**Electric Immersion Heaters**

**Features**

- **Heavy Duty Construction**
  Hubbell electric immersion heaters are constructed using only the highest grade materials and are put through a rigorous quality assurance testing procedure to ensure that each heater conforms to specification.

- **Wide Selection**
  Hubbell electric heaters are fabricated in a wide variety of types and styles including cartridge heaters, screw plug heaters, and flanged heaters.

- **Delivery**
  Hubbell maintains a large inventory to meet even the most demanding delivery requirements.

**Versatility**
Hubbell heaters are manufactured to order and can be engineered to meet the exact requirements of a particular application.

**APPLICATIONS**

- Water Heaters
- Boilers
- Oil Heaters
- Freeze Protection
- OEM Applications
- Storage Tanks
- Railroad Tank Cars
- Process Systems
- Heat Transfer Systems

**Electric Immersion Heater Constructed For Long Service Life**

Hubbell electric heaters have been in service since 1920. In that time Hubbell engineering, production, and quality control systems have been continually refined to ensure that each electric heater performs to the highest standards. Available in virtually any configuration, Hubbell electric heaters are manufactured to meet the requirements of the most demanding application. So whatever fluid type you are heating, you will have confidence in knowing that when you specify and install a Hubbell electric heater the owner will be provided with a trouble-free and long lasting product.
### Standard Equipment
- NEMA 1 terminal housing
- Tubulars brazed to flange
- Fitted gasket
- Maximum 48 amp rating per circuit
- Heavy duty factory fitted jumpers
- 80/20 Nickel-chromium resistance wire
- High grade magnesium oxide insulation
- Factory fitted element spacers to prevent excessive rubbing (Only when required)
- Repressed elements to prevent hot spots at tubular bends
- Flange construction to ANSI B16.5 Class 150

### Optional Equipment
- 1. Alternate watt density (please specify) to suit specific fluid requirements
- 2. Alternate material construction
- 3. Alternate flange rating
- 4. Built-in thermostat 60-250°F range
- 5. Built-in thermowell
- 6. Factory installed nonferrous baffle system
- 7. Passivation
- 8. Electropolished finish for high purity
- 9. Terminal hermetic seals
- 10. Military spec conformance to MIL-H-22577
- 11. Individually replaceable element blades
- 12. Welded elements
- 13. Dry side extended cold end
- 14. Flange construction to ANSI B16.5 Class 300

### Model Number Designation

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</thead>
<tbody>
<tr>
<td>A = 3&quot; Flange</td>
<td>Up to 1600KW</td>
<td>A = 120V1Φ</td>
<td>B = Steel</td>
<td>1 - 108</td>
<td>C = Copper</td>
<td></td>
<td>N = None</td>
<td>In inches</td>
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<tr>
<td>B = 5&quot; Flange</td>
<td></td>
<td>RS = 208V1Φ</td>
<td>I = Incoloy</td>
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<td>W = Water Tight</td>
<td>(NEMA 4)</td>
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<tr>
<td>C = 6&quot; Flange</td>
<td></td>
<td>R = 208V3Φ</td>
<td>T = Titanium</td>
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<td></td>
<td>R = Explosion Resistant</td>
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<tr>
<td>D = 8&quot; Flange</td>
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<td>S = 240V1Φ</td>
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<tr>
<td>E = 10&quot; Flange</td>
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<td>T = 240V3Φ</td>
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<tr>
<td>G = 12&quot; Flange</td>
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<td>W = 277V1Φ</td>
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<td>T3 = 380V3Φ</td>
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<td>J = 16&quot; Flange</td>
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<td>T7 = 415V3Φ</td>
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<td>K = 18&quot; Flange</td>
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<td>T5 = 440V3Φ</td>
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<td>SL = 1&quot; MPS Screw Plug (Straight Thread)</td>
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<td>SM = 1&quot; MNPT Screw Plug (Tapered Thread)</td>
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<tr>
<td>SN = 1 1/4&quot; MNPT Screw Plug (Tapered Thread)</td>
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<tr>
<td>SP = 1 1/2&quot; MNPT Screw Plug (Tapered Thread)</td>
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<td>SR = 2&quot; MNPT Screw Plug (Tapered Thread)</td>
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<td>SW = 2 1/2&quot; MNPT Screw Plug (Tapered Thread)</td>
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<td>T = Cartridge Heater</td>
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<td>X = Alternate Configuration, (See Written Specifications)</td>
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**Example:** D120T4C18B3A52

An electric immersion heater with an 8" 150 Lb. ANSI flange, 120 KW, 480 Volt 3 phase, copper sheathing, 18 elements, steel flange, 3 circuits, NEMA 1 terminal housing, and a total immersed length of 52".

**Note:** All heaters do not necessarily conform to the model number designation system as stated above.
Please Provide The Following Data For Accurate Sizing.

**Dimensional Data:**

- **Flange O.D.:** (A) __________ inches
- **Immersion Length:** (B) __________ inches
- **Number of Bolt Holes:** ________  
  **Diameter of Bolt Holes:** ________
- **Bolt Circle Diameter:** __________ inches
- **Flange Thickness:** (C) __________ inches
- **Terminal Housing Depth:** __________ inches
- **Maximum Bundle Diameter:** (D) __________ inches
- **Electrical Conduit Opening:** (E) ________ Qty ________ NPT
- **Tubular Diameter:** __________ inches
- **Cold Length:** (F) __________ (unheated)

- **Wattage (KW):** ________________________
- **Voltage:** ________________________
- **Phase:** ________________________
- **Number of Circuits:** ________  
  **Rated** ________ KW each
  **Of equal wattage?**  
  ☐ Yes ☐ No
  If No, provide details: __________________

- **Number of U-Tubes/Hairpins:** ________________________
- **Sheath Material:** ________________________
- **Watt Density:** ________________________
- **Flange Material:** ________________________
- **Liquid Being Heated:** ________________________
- **Terminal Housing:**  
  ☐ None  ☐ Water tight NEMA 4  
  ☐ Standard ☐ Explosion Resistant
  (Please provide class, division and group rating)

- **Spacers:** ☐ Yes ☐ No
  Provide details: __________________

- **Baffles:** ☐ Yes ☐ No
  Provide details: __________________

- **Built-in Thermostat:** ☐ Yes ☐ No
  Provide details: __________________

- **Thermowell:** ☐ Yes ☐ No
  Provide details: __________________

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*Hubbell*
Master Specification: Electric Immersion Heaters

General
Provide a quantity of _______ electric immersion heater(s) Model No. ______________________ as manufactured by HUBBELL Electric heater Co., Stratford, CT. The heater shall have a total rating of _______ KW composed of _______ circuit(s) of _______ KW each when supplied with _______ Volts _______ Phase _______ Hz electrical power. The heater shall be a _______ (Specify: Flange or Screwplug) type of _______ size. The heater shall be designed for full immersion in liquid and constructed of high quality grade materials to ensure a long service life.

Tubular
The heater shall consist of _______ individual tubular elements of _______ " diameter. The properly sized Nickel-Chromium resistor wire for the element shall be verified by computer calculations to ensure the longest service life possible. The resistor wire shall be factory inspected, tested, and verified as meeting rigid quality control specifications prior to being coiled. The resistor wire is to be centered in the sheath and insulated with high quality magnesium oxide. The magnesium oxide shall be compacted so that the terminal pin is firmly secured allowing for a maximum torque of 8 inch lbs. when tightening terminal hardware. The tubular sheathing shall be copper (Optional Specifications: Incoloy, Type 304 or 316 or 321 stainless steel, Steel, Teflon coated, Titanium, Monel, Inconel, Copper-Nickel) and have a maximum watt density of _______ watts/per square inch with a _______ " cold section and a total immersed length of _______ ".

Terminal Housing
The heater (shall, shall not) include a terminal housing. The terminal housing shall be a general purpose NEMA 1 enclosure (Optional Specification: Nema 4 watertight, explosion resistant) and supplied with a quantity of _______ electrical conduit connections of _______ NPT size each.

In addition, the heater may be supplied with the following optional features:

- Option Built-in thermostat with a 60-250°F range
- Option Built-in thermowell
- Option Factory fitted thermocouple strapped to the element sheathing
- Option Factory fitted element baffle system
- Option Passivation of material
- Option Electropolishing of material
- Option Hermetic seals for superior moisture protection
- Option Individually replaceable element hairpins
- Option Liquid Die Penetrant Testing
- Option ASME Certification
- Option Construction to MIL-H-22577
- Option ________________
- Option ________________

Warranty
The heater manufacturer shall warranty the entire immersion heating element against defects in workmanship and material for a period of one (1) year from date of start-up, provided that the unit is started within three (3) months of date of shipment and installed and operated within the scope of the heater design and operating capability.

ISO 9001:2008
Committed to continuous improvement...
Continuing research results in product improvement; therefore specifications are subject to change without notice. For the most updated information, consult the factory directly.

Made in the U.S.A.

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