



Safe heat when you need it!







Explosion-Proof Electric Air Heater For Hazardous Locations

Class I, Division 1 & 2, Groups C & D Class II, Division 1 & 2, Groups F & G Temperature Code T3B (3kW/35kW = T3A)

Class I, Zone 1 & 2, Groups IIA & IIB, T3



Thorne & Derrick +44 (0) 191 410 4292

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



The XEU1 series of explosion-proof electric air heaters is designed to meet the most demanding requirements of heavy industry. The harsh operating conditions of this industry require heating equipment that is safe, reliable, dependable, and available when you need it. XEU1 unit heaters are designed to provide primary or supplementary heating for comfort or freeze protection in areas that are classified as hazardous locations (Gas and Dust atmospheres).

Designed for hazardous locations!

All *Hazloc Heaters*™ XEU1 models are designed to meet U.S. and Canadian certification standards and the spark-resistant fan assembly is also compliant to AMCA 99-10, Type B. The three sizes of XEU1 heaters include our *ExCaliber*™ high performance liquid-to-air heat-exchanger cores that are available in 35 model choices of voltage and heat output combinations to meet your specific requirements.

The rugged and versatile **XEU1** heater incorporates a high quality immersion heater, high performance fan and motor assembly, a sturdy 14 GA steel cabinet with epoxy/polyester powder-coating for corrosion resistance, large control enclosure with an extra port for convenient wiring of an external room thermostat, and enclosure O-rings to minimize moisture ingress.

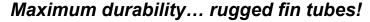


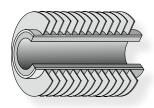
XEU1 heaters are suitable for a wide variety of applications that include but are not limited to oil & gas drilling rigs, petrochemical facilities, refineries, chemical storage and handling facilities, paint storage areas, sewage treatment plants, aircraft servicing areas, grain elevators, coal preparation areas, and other areas containing combustible dusts (flour, wood, plastics, chemicals, etc.).



Rugged design, but easily maintained!

All **XEU1** 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 steel construction used throughout the heater it does not inhibit maintenance of the product since the **XEU1** has been designed for easy field servicing with a removable heat exchanger core assembly, split fan guard, and replaceable automatic and manual reset high-limits. An added benefit is our 36-month heater warranty!

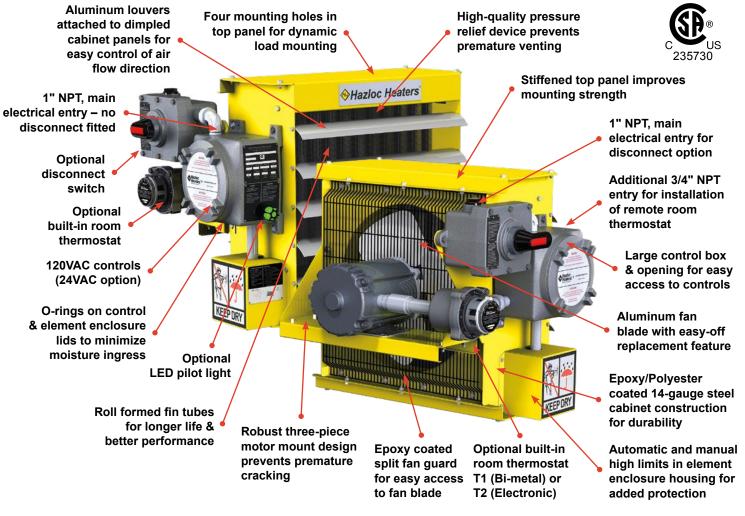




All **XEU1** *ExCaliber*™ liquid-to-air heat-exchanger cores are evacuated & sealed and are constructed using rugged carbon-steel tubes with copper-free, roll-formed aluminum fins to maximize heat transfer and carbon-steel headers for maximum durability, resistance to corrosion, and longer life in your demanding applications.

"Safe heat when you need it!"

Dedicated to Performance and Reliability!



NOTE: XEU1 heaters must not be exposed to rain or snow. This applies to both installed and stored heaters.

Suitable for the following hazardous location classifications:

Class I, Division 1 & 2, Groups C & D, T3B (3kW/35kW = T3A)



Class I, Zone 1 & 2, Groups IIA & IIB, T3

Limited 36-month Warranty



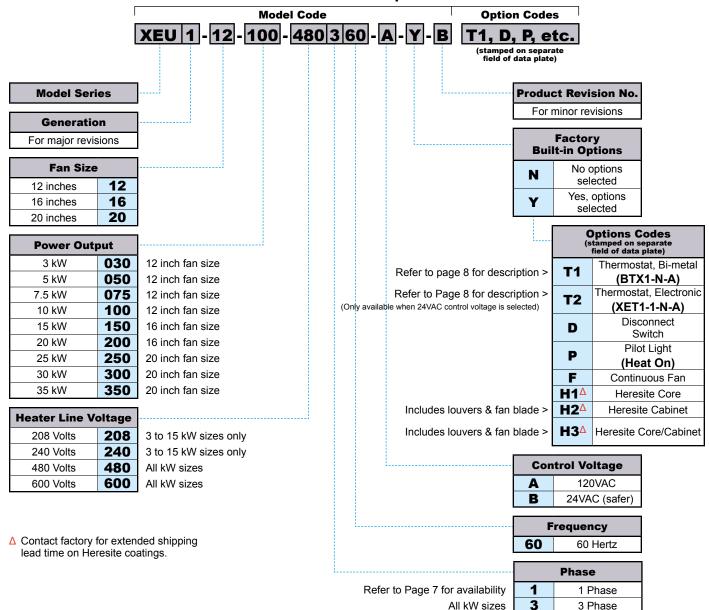
The *ExCaliber™* vacuum sealed liquid-to-air heat exchanger core is constructed using rugged, copper-free, roll-formed aluminum fins and protected by a pressure relief device, automatic reset high limit, and a back-up manual reset high limit.

The **XEU1** heater has the highest air temperature rise, on average, in the industry across our complete kW range.

ExCaliber™ heat-exchanger core is easy to remove

XEU1 Model Coding

Heater Model Code & Option Codes





Model Code Format

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

Example:

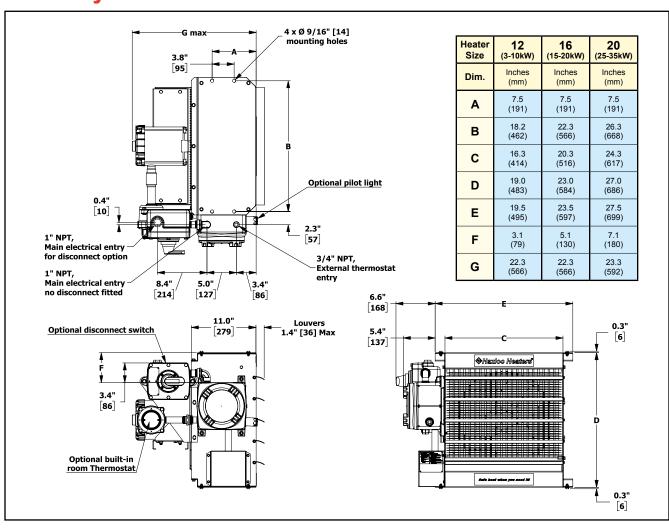
Model Code: XEU1-12-100-480360-A-Y-B

Option Code: T1, D, P

XEU1 Specifications By Model Size

| Model | | XEU1-12 | | | XEU1-16 | | XEU1-20 | | | |
|--|-----------------------|--------------------------|------------|--------------------------|----------------------------|--------------|----------------------------|--------------|-------------------------|--------------|
| Fan diameter | in (mm) | 12 (304.8) | | | 16 (406.4) | | 20 (508.0) | | | |
| Nominal kW | | 3 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 35 |
| Air delivery | cfm m³/hr | 350 595 | 400 680 | 600 1019 | 800 1359 | 1200 2039 | 1700 2888 | 2100 3568 | 3000 5097 | 3000 5097 |
| Approximate air velocity | fpm m/s | 422 2.1 | 479 2.4 | 718 3.6 | 958 4.9 | 808 4.1 | 1145 5.8 | 916 4.6 | 1309 6.6 | 1309 6.6 |
| Approximate horizontal air throw | ft m | 13 3.9 | 15 4.6 | 22 6.7 | 30 9.1 | 33 10.1 | 46 14.0 | 41 12.5 | 61 18.6 | 61 18.6 |
| Motor power | hp (watts) | | 1/2 | (186) | | 1⁄4 (186) | | 1/2 (373) | | |
| Maximum mounting height (to underside of heater) | ft m | 7 2.1 | 7 2.1 | 7.5 2.3 | 9.5 2.9 | 10 3.0 | 11 3.4 | 12 3.6 | 15 4.6 | 15 4.6 |
| Approximate net weight (without disconnect) (with disconnect) | lbs (kg) lbs (kg) | ` ' | | 133 (60.3) 146 (66.2) | 161 (73.0) 174 (78.9) | | 192 (87.1) 205 (92.9) | | | |
| Approximate shipping weight (without disconnect) (with disconnect) | lbs (kg) lbs (kg) | 188 (85.3) 201 (91.2) | | 192 (87.1) 205 (93.0) | 224 (101.6) 237 (107.5) | | 261 (118.4) 274 (124.3) | | | |
| Wood crate dimensions Wood packaging material is in compliance with ISPM No. 15. | W x D x H in mm | | | 29.5 x 29 749 x 74 | | | .5 x 31.75 49 x 806 | | x 29.5 x 3 3 x 749 x | |

XEU1 Physical Dimensions



XEU1 General Specifications

| | Certification | _c CSA _{US} 235730 - Certified to Canadian and U.S. standards | | |
|------------------------------------|---|---|--|--|
| Approvals | North American Hazardous Location Classifications | Class I, Division 1 & 2, Groups C & D Class II, Division 1 & 2, Groups F & G Temperature Code T3B (3kW/35kW =T3A) | | |
| | Classifications | Class I, Zone 1 & 2, Groups IIA & IIB, T3 | | |
| Temperature Code | | Division System - T3B 165°C (329°F); [3kW/35kW = T3A 180°C (356°F)] Zone System - T3 200°C (392°F) | | |
| | Cabinet Material | 14-gauge (0.075 in.) (1.9 mm) steel. Yellow epoxy/polyester powder coated with five-stage pretreatment, including iron phosphate. | | |
| | Fan Guard | Split design with close wire spacing. A 3/8 in. (9.5 mm) diameter probe will not enter. Black polyester powder coated. | | |
| Cabinet | Louver Blades | Anodized extruded aluminum. | | |
| Cabinet | Conduit Materials & Fittings | Plated steel and aluminum alloy for corrosion resistance. | | |
| | Fasteners | Zinc plated steel for corrosion resistance. | | |
| | Enclosures | Cast aluminum (non-copper alloy) NEMA 7 & 9 type with O-ring. | | |
| | Mounting Holes | 9/16" diameter holes – Four located on the top face of heater. | | |
| | Motor Type | Explosion-proof, thermally protected, 1725 RPM permanently lubricated ball bearing type with 56 frame and "easy-off" fan blade replacement feature. | | |
| Motor/Fan | Fan | Three-blade spark-resistant aluminum, steel spider and hub with 5/8 in. bore. | | |
| | Fan Shroud | Spark-resistant aluminum. Compliant to AMCA 99-10, Type B. | | |
| | Heating Elements | Long-life, low watt-density, high grade metal-sheathed | | |
| Heat | Heat Transfer Fluid | Ethylene glycol and water including corrosion inhibitors. | | |
| Exchanger | Header Material | Carbon steel. | | |
| | ExCaliber™ Core | Carbon steel headers and element housing with O-ring. Fin tubes are carbon steel tubes with copper-free, roll-formed aluminum fins @ 10 fins per in. Vacuum sealed. Coated with black, high-heat enamel. | | |
| Protection Temperature High Limits | | One automatic reset rated for 100,000 cycles, and one manual reset. Both are snap-action bimetal type, open on temperature rise. | | |
| | Pressure Relief | High-quality stainless steel pressure relief device. | | |
| | Control Circuit | Built-in 120VAC or 24VAC control (24VAC recommended). | | |
| | Control Contactor | 40 FLA (50A resistive per pole) Definite Purpose. Rated for 500,000 mechanical operations. | | |
| 0 | Control Transformer | Multitap primary, 120VAC or 24VAC secondary. | | |
| Controls | Fuse Protection | Thermal delay fuse with spare, .25" x 1.25", 120VAC = 1/4A, 24VAC = 1A. | | |
| | Room Thermostat With Lockable Temperature Dial (option code T1 or T2) | Built-in, BTX1-N-A (T1) or XET1-1-N-A (T2) explosion-proof thermostat, 40°F to 80°F (5°C to 25°C). Conduit is factory sealed between enclosures. Wall mount thermostats also available. See Page 8. Note: Optional BLK1-N-A thermostat conversion kit allows simple interchangeability from a built-in to a wall mount configuration. | | |
| Load Isolation | Disconnect Switch (option code D) | Built-in, XDC-01 explosion-proof disconnect switch, 600VAC, 50A max with lock-out feature. Conduit is factory sealed between enclosures. Also available in a wall mount version. | | |
| | Pilot Light (option code P) | Built-in "Heat on" Green LED pilot light with lens guard. | | |
| Additional | Continuous Fan (option code F) | Continuous fan operation. Circulates air and prevents gas pockets from forming. | | |
| Options | Heresite Coating (option code H1, H2, H3) | H1 = Heresite Core; or H2 = Heresite Cabinet (includes louvers & fan blade); or H3 = Heresite Core and Cabinet. <i>Note: Contact factory for Heresite delivery lead time.</i> | | |
| Operating | Ambient Temperature | -40°F to 104°F (-40°C to 40°C). Storage: -58°F to 140°F (-50°C to 60°C) | | |
| Limits | Maximum Altitude | 10,000 ft (3048 m) above sea level. | | |

XEU1 Heater Performance Data

| IdM Line Line | | Fan Dia. | Model See page 4 to complete | Temperature Classification | Total Current | Air Temp. Rise | | |
|-------------------|-------|-------------|------------------------------|-------------------------------|------------------|-------------------|------|------|
| (btu/iii) | VOILS | | in. | model coding | Code | A | °F | °C |
| | 208 | 1 | 12 | XEU1-12-030-208160 * | ТЗА | 16.7 | 32.2 | 18.0 |
| | 240 | 1 | 12 | XEU1-12-030-240160 * | T3A | 14.9 | 32.2 | 18.0 |
| 3 | 208 | 3 | 12 | XEU1-12-030-208360 * | ТЗА | 9.4 | 32.2 | 18.0 |
| (10236) | 240 | 3 | 12 | XEU1-12-030-240360 * | T3A | 8.3 | 32.2 | 18.0 |
| | 480 | 3 | 12 | XEU1-12-030-480360 * | T3A | 4.2 | 32.2 | 18.0 |
| | 600 | 3 | 12 | XEU1-12-030-600360 * | T3A | 3.3 | 32.2 | 18.0 |
| | 208 | 1 | 12 | XEU1-12-050-208160 * | ТЗВ | 26.3 | 44.0 | 24.5 |
| | 240 | 1 | 12 | XEU1-12-050-240160 * | ТЗВ | 23.2 | 44.0 | 24.5 |
| 5 | 208 | 3 | 12 | XEU1-12-050-208360 * | Т3В | 15.0 | 44.0 | 24.5 |
| (17060) | 240 | 3 | 12 | XEU1-12-050-240360 * | Т3В | 13.1 | 44.0 | 24.5 |
| | 480 | 3 | 12 | XEU1-12-050-480360 * | ТЗВ | 6.6 | 44.0 | 24.5 |
| | 600 | 3 | 12 | XEU1-12-050-600360 * | ТЗВ | 5.2 | 44.0 | 24.5 |
| | 208 | 1 | 12 | XEU1-12-075-208160 * | ТЗВ | 38.4 | 42.5 | 23.7 |
| | 240 | 1 | 12 | XEU1-12-075-240160 * | ТЗВ | 33.7 | 42.5 | 23.7 |
| 7.5 | 208 | 3 | 12 | XEU1-12-075-208360 * | ТЗВ | 21.9 | 42.5 | 23.7 |
| (25590) | 240 | 3 | 12 | XEU1-12-075-240360 * | ТЗВ | 19.1 | 42.5 | 23.7 |
| | 480 | 3 | 12 | XEU1-12-075-480360 * | Т3В | 9.6 | 42.5 | 23.7 |
| | 600 | 3 | 12 | XEU1-12-075-600360 * | ТЗВ | 7.6 | 42.5 | 23.7 |
| | 240 | 1 | 12 | XEU1-12-100-240160 * | ТЗВ | 44.1 | 41.8 | 23.2 |
| 40 | 208 | 3 | 12 | XEU1-12-100-208360 * | ТЗВ | 28.9 | 41.8 | 23.2 |
| 10 (34120) | 240 | 3 | 12 | XEU1-12-100-240360 * | Т3В | 25.2 | 41.8 | 23.2 |
| (04120) | 480 | 3 | 12 | XEU1-12-100-480360 * | Т3В | 12.6 | 41.8 | 23.2 |
| | 600 | 3 | 12 | XEU1-12-100-600360 * | ТЗВ | 10.1 | 41.8 | 23.2 |
| | 208 | 3 | 16 | XEU1-16-150-208360 * | Т3В | 42.7 | 40.6 | 22.6 |
| 15 | 240 | 3 | 16 | XEU1-16-150-240360 * | ТЗВ | 37.2 | 40.6 | 22.6 |
| (51180) | 480 | 3 | 16 | XEU1-16-150-480360 * | Т3В | 18.6 | 40.6 | 22.6 |
| | 600 | 3 | 16 | XEU1-16-150-600360 * | ТЗВ | 14.9 | 40.6 | 22.6 |
| 20 | 480 | 3 | 16 | XEU1-16-200-480360 * | ТЗВ | 24.6 | 38.0 | 21.1 |
| (68240) | 600 | 3 | 16 | XEU1-16-200-600360 * | ТЗВ | 19.7 | 38.0 | 21.1 |
| 25 | 480 | 3 | 20 | XEU1-20-250-480360 * | ТЗВ | 31.3 | 39.1 | 21.8 |
| (85300) | 600 | 3 | 20 | XEU1-20-250-600360 * | ТЗВ | 25.1 | 39.1 | 21.8 |
| 30 | 480 | 3 | 20 | XEU1-20-300-480360 * | ТЗВ | 37.3 | 32.6 | 18.2 |
| (102360) | 600 | 3 | 20 | XEU1-20-300-600360 * | ТЗВ | 29.9 | 32.6 | 18.2 |
| 35 | 480 | 3 | 20 | XEU1-20-350-480360 * | T3A | 43.3 | 37.9 | 21.1 |
| (119420) | 600 | 3 | 20 | XEU1-20-350-600360 * | T3A | 34.7 | 37.9 | 21.1 |

^(*) Refer to page 4 for Control Voltage and Factory Built-in Option codes to complete entire model code for ordering.

Nomenclature/Useful Formulas/Conversions

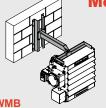
1 kW = 3,414 btu/hr; Final air temp. = Entering air temp. + Temp. rise; $^{\circ}$ C = 5/9 ($^{\circ}$ F - 32)

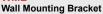
| AC/DC Formulas | | | | | |
|-------------------------------|--------------------|-------------------|-------------------------|--|--|
| To Find | Direct Current | AC - 1 phase | AC - 3 phase | | |
| Amps when horsepower is known | HP x 746 | <u>HP x 746</u> | HP x 746 | | |
| | E x Eff | E x Eff x PF | 1.73 x E x Eff x PF | | |
| Amps when kilowatts is known | <u>kW x 1000</u> | <u>kW x 1000</u> | <u>kW x 1000</u> | | |
| | E | E x PF | 1.73 x E x PF | | |
| Amps when kVA is known | KVA x 1000 | <u>kVA x 1000</u> | kVA x 1000 | | |
| | E | E | 1.73 x E | | |
| Kilowatts | <u>I x E</u> | <u>I x E x PF</u> | I x E x 1.73 PF | | |
| | 1000 | 1000 | 1000 | | |
| Kilovolt-Amps | <u>I x E</u> | <u>I x E</u> | <u>I x E x 1.73</u> | | |
| | 1000 | 1000 | 1000 | | |
| Horsepower (output) | <u>I x E x Eff</u> | 1 x E x Eff x PF | I x E x Eff x 1.73 x PF | | |
| | 746 | 746 | 746 | | |

Where I = amps; E = phase-to-phase volts; Eff = efficiency expressed as a decimal; PF = power factor expressed as a decimal; **kW** = kilowatts; **KVA** = kilovolt amperes; **HP** = horsepower.

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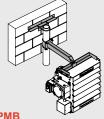


For use in buildings that have substantial walls. The 7 sections provide additional support where



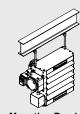
Basic Mounting Bracket

For applications where the support arm can be bolted or welded directly to structural steel or concrete.



Pipe Mounting Bracket

For buildings with insufficient strength to use other types of mounting brackets. Requires 3 in. pipe (3.5 in. O.D., min. Sch. 40, not supplied).



Hanging Mounting Bracket Ideal and economical if adequate overhead structure exists. Requires 1/2 in. pipe, cut and threaded (min. Sch. 40 not supplied).

Note: When ordering mounting brackets, please specify the type of bracket preferred and the basic model code of the heater to be mounted. Example, PMB-XEU1-16. Mounting kits are made of carbon steel and coated with black enamel. Structural support of heater and bracket during transit is required.

Explosion-proof ExCaliber™ Series Thermostats, Remote Mount

BTX1-N-A (SPDT) Heating or Cooling (Bi-metal thermostat used on XEU1 heaters with built-in option code (T1) selected)

Class I, Division 1 & 2, Groups C & D

Class II, Division 1, Groups E, F & G

Class II, Division 2, Groups F & G; Class III; T6

-50°C ≤ T amb ≤ +40°C, IP66, Type 4

Class I, Zone 1 & 2, Ex db, Groups IIA, IIB, T6, Gb

Class I, Zone 1 & 2, AEx db, Groups IIA, IIB, T6, Gb

Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db

Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom; Ship wt - 3.5 lbs (1.6 kg)

22 Amps Resistive Load. 480VAC Max: 1/2HP @ 125VAC: 1HP @ 250VAC (suitable for 24VAC or 120VAC control circuit)

XET1-1-N-A (Electronic) Heating only (24VAC required)

Class I, Division 1 & 2, Groups B, C & D

Class II, Division 1, Groups E, F & G

-50°C ≤ T amb ≤ +40°C, IP66, Type 4

Class II, Division 2, Groups F & G; Class III; T6

Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H₂, T6, Gb

Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H

, T6, Gb
Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db

Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom; Ship wt - 3.4 lbs (1.5 kg)



24VAC 50/60Hz; 1 Amp max continuous (suitable for 24 volt control circuit only)

BLK1-N-A Junction Box (Heater thermostat conversion kit) The BLK1-N-A heater thermostat conversion kit allows simple interchangeability from a built-in to a wall mount configuration.



Explosion-proof Disconnect Switch, Remote Mount

XDC-01 (Disconnect switch used on XEU1 heaters with built-in option code (D) selected)

Class I, Division 1 & 2, Groups C & D; Class II, Division 1, Groups E, F & G; Class II, Division 2, Groups F & G; Class III Class I, Zone 1 & 2, Grp IIA & IIB, T5

600V, 50A max;15 HP@208/240V, 3 phase; 30 HP@480/600V, 3 phase; 2 HP@120V, 1 phase; 7.5 HP@240V, 1 phase Ship wt -12.0 lbs (5.4 kg)



XEU1 Engineering Specifications

1.0 General

- 1.1 The explosion-proof unit heater(s) shall be supplied and installed, in accordance with the plans and specifications, with ratings as listed in the schedule of electrical heating equipment, and shall be Hazloc Heaters' XEU1 series.
- 1.2 The unit heater(s) shall be _cCSA_{us} certified for use in Class I, Divisions 1 & 2, Groups C & D; Class II, Divisions 1 & 2, Groups F & G; and Class I, Zones 1 & 2, Groups IIA & IIB Hazardous Locations and shall be rated for National Electric Code and Canadian Electric Code Temperature Code T3B, 165°C (329°F); [3kW/35kW = T3A, 180°C (356°F)] for Division System and T3, 200°C (392°F) for Zone System.

2.0 Heat Exchanger

- 2.1 The Heat Exchanger shall be a liquid-to-air type consisting of steel tubes with integral aluminum fins @ 10 fins per inch and be evacuated, sealed and painted with black, high heat enamel.
- 2.2 The heat exchanger shall be protected by a high-quality stainless steel pressure relief device with no serviceable parts.
- 2.3 The Heat Exchanger shall be filled and sealed to design level with a custom-blended, longlife solution of ethylene-glycol and water including inhibitors to provide superior corrosion protection.
- 2.4 The Heat Exchanger shall include heavy-duty immersion heating elements brazed into a heavy steel flange. The elements shall consist of high-quality resistance wire embedded in a magnesium oxide refractory and sheathed in a metal tubing. The heater is to be protected by two snap-action bimetal temperature high-limit cutouts. The primary high-limit shall be an automatic reset type rated for 100,000 cycles, and the secondary high-limit a manual reset type and will shut off the heater if the fluid temperature rises due to a lack of heat dissipation. The high-limits shall not be effected by altitude or changes in atmospheric pressure.

3.0 Fan and Motor Assembly

- 3.1 The Fan Assembly shall include a ball bearing, permanently lubricated, thermally protected explosion-proof motor rated for continuous duty at 40°C (104°F). The motor shaft shall provide a method for easy field replacement of fan blade assembly without the use of special tools.
- 3.2 The Fan and Fan Shroud shall be aluminum to prevent sparking and be compliant to AMCA 99-10, Type B. The assembly shall be directly connected to the motor, dynamically balanced, and designed specifically for the heater application.
- 3.3 The Fan shall be shielded with a heavy-duty steel wire, polyester-coated guard. To provide easy maintenance and cleaning of the fan and motor, the fan guard shall be of a two piece construction. The guard shall not allow a 3/8 in. (9.5 mm) probe to enter.

4.0 Control Center

- 4.1 The Control Center shall be completely factory pre-wired and tested, and enclosed in a NEMA 7 and 9 type of explosion-proof control enclosure with O-ring and a large threaded cover for easy access.
- 4.2 The Control Center shall include a 40 FLA (50A resistive per pole) Definite Purpose magnetic contactor sized to handle the heater and motor current, and shall be rated for 500,000 cycles operation. The encapsulated severe-duty coil shall be rated 120VAC or 24VAC (specify one) and separately fuse protected.

XEU1 Engineering Specifications (continued)

- 4.3 The Control Center shall include a control voltage transformer, the primary voltage being the same as the heater voltage and the secondary to be 120VAC or 24VAC (specify one).
- The Control Center shall include a terminal block for thermostat connection. 4.4
- 4.5 The Control Center shall include in-line thermal delay fuse protection on secondary side of transformer. The fuse holder shall be mounted on the printed circuit board and contain both an operating fuse and a spare fuse.

5.0 **Cabinet Assembly**

- 5.1 The Cabinet Assembly shall be fabricated from 14 gauge steel with a baked epoxy/polyester powder coating over a 5-stage pretreatment including iron phosphate, for protection from corrosive atmospheres.
- 5.2 The Cabinet shall include four 9/16 inch (14.3 mm) mounting holes located on top face of heater.
- 5.3 Louver blades shall be individually adjustable and made of anodized extruded aluminum.

6.0 **Mounting Brackets**

☐ Heresite coated core.

- 6.1 The heater shall be provided with a steel Mounting Bracket, coated with black enamel, specifically designed to bear the weight of the heater assembly.
- 6.2 The Mounting Bracket shall be – (select one): ☐ Type WMB – Wall Mounting Bracket ☐ Type BMB – Basic Mounting Bracket ☐ Type PMB – Pipe Mounting Bracket ☐ Type HMB – Hanging Mounting Bracket 7.0 **Room Thermostat Options** 7.1 The heater shall be supplied with (select one): Option Code T1. Built-in BTX1-N-A Bi-metal explosion-proof room thermostat mounted on the control enclosure side of the heater. ☐ Option Code T2. Built-in XET1-1-N-A Electronic explosion-proof room thermostat mounted on the control enclosure side of the heater (requires 24VAC control option). ☐ Field installed remote mount BTX1-N-A Bi-metal explosion-proof thermostat. ☐ Field installed remote mount XET1-1-N-A Electronic explosion-proof thermostat (requires 24VAC control option). 8.0 **Disconnect Switch Options** 8.1 The heater shall be supplied with (select one): ☐ Built-in XDC-01 explosion-proof disconnect switch mounted on the control enclosure side of the heater. ☐ Field installed remote mount XDC-01 explosion-proof disconnect switch. 9.0 **Additional Options** 9.1 The heater shall be supplied with (select one or more): ☐ Built-in Pilot light (Heat On) mounted on front of control enclosure. ☐ Continuous fan operation.

☐ Heresite coated cabinet (includes louvers & fan blade).

Guide to Hazardous Locations

North America/ATEX/IECEx

| Classification of Divisions and Zones | | | | | | |
|---------------------------------------|------------|------------------|--|--|--|--|
| Hazard Level Division Scheme Zon | | Zone Scheme | Definitions | | | |
| Continuous Hazard | Division 1 | Zone 0 / Zone 20 | A location in which an explosive atmosphere is continually present. | | | |
| Intermittent Hazard | DIVISION | Zone 1 / Zone 21 | A location in which an explosive atmosphere is likely to occur in normal operation. | | | |
| Hazard Under Abnormal Conditions | Division 2 | Zone 2 / Zone 22 | A location in which an explosive atmosphere is not likely to occur in normal operation, but may occur for short periods. | | | |

| Atmosphere Groups | | | | | | |
|---|---------------------------------|-----------------|--------------------|--|--|--|
| Substance | Hazard Class | Division Groups | Zone Groups | | | |
| Acetylene | | Group A | IIC | | | |
| Hydrogen | Class I Flammable Gases | Group B | IIB+H ₂ | | | |
| Ethylene | | Group C | IIB | | | |
| Propane | | Group D | IIA | | | |
| Methane | | Group D | IIA# | | | |
| Combustible Metal Dusts | | Group E* | IIIC | | | |
| Combustible Carbonaceuous Dusts | Class II | Group F | IIIB | | | |
| Combustible Dusts not in Group E or F (Flour, Grain, Wood, Plastics, Chemicals) | Combustible Dusts | Group G | IIIB | | | |
| Combustible Fibers and Flyings | Class III Fibers and Flyings | Not Applicable | IIIA | | | |

^{*} Group E is applicable to Class II, Division 1 only

[#] Methane is a Group IIA gas for non-mining applications

| Temperature Codes | | | | | |
|--------------------------|---------------------------|-----------------|--|--|--|
| Max. Surface Temperature | NEC® 500 / IEC - Group II | | | | |
| 450°C (842°F) | T1 | T1 | | | |
| 300°C (572°F) | T2 | | | | |
| 280°C (536°F) | T2A | | | | |
| 260°C (500°F) | T2B | T2 | | | |
| 230°C (446°F) | T2C | | | | |
| 215°C (419°F) | T2D | | | | |
| 200°C (392°F) | T3 | | | | |
| 180°C (356°F) | T3A | Т3 | | | |
| 165°C (329°F) | T3B | 13 | | | |
| 160°C (320°F) | T3C | | | | |
| 135°C (275°F) | T4 | TA | | | |
| 120°C (248°F) | T4A | - T4 | | | |
| 100°C (212°F) | T5 | T5 | | | |
| 85°C (185°F) | T6 | T6 | | | |

Note: Consult the current NEC and CEC codes for the latest technical and installation information

North American transition to the zone system

The U.S. and Canada have recently revised installation codes to recognize an international 3-Zone area classification system for equipment used in hazardous locations.

In Canada, all new installations must use the 3-Zone system. Existing installations may continue to use the 2-Division system or opt to re-classify using the 3-Zone system.

In the U.S., all installations (both new and existing) can either use the 2-Division system or use the 3-Zone system.

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 36-Month Warranty

Hazloc Heaters™ warrants all XEU1 series of explosion-proof electric heaters against defects in materials and workmanship under normal conditions of use for a period of thirty-six (36) months from date of purchase 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.





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