



## Electric Immersion Heaters Constructed For Long Service Life

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

Our 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.

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

### Applications

Water heaters, boilers, oil heaters, freeze protection, oem applications, storage tanks, railroad tank cars, process systems, heat transfer systems



# HEATING ELEMENTS

COMPONENTS

### Standard Equipment

- NEMA 1 terminal housing
- Fitted gasket
- Heavy duty factory fitted jumpers
- 80/20 Nickel-chromium resistance wire
- High grade magnesium oxide insulation
- Element spacers as required
- Re-pressed elements at U-bends



## Heating Elements Model Number Designation

BASE DESIGN	KW	VOLTAGE & PHASE	SHEATH MATERIAL	NUMBER OF ELEMENTS	FLANGE MATERIAL	NUMBER OF CIRCUITS	TERMINAL HOUSING	IMMERSION LENGTH	OPTIONAL EQUIPMENT
<b>A</b> = 3" Flange <b>B</b> = 5" Flange <b>C</b> = 6" Flange <b>D</b> = 8" Flange <b>E</b> = 10" Flange <b>G</b> = 12" Flange <b>H</b> = 14" Flange <b>J</b> = 16" Flange <b>K</b> = 18" Flange <b>SL</b> = 1" MPS Screw Plug (Straight Thread) <b>SM</b> = 1" MNPT Screw Plug (Tapered Thread) <b>SN</b> = 1 1/4" MNPT Screw Plug (Tapered Thread) <b>SP</b> = 1 1/2" MNPT Screw Plug (Tapered Thread) <b>SR</b> = 2" MNPT Screw Plug (Tapered Thread) <b>SW</b> = 2 1/2" MNPT Screw Plug (Tapered Thread) <b>T</b> = Cartridge Heater <b>X</b> = Alternate Configuration (See Written Specifications)	Up to 1000 kW* (*Standard configuration. Higher kW available, consult factory)	<b>A</b> = 120V 1Φ <b>RS</b> = 208V 1Φ <b>R</b> = 208V 1Φ <b>S</b> = 240V 1Φ <b>T</b> = 240V 1Φ <b>W</b> = 277V 1Φ <b>T4S</b> = 480V 1Φ <b>T3</b> = 380V 3Φ <b>T7</b> = 415V 3Φ <b>T5</b> = 440V 3Φ <b>T4</b> = 480V 3Φ <b>T6</b> = 600V 3Φ <b>T9</b> = 690V 3Φ	<b>C</b> = Copper <b>I</b> = Incoloy <b>T</b> = Titanium <b>B</b> = Steel <b>M</b> = Monel <b>S</b> = Type 316 Stainless Steel <b>F</b> = Type 304/321 Stainless Steel <b>K</b> = Inconel <b>N</b> = Copper Nickel <b>X</b> = Other	1 – 78* (*Standard Configuration. Higher element counts available, consult factory)	<b>B</b> = Steel <b>C</b> = Steel with Copper Facing <b>I</b> = Incoloy <b>T</b> = Titanium <b>M</b> = Monel <b>S</b> = Type 316 Stainless Steel <b>F</b> = Type 304 Stainless Steel <b>K</b> = Inconel <b>P</b> = Brass/Bronze <b>X</b> = Other	1 – 26 (*Standard Configuration. Higher number of circuits available, consult factory)	<b>N</b> = None <b>A</b> = NEMA 1 (Dust Resistant) <b>W</b> = NEMA 4 (Liquid Resistant) <b>X</b> = NEMA 4x (Liquid and Corrosion Resistant) <b>R</b> = NEMA 7 (Explosion Resistant)	in inches	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (-).

### 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".

## Optional Equipment

*Optional equipment must be called out in the written specifications, use the codes below.*

- |   |  |
|---|--|
| <b>i1</b> Built-in High Limit<br><b>i2</b> Built-in Thermostat 60°F - 250°F range<br><b>i3</b> Built-in Thermostat 60°F - 187°F, SPST, Pilot Duty (Explosion Proof/Resistant Only)<br><b>i4</b> Built-in Thermowell<br><b>i5</b> Factory installed Baffle System<br><b>i6</b> Passivated<br><b>i7</b> Electropolished | <b>i8</b> Element Hermetic Seals<br><b>i9</b> Military Spec Conformance to MIL-H-22577<br><b>i10</b> Individually Replaceable Elements*<br><b>i11</b> Dry Side Shortened/Extended Cold End (Please Specify)<br><b>i12</b> Alternate Flange Construction<br><b>i13</b> Additional Conduit Openings (Please Specify Size and Amount)<br><b>i14</b> Thermocouple Attached to Sheath (Specify Type: J, K, T, E)<br><b>i15</b> Gasket Material (Specify Type) |
|---|--|

**Please note:** Optional equipment is only meant for **electric immersion heaters** and may impact overall dimensions and weight. Please request submittal drawing from factory.

\*Subject to design

All information is subject to change without notice. Consult factory for submittal drawings.

For help with your electric heater application, please complete as much information as possible. An applications engineer or technical salesperson will respond to help you with your specific needs.

Name _____		Title _____	
Company _____		Address _____	
City _____	State _____	Zip _____	Country _____
Tel: (        )        -		Ext        Fax: (        )        -	
Email _____		Website URL _____	
Should we send you a quote by:    Mail    Fax    Email    Needed    ASAP or by    _____ /    _____ /    _____			

Replacement Heater	Model #	KW	Volts	Phase	Quantity
Manufacturer _____	Heater failed due to _____	Age _____	Operator error _____	Misapplication _____	Other _____

**New Application**    Just Quote    or    if further recommendations can be made *contact*  
 I need technical assistance \_\_\_\_\_ Tel: (        )        -       

Quantity _____	(If other than above)
<b>My application Requires</b>	
Circulation Heater(s) _____ Flanged Immersion Heater(s) _____ Screw Plug Immersion Heater(s) _____ Fuel Oil heater(s) _____ Hydraulic/Lube Oil Heater(s) _____ Other _____	<b>Circulation Heater(s) Details Needed</b> Insulation & Jacket:    Yes    No Insulation: Type _____ Thickness _____ ASME Certification Required:    Yes    No    Maybe Inlet & Outlet: Size _____ Location _____ Flanged    FNPT    MNPT Sketch or indicate Drain    Vent    Other _____

**Power Required** if unknown referred to Power Information section below

Wattage: _____	KW or _____	Watts _____	Volts _____	Phase _____	Watt Density <i>(WSI if known)</i> _____
Fluid/gas to be heated: _____		Cold lead wet side: _____		<i>(minimum if applicable)</i>	
Element sheath material: _____		Flange plug material: _____		<i>(if specific materials are required)</i>	
Maximum immersion length: _____ inches		Mounting installation:    Horizontal    Vertical			
Preferred flange/plug size: _____		If vertical terminal enclosure    Up    Down			
Operating pressure: _____ PSIG		Thermostat:    Yes    No			
Operating temperature: _____ °F or    °C		Temperature range:    0 - 100°F    60 - 250°F			
Maximum bundle diameter: _____		175 - 550°F    Other _____			
Terminal enclosure:    Standard    Weather resistant		Thermocouple:    Yes    No    If yes type _____			
Explosion resistant    Other _____		RTD:    Yes    No			
Other comments: _____					

**Power Information**

**I need to maintain tank temperature**    Tank dimensions: \_\_\_\_\_ Dia. x \_\_\_\_\_ L or \_\_\_\_\_ L x \_\_\_\_\_ W x \_\_\_\_\_ H  
 Closed top    Yes    No    Tank insulation:    Yes    No    Type/Thickness: \_\_\_\_\_ Tank:    Vertical    Horizontal  
 Desired temperature: \_\_\_\_\_ °F or    °C    Ambient temperature (worst case): \_\_\_\_\_ °F or    °C

**I need to increase the temperature**    Beginning temp: \_\_\_\_\_ °F or    °C    Desired temp: \_\_\_\_\_ °F or    °C  
 Allowable heat-up time: \_\_\_\_\_ Hrs/Mins.    Flow rate: \_\_\_\_\_ gallons or    pounds per hour, \_\_\_\_\_ minute or    second \_\_\_\_\_



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