | THREE PHASE WYE | 380 | 5.0 | 7.6 |
| | | 240 | 2.0 | 4.8 |
| | | 208 | 1.5 | 4.2 |
| | | 240 | 6.0 | 25 |
| | | 230 | 5.5 | 24 |
| 30SH | SINGLE PHASE | 220 | 5.0 | 22.9 |
| | | 208 | 4.5 | 21.7 |
| | | 120 | 1.5 | 12.5 |
| | | 240 | 4.0 | 16.7 |
| | | 230 | 3.7 | 16 |
| 30SJ | SINGLE PHASE | 220 | 3.4 | 15.3 |
| | | 208 | 3.0 | 14.4 |
| | | 120 240 | 1.0 2.0 | 8.3 |
| | | | 1.8 | 8.3 |
| 30SK | SINGLE PHASE | 230 220 | 1.7 | 8.0 7.6 |
| 303K | SINGLE PHASE | 208 | 1.7 | 7.0 |
| | | 120 | 0.5 | 4.2 |
| | | | 1.5 | |
| 30SL | SINGLE PHASE | 240 | Same as 300C | 6.3 |
| 30SM | SINGLE PHASE | 240 | 1.0 Same as 300D | 4.2 |
| 30SN | SINGLE PHASE | 120 | 1.5 | 12.5 |
| 30SP | SINGLE PHASE | 120 | Same as 300H 1.0 | 8.3 |
| | THREE PHASE | - | Same as 300J 4.5 | |
| 30SQ | DELTA | 208 | Same as 300F 1.5 | 12.5 |
| 30SR | THREE PHASE WYE | 208 | Same As 300G 4.5 | 4.2 |
| 30SS | SINGLE PHASE | 208 | Same as 300H | 21.7 |
| 30ST | SINGLE PHASE | 208 | 3.0 Same as 300J | 14.4 |
| 30SU | SINGLE PHASE | 208 | 1.5 Same as 300K | 7.2 |
| 0001/ | THREE PHASE | 208 | 6.0 | 16.7 |
| 303 V | 30SV THREE PHASE DELTA | 120 | 2.0 | 9.6 |
| 000144 | THREE DHASE W/VE | 380 | 6.6 | 10.1 |
| 30377 | 30SW THREE PHASE WYE | 208 | 2.0 | 5.6 |
| 2007 | 30SX THREE PHASE DELTA | 208 | 3.0 | 8.3 |
| 3031 | | 120 | 1.0 | 4.8 |
| 2067 | 01101 = 51115 | 208 | 6.0 | 28.8 |
| 30SY | SINGLE PHASE | 120 | 2.0 | 16.6 |

| ENCLOSURES AND TEMPERATURE SENSORS | | | | |
|------------------------------------|---|----------------|-----------|--|
| | All thermocouples are ungrounded, for optimal performance | | | |
| Section "BBB" | Description | No. of Sensors | Enclosure | |
| W00 | NO SENSOR | 0 | NEMA 4 | |
| WOJ | J-TYPE THERMOCOUPLE IN THERMOWELL | 1 | NEMA 4 | |
| WoK | K-TYPE THERMOCOUPLE IN THERMOWELL | 1 | NEMA 4 | |
| W0R | RTD, SINGLE, 3 WIRE, 100 OHMS | 1 | NEMA 4 | |
| MJJ | J-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | NEMA 4 | |
| WKK | K-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | NEMA 4 | |
| WRR | RTDs, EACH IS 3 WIRE, 100 OHMS | 2 | NEMA 4 | |
| E00 | NO SENSOR | 0 | NEMA 7 | |
| E0J | J-TYPE THERMOCOUPLE IN THERMOWELL | 1 | NEMA 7 | |
| E0K | K-TYPE THERMOCOUPLE IN THERMOWELL | 1 | NEMA 7 | |
| E0R | RTD, SINGLE, 3 WIRE, 100 OHMS | 1 | NEMA 7 | |
| EJJ | J-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | NEMA 7 | |
| EKK | K-TYPE THERMOCOUPLES IN THERMOWELLS | 2 | NEMA 7 | |
| ERR | RTDs, EACH IS 3 WIRE, 100 OHMS | 2 | NEMA 7 | |

| METRIC MOUNTING HOLES | | |
|--|--|--|
| 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 | | |
| Section "D" | Metric Mounting Holes | |
| M | M8 X 1.25 METRIC TAPPED MOUNTING HOLES | |

| | ACCESSORIES |
|-------------|---|
| | These PNs are totally separate from the PNs for the heater. |
| 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 | | |
|---|---|--|
| If you need electropolished or passivated flow-tubes, add these letters to the end of your part number. For both, indicate "EP-P" | | |
| PN Adder | Additional Service | |
| Р | 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 |
|--|
| For these options, please call a CAS Representative for a quote. |
| THICK WALL TUBES FOR HIGH PRESSURE APPLICATIONS |
| SPECIAL TUBE FITTINGS |