

NuSource Offers an Answer to Obsolescence

Solve the problem of obsolete Pressurizer Heaters with Watlow replacement parts, now provided by NuSource

NuSource is now providing genuine, like-for-like Watlow OEM replacement heaters along with the technical support, design, engineering, and manufacturing expertise for a seamless, worry-free replacement component.

FEATURES & BENEFITS

Wound-core heater technology with enhanced magnesium oxide (MgO) insulation inside stainless steel sheath

- Optimizes the heat flux by placing element wire closer to external heating surface
- Improves insulation properties leading to longer heater life
- Maximizes heater life through independently operated parallel circuits

High temperature, high pressure seal technology

- Provides a secondary level of protection - a proven leak-proof design

Terminal lugs with captive nut connectors

- Eases installation

Nickel-chromium resistance wire combined with enhanced MgO and proprietary manufacturing processes

- Ensures reliability and long life of the heater

True no-heat with discrete separation from heating element

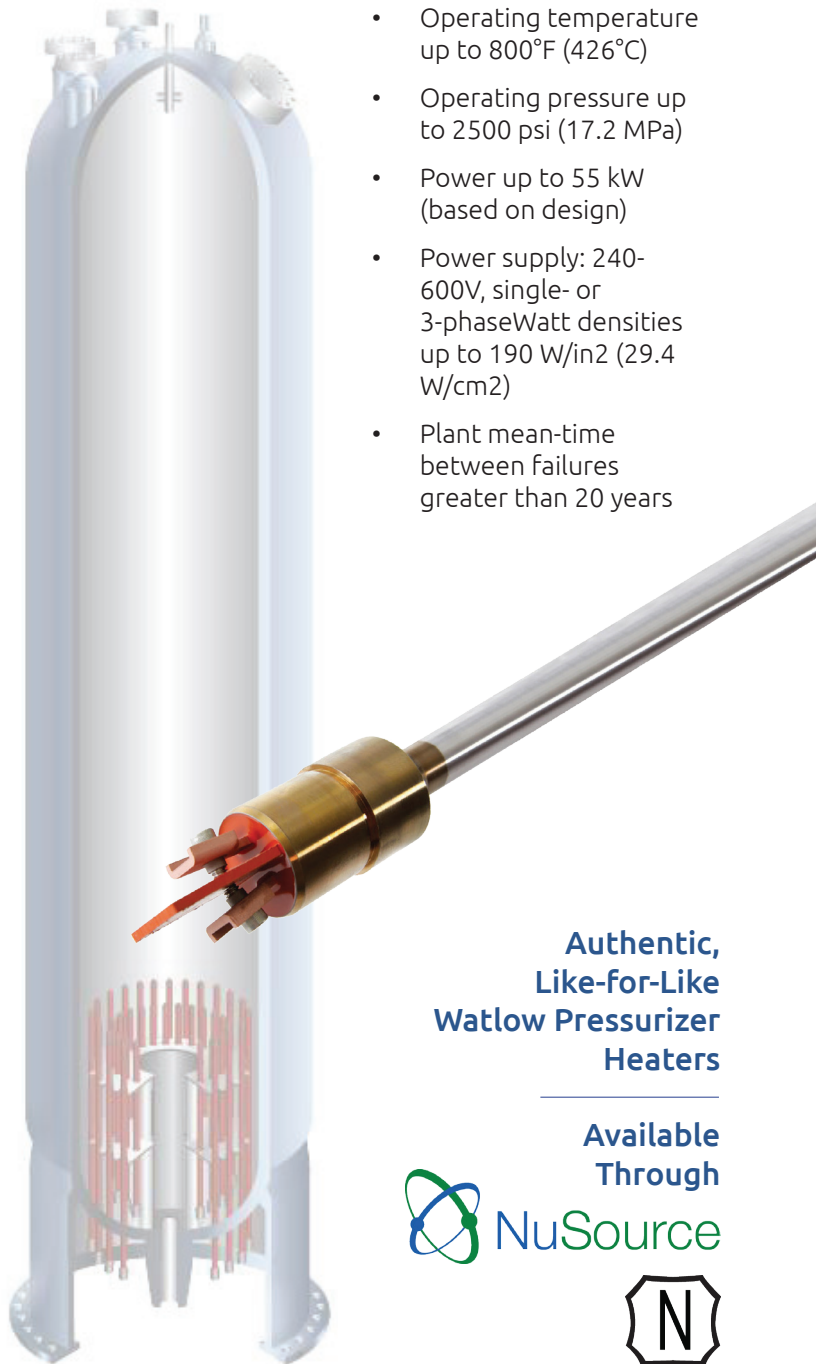
- Reduces residual heat flow towards pressurizer weld connections thus eliminating need for heat sinks
- Decreases stress-corrosion cracking when used at the support plate
- Allows easy identification of no-heat length through standard radiographic viewing

ASME Section III, NPT stamped heater

- Reduces lead time
- Ensures competitive price
- Streamlines supply chain

PERFORMANCE CAPABILITIES

- Operating temperature up to 800°F (426°C)
- Operating pressure up to 2500 psi (17.2 MPa)
- Power up to 55 kW (based on design)
- Power supply: 240-600V, single- or 3-phase Watt densities up to 190 W/in² (29.4 W/cm²)
- Plant mean-time between failures greater than 20 years



**Authentic,
Like-for-Like
Watlow Pressurizer
Heaters**

**Available
Through**



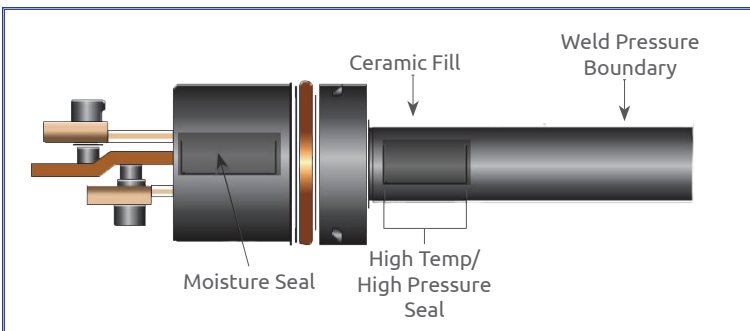
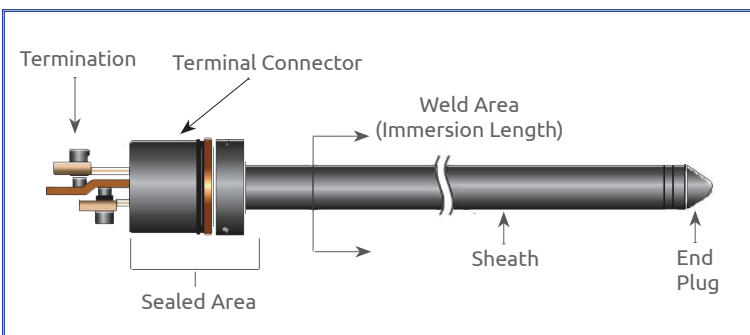
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Worry-free electric heating solutions for nuclear power applications.

Since the introduction of its nuclear pressurizer heater in 1966, Watlow has been a major source for designers and contractors who specialize in serving the nuclear power industry. For over fifty years, it's been the Watlow name behind many of the critical application heaters used in our industry.

Today, facility managers who face obsolescence can get like-for-like replacement parts with the same premium design, construction, and performance of the Watlow originals - and from a proven, trusted partner who can bring decades of experience and know-how to your project.

Your new source is NuSource, LLC.



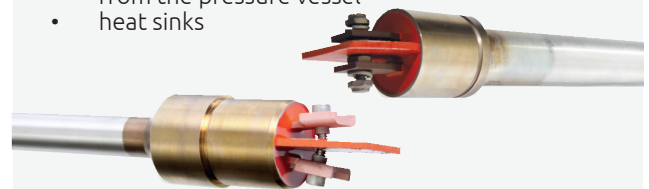
CONSTRUCTION ATTRIBUTES

Sheath and end plug

- Heater diameters between 0.553 in. (14.0 mm) and 1.25 in. (31.8 mm) forms the primary protection within the pressure boundary
- Materials used meet or exceed standard specifications
- Each heater is hydrostatically tested
- NPT stamped

Termination

- Various terminations available to meet specific design requirements
- Designs allow for easy installation and removal from the pressure vessel
- heat sinks



Independently operated parallel circuits

- Nickel-chromium resistance wire wound around cores
- Each core operates independently, electrically operated in parallel
- Heater element wire's proximity with the external heating surface, optimizes the efficiency of heat transfer through dielectric media
- Enhanced MgO provides dielectric strength between the high pressure/high temperature seal and the moisture seal
- Varying number of cores available

Seals

- High temperature/high pressure seal forms secondary protection in case of sheath rupture
- Tested and proven to withstand over 3750 psi (over 25.86 MPa)
- Moisture seal forms a moisture barrier around the terminations
- Provides excellent dielectric strength

The NuSource Quality Assurance Program

- ASME Section III "N" Stamp
- 10CFR50 Appendix B
- 10CFR 21
- ASME NQA-1
- ANSI N45.2



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