



**THERMAL  
PRODUCTS** INC.

Engineered Solutions To  
Industrial Applications

## INDEECO Ultra-Safe EXP Explosion Proof Electric Unit Heaters



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# Thermal Products, Inc

## Ultra-Safe™ EXP explosion-proof unit heater

Indeeco's Ultra-Safe™ EXP explosion-proof unit heater is designed with both safety and versatility in mind. Unique ULTRA-SAFE™ EXP features include:

**Industry's Lowest Ignition Temperature Code Rating:** T3C, 320°F (160°C)

**Dual Over temperature Protection:** With both automatic and manual reset over temperature cutouts for additional safety.

### **Nontoxic Propylene Glycol Heat Transfer Fluid**

**Low 70 PSIG Relief Valve Setting:** This assures that in an emergency, the initial escaping vapor temperature remains below the 320°F (160°C) ignition temperature.

**Corrosion Resistant Options:** INDEECO offers three constructions suitable for most applications. Standard construction for use in dry non-corrosive areas includes: welded steel heat exchanger; powder-coated cabinet.

A 316 stainless steel construction suitable for Waste Water Treatment Plants includes: 316 stainless steel heat exchanger, headers and tubes with aluminum fins; stainless steel cabinet; corrosion resistant hardware.

Third construction is suitable for use in Chemical Plants where chlorides are present and includes: Heresite® coated heat exchanger, cabinet, fan blade; corrosion resistant hardware.

## **Standard Construction Features**

### **Heat Exchanger**

Efficient liquid-to-air design utilizes an all welded steel headers and finned tube construction with spiral wound aluminum fins. Industrial grade INDEECO heating elements are immersed in a nontoxic, inhibited, propylene glycol heat transfer fluid that provides freeze protection down to -49°F (-45°C). The heat exchanger is hydrostatically tested at 350 psig. A pressure relief valve provides excess pressure protection and is set at 70 psig.

### **Fan Motor Assembly**

Consists of an explosion-proof motor fitted with an aluminum fan blade. The motor has double-shielded, permanently lubricated ball bearings and automatic reset line breaking thermal overload protection. Motors furnished on standard units operate at line voltage and are prewired to the control enclosure so separate field wiring to the motor is not required. The standard motor is rated for Class I, Groups C and

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D, Class II, Groups F and G. The minimum operating temperature is -14°F (-25°C) and the minimum storage temperature is -49°F (-45°C).

## Cabinet/Louvers

Industrial grade, corrosion resistant construction fabricated from beige powder coated 14-gauge galvanized steel. The adjustable louvers have minimum opening safety stops.

## Controls

Factory mounted on the unit heater. Standard built-in controls include automatic and manual reset over temperature cutouts, controlling magnetic contactor, and 24-volt control circuit transformer housed in a NEMA 7, 9 cast aluminum enclosure.

## Factory Built-in Options

- 316 Stainless Steel Corrosion-Resistant Construction (Waste Water Treatment Plants)
- 316 Stainless steel heat exchanger with aluminum fins, 316 stainless steel cabinet; aluminum fan blade; cast aluminum NEMA 4, 7, 9 control enclosure; corrosion-resistant hardware; corrosion-resistant protective coated motor, which has passed the ASTM B117 salt-spray test.
- Dirty Duty Corrosion-Resistant Construction (Chemical Plants)
- Heresite® coated heat exchanger, cabinet and fan blade; cast aluminum NEMA 4, 7, 9 control enclosure; corrosion-resistant hardware; corrosion-resistant protective coated motor which has passed the ASTM B117 salt-spray test.
- Disconnect Switch
- Factory installed on the unit heater above the control enclosure. This is an inexpensive and positive way to meet NEC/CEC requirements for a disconnecting means within sight of the heater.
- Group E (Metal Dust) Construction
- Class II, Group E (Metal Dust) Construction Temperature Code T3C, 320°F (160°C)
- "Warning" Pilot Light
- Indicates when the thermal cutouts have tripped and the unit heater needs servicing.
- "Heater On" Pilot Light
- Indicates when the electric heating elements are energized.
- Manual Reset Thermal Cutout with Backup Contactor
- A pilot duty manual reset thermal cutout with a backup contactor is provided for independent secondary over temperature protection. This option cannot be provided if option Code S or V are also specified.
- Auto/Fan Selector Switch
- A two-position switch wired to the control circuit for auto (automatic heat) and fan only control. This selector switch cannot be provided if option Code M or V are also specified.
- Adjustable Thermostat

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- Factory installed and prewired to the control enclosure. Thermostat is adjustable from 50° to 90°F (10° to 32°C) range.
- 120 Volt Control Circuit
- Can be provided when required for special external thermostat circuit. This option cannot be provided if option Code S or M are also specified. Nor can both K and L be specified.

## Accessories

- Mounting Kit
- These are available for ceiling, wall and pole mounting.
- Remote Thermostat
- A remote wall mounted thermostat is available.

**Contact Thermal Products Inc Today To Discuss Your Application!**

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