

## Safe Circulation Heater Ideal for Contamination-Free Gas and Liquid Heating

The new CAST-X 500 from Watlow® is a small, lightweight circulation heater ideal for heating gas or liquids in demanding applications. Even in its compact size, the CAST-X 500 is extremely powerful with operating temperatures up to 350°F (177°C) and working fluid pressure up to 3000psi. The CAST-X 500 heater is available in a variety of wattages and can be shipped in just a few days.

The CAST-X 500 heater is constructed of a helical coiled tube cast into an aluminum body with a replaceable cartridge heater installed in the center. The cartridge heater can be replaced with various wattages to suit your equipment's changing requirements.

The aluminum body serves as the heat transfer media between the cartridge heater and the coiled tube where the fluid is being heated. The aluminum mass acts as a "thermal flywheel" and ensures accurate temperature control of the fluid to prevent degradation.

The unique, non-weld construction of the CAST-X 500 allows it to be used where thermally sensitive materials are being heated such as paints, resins and flammable materials. The heater is suited for applications where fluid cleanliness is critical, because the material being heated never comes in contact with the heater. This is a performance requirement in foodservice, semiconductor and analytical industries.

### Applications

- Solvent heating
- Air, CO<sub>2</sub> and nitrogen heating
- DI water heating
- Packaging sterilization
  - Hydrogen peroxide vaporization
- Analytical instrumentation
  - Sample heating
- Foodservice
  - Steam generation
  - Glycol heating for CIP systems
  - Pasteurization
- Printing ink heating
- Diesel and fuel heating



### Features and Benefits

#### Fluid path constructed independent from heater sheath

- Assures an intrinsically safe thermal solution
- Prevents fluid contamination upon heater failure
- Heats sensitive materials safely because the material heated does not come in contact with heating elements

#### Robust cast-in aluminum construction

- Assures longer heater life
- Offers accurate temperature control

#### Non-welded construction

- Minimizes potential leakage
- Offers an economical priced package
- Provides high pressure operation to 3000 psi
- Self draining when mounted vertically

#### Standard stainless steel fluid path

- Assures material compatibility with many different materials

#### Replaceable cartridge heater

- Offers low cost of ownership due to ability to replace heater in field
- Assures faster delivery and customization from factory

#### Compact size

- Assures quick response due to low mass (2.375 lbs)
- Saves real estate in equipment because of small footprint



BAT-CX500-0807

Watlow® is a registered trademark of Watlow Electric Manufacturing Company.

To be automatically connected to the nearest North American Technical Sales Office:

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## Specifications

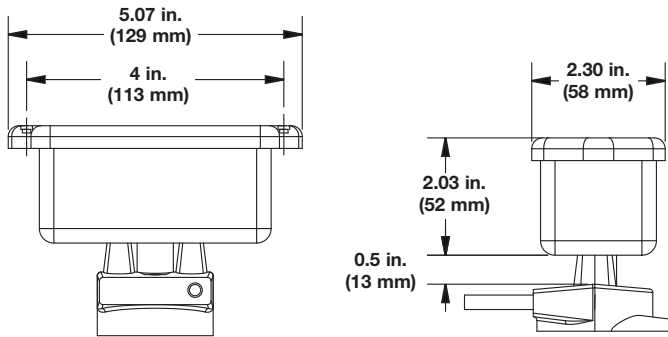
- (4) 10-32  $\frac{3}{8}$  (10 mm) in. deep mounting holes
- $\frac{1}{4}$  in. (6.35 mm) 316 SS tubing
- 0.028 in. (0.710 mm) wall
- 84 in. (213.36 cm) long
- Process temperatures to 350°F (177°C)
- Up to 1500 W

## Options

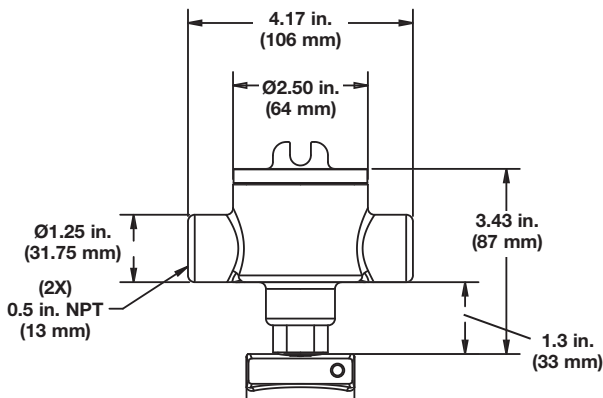
- Single phase operation to 240V
- NEMA 1, 4 or 7 housings with and without sensors.
- Passivated or electropolished wetted surfaces
- Insulated body up to 400°F (204°C) operation

## Dimensions

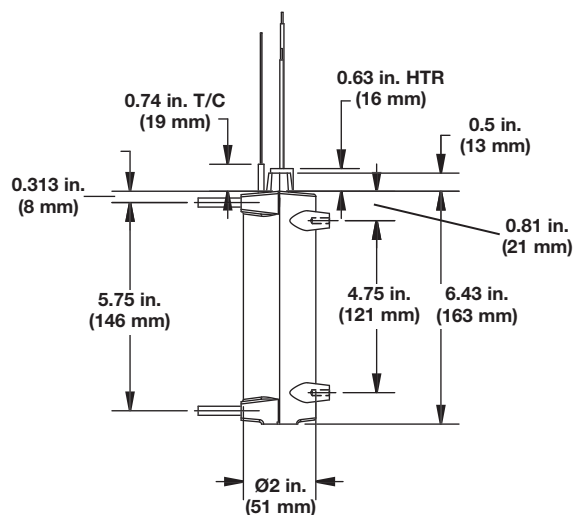
### NEMA 1 and 4



### NEMA 7



### No Enclosure



## Ordering Information

To order, complete the code number to the right with the information below.

W X 6 E 2 A -

### Base Circulation Heater

0.25 in. O.D. (6.35 mm), 0.028 in. wall (0.71 mm), 316 SS tubing with  $\frac{3}{8}$  in. (16 mm) dia. cartridge heater with 36 in. (914 mm) Teflon® leads.

No housing

### Heater Wattage

300A = 120V, 300 W  
 300B = 120V, 1500 W  
 300C = 240V, 300 W  
 300D = 240V, 500 W  
 300E = 240V, 750 W  
 300F = 240V, 1000 W  
 300G = 240V, 1200 W  
 300H = 240V, 1500 W  
 300J = 208V, 1125 W  
 300K = 208V, 900 W  
 300L = 208V, 750 W  
 300M = 208V, 565 W

### Enclosures and Sensors

00 = No sensor or enclosure  
 0J = Type J T/C in casting, no housing  
 0K = Type K T/C in casting, no housing  
 S0 = NEMA 1 housing, no sensor  
 SJ = NEMA 1 housing with Type J sensor in casting  
 SK = NEMA 1 housing with Type K sensor in casting  
 W0 = NEMA 4 housing, no sensor  
 WJ = NEMA 4 housing with Type J sensor in casting  
 WK = NEMA 4 housing with Type K sensor in casting  
 E0 = NEMA 7 housing, no t-stat, no sensor  
 EJ = NEMA 7 housing with Type J sensor in heater, non standard delivery  
 EK = NEMA 7 housing with Type K sensor in heater, non standard delivery

### High Limits (Only available with no housing option)

00 = None  
 01 = Snap action high limit set at 260°F (127°C)  
 02 = Snap action high limit set at 500°F (260°C)

### Accessories

Pair high pressure compression fitting - 274-55-6-1  
 Insulation jacket - 307-0-12-1, maximum temperature 400°F (204°C)

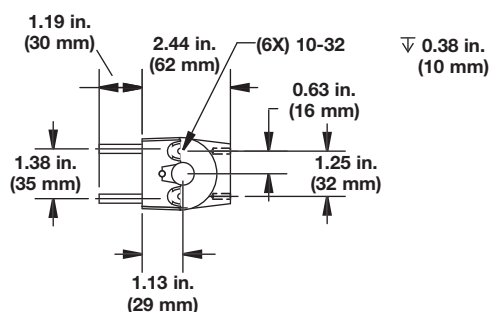
### Application Guidelines

Maximum process temperature 350°F (177°C)

Maximum water flow rate is 0.75 GPM

Consult factory for gas applications

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