

Standard Flange Immersion Heaters



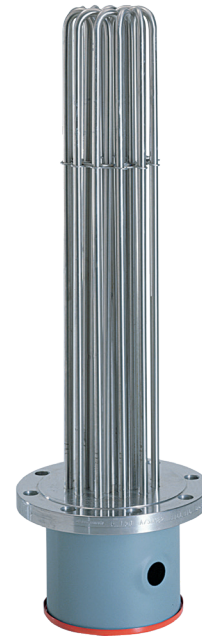
- Five day or less lead time
- Premium same-day/next-day expedite available
- Dimensional drawing included (via Watlow's Visual Designer)

Watlow® flange heaters are easy to install and maintain. Designed for heating liquids and gases in tanks and pressure vessels, flange immersion heaters are ideal for applications requiring higher kilowatts. You can custom configure your flange heater with 3 inch through 14 inch ANSI flange sizes via Watlow's Visual Designer tool on Watlow.com. The tool will guide you through all of the steps required to quickly configure and order your heater.

Watlow flange heaters are made with WATROD™ tubular elements brazed or welded to a flange.

Performance Capabilities

- Watt densities up to 120 W/in² (18.6 W/cm²)
- UL® and CSA component recognition up to 480VAC
- Alloy 800/840 sheath temperatures up to 1600°F (870°C)
- Passivated 316 stainless steel sheath temperatures up to 1200°F (650°C)
- 304 stainless steel sheath temperatures up to 1200°F (650°C)
- Steel sheath temperatures up to 750°F (400°C)



Features and Benefits

ANSI B16.5 Class 150 on 3 to 14 inch WATROD element flanges

- Meets recognized agency standards

Element sheath and flange materials

- Meets your application needs

Integral thermowells

- Provides convenient temperature sensor insertion and replacement without draining the fluid being heated

General purpose terminal enclosures are standard, with optional enclosures available

- Offers easy access to wiring

Element support(s)

- Provides proper element spacing to maximizing heater performance and life

All units are inspected and/or tested

- Ensures element-to-flange pressure seals do not leak

All flange heaters are provided with two lift lugs welded to the flange

- Facilitates lifting during installation

Compacted mgO insulation filled elements

- Maximizes dielectric strength, heat transfer and life

Branch circuits

- Branch circuits are designed for 48 amperes per circuit maximum.

UL® and CSA component recognition under file numbers E52951 and 31388 respectively

- Simplifies obtaining third-party recognition for assembly
- Meets industry safety standards

Typical Applications

- Water:
 - Deionized
 - Demineralized
 - Clean
 - Potable
 - Process
- Industrial water rinse tanks
- Vapor degreasers
- Hydraulic oil, crude, asphalt
- Lubricating oils at API specified watt densities
- Air and gas flow
- Caustic solutions
- Chemical baths
- Process air equipment
- Boiler equipment
- Freeze protection of any fluid
- Anti-freeze (glycol) solutions
- Paraffin

Options

Terminal Enclosures

Watlow offers the following optional terminal enclosures:

- **Non-certified**, moisture resistant enclosure. Protects wiring in a high moisture environment.
- **CSA certified** (File number 31388), Enclosure 4 enclosure. Protects wiring in a high moisture environment.
- **CSA certified** (File number 61707), Explosion-proof enclosure. Protects wiring in hazardous gas environments.
- **CSA certified** (File number 61707), Type 4/Explosion-proof enclosure. Protects wiring in a high moisture/hazardous gas environment.

When ordering a CSA Explosion Proof enclosure, specify the following:

- **Process temperature** (°F)
- **Maximum working pressure** of application (psig)
- **Media** being heated
- **Mounting orientation** (horizontal or vertical)

Thermostats

To provide process temperature control, Watlow offers optional single- and double-pole thermostats. Thermostats are mounted in the terminal enclosure.

Thermocouples

To sense process or element sheath temperature, ASTM Type J or K thermocouples are available.

Wattages and Voltages

Watlow routinely supplies flange immersion heaters with 240 to 480VAC as well as wattages from 150 watts to 200kW

Sheath Materials

The following sheath materials are available on WATROD heaters:

Standard Sheath Materials

WATROD	Alloy 800, 840
	316 SS
	Steel

External Finishing

Passivation

Passivation will remove free iron from the sheath. To order, specify **passivation**.

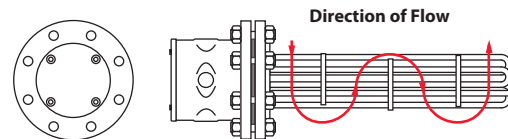
Other Finishes

Bright annealing available to meet cosmetic demands.

Flange Materials

Standard	Carbon steel
	316 SS
	304 SS

Baffles



Baffles mounted on the heating element bundle enhance and/or modify liquid or gas flow for better heat transfer. For critical sheath temperature and low flow conditions, baffles may be required.

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