Watlow’s engineering and expertise has delivered reliable electric heat exchangers used in hazardous locations for over 40 years. This deep domain knowledge is especially critical to ensure that electrical equipment is operating safely. Heat exchangers designed for use within hazardous locations typically require heavy cast enclosures to adhere to the tough Class 1, Div. 2 safety standard designations. Watlow® makes this possible now with lighter materials that are easier to install and maintain. Enclosures constructed of sheet metal, that meet Class 1, Div. 2 standards, are now available and provide considerable advantages. In addition to providing a lighter heat exchanger, a hinged access door enables easy access for installation and maintenance compared to bolted flange assemblies. Standard lead wire construction makes wiring the heat exchanger to a power source easy and significantly reduces the potential for damage occurring to terminal posts or the epoxy seals during initial wire up and maintenance. Watlow immersion heaters are certified by NEC for operation within Class 1, Div. 2 locations so you can be confident that your facility will remain safe and your heat exchanger performs as designed.
Immersion Heaters for Hazardous Locations

Features and Benefits

- ANSI and ANSI compatible 2, 2½, 3 through 48 inch flanges
  > Provides appropriate heater size-to-application and fit

- Element sheath and flange materials
  > Meets your application needs

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

- 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

- WATROD™ hairpins are repressed (recompacted)
  > Provides improved heater life, insulation resistance and heat transfer

- Branch circuits are designed for 48 amperes per circuit maximum
  > Reduces risk of failure due to excessive temperatures generated by high amperage

- UL® and CSA component recognition under File numbers E52951 and 31388 respectively
  > Simplifies obtaining third-party recognition for assembly

Performance Capabilities

- Watt densities up to 100 W/in² (15.5 W/cm²)

- Wattages up to three megawatts

- UL® and CSA component recognition up to 600VAC and IEC and ATEX recognition up to 690VAC

- 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)

- Hazardous area ratings:
  • Class 1, Div. 1 & 2, Groups B, C & D