



Hazloc Heaters™

Safe heat when you need it!



IEH1

**Industrial-Grade
Electric Unit Heater
For Ordinary Locations**

www.HazlocHeaters.com



Hazloc Heaters™ is a manufacturer of industrial-grade unit heaters suitable for hazardous and severe-duty locations.



The **IEH1 Evolution** series of industrial-grade electric air heaters are engineered to meet the most demanding requirements of industrial environments. The harsh operating conditions require heating equipment that is safe, reliable, dependable, and available when you need it. **IEH1** unit heaters are designed for maximum heating performance and to provide primary or supplementary heating of people or equipment in non-hazardous and non-corrosive environments.

Designed for heavy-duty use and improved performance!

All **Hazloc Heaters™ IEH1** models are **designed to meet U.S. and Canadian certification standards**. The three housing sizes of **IEH1** heaters are available in **76 model choices** of voltage and heat output combinations to meet your specific requirements. Numerous factory built-in options are also available for added convenience and safety.

The rugged and versatile **IEH1** heater incorporates high quality stainless steel tubular elements, high performance fan and motor assembly, and sturdy powder coated 16 GA galvanized steel housing and inlet/outlet grilles. The high air flow and air throw, up to 50 feet (15 m), promote air circulation within the space. Furthermore, the more uniform temperature increases comfort levels and helps eliminate cold spots.

Applications!

IEH1 heaters are suitable for a wide variety of applications that include, but are not limited to, aircraft hangars, power generation stations, mine shafts, hoist houses, factories, pump houses, maintenance shops, chemical plants, welding shops, entryways, garages, as well as service stations.



Rugged design, but easily maintained!

IEH1 heaters are designed for industrial applications with all features being heavy-duty to meet your most demanding environments and long-life expectations. Even with heavy-gauge galvanized steel construction used throughout the heater, it does not inhibit maintenance of the product since it has been designed for easy installation and field servicing. All components and motor are factory-wired to a single terminal block for field wiring, eliminating the chance for field error and reducing installation costs. This heater will reduce the downtime and maintenance costs normally experienced in heaters of standard design.

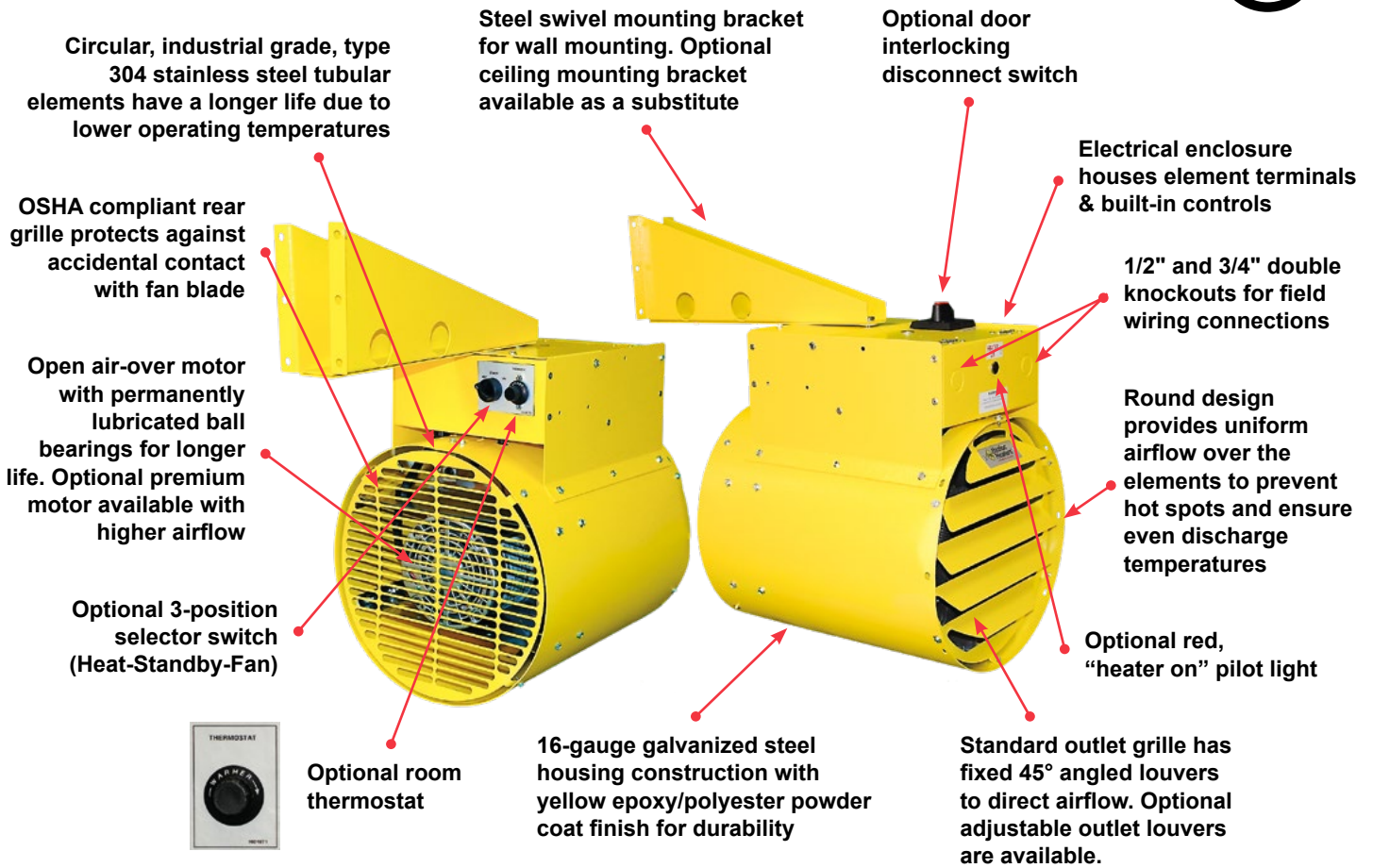


Maximum durability... rugged finned tubular elements!

The **IEH1 Evolution** series of heaters uses circular, industrial grade, type 304 stainless steel finned tubular elements for **maximum durability and longer life** in your demanding applications. The round design of the unit heater provides uniform airflow over the elements to prevent hot spots and ensures even discharge temperatures.



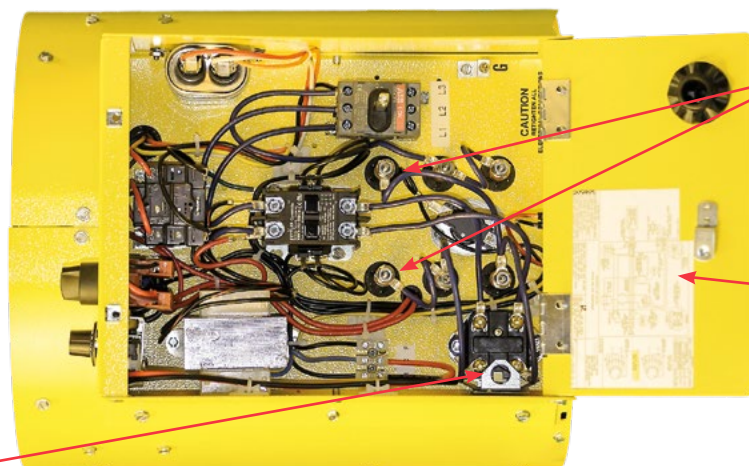
Dedicated to Performance and Reliability!



Electrical Enclosure

Built-in controls include automatic reset overtemperature cutout, controlling contactor, transformer for 24 VAC control circuit, and terminal block for field wiring. Heater, fan motor and controls are all connected to the same branch circuit. All models have a fan delay which is a thermal cutout attached to the element.

Optional secondary manual reset overtemperature cutout available

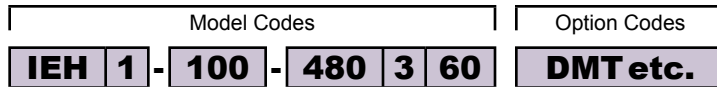


Element terminals

Wiring diagram label on inside enclosure lid for easy reference

IEH1 Model Coding

Heater Model Code & Option Codes



Option codes are stamped on data plate in alphabetical order

Model Series

Generation

For major revisions

| Power Output | | |
|--------------|------------|--------------------|
| 3 kW | 030 | Small cabinet size |
| 5 kW | 050 | Small cabinet size |
| 7.5 kW | 075 | Small cabinet size |
| 9 kW | 090 | Small cabinet size |
| 10 kW | 100 | Small cabinet size |
| 12 kW | 120 | Small cabinet size |
| 12.5 kW | 125 | Large cabinet size |
| 15 kW | 150 | Large cabinet size |
| 20 kW | 200 | Large cabinet size |
| 25 kW | 250 | Large cabinet size |
| 30 kW | 300 | Large cabinet size |
| 35 kW | 350 | Large cabinet size |
| 38.4 kW | 384 | Large cabinet size |

| Heater Line Voltage | |
|---------------------|------------|
| 120 Volts | 120 |
| 208 Volts | 208 |
| 240 Volts | 240 |
| 277 Volts | 277 |
| 347 Volts | 347 |
| 480 Volts | 480 |
| 600 Volts | 600 |

| Factory Built-in Option Codes | |
|-------------------------------|--|
| D | Disconnect switch |
| G | Adjustable outlet louvers |
| M | Manual high limit (secondary) |
| L | Pilot light (heater on) |
| R | Built-in fan relay (required for remote fan switch) |
| S | 3-position selector switch (Heat-Standby-Fan) |
| T* | Thermostat, bulb (40 to 120°F / 4 to 49°C) |
| H† | Premium fan motor |
| C | Ceiling mounting bracket (substitute for wall bracket) |

Standard outlet louvers are not adjustable
Primary protection is an automatic reset high limit

Not Required for 600V heaters. Terminal block is included for this connection.

Adjustment knob has "Warmer" indicator label
Refer to Page 7 for availability

Heater installs from ceiling using two 3/8 - 16 customer supplied threaded rods

| Frequency | |
|-----------|------|
| 60 | 60Hz |

| Phase | |
|----------|---------|
| 1 | 1 Phase |
| 3 | 3 Phase |

* Thermostat setting should not exceed a room temperature of 104°F (40°C).

† The 10, 12, 20, 35 & 38.4 kW models and all 120V, 277V, 347V & 600V models come standard with premium fan motor. On all other models it is an option. Refer to Page 7 for availability.



Model Code Format

When requesting a quote or ordering refer to Page 7 and then please follow the "Model Code" format above.

Example:

Model Code: **IEH1-100-480360 DMT**

IEH1 Specifications by Model Size

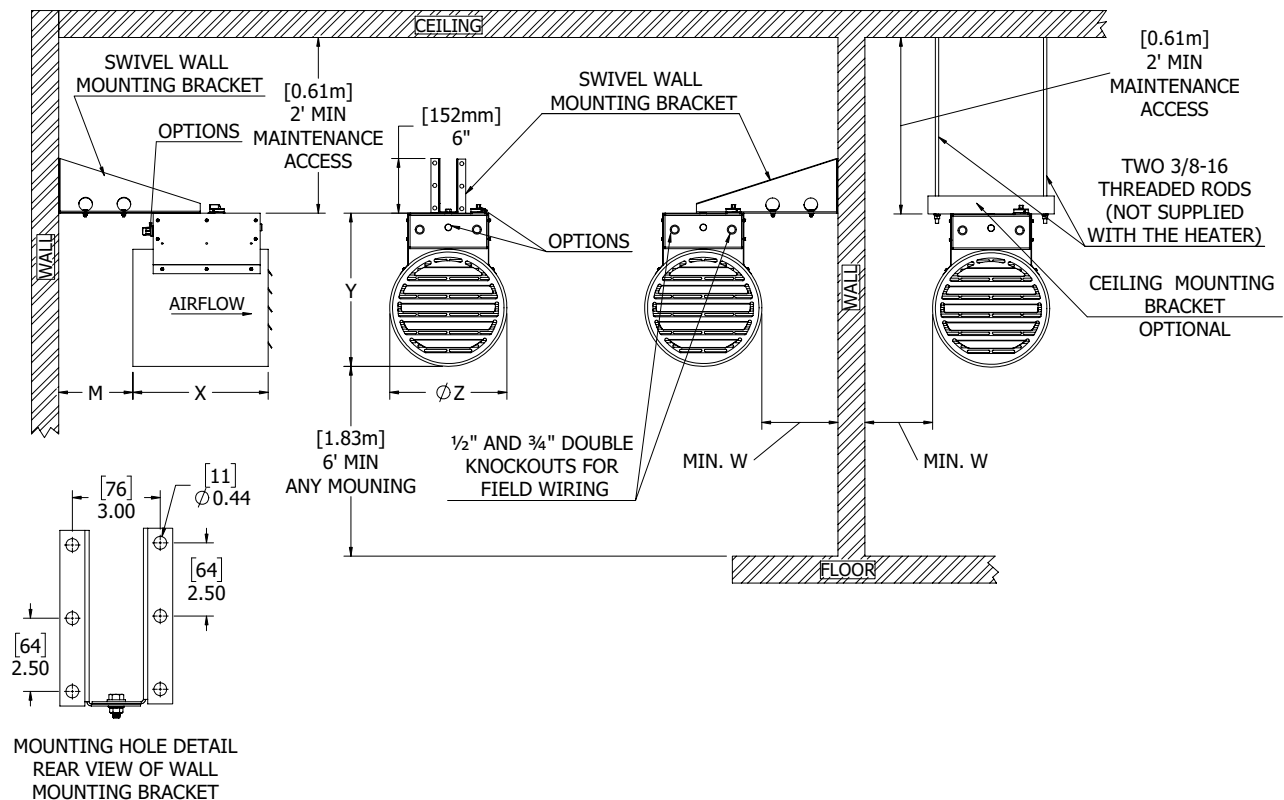
| Dimensions, Airflows and Weights | | kW | | | |
|----------------------------------|-------------------------------|---------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | 3 to 12 | 12.5 to 20 | 25 to 38.4 | |
| Overall heater dimensions | "X" in. (mm) | 15 (381) | 16.25 (413) | 20.75 (527) | |
| | "Y" in. (mm) | 17 (432) | 23.50 (597) | 23.50 (597) | |
| | "Z" in. (mm) | 13 (330) | 19.25 (489) | 19.25 (489) | |
| Mounting dimensions | "M" in. (mm) | 8.25 (210) | 7 (178) | 4 (102) | |
| | "W" in. (mm) | 8.75 (222) | 5.50 (140) | 5.50 (140) | |
| Airflow characteristics | Base Fan Motor (1200 rpm) | Air volume cfm (m³/hr) | 362 (615) | 1342 (2280) | 1237 (2102) |
| | Premium Fan Motor (1800 rpm)* | Air volume cfm (m³/hr) | 618 (1050) | 1774 (3014) | 1635 (2778) |
| | Maximum air throw ft. (m) | | 15 (5) | 50 (15) | 50 (15) |
| Noise Level (dB) | Standard fan motor (1200 rpm) | | 64 | 68 | 68 |
| | Premium fan motor (1800 rpm) | | 75 | 84 | 84 |
| Approximate weight | Net lbs (kg) | | 45 (20) | 60 (27) | 80 (36) |
| | Shipping lbs (kg) | | 60 (27) | 84 (38) | 130 (59) |
| Shipping package dimensions | in. (mm) | | 25 x 18 x 15 (635 x 457 x 381) | 35 x 21 x 30 (889 x 533 x 762) | 35 x 21 x 30 (889 x 533 x 762) |

Note: Heaters are packed inside cardboard boxes with protective packing material.

* The 10, 12, 20, 35 & 38.4 kW models and all 120V, 277V, 347V & 600V models come standard with premium fan motor. On all other models it is an option. Refer to Page 7 for availability.

| Recommended Maximum Mounting Height From Floor ft. (m) | | | |
|--|--------------|-------------|---------------|
| 3 to 5 kW | 7.5 to 10 kW | 12 to 20 kW | 25 to 38.4 kW |
| 10 (3) | 15 (4.6) | 20 (6.1) | 25 (7.6) |

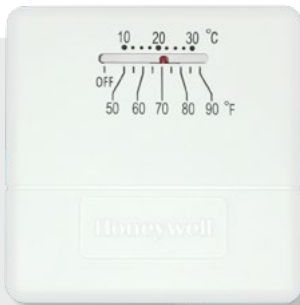
IEH1 Physical Dimensions



IEH1 General Specifications

| | | |
|---------------------------------|-------------------------------------|---|
| Approvals | Certification | cULus - Certified to Canadian and U.S. standards. |
| Cabinet | Housing material | 16-gauge (0.0635 in.) (1.61 mm) galvanized steel with yellow epoxy/polyester powder coat paint. |
| | Inlet grille | 16-gauge (0.0635 in.) (1.61 mm) galvanized steel with yellow epoxy/polyester powder coat paint. Meets OSHA requirements. |
| | Outlet grille | 16-gauge (0.0635 in.) (1.61 mm) galvanized steel fixed louvers with yellow epoxy/polyester powder coat paint. For adjustable outlet louvers select option code (G). |
| | Fasteners | Zinc plated steel and stainless steel. |
| | Enclosure | 16-gauge (0.0635 in.) (1.61 mm) galvanized steel with yellow epoxy/polyester powder coat paint. Houses element terminals and built-in controls that are all connected to the same branch circuit. Single terminal block for field wiring. |
| | Mounting bracket | Heater comes complete with a galvanized steel swivel wall mounting bracket with yellow epoxy/polyester powder coat paint. If heater is to be installed from ceiling using two field-supplied 3/8-16 threaded rods, select option code (C) to substitute ceiling bracket for factory swivel wall mounting bracket. |
| Motor/Fan | Motor type | Open air-over, epoxy coated, with built-in thermal protection and permanently lubricated ball bearings. Base motor is 1200 rpm. For 1800 rpm, Premium fan motor, select option code (H). The 10, 12, 20, 35 & 38.4 kW models and all 120V, 277V, 347V & 600 Volt models come standard with Premium fan motor. |
| | Fan blade | Aluminum. Three-blade or four-blade depending on kW size. |
| Heating Elements | Material | Industrial grade, type 304 stainless steel finned tubular elements (Sheath and Fins). |
| Protection | Temperature high limits | One automatic reset overtemperature cutout. For a secondary manual reset overtemperature cutout, select option code (M). |
| Controls | Fan delay | Thermal cutout attached to an element. |
| | Control circuit | 24VAC control circuit. Includes main magnetic contactor and control voltage transformer. |
| Factory Built-in Options | Adjustable outlet louvers | Replaces fixed louvers. Select option code (G). |
| | Fan relay | Required for remote fan switch. Select option code (R). Not required on 600V models. |
| | Premium fan motor (1800 rpm) | Replaces standard 1200 rpm motor. Select option code (H). The 10, 12, 20, 35 & 38.4 kW models and all 120V, 277V, 347V & 600 Volt models come standard with Premium fan motor. |
| | 3-Position selector switch | Position markings: Heat-Standby-Fan. Select option code (S). |
| | Room thermostat | Knob with "Warmer" and arrow indicating direction. Range: 40 to 120°F (4 to 49°C). Select option code (T). |
| | Disconnect switch | Main supply power door interlocking disconnect located on door of control enclosure. Select option code (D). |
| | Pilot light | Red "Heater on" pilot light. Select option code (L). |
| | Secondary high limit | Manual reset overtemperature cutout. Select option code (M). |
| Operating Limits | Substitute ceiling mounting bracket | Replaces swivel wall mounting bracket. Heater installs from the ceiling with two field-supplied 3/8-16 threaded rods. Select option code (C). |
| | Ambient temperature | Operating and Storage: -22 to 104°F (-30 to 40°C). These air heaters are designed for comfort heating and should not be used in ambient temperatures exceeding the maximum limit. |

T812A1010 Remote Room Thermostat



Part #: 1006998

1-stage, snap action bimetal type

Heating only applications, SPST, 18 to 30VAC, 1 stage

Anticipator: adjustable 0.18A to 1.2A @ 30VAC

Temperature adjustment range: 50 to 90°F (10 to 32°C)

Differential: +/- 3°F (1.5°C)

Dimensions: 3.125" W x 3.125" H x 0.875" D (79 mm x 79 mm x 23 mm)

Tamperproof: No

Thermometer: No

Positive off: Yes

IEH1 Heater Performance Data

| kW (btu/hr) | Line Volts | Phase Ø | Total Current A (†) | Approximate Air Temp. Rise | | Motor | | | Premium Fan Motor Availability | Model See Page 4 to complete model coding | Approximate Shipping Lead Time (Δ) | | | | | | |
|------------------|-----------------|------------|---------------------------|-------------------------------|-------------------|-------------------|-------------------|-------|--------------------------------------|---|--|-------------------|-----|-----|---|----------|-------------------|
| | | | | °F | °C | HP | Volts | Phase | | | | | | | | | |
| 3 (10236) | 120 | 1 | 29 | 15 | 8 | 1/4 | 120 | 1 | Standard | IEH1-030-120160 * | 3 to 4 weeks | | | | | | |
| | 208 | | 17 | 21 | 12 | | | | 208 | Optional | | IEH1-030-208160 * | | | | | |
| | 240 | | 15 | 21 | 12 | | | | 240 | Optional | | IEH1-030-240160 * | | | | | |
| | 277 | | 13 | 15 | 8 | | | | 277 | Standard | | IEH1-030-277160 * | | | | | |
| | 347 | | 11 | 15 | 8 | | | | 347 | Standard | | IEH1-030-347160 * | | | | | |
| | 480 | | 8 | 21 | 12 | | | | 480 | Optional | | IEH1-030-480160 * | | | | | |
| | 600 | 6 | 15 | 8 | 600 | Standard | IEH1-030-600160 * | | | | | | | | | | |
| | 208 | 3 | 11 | 21 | 12 | 208 | 1/4 | 1 | Optional | IEH1-030-208360 * | | | | | | | |
| | 240 | | 10 | 21 | 12 | 240 | | | Optional | IEH1-030-240360 * | | | | | | | |
| 480 | 5 | | 21 | 12 | 480 | Optional | | | IEH1-030-480360 * | | | | | | | | |
| 5 (17060) | 208 | 1 | 27 | 35 | 19 | 1/4 | 208 | 1 | Optional | IEH1-050-208160 * | | | | | | | |
| | 240 | | 23 | 35 | 19 | | | | 240 | Optional | | IEH1-050-240160 * | | | | | |
| | 277 | | 20 | 26 | 14 | | | | 277 | Standard | | IEH1-050-277160 * | | | | | |
| | 347 | | 17 | 26 | 14 | | | | 347 | Standard | | IEH1-050-347160 * | | | | | |
| | 480 | | 12 | 35 | 19 | | | | 480 | Optional | | IEH1-050-480160 * | | | | | |
| | 600 | | 10 | 26 | 14 | | | | 600 | Standard | | IEH1-050-600160 * | | | | | |
| | 208 | 3 | 16 | 35 | 19 | 208 | 1/4 | 1 | Optional | IEH1-050-208360 * | | | | | | | |
| | 240 | | 15 | 35 | 19 | 240 | | | Optional | IEH1-050-240360 * | | | | | | | |
| | 480 | | 8 | 35 | 19 | 480 | | | Optional | IEH1-050-480360 * | | | | | | | |
| 600 | 6 | 26 | 14 | 600 | Standard | IEH1-050-600360 * | | | | | | | | | | | |
| 7.5 (25590) | 208 | 1 | 39 | 53 | 29 | 1/4 | 208 | 1 | Optional | IEH1-075-208160 * | | | | | | | |
| | 240 | | 34 | 53 | 29 | | | | 240 | Optional | IEH1-075-240160 * | | | | | | |
| | 277 | | 29 | 39 | 22 | | | | 277 | Standard | IEH1-075-277160 * | | | | | | |
| | 347 | | 24 | 39 | 22 | | | | 347 | Standard | IEH1-075-347160 * | | | | | | |
| | 480 | | 17 | 53 | 29 | | | | 480 | Optional | IEH1-075-480160 * | | | | | | |
| | 600 | | 14 | 39 | 22 | | | | 600 | Standard | IEH1-075-600160 * | | | | | | |
| | 208 | 3 | 23 | 53 | 29 | 208 | 1/4 | 1 | Optional | IEH1-075-208360 * | | | | | | | |
| | 240 | | 21 | 53 | 29 | 240 | | | Optional | IEH1-075-240360 * | | | | | | | |
| | 480 | | 11 | 53 | 29 | 480 | | | Optional | IEH1-075-480360 * | | | | | | | |
| 600 | 9 | 39 | 22 | 600 | Standard | IEH1-075-600360 * | | | | | | | | | | | |
| 9 (30709) | 208 | 1 | 46 | 64 | 36 | 1/4 | 208 | 1 | Optional | IEH1-090-208160 * | | | | | | | |
| | 240 | | 40 | 64 | 36 | | | | 240 | Optional | IEH1-090-240160 * | | | | | | |
| | 277 | | 35 | 47 | 26 | | | | 277 | Standard | IEH1-090-277160 * | | | | | | |
| | 347 | | 29 | 47 | 26 | | | | 347 | Standard | IEH1-090-347160 * | | | | | | |
| | 480 | | 20 | 64 | 36 | | | | 480 | Optional | IEH1-090-480160 * | | | | | | |
| | 600 | | 17 | 47 | 26 | | | | 600 | Standard | IEH1-090-600160 * | | | | | | |
| | 208 | 3 | 28 | 64 | 36 | 208 | 1/4 | 1 | Optional | IEH1-090-208360 * | | | | | | | |
| | 240 | | 24 | 64 | 36 | 240 | | | Optional | IEH1-090-240360 * | | | | | | | |
| | 480 | | 12 | 64 | 36 | 480 | | | Optional | IEH1-090-480360 * | | | | | | | |
| 600 | 10 | 47 | 26 | 600 | Standard | IEH1-090-600360 * | | | | | | | | | | | |
| 10 (34120) | 240 | 1 | 44 | 52 | 29 | 1/4 | 240 | 1 | Standard | IEH1-100-240160 * | | | | | | | |
| | 277 | | 39 | | | | | | | 277 | IEH1-100-277160 * | | | | | | |
| | 347 | | 32 | | | | | | | 347 | IEH1-100-347160 * | | | | | | |
| | 480 | | 22 | | | | | | | 480 | IEH1-100-480160 * | | | | | | |
| | 600 | | 19 | | | | | | | 600 | IEH1-100-600160 * | | | | | | |
| | 208 | | 30 | | | | | | | 208 | IEH1-100-208360 * | | | | | | |
| | 240 | 3 | 27 | 52 | 29 | 1/4 | 240 | 1 | Standard | IEH1-100-240360 * | | | | | | | |
| | 480 | | 14 | | | | | | | 480 | IEH1-100-480360 * | | | | | | |
| | 600 | | 11 | | | | | | | 600 | IEH1-100-600360 * | | | | | | |
| 12 (40946) | 277 | 1 | 46 | 62 | 34 | 1/4 | 277 | 1 | Standard | IEH1-120-277160 * | | | | | | | |
| | 347 | | 38 | | | | | | | 347 | IEH1-120-347160 * | | | | | | |
| | 480 | | 27 | | | | | | | 480 | IEH1-120-480160 * | | | | | | |
| | 208 | | 36 | | | | | | | 208 | IEH1-120-208360 * | | | | | | |
| | 240 | | 3 | | | | | | | 32 | 62 | 34 | 1/4 | 240 | 1 | Standard | IEH1-120-240360 * |
| | 480 | | | | | | | | | 16 | | | | | | | 480 |
| | 600 | 13 | | 600 | IEH1-120-600360 * | | | | | | | | | | | | |
| | 12.5 (42652) | 347 | 1 | 39 | 22 | 12 | 1/4 | 347 | 1 | Standard | IEH1-125-347160 * | | | | | | |
| | | 208 | | 37 | | | | | | | 208 | IEH1-125-208360 * | | | | | |
| 240 | | 33 | | 240 | | | | | | | IEH1-125-240360 * | | | | | | |
| 480 | | 3 | 17 | 31 | 17 | 1/4 | 480 | 1 | Standard | IEH1-125-480360 * | | | | | | | |
| 600 | | | 14 | | | | | | | 600 | IEH1-125-600360 * | | | | | | |
| 15 (51180) | 347 | 1 | 47 | 27 | 15 | 1/4 | 347 | 1 | Standard | IEH1-150-347160 * | | | | | | | |
| | 208 | | 44 | | | | | | | 208 | IEH1-150-208360 * | | | | | | |
| | 240 | | 39 | | | | | | | 240 | IEH1-150-240360 * | | | | | | |
| | 480 | 3 | 20 | 38 | 21 | 1/4 | 480 | 1 | Standard | IEH1-150-480360 * | | | | | | | |
| | 600 | | 16 | | | | | | | 600 | IEH1-150-600360 * | | | | | | |
| 20 (68240) | 480 | 3 | 26 | 35 | 19 | 1/4 | 480 | 1 | Standard | IEH1-200-480360 * | | | | | | | |
| | 600 | | 21 | | | | | | | 600 | IEH1-200-600360 * | | | | | | |
| 25 (85300) | 480 | 3 | 32 | 66 | 37 | 1/4 | 480 | 1 | Optional | IEH1-250-480360 * | | | | | | | |
| | 600 | | 26 | | | | | | | 600 | IEH1-250-600360 * | | | | | | |
| 30 (102360) | 480 | 3 | 38 | 79 | 44 | 1/4 | 480 | 1 | Optional | IEH1-300-480360 * | | | | | | | |
| | 600 | | 31 | | | | | | | 600 | IEH1-300-600360 * | | | | | | |
| 35 (119420) | 480 | 3 | 44 | 61 | 34 | 1/4 | 480 | 1 | Standard | IEH1-350-480360 * | | | | | | | |
| | 600 | | 35 | | | | | | | 600 | IEH1-350-600360 * | | | | | | |
| 38.4 (131026) | 480 | 3 | 48 | 70 | 39 | 1/4 | 480 | 1 | Standard | IEH1-384-480360 * | | | | | | | |
| | 600 | | 38 | | | | | | | 600 | IEH1-384-600360 * | | | | | | |

(*) Refer to Page 4 for Factory Built-in Option codes to complete entire model code for ordering.

(†) Total Amps = Heating element amps and motor amps.

(Δ) Heaters ordered with custom options subject to longer shipping lead times.

Large quantity orders may also be subject to longer lead times.

Additional Products Available

Hazloc Heaters™ offers a wide variety of steam/hydronic air heaters, explosion-proof electric air heaters, washdown/corrosion resistant air heaters, non-hazardous area air heaters, air sensing thermostats, disconnect switches and other related accessories.

Please visit www.HazlocHeaters.com and click on the *Products* link.



 **Hazloc Heaters™** *“Safe heat when you need it!”*

Quality Mission Statement

Quality is... customers that come back, and products that don't.

Limited Warranty

Hazloc Heaters™ warrants all **IEH1** series of industrial-grade electric unit heaters against defects in materials and workmanship under normal conditions of use for a period of eighteen (18) months from date of purchase or twelve (12) months from date the product is first placed into service, whichever period lapses first, based on the following terms:

1. The heater must not be modified in any way.
2. The heater must be stored, installed and used only in accordance with the owner's manual and attached data plate information.
3. Replacement parts will be provided free of charge as necessary to restore any unit to normal operating condition, provided that the defective parts be returned to us freight prepaid and that the replacement parts be accepted freight collect.
4. The complete heater may be returned to our manufacturing plant for repair or replacement (at our discretion), freight charges prepaid.
5. Contamination by dirt, dust, etc. or corrosion will not be considered as defects.
6. This warranty shall be limited to the actual equipment involved and, under no circumstances, shall include or extend to installation or removal costs, or to consequential damages or losses.

 **Hazloc Heaters™**

Safe heat when you need it!

#1, 666 Goddard Ave. NE
Calgary, Alberta T2K 5X3 Canada
Tel.: +1-403-730-2488
Fax: +1-403-730-2482
Customer Toll Free (U.S. & Canada):
+1-866-701-Heat (4328)
www.HazlocHeaters.com



Available from: