

# INDEECO

## explosion-proof and fan-forced electric unit heaters



**commercial & industrial**  
*electric heating and controls*

# INTRODUCTION/TABLE OF CONTENTS

INDEECO offers commercial and industrial electric heating and control systems that set the industry standard for excellence. The company's heating solutions reflect more than 85 years of innovation, product quality and efficient service.

This catalog features INDEECO's complete line of explosion-proof and fan-forced electric unit heaters. Our products include ULTRA-SAFE™ EXP and COMPACT Explosion-proof

Unit Heaters; an explosion-proof convector; the TRIAD® Washdown/Corrosion Resistant Unit Heater; and several types of standard unit heaters.

INDEECO's quality is matched only by its customer service and support. With its quick-ship delivery program, INDEECO provides the products you need.

Use of Electric Heaters in Hazardous Locations	3
--	---

## Explosion-proof Unit Heaters

Comparison Chart	6-7
------------------	-----



Ultra-Safe EXP Explosion-proof Unit Heaters (233)	8-13
---	------



Compact Explosion-proof Unit Heaters (236)	14-16
--	-------



Convector (254)	17-24
-----------------	-------

## Fan Forced Heaters

Comparison Chart	25
------------------	----



TRIAD Washdown/Corrosion Resistant Unit Heaters (234)	26-29
---	-------



Industrial Unit Heater IUH Series (238)	30-32
---	-------



Unit Heater UHIR Series (240)	33-37
-------------------------------	-------



Unit Heater UCI Series (926)	38-41
------------------------------	-------



Economical Unit Heater ULI Series (924)	42
---	----



Vertical Unit Heater UVI Series (928)	43-45
---------------------------------------	-------



Portable Heater UPI Series (927)	46
----------------------------------	----

Color Section Chart	47
---------------------	----

Limited Warranty	47
------------------	----

\*Optional factory installed disconnect switches have been sized in accordance to current UL2021 standards.

\*All field installed and factory installed electrical component options are listed with their maximum voltage and maximum amperage ratings. They can be used with heaters rated up to their maximum ratings.

# USE OF ELECTRIC HEATERS

## In Hazardous Locations

### Introduction

Hazardous locations are those areas where a potential for explosion and fire exists due to the presence of flammable gases, vapors, pulverized dusts or ignitable fibers in the atmosphere. Hazardous locations are created from the normal processing of volatile chemicals, gases, coal, grains, etc., or from the accidental failure of storage systems for these materials.

Open flames are not permitted in these locations. The use of electric heating equipment is permitted with two major restrictions: 1) The surface temperature of the equipment cannot exceed the ignition temperature of the hazardous atmosphere and 2) all arc and spark producing devices must be isolated from the atmosphere in an appropriate enclosure.

### National Electrical Code Classification

Articles 500 through 516 of the National Electrical Code deal with the definition of hazardous areas and the use or design of electrical equipment used in these locations. Electric heating equipment for hazardous areas is specified based on the NEC class, division, group and ignition temperature or the alternate class and zone classification.

### Class

Hazardous locations are divided into the three general classes of vapors/gases, dusts and fibers.

**Class I** – Locations where the potential for explosion and fire exists due to the presence of flammable gases or vapors in the air. Typical Class I locations include oil or natural gas drilling rigs, petroleum refining or pumping facilities, petrochemical plants, wastewater/sewage treatment plants, solvent extraction plants, paint spraying booths, locations where open tanks or vats of combustible liquids are present and storage areas for flammable materials.

**Class II** – Locations where the potential for explosion exists because of finely pulverized flammable dusts suspended in the atmosphere. Typical locations would include coal fired power plants, coal preparation/coal handling facilities, coal mines, grain elevators, flour and feed mills, packaging and handling of pulverized sugar and processing and storage of magnesium and aluminum powder.

**Class III** – This third classification is primarily a fire hazard where fibers or flyings suspended in the air create a hazard. This would include small pieces of thread-like fiber, sawdust, lint, etc. Typical applications would include textile mills, wood-working plants, cotton gins, cotton seed mills and flax producing plants.

### Division

Class I, Class II and Class III areas are further defined in terms of when the hazard occurs. Division 1 and Division 2 occurrences are summarized below.

**Division 1** – If the hazard is expected to be present under normal conditions, such as a production or processing facility, the occurrence is designated Division 1. The hazardous atmosphere may be present continuously, intermittently, periodically, or during normal repair or maintenance operations. Division 1 occurrences also include locations where a breakdown in the operation of processing equipment results in the release of hazardous vapors.

**Division 2** – If the hazardous material is normally expected to be contained within a closed area, system or container, and would enter the ambient atmosphere only under an abnormal failure, then it is referred to as a Division 2 occurrence.

### Hazardous and Corrosive Area Applications

- Aircraft Hangars/Service Areas
- Battery Storage Areas
- Chemical Plants
- Chemical Storage/Handling Areas
- Coal Mines/Preparation Plants
- Control Rooms
- Dry Cleaning Plants
- Dusty Areas Subject to Washdown
- Food Processing Plants (Washdown Areas)
- Foundries
- Gasoline Fueling/Storage Areas
- Grain Elevators
- Hydrogen Atmospheres
- Marine/Shipboard and Landbase Facilities
- Natural Gas (Methane) Atmospheres
- Oil Refineries
- Offshore Drilling Rigs
- Paint Spraying/Storage Areas
- Parking Garages
- Petrochemical Plants
- Pipeline Pumping Stations
- Pulp and Paper Mills
- Sewage/Wastewater Treatment Plants
- Solvent Recovery/Storage Areas
- Utility Plants

# USE OF ELECTRIC HEATERS

## In Hazardous Locations

### Group

The nature and explosive characteristics of the hazardous materials are defined by the NEC group to which it is assigned.

**Class I** – Hazardous vapors/gas locations include chemicals and other materials that have been divided into four groups based on their ignition temperature and explosive characteristics. (Groups A, B, C and D)

**Class II** – Hazardous dust locations are divided into three groups based on their ignition temperature and electrical conductivity of the suspended particles.

**Group E** – Atmospheres containing metal dust, such as aluminum or magnesium.

**Group F** – Atmospheres containing coal, charcoal or coke dust.

**Group G** – Atmospheres with grain, flour, starch, combustible plastics or chemical dust.

**Class III** – Locations have no group definitions.

### Ignition Temperature

All electrical equipment is designed not to exceed the ignition temperature of the hazardous atmosphere. The maximum surface temperature for electric heaters is defined by the NEC.

### Class and Zone Classifications

**Class I, Zone 0** – Locations in which ignitable concentrations of flammable gases or vapors are present continuously or for long periods.

**Class I, Zone 1** – Locations in which ignitable concentrations of flammable gases or vapors are likely to exist, may exist frequently or exist as a result of equipment breakdown or faulty operation. Applies to locations adjacent to a Class I, Zone 0 location.

**Class I, Zone 2** – Locations in which ignitable concentrations of flammable gases or vapors are not likely to occur under normal operation, exist only for a short period or exist only as a result of accidental failure, such as rupture or breakdown of the container or system, abnormal operation of equipment, failure or abnormal operation of the ventilation equipment. Applies to locations adjacent to a Class I, Zone 1 location.

### Material Groups

**Group IIC** – Atmospheres containing acetylene or hydrogen. Equivalent to a combination of Class I, Group A and Class I, Group B as described in NEC Article 500.

**Group IIB** – Atmospheres containing acetaldehyde. Equivalent to Class I, Group C as described in NEC Article 500.

**Group IIA** – Atmospheres containing acetone, ammonia, ethyl alcohol, gasoline, methane or propane. Equivalent to Class I, Group D as described in NEC Article 500.

Product use depends on temperature class. The temperature code indicates the maximum temperature of the exposed surface of the product. For Zone classified dusts the explosion-proof temperature is the maximum surface temperature is shown as e.g. T80°C

Class, Division Classification		Zone Classification	
Temperature Class (T Code)	Maximum Surface Temperature °F (°C)	Temperature Class (T Code)	Maximum Surface Temperature °C
T1	≤ 842 (≤ 450)	T1	≤ 450
T2	≤ 572 (≤ 300)	T2	≤ 300
T2A	≤ 536 (≤ 280)	T3	≤ 200
T2B	≤ 500 (≤ 260)	T4	≤ 135
T2C	≤ 446 (≤ 230)	T5	≤ 100
T2D	≤ 419 (≤ 215)	T6	≤ 85
T3	≤ 392 (≤ 200)		
T3A	≤ 356 (≤ 180)		
T3B	≤ 329 (≤ 165)		
T3C	≤ 320 (≤ 160)		
T4	≤ 275 (≤ 135)		
T4A	≤ 248 (≤ 120)		
T5	≤ 212 (≤ 100)		
T6	≤ 185 (≤ 85)		

# USE OF ELECTRIC HEATERS

## In Hazardous Locations

### Special Requirements for Electric Heating Equipment used in Hazardous Areas

Electric heating equipment can be economically designed and safely used in hazardous areas if the following special requirements are observed.

1. The surface temperature of the electric heating equipment cannot exceed the ignition temperature of the hazardous atmosphere. To insure that the proper heater has been selected, it is essential that the correct NEC Ignition Temperature Code be specified.

If the temperature code selected is too high, the electric heating system may operate above the ignition point of the application, creating a potentially hazardous condition.

2. All arc and spark-producing control devices must be isolated from the hazardous atmosphere. If it is not economically feasible to locate the control devices in the non-hazardous area, they must be housed in an enclosure that will withstand the pressure of a potential explosion from within the enclosure.
3. All electrical supply connections must be made according to the latest NEC and local code requirements for hazardous locations. This includes the requirement that conduit entering the enclosures must be provided with seals at the enclosure.

CLASS I - HAZARDOUS GAS ATMOSPHERES					CLASS I - HAZARDOUS GAS ATMOSPHERES				
Group	Material	Ignition Temp.		NEC Code	Group	Material	Ignition Temp.		NEC Code
		°F	°C				°F	°C	
A	Acetylene	581	305	T2	D	Methyl Isobutyl Ketone	840	448	T2
B	Acrolein (Inhibited)	428	220	T2D		2-Methyl-1-Propanol (Isobutyl Alcohol)	780	415	T2
	Butadiene	788	420	T2		Petroleum Naptha	550	288	T2A
	Ethylene Oxide	804	429	T2		Pyridine	900	482	T1
	Hydrogen	932	500	T1		Octanes	403	206	T3
	Propylene Oxide	840	449	T2		Pentanes	500	260	T2B
	Propyl Nitrate	347	175	T3B		1-Pentanol (Amyl Alcohol)	650	343	T2
C	Acetaldehyde	347	175	T3B		Propane	842	450	T1
	Allyl Alcohol	713	378	T2		1-Propanol (Propyl Alcohol)	775	412	T2
	Carbon Monoxide	1128	609	T1		2-Propanol (Isopropyl Alcohol)	750	399	T2
	Cyclopropane	928	498	T1		Propylene	851	455	T1
	Ethylene	842	450	T1		Styrene	914	490	T1
	Hydrogen Cyanide	1000	538	T1		Toluene	896	480	T1
	Hydrogen Sulfide	500	260	T2B		Vinyl Acetate	756	402	T2
	2-Nitropropane	802	428	T2		Vinyl Chloride	882	472	T1
	Tetrahydrofuran	610	321	T2		Xylenes	867-984	463-528	T1
D	Acetic Acid (Glacia)	867	463	T1	<b>CLASS II - HAZARDOUS DUST ATMOSPHERES</b>				
	Acetone	869	465	T1	<b>Group</b>	<b>Material</b>	<b>Ignition Temp. °F</b>	<b>°C</b>	<b>NEC Code</b>
	Ammonia, Anhydrous	1204	651	T1	E	Aluminum, A422 Flake	608	320	T2
	Benzene	928	498	T1		Calcium Silicide	1004	540	T1
	Butane	550	287	T2A		Manganese	464	240	T2C
	1-Butanol (Butyl Alcohol)	650	343	T2		Magnesium, Grade B, Milled	806	430	T2
	2-Butanol (Secondary Butyl Alcohol)	761	405	T2	F	Charcoal	356	180	T3A
	Ethane	882	472	T1		Coal, Kentucky Bituminous	356	180	T3A
	Ethanol (Ethyl Alcohol)	685	363	T2		Coal, Pittsburgh Experimental	338	170	T3B
	Ethyl Acetate	800	427	T2		Pitch, Petroleum	1166	630	T1
	Ethylene Dichloride	775	413	T2	G	Alkyl Ketone Dimer Sizing Compound	320	160	T3C
	Gasoline (56-60 Octane)	536	280	T2A		Corn	482	250	T2C
	Gasoline (100 Octane)	853	456	T1		Corn Starch, Modified	392	200	T3
	Heptanes	399	204	T3		Polyurethane Foam, Fire Retardant	734	390	T2
	Hexanes	437	235	T2D		Shellac	752	400	T2
	Isoprene	428	220	T2D		Soy Flour	374	190	T3A
	Isopropyl Ether	830	443	T2		Sugar, Powdered	698	370	T2
	Methane (Natural Gas)	900-1170	482-632	T1		Sulfur	428	220	T2D
	Methanol (Methyl Alcohol)	867	454	T1		Wheat	428	220	T2D
	3-Methyl-1-Butanol (Isoamyl Alcohol)	662	350	T2		Wood Flour	500	260	T2B
	Methyl Ethyl Ketone	759	404	T2					

The materials given are found in NFPA 497, 1991 and NFPA 325, 2001.

# COMPARISON CHART

Only INDEECO offers a selection of explosion-proof heater constructions to meet your specific application.

## ULTRA-SAFE™ EXP

Our most popular and versatile construction has a broad range of stock designs, special options and the industry's lowest Ignition Temperature Code rating, 320°F (160°C).



Features	ULTRA-SAFE™ EXP
<b>Hazardous Location</b> NEC Classifications	Class I, Divisions 1 and 2, Groups C and D Class II, Divisions 1 and 2, Groups E, F, and G Class 1, Zones 1 and 2, Groups IIB
<b>Ignition Temperature Code</b>	T3C 320°F (160°C)
<b>KW Range</b>	Up to 30 KW
<b>Standard Built-in Overtemperature Protection</b>	Dual overtemperature protection with automatic and manual reset thermal cutouts
<b>Other Standard Built-in Controls</b>	Controlling contactor, control circuit transformer
<b>Standard Control Voltage</b>	24V
<b>Single Point Line Voltage Connection</b> for Incoming Power	Yes
<b>Optional Built-in Controls</b>	
Thermostat	Yes
Disconnect Switch	Yes
Selector Switch	Yes
Manual Reset Cutout	Standard
"Heater On" Pilot Light	Yes
"Warning" Pilot Light	Yes
Control Circuit Transformer	Standard
<b>Standard Construction</b>	
Heater Assembly	Liquid-to-air heat exchanger, steel tube with aluminum fins, propylene glycol, immersion heater
Cabinet/Housing	Powder coated galvanized steel
NEMA 7, 9 Control Enclosure	Cast aluminum
Mounting Brackets	Wall, ceiling or pole mounting kits (optional)
<b>Optional Constructions</b>	
Dirty Duty Corrosion Resistant	Choice of 316SS Construction or Heresite® coating
50 Hertz Motor	Yes
<b>Agency Approvals</b>	
FM (Factory Mutual)	Yes
CSA (Canadian Standards Association)	Yes
ABS (American Bureau of Shipping)	No

# COMPARISON CHART

## COMPACT

The industry's smallest and most economical design for Class I, Group D applications up to 12 KW.



## Convector

Small, compact design with a wide range of optional built-in controls.



COMPACT	Convector
Class I, Divisions 1 and 2, Group D Class 1, Zones 1 and 2, Group IIA	Class I, Divisions 1 and 2, Groups B, C and D Class II, Divisions 1 and 2, Groups E, F, and G Class 1, Zones 1 and 2, Groups IIC
T3 392°F (200°C) (Varies with KW)	T3C 320°F (160°C) (Varies with classification)
Up to 12 KW	Up to 9.5 KW
Primary and secondary automatic reset cutouts with fan relay	Primary automatic reset cutout
Controlling contactor	None
120V	Maximum 277V
Separate 120V motor line required	Yes
Yes	Yes
No	No
No	No
Yes	No
No	No
No	No
No	Yes
Stainless steel finned tubular elements	Heater core enclosed in copper tube with large aluminum fins
Stainless steel	Powder coated galvanized steel
Cast aluminum	Cast aluminum
Swivel mounting bracket (standard)	Wall mounting bracket (standard)
Yes	Wet locations (Type 3) iridite coated elements
No	N/A
Yes	Yes
Yes	Yes
Yes	Yes

# ULTRA-SAFE™ EXP 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 Overtemperature Protection: With both automatic and manual reset overtemperature 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.

## Applications

- Aircraft Hangars/Service Areas
- Chemical Storage/Handling Areas
- Coal Preparation Plants
- Compressor Stations
- Grain Elevators
- Oil Refineries and Rigs
- Paint Storage Areas
- Petrochemical Plants
- Sewage Pump Stations/Treatment Plants
- Spray Booths

Class I, Divisions 1 and 2, Groups C and D  
Class II, Divisions 1 and 2, Groups E, F and G  
Class I, Zones 1 and 2, Group IIB  
Temperature Code T3C, 320°F (160°C)

## 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 pre-wired 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 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). Optional motor ratings are described on page 9.

**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 overtemperature cutouts, controlling magnetic contactor, and 24-volt control circuit transformer housed in a NEMA 7, 9 cast aluminum enclosure.



# ULTRA-SAFE™ EXP UNIT HEATER

## Factory Built-in Options

Code	Option	Description	Availability Code (2)
C1	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 7, 9 control enclosure; corrosion-resistant hardware; corrosion-resistant protective coated motor, which has passed the ASTM B117 salt-spray test.	C
C2	Dirty Duty Corrosion-Resistant Construction (Chemical Plants)	Heresite® coated heat exchanger, cabinet and fan blade; cast aluminum NEMA 7, 9 control enclosure; corrosion-resistant hardware; corrosion-resistant protective coated motor which has passed the ASTM B117 salt-spray test.	C
D	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.	AS
E	Group E (Metal Dust) Construction	Class II, Group E (Metal Dust) Construction Temperature Code T3C, 320°F (160°C)	C
K	“Warning” Pilot Light	Indicates when the thermal cutouts have tripped and the unit heater needs servicing.	AS
L	“Heater On” Pilot Light	Indicates when the electric heating elements are energized.	AS
M	Manual Reset Thermal Cutout with Backup Contactor	A pilot duty manual reset thermal cutout with a backup contactor is provided for independent secondary overtemperature protection. This option cannot be provided if option Code S or V are also specified.	AS
S	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.	AS
T	Adjustable Thermostat	Factory installed and prewired to the control enclosure. Thermostat is adjustable from 50° to 90°F (10° to 32°C) range.	AS
V	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.	AS

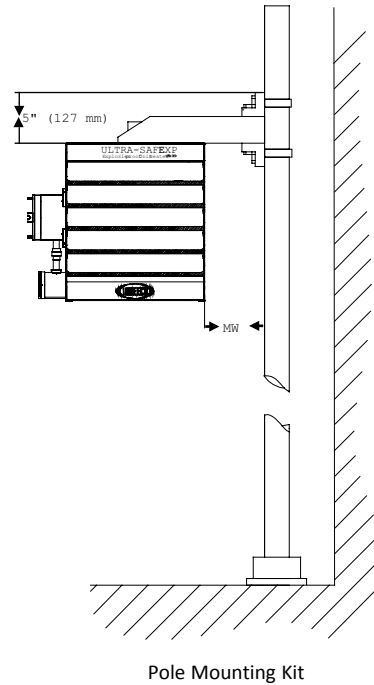
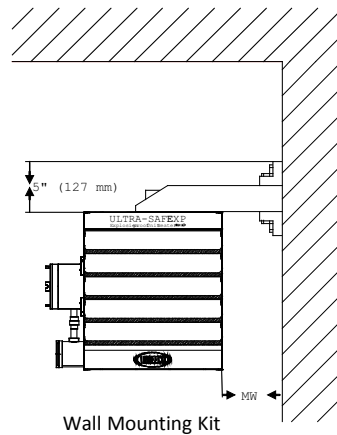
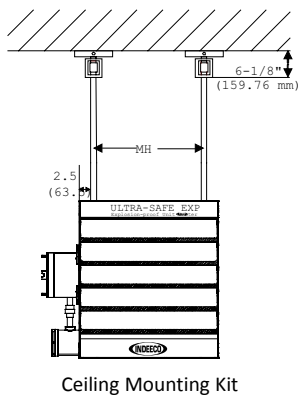
(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

# ULTRA-SAFE™ EXP UNIT HEATER

## Accessory Items

### ULTRA-SAFE™ EXP Heater Mounting Kits

These are available for ceiling, wall and pole mounting configurations as described below. Specify type required and catalog number at time of order entry.



Size	MH In. (mm)	MW In. (mm)
1	11.063 (281)	9 (228.6)
2	15.063 (382.6)	7 (177.8)
3	19.063 (484.2)	5 (127)

## Unit Heater Mounting Kits (One kit required per heater) Standard Mounting Kits for use in most applications

Catalog Number	Description	Availability Code (2)
1022451	Ceiling Mounting Kit, for Frame Size 1, 2, 3	AS
1022454	Wall Mounting Kit, for Frame Size 1, 2, 3	
1022457	Pole Mounting Kit, for Frame Size 1, 2, 3	

## Optional Mounting Kits for Option C1 or C2 heaters

Catalog Number	Description	Availability Code (2)
1022451-S	Corrosion Resistant Ceiling Mounting Kit, for Frame Size 1, 2, 3	AS
1022454-S	Corrosion Resistant Wall Mounting Kit, for Frame Size 1, 2, 3	
1022457-S	Corrosion Resistant Pole Mounting Kit, for Frame Size 1, 2, 3	

(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

## Accessory Remote Thermostat

Catalog Number	Switch Type	Description	Type	Ratings	Temp. Range °F (°C)	Availability Code
1007002	Bimetal	Class 1, Div. 1, Groups C & D Class II, Div. 1, Groups E, F, & G	SPDT	125-277V, 22A	50°-90° (10°-32°)	AS
1024754	Bulb and Capillary with Internal Set Point Adjustment	Class 1, Div. 1, Groups B, C & D Class II, Div. 1, Groups E, F, & G	SPDT	120-240V, 25A 277V, 22A	40°-120°	
1025396	Bulb and Capillary with Internal Set Point Adjustment	Corrosion-Resistant Class 1, Div. 1, Groups B, C, & D Class II, Div. 1, Groups E, F & G	SPST	120-240V, 25A 277V, 22A	40°-120°	

# ULTRA-SAFE™ EXP UNIT HEATER

## Dimensions, Airflows and Weights

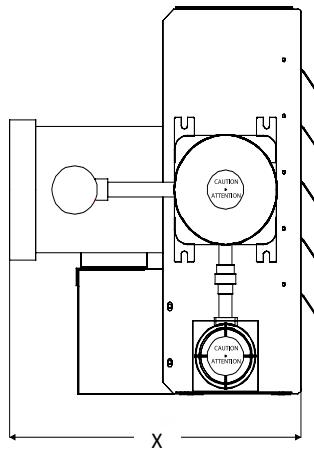
Frame Size		Size 1	Size 2	Size 3
Overall Heater Dimensions	'X' In. (mm)	21.75 (552.45)	21.75 (552.45)	20.875 (530.23)
	'Y' In. (mm)	19.375 (492.125)	23.375 (593.725)	27.375 (695.325)
	'Z' In. (mm)	16.063 (408)	20.188 (512.775)	24.188 (614.375)
Weight	Net Lbs. (kgs)	110 (49.89)	150 (68.03)	190 (86.18)
	Shipping Lbs (kgs)	130 (58.96)	169 (76.65)	216 (97.97)

## 60 Hertz Heaters

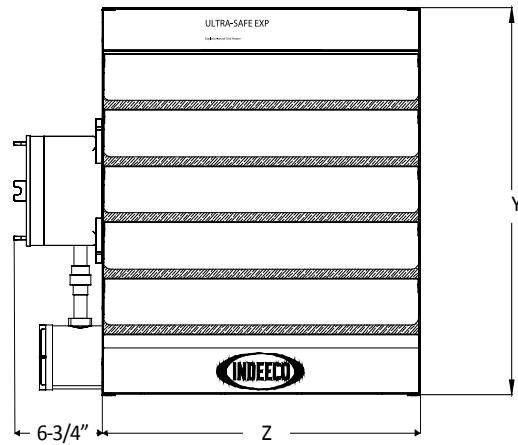
KW Range		3 - 5	7.5 - 10	15	20	25	30
Airflow Characteristics	Air Volume CFM (cubic meter/hr.)	650 (1104)	850 (1444)	1800 (3058)	3110 (5283)	3850 (6541)	
	Air Throw Feet (m)	15 (4.5)	25 (7.6)	45 (13.7)	65 (19.8)	75 (22.8)	
Motor/Fan	RPM	1725					
	HP	1/4				1/2	
	Fan Blade Dia. In. (mm)	12 (304.8)		16 (406.4)		20 (508)	

## 50 Hertz Heaters

KW Range		2.5 - 4.2	6.3 - 8.4	12.5	16.7	21 - 25	
Airflow Characteristics	Air Volume CFM (cubic meter/hr.)	550 (934)	700 (1189)	1500 (2549)		2600 (4417)	
	Air Throw Feet (m)	13 (4)	22 (7)	39 (12)		57 (17)	
Motor/Fan	RPM	1438					
	HP	1/4				1/2	
	Fan Blade Dia. In. (mm)	12 (304.8)		16 (406.4)		20 (508)	



Side View



Front View

# ULTRA-SAFE™ EXP UNIT HEATER

## ULTRA-SAFE™ EXP Unit Heater Listing 60 Hz

Class I, Divisions 1 and 2, Groups C and D  
Class II, Divisions 1 and 2, Groups F and G  
Class I, Zones 1 and 2, Group IIB  
Temperature Code T3C, 320°F (160°C)



KW	Volts	Phase	Total Amps (1)	Frame Size	Approximate Air Temperature Rise °F (°C)	Catalog Number	Availability (2)
3	208	1	17	1	15 (8)	233-FA-0036C	AS
	240	1	15	1	15 (8)	233-FA-0036J	
	208	3	10	1	15 (8)	233-FA-0036D	
	240	3	9	1	15 (8)	233-FA-0036K	
	480	3	5	1	15 (8)	233-FA-0036U	
	600	3	4	1	15 (8)	233-FA-0036Z	
5	208	1	26	1	25 (13)	233-FA-0056C	
	240	1	23	1	25 (13)	233-FA-0056J	
	208	3	16	1	25 (13)	233-FA-0056D	
	240	3	14	1	25 (13)	233-FA-0056K	
	480	3	7	1	25 (13)	233-FA-0056U	
	600	3	6	1	25 (13)	233-FA-0056Z	
7.5	208	1	38	1	28 (16)	233-FA-0086C	
	240	1	34	1	28 (16)	233-FA-0086J	
	208	3	23	1	28 (16)	233-FA-0086D	
	240	3	20	1	28 (16)	233-FA-0086K	
	480	3	10	1	28 (16)	233-FA-0086U	
	600	3	9	1	28 (16)	233-FA-0086Z	
10	240	1	44	1	38 (21)	233-FA-0106J	
	208	3	30	1	38 (21)	233-FA-0106D	
	240	3	26	1	38 (21)	233-FA-0106K	
	480	3	13	1	38 (21)	233-FA-0106U	
	600	3	11	1	38 (21)	233-FA-0106Z	
15	208	3	44	2	27 (15)	233-FB-0156D	
	240	3	38	2	27 (15)	233-FB-0156K	
	480	3	19	2	27 (15)	233-FB-0156U	
	600	3	16	2	27 (15)	233-FB-0156Z	
20	480	3	25	2	35 (19)	233-FB-0206U	
	600	3	21	2	35 (19)	233-FB-0206Z	
25	480	3	31	3	26 (14)	233-FC-0256U	
	600	3	25	3	26 (14)	233-FC-0256Z	
30	480	3	37	3	25 (13)	233-FC-0306U	
	600	3	30	3	25 (13)	233-FC-0306Z	

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

(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

# ULTRA-SAFE™ EXP UNIT HEATER

## ULTRA-SAFE™ EXP Unit Heater Listing 50 Hz

Class I, Divisions 1 and 2, Groups C and D  
Class II, Divisions 1 and 2, Groups F and G  
Class I, Zones 1 and 2, Group IIB  
Temperature Code T3C, 320°F (160°C)



KW	Volts	Phase	Total Amps (1)	Frame Size	Approximate Air Temperature Rise °F (°C)	Catalog Number	Availability (2)
2.5	220	1	14	1	14 (8)	233-FA-0036E	C
	220	3	9	1	14 (8)	233-FA-0036F	
	380	3	6	1	14 (8)	233-FA-0036G	
	400	3	6	1	14 (8)	233-FA-0036H	
	415	3	5	1	14 (8)	233-FA-0036I	
4.2	220	1	21	1	24 (13)	233-FA-0056E	
	220	3	13	1	24 (13)	233-FA-0056F	
	380	3	9	1	24 (13)	233-FA-0056G	
	400	3	8	1	24 (13)	233-FA-0056H	
	415	3	7	1	24 (13)	233-FA-0056I	
6.3	220	1	31	1	28 (16)	233-FA-0076E	
	220	3	19	1	28 (16)	233-FA-0076F	
	380	3	12	1	28 (16)	233-FA-0076G	
	400	3	11	1	28 (16)	233-FA-0076H	
	415	3	10	1	28 (16)	233-FA-0076I	
8.4	220	1	40	1	38 (21)	233-FA-0096E	
	220	3	24	1	38 (21)	233-FA-0096F	
	380	3	15	1	38 (21)	233-FA-0096G	
	400	3	13	1	38 (21)	233-FA-0096H	
	415	3	13	1	38 (21)	233-FA-0096I	
12.5	220	3	35	2	26 (14)	233-FB-0136F	
	380	3	21	2	26 (14)	233-FB-0136G	
	400	3	19	2	26 (14)	233-FB-0136H	
	415	3	18	2	26 (14)	233-FB-0136I	
16.7	220	3	46	2	35 (19)	233-FB-0176F	
	380	3	28	2	35 (19)	233-FB-0176G	
	400	3	25	2	35 (19)	233-FB-0176H	
	415	3	24	2	35 (19)	233-FB-0176I	
21	380	3	33	3	26 (14)	233-FC-0216G	
	400	3	32	3	26 (14)	233-FC-0216H	
	415	3	31	3	26 (14)	233-FC-0216I	
25	380	3	39	3	30 (17)	233-FC-0256G	
	400	3	37	3	30 (17)	233-FC-0256H	
	415	3	36	3	30 (17)	233-FC-0256I	

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

(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

# COMPACT UNIT HEATER



## Applications

- Chemical Storage/ Handling Areas
- Compressor Stations
- Marine and Offshore
- Oil Platforms and Refineries
- Sewage/Wastewater Treatment Plants
- Spray Booths



American  
Bureau of  
Shipping

Class I, Divisions 1 and 2, Group D  
Class I, Zones 1 and 2, Group IIA

INDEECO's COMPACT explosion-proof unit heater is designed with both size and economy in mind. COMPACT advantages and unique features include:

- **Compact Size:** This small design is only 13 inches wide, which makes it ideal for applications where limited space is available.
- **Low Cost:** The COMPACT design offers the most economical solution for heating small Class I, Group D hazardous areas. It is a cost effective alternative to the use of explosion-proof convection heaters.
- **Redundant Overtemperature Protection:** Primary and secondary automatic reset thermal cutouts for additional safety.
- **Stainless Steel Construction:** Provides superior corrosion resistant protection. Optional Dirty Duty construction adds polyester powder coating to all aluminum parts for use in corrosive applications.
- **Optional Marine Duty Construction:** The COMPACT design is ideal for shipboard use where size, weight and corrosion resistant construction are critical.

---

## Standard Construction Features

**Heating Elements** – Industrial grade, Type 304 stainless steel finned tubular heating elements are manufactured by INDEECO.

**Terminal Enclosure** – A NEMA 7, 9 cast aluminum enclosure with a threaded bottom cover permits easy access to the built-in controls from underneath the heater.

**Housing** – Round, 16-gauge stainless steel shroud.

**Grilles** – An adjustable stainless steel louvered outlet grille directs airflow 45° up or down and a heavy gauge stainless steel rear grille protects against accidental contact with the fan blade.

**Stainless Steel Swivel Mounting Bracket** – Supplied as standard with all COMPACT explosion-proof unit heaters. This multi-purpose bracket can be used for either wall or ceiling mounting.

**Built-In Controls** – Include primary and secondary automatic reset overtemperature cutouts, controlling contactor, and a time delay relay which keeps the fan running to cool the heating elements after they have been de-energized.

**Fan Motor Assembly** – Consists of a 120-volt, 1-phase 60 hertz motor fitted with an aluminum fan blade. The totally enclosed motor is UL Listed for Class I, Group D applications and includes permanently lubricated ball bearings and built-in thermal overload protection. The motor is factory wired into the enclosure to reduce field wiring, but requires a separate 120-volt power supply.

# COMPACT UNIT HEATER

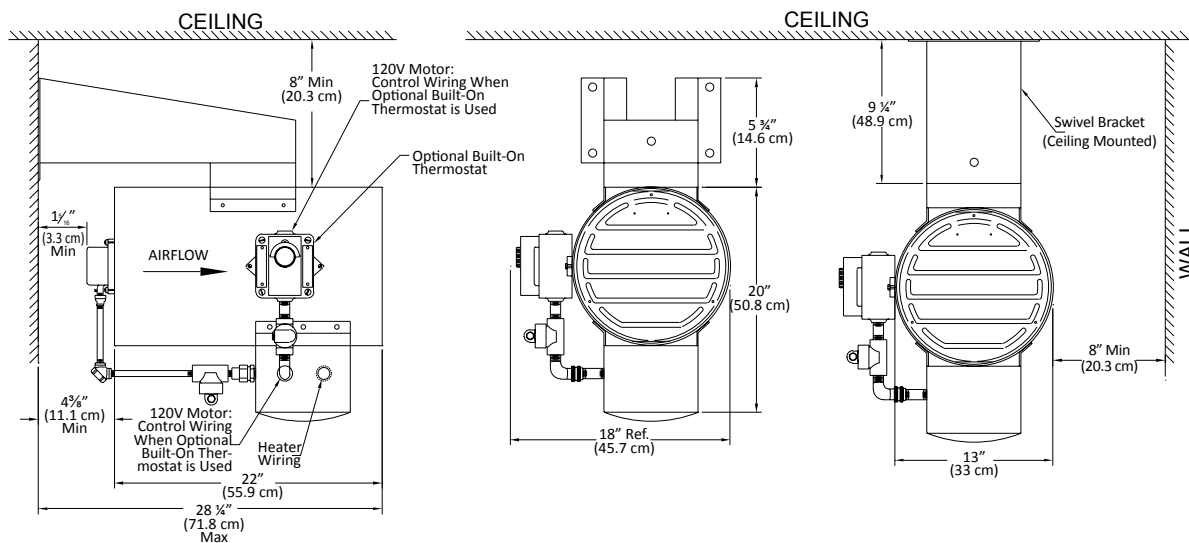
## Custom Options

Code	Option	Description	Availability Code (2)
C	Dirty Duty Corrosion Resistant Construction	Includes polyester powder coated fan blade, wiring conduit and fittings, NEMA 4X, 7, 9 enclosure.	C
CM	Marine Duty Construction	Dirty Duty Construction with manual reset thermal cutout. Meets U.S. Coast Guard requirements per 46CFR-111.87 and is ABS Approved	C
M	Manual Reset Cutout	Can be specified to replace secondary automatic cutout.	C
T	Adjustable Thermostat	Factory installed and prewired to the control enclosure. Thermostat is adjustable from 50° to 90°F (10° to 32°C) range.	C

(2) AS = Assembly Stock, C = Custom Assembly Stock heaters ordered with custom options are subject to longer delivery.

## Dimensions, Airflows and Weights

KW		3	5	7	10	12
Ignition Temperature Code		T3	T2C	T2	T1	T1
Approximate Air Temperature Rise °F (°C)		9 (5)	15 (8)	22 (12)	31 (17)	37 (21)
Airflow Characteristics	Air Volume CFM (cubic meters/hr)	1050 (1784)	1050 (1784)	1050 (1784)	1050 (1784)	1050 (1784)
	Air Throw Feet (m)	25 (8)	25 (8)	25 (8)	25 (8)	25 (8)
	Outlet Velocity FPM (meters/min)	1140 (348)	1140 (348)	1140 (348)	1140 (348)	1140 (348)
Motor/Fan	RPM	1725	1725	1725	1725	1725
	HP	1/6	1/6	1/6	1/6	1/6
	Fan Blade Dia. Inch (cm)	12 (31)				
Weight	Net Lbs (kgs)	96 (44)				
	Shipping Lbs (kgs)	110 (50)				



Standard Wall and Ceiling Installation with Swivel Mounting Bracket

# COMPACT UNIT HEATER

Class I, Divisions 1 and 2, Group D  
Class I, Zones 1 and 2, Group IIA

## COMPACT Unit Heater Listing

Ignition Temperature Code °F (°C)	KW	Volts	Phase	Heater Amps (1)	Catalog Number	Availability Code (2)
T3 392 (200)	3	208	1	14.5	236-F01T-0037C-7000	C
		240	1	12.5	236-F01T-0037J-7001	C
		480	1	6.3	236-F01T-0037T-7002	C
		208	3	8.4	236-F01T-0037D-7003	C
		240	3	7.3	236-F01T-0037K-7004	C
		480	3	3.7	236-F01T-0037U-7005	C
		600	3	2.9	236-F01T-0037Z-7006	C
T2C 446 (230)	5	208	1	24.1	236-F01T-0055C-7007	C
		240	1	20.9	236-F01T-0055J-7008	C
		480	1	10.5	236-F01T-0055T-7009	C
		208	3	13.9	236-F01T-0055D-7010	C
		240	3	12.1	236-F01T-0055K-7011	C
		480	3	8.1	236-F01T-0055U-7012	C
		600	3	4.9	236-F01T-0055Z-7013	C
T2 572 (300)	7	208	1	33.7	236-F01T-0072C-7021	C
		240	1	29.2	236-F01T-0072J-7022	C
		480	1	14.6	236-F01T-0072T-7023	C
		208	3	19.5	236-F01T-0072D-7024	C
		240	3	16.9	236-F01T-0072K-7025	C
		480	3	8.5	236-F01T-0072U-7026	C
		600	3	6.8	236-F01T-0072Z-7027	C
T1 842 (450)	10	240	1	41.7	236-F01T-0101J-7035	C
		480	1	20.9	236-F01T-0101T-7036	C
		208	3	27.8	236-F01T-0101D-7037	C
		240	3	24.1	236-F01T-0101K-7038	C
		480	3	12.1	236-F01T-0101U-7039	C
		600	3	9.7	236-F01T-0101Z-7040	C
T1 842 (450)	12	480	1	25.0	236-F01T-0121T-7041	C
		240	3	29.0	236-F01T-0121K-7042	C
		480	3	14.5	236-F01T-0121U-7043	C
		600	3	11.6	236-F01T-0121Z-7044	C



American Bureau of Shipping

(1) The amps shown are for the heating elements only. The 120V, 1 Ph 60 Hz motor draws 3.8 amps and requires a separate 120V power supply.

(2) Availability Code: C = Custom

## Accessory Remote Thermostat

Catalog Number	Switch Type	Description	Type	Ratings	Temp. Range °F (°C)	Availability Code
1007002	Bimetal	Class 1, Div. 1, Groups C & D Class II, Div. 1, Groups E, F, & G	SPDT	125-277V, 22A	50°-90° (10°-32°)	AS
1024754	Bulb and Capillary with Internal Set Point Adjustment	Class 1, Div. 1, Groups B, C & D Class II, Div. 1, Groups E, F, & G	SPDT	120-240V, 25A 277V, 22A	40°-120°	
1025396	Bulb and Capillary with Internal Set Point Adjustment	Corrosion-Resistant Class 1, Div. 1, Groups B, C, & D Class II, Div. 1, Groups E, F & G	SPST	120-240V, 25A 277V, 22A	40°-120°	



# CONVECTOR



American  
Bureau of  
Shipping

Class I, Divisions 1 and 2, Groups B, C and D  
Class II, Divisions 1 and 2, Groups E, F and G  
Class I, Zones 1 and 2, Groups IIB and H2

## Applications

- Battery Storage Areas
- Chemical Plants
- Coal Handling Facilities
- Dry Cleaning Plants
- Gasoline Fueling/Storage Areas
- Grain Elevators
- Oil Refineries
- Paint Spraying/Storage Areas
- Petrochemical Plants

INDEECO's explosion-proof convector is designed to provide a heavy duty and corrosion resistant heat source. Features include:

- **Wide Selection of Sizes:** Four compact sizes to fit any space with ratings from 500 to 9,500 watts.
- **Sloped Top Cabinet:** Prevents objects from being set on top of the convector, which can restrict airflow and cause overheating.
- **Single and Three-Phase:** Unique design provides single and balanced three-phase loads in a single element.
- **Gas and Dust Atmospheres:** Three listings cover the entire field, two for hazardous gases and vapors and one for dust particles.
- **Wet Locations:** All unit sizes available with iridite-coated elements and powder-coated frames for NEMA 3 wet locations.

---

## Standard Construction Features

**Element** – Grade A Nickel-Chromium heating coils are insulated with ceramics and magnesium oxide from the copper heater tube and fitted with large aluminum fins locked in place.

**Cabinet** – Heavy gauge galvanized steel cabinet is painted with a beige powder coat for durability. Cabinet should be mounted at least 6 inches (152 mm) above the floor. Factory-furnished wall brackets make installation easy.

**Thermal Protection** – A linear limit, automatic reset thermal cutout is built into every unit.

**Complete Electrical Package** – For larger single-phase and all three-phase units, a built-on contactor and transformer option package are available.

# CONVECTOR

## Electrical Package Options

All single-phase heaters rated over 22 amps or 277 volts and all three-phase heaters require a magnetic contactor. Some electrical combinations will also require a control

transformer. To simplify field installation, these accessories are factory-mounted on the heater cabinet and factory pre-wired (not available on Size 1 convectors).

Code	Option	Description	Availability Code (2)
B2	Electric Control Option (1) (without thermostat)	Classes I and II, Groups B, C, E, D, F and G includes contactor and transformer (as required). Required for all three-phase and single-phase heaters over 22 amps or 277 volts	AS
B2S1	Thermostat & Controls (1)	Classes I and II, Groups C, D, E, F and G includes thermostat, contactor and transformer (as required).	AS
B3	Thermostat & Controls (Group B) (1)	Classes I and II, Groups B, C, D, E, F and G includes thermostat, contactor and transformer (as required). Thermostat has internal set point.	AS
S1	Thermostat Only (1)	Classes I and II, Groups C, D, E, F and G single-phase heaters rated up to 22 amps at 120-277 volts. Use remote room thermostat Catalog Number 1007002 for Size 1 convectors.	AS
S2	Thermostat Only (Group B) (1)	Classes I and II, Groups B, C, D, E, F and G single-phase heaters rated up to 22 amps at 120-277 volts. Thermostat has internal set point. Use remote room thermostat Catalog Number 1024754 for Size 1 convectors.	AS

(1) These options are not available on Size 1 Convector.

## Custom Option

Code	Option	Description	Availability Code (2)
C1	Wet Locations	Type 3 rated construction. Includes Iridite coated element assembly and gasketed terminal box. Not available with options B2/S1, S1, or S2.	C
C2	Corrosive-Resistant Stainless Steel Construction	Type 3 rated construction with addition of stainless steel cabinet. Includes Iridite coated element assembly and gasketed terminal box. Not available with options B2/S1, S1, or S2. ONLY the cabinet is upgraded to stainless steel.	C

(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

## Accessory Remote Thermostat

Catalog Number	Switch Type	Description	Type	Ratings	Temp. Range °F (°C)	Availability Code
1007002	Bimetal	Class 1, Div. 1, Groups C & D Class II, Div. 1, Groups E, F, & G	SPDT	125-277V, 22A	50°-90° (10°-32°)	AS
1024754	Bulb and Capillary with Internal Set Point Adjustment	Class 1, Div. 1, Groups B, C & D Class II, Div. 1, Groups E, F, & G	SPDT	120-240V, 25A 277V, 22A	40°-120°	
1025396	Bulb and Capillary with Internal Set Point Adjustment	Corrosion-Resistant Class 1, Div. 1, Groups B, C, & D Class II, Div. 1, Groups E, F & G	SPST	120-240V, 25A 277V, 22A	40°-120°	

# CONVECTOR

**Class I, Divisions 1 & 2, Groups B, C & D**  
**Ignition Temperature Code T2A, 536°F (280°C)**  
**Class I, Zones 1 and 2 Groups IIB + H2**

Use these heaters when ordering heaters without optional built-on controls

KW	Volts (1)	Phase	Total Amps	Unit Size	Catalog Number	Availability Code (3)	Optional Built-on Controls (see Factory Built-on Options for Pricing)	
							Controls Only	Thermostat Only (4) or Thermostat with Controls
0.5	120	1	4.2	1	254-F0310052B	AS	N/A	1024754
	208	1	2.4		254-F0310052C		N/A	1024754
	240	1	2.1		254-F0310052J		N/A	1024754
	277	1	1.8		254-F0310052N		N/A	1024754
1	120	1	8.3	1	254-F0310102B		N/A	1024754
	208	1	4.8		254-F0310102C		N/A	1024754
	240	1	4.2		254-F0310102J		N/A	1024754
	277	1	3.6		254-F0310102N		N/A	1024754
1.8	120	1	15.0	2	254-F0320182B		N/R	S2
	208	1	8.7		254-F0320182C		N/R	S2
	240	1	7.5		254-F0320182J		N/R	S2
	277	1	6.5		254-F0320182N		N/R	S2
	347	1	5.2		254-F0320182I		B2	B3
	480	3	2.2		254-F0320182U		B2	B3
2.5	600	3	1.8	2	254-F0320182Z		B2	B3
	208	1	12.0		254-F0320252C		N/R	S2
	208	3	6.9		254-F0320252D	B2	B3	
	240	1	10.4		254-F0320252J	N/R	S2	
	277	1	9.0		254-F0320252N	N/R	S2	
	347	1	7.2		254-F0320252I	B2	B3	
3.6	480	3	3.0	3	254-F0320252U	B2	B3	
	600	3	2.4		254-F0320252Z	B2	B3	
	208	1	17.3		254-F0330362C	N/R	S2	
	208	3	10.0		254-F0330362D	B2	B3	
	240	1	15.0		254-F0330362J	N/R	S2	
	277	1	13.0		254-F0330362N	N/R	S2	
	347	1	10.4		254-F0330362I	B2	B3	
	480	3	4.3		254-F0330362U	B2	B3	
4.4	600	3	3.5	3	254-F0330362Z	B2	B3	
	208	3	12.2		254-F0330442D	B2	B3	
	240	1	18.3		254-F0330442J	N/R	S2	
	277	1	15.9		254-F0330442N	N/R	S2	
	347	1	12.7		254-F0330442I	B2	B3	
	480	3	5.3		254-F0330442U	B2	B3	
	600	3	4.3		254-F0330442Z	B2	B3	
6.5	208	3	18.0	4	254-F0340652D	B2	B3	
	240	3	27.1		254-F0340652J	B2	B3	
	277	1	23.5		254-F0340652N	B2	B3	
	347	1	18.7		254-F0340652I	B2	B3	
	480	3	7.8		254-F0340652U	B2	B3	
	600	3	6.3		254-F0340652Z	B2	B3	
7.5	208	3	20.8	4	254-F0340752D	B2	B3	
	240	1	31.3		254-F0340752J	B2	B3	
	277	1	27.1		254-F0340752N	B2	B3	
	347	1	21.6		254-F0340752I	B2	B3	
	480	3	9.0		254-F0340752U	B2	B3	
	600	3	7.2		254-F0340752Z	B2	B3	
9.5	208	3	26.4	4	254-F0340952D	B2	B3	
	240	1	39.6		254-F0340952J	B2	B3	
	277	1	34.3		254-F0340952N	B2	B3	
	347	1	27.4		254-F0340952I	B2	B3	
	480	3	11.4		254-F0340952U	B2	B3	
	600	3	9.1		254-F0340952Z	B2	B3	

(1) Convector are 60/50 Hz rated

(2) Price includes wall mounting brackets

(3) AS = Assembly Stock, AS listed heaters ordered with custom (C) features are subject to longer lead times.

(4) Thermostat only is load carrying or remote.

# CONVECTOR

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

Class I, Zones 1 and 2 Groups IIB

Ignition Temperature Code T2A, 536°F (280°C)

KW	Volts (1)	3Phase	Total Amps	Unit Size	Catalog Number	Availability Code (3)	Optional Built-on Controls (see Factory Built-on Options for Pricing)	
							Controls Only	Thermostat Only (4) or Thermostat with Controls
0.5	120	1	4.2	1	254-F0310053B	AS	N/A	1007002
	208	1	2.4		254-F0310053C		N/A	1007002
	240	1	2.1		254-F0310053J		N/A	1007002
	277	1	1.8		254-F0310053N		N/A	1007002
1	120	1	8.3	1	254-F0310103B		N/A	1007002
	208	1	4.8		254-F0310103C		N/A	1007002
	240	1	4.2		254-F0310103J		N/A	1007002
	277	1	3.6		254-F0310103N		N/A	1007002
1.8	120	1	15.0	2	254-F0320183B		N/R	S1
	208	1	8.7		254-F0320183C		N/R	S1
	240	1	7.5		254-F0320183J		N/R	S1
	277	1	6.5		254-F0320183N		N/R	S1
	347	1	5.2		254-F0320183I		B2	B2S1
	480	3	2.2		254-F0320183U		B2	B2S1
2.5	600	3	1.8	2	254-F0320183Z	B2	B2S1	
	208	1	12.0		254-F0320253C	N/R	S1	
	208	3	6.9		254-F0320253D	B2	B2S1	
	240	1	10.4		254-F0320253J	N/R	S1	
	277	1	9.0		254-F0320253N	N/R	S1	
	347	1	7.2		254-F0320253I	B2	B2S1	
3.6	480	3	3.0	2	254-F0320253U	B2	B2S1	
	600	3	2.4		254-F0320253Z	B2	B2S1	
	208	1	17.3		3	254-F0330363C	N/R	S1
	208	3	10.0			254-F0330363D	B2	B2S1
	240	1	15.0			254-F0330363J	N/R	S1
	277	1	13.0			254-F0330363N	N/R	S1
347	1	10.4	254-F0330363I	B3		B3S1		
480	3	4.3	254-F0330363U	B2		B2S1		
4.4	600	3	3.5	3	254-F0330363Z	B2	B2S1	
	208	3	12.2		254-F0330443D	B2	B2S1	
	240	1	18.3		254-F0330443J	N/R	S1	
	277	1	15.9		254-F0330443N	N/R	S1	
	347	1	12.7		254-F0330443I	B2	B3S1	
	480	3	5.3		254-F0330443U	B2	B2S1	
6.5	600	3	4.3	4	254-F0330443Z	B2	B2S1	
	208	3	18.0		254-F0340653D	B2	B2S1	
	240	1	27.1		254-F0340653J	B2	B2S1	
	277	1	23.5		254-F0340653N	B2	B2S1	
	347	1	18.7		254-F0340653I	B2	B2S1	
	480	3	7.8		254-F0340653U	B2	B2S1	
7.5	600	3	6.3	4	254-F0340653Z	B2	B2S1	
	208	3	20.8		254-F0340753D	B2	B2S1	
	240	1	31.3		254-F0340753J	B2	B2S1	
	277	1	27.1		254-F0340753N	B2	B2S1	
	347	1	21.6		254-F0340753I	B2	B2S1	
	480	3	9.0		254-F0340753U	B2	B2S1	
9.5	600	3	7.2	4	254-F0340753Z	B2	B2S1	
	208	3	26.4		254-F0340953D	B2	B2S1	
	240	1	39.6		254-F0340953J	B2	B2S1	
	277	1	34.3		254-F0340953N	B2	B2S1	
	347	1	27.4		254-F0340953I	B2	B2S1	
	480	3	11.4		254-F0340953U	B2	B2S1	
	600	3	9.1		254-F0340953Z	B2	B2S1	

(1) Convector are 60/50 Hz rated

(2) Price includes wall mounting brackets

(3) AS = Assembly Stock, AS listed heaters ordered with custom (C) features are subject to longer lead times.

(4) Thermostat only is load carrying or remote.

# CONVECTOR

**Class I, Divisions 1 & 2, Groups B, C & D**  
**Ignition Temperature Code T3A, 356°F (180°C)**  
**Class I, Zones 1 and 2 Groups IIB + H2**

Use these heaters when ordering heaters without optional built-on controls

KW	Volts (1)	Phase	Total Amps	Unit Size	Catalog Number	Availability Code (3)	Optional Built-on Controls (see Factory Built-on Options for Pricing)	
							Controls Only	Thermostat Only (4) or Thermostat with Controls
0.5	120	1	4.2	1	254-F0610052B	AS	N/A	1024754
	208	1	2.4		254-F0610052C		N/A	1024754
	240	1	2.1		254-F0610052J		N/A	1024754
	277	1	1.8		254-F0610052N		N/A	1024754
1.4	120	1	11.7	2	254-F0620142B		N/R	S2
	208	1	6.7		254-F0620142C		N/R	S2
	240	1	5.8		254-F0620142J		N/R	S2
	277	1	5.1		254-F0620142N		N/R	S2
	347	1	4.0		254-F0620142I		B2	B3
2.3	120	1	19.2	3	254-F0630232B		N/R	S2
	208	1	11.1		254-F0630232C		N/R	S2
	208	3	6.4		254-F0630232D		B2	B3
	240	1	9.6		254-F0630232J		N/R	S2
	277	1	8.3		254-F0630232N		N/R	S2
	347	1	6.6		254-F0630232I		B2	B3
	480	3	2.8		254-F0630232U		B2	B3
	600	3	2.2		254-F0630232Z		B2	B3
3.2	208	1	15.4	4	254-F0640322C		N/R	S2
	208	3	8.9		254-F0640322D		B2	B3
	240	1	13.3		254-F0640322J		N/R	S2
	277	1	11.6		254-F0640322N		N/R	S2
	347	1	9.2		254-F0640322I		B2	B3
	480	3	3.8		254-F0640322U		B2	B3
	600	3	3.1		254-F0640322Z		B2	B3
5.0	208	3	13.9	4	254-F0640502D		B2	B3
	240	1	20.8		254-F0640502J		N/R	S2
	277	1	18.1		254-F0640502N		N/R	S2
	347	1	14.4		254-F0640502I		B2	B3
	480	3	6.0		254-F0640502U		B2	B3
	600	3	4.8		254-F0640502Z		B2	B3

(1) Conveyors are 60/50 Hz rated

(2) Price includes wall mounting brackets

(3) AS = Assembly Stock, AS listed heaters ordered with custom (C) features are subject to longer lead times.

(4) Thermostat only is load carrying or remote.

# CONVECTOR

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

Class I, Zones 1 and 2 Groups IIB

Ignition Temperature Code T3A, 356°F (180°C)

KW	Volts (1)	Phase	Total Amps	Unit Size	Catalog Number	Availability Code (3)	Optional Built-on Controls (see Factory Built-on Options for Pricing)	
							Controls Only	Thermostat Only (4) or Thermostat with Controls
0.5	120	1	4.2	1	254-F0610053B	AS	N/A	1007002
	208	1	2.4		254-F0610053C		N/A	1007002
	240	1	2.1		254-F0610053J		N/A	1007002
	277	1	1.8		254-F0610053N		N/A	1007002
1.4	120	1	11.7	2	254-F0620143B		N/R	S1
	208	1	6.7		254-F0620143C		N/R	S1
	240	1	5.8		254-F0620143J		N/R	S1
	277	1	5.1		254-F0620143N		N/R	S1
	347	1	4.0		254-F0620143I		B2	B2S1
2.3	120	1	19.2	3	254-F0630233B		N/R	S1
	208	1	11.1		254-F0630233C		N/R	S1
	208	3	6.4		254-F0630233D		B2	B2S1
	240	1	9.6		254-F0630233J		N/R	S1
	277	1	8.3		254-F0630233N		N/R	S1
	347	1	6.6		254-F0630233I		B2	B2S1
	480	3	2.8		254-F0630233U		B2	B2S1
	600	3	2.2		254-F0630233Z	B2	B2S1	
3.2	208	1	15.4	4	254-F0640323C	N/R	S1	
	208	3	8.9		254-F0640323D	B2	B2S1	
	240	1	13.3		254-F0640323J	N/R	S1	
	277	1	11.6		254-F0640323N	N/R	S1	
	347	1	9.2		254-F0640323I	B2	B2S1	
	480	3	3.8		254-F0640323U	B2	B2S1	
	600	3	3.1		254-F0640323Z	B2	B2S1	
5.0	208	3	13.9	4	254-F0640503D	B2	B2S1	
	240	1	20.8		254-F0640503J	N/R	S1	
	277	1	18.1		254-F0640503N	N/R	S1	
	347	1	14.4		254-F0640503I	B2	B2S1	
	480	3	6.0		254-F0640503U	B2	B2S1	
	600	3	4.8		254-F0640503Z	B2	B2S1	

(1) Convector are 60/50 Hz rated

(2) Price includes wall mounting brackets

(3) AS = Assembly Stock, AS listed heaters ordered with custom (C) features are subject to longer lead times.

(4) Thermostat only is load carrying or remote.

# CONVECTOR

## Class II, Divisions 1 & 2, Groups E, F & G Ignition Temperature Code T3C, 320°F (160°C)

KW	Volts (1)	Phase	Total Amps	Unit Size	Catalog Number	Availability Code (3)	Optional Built-on Controls (see Factory Built-on Options for Pricing)	
							Controls Only	Thermostat Only (4) or Thermostat with Controls
0.5	120	1	4.2	1	254-F0810054B	AS	N/A	1007002
	208	1	2.4		254-F0810054C		N/A	1007002
	240	1	2.1		254-F0810054J		N/A	1007002
	277	1	1.8		254-F0810054N		N/A	1007002
1.0	120	1	8.3	2	254-F0820104B		N/R	S1
	208	1	4.8		254-F0820104C		N/R	S1
	240	1	4.2		254-F0820104J		N/R	S1
	277	1	3.6		254-F0820104N		N/R	S1
	347	1	2.9		254-F0820104I		B2	B2S1
1.7	120	1	14.2	3	254-F0830174B		N/R	S1
	208	1	8.2		254-F0830174C		N/R	S1
	208	3	4.7		254-F0830174D		B2	B2S1
	240	1	7.1		254-F0830174J		N/R	S1
	277	1	6.1		254-F0830174N		N/R	S1
	347	1	4.9		254-F0830174I		B2	B2S1
	480	3	2		254-F0830174U		B2	B2S1
	600	3	1.6		254-F0830174Z	B2	B2S1	
3.2	208	1	15.4	4	254-F0840324C	N/R	S1	
	208	3	8.9		254-F0840324D	B2	B2S1	
	240	1	13.3		254-F0840324J	N/R	S1	
	277	1	11.6		254-F0840324N	N/R	S1	
	347	1	9.2		254-F0840324I	B2	B2S1	
	480	3	3.8		254-F0840324U	B2	B2S1	
	600	3	3.1		254-F0840324Z	B2	B2S1	

(1) Convectors are 60/50 Hz rated

(2) Price includes wall mounting brackets

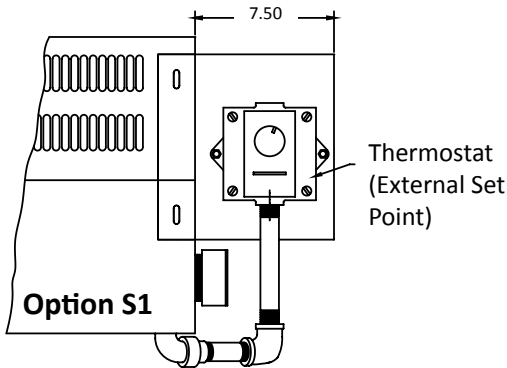
(3) AS = Assembly Stock, AS listed heaters ordered with custom (C) features are subject to longer lead times.

(4) Thermostat only is load carrying or remote.

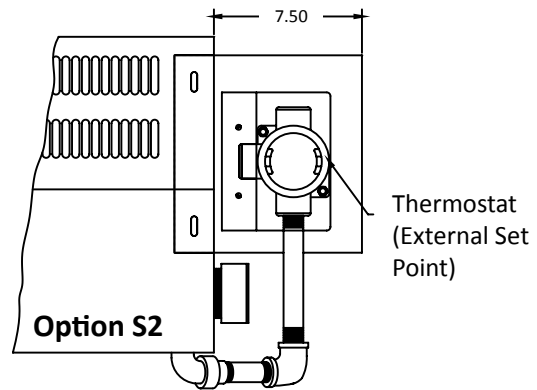
## Accessory Remote Thermostat

Catalog Number	Switch Type	Description	Type	Ratings	Temp. Range °F (°C)	Availability Code
1007002	Bimetal	Class 1, Div. 1, Groups C & D Class II, Div. 1, Groups E, F, & G	SPDT	125-277V, 22A	50°-90° (10°-32°)	AS
1024754	Bulb and Capillary with Internal Set Point Adjustment	Class 1, Div. 1, Groups B, C & D Class II, Div. 1, Groups E, F, & G	SPDT	120-240V, 25A 277V, 22A	40°-120°	
1025396	Bulb and Capillary with Internal Set Point Adjustment	Corrosion-Resistant Class 1, Div. 1, Groups B, C, & D Class II, Div. 1, Groups E, F & G	SPST	120-240V, 25A 277V, 22A	40°-120°	

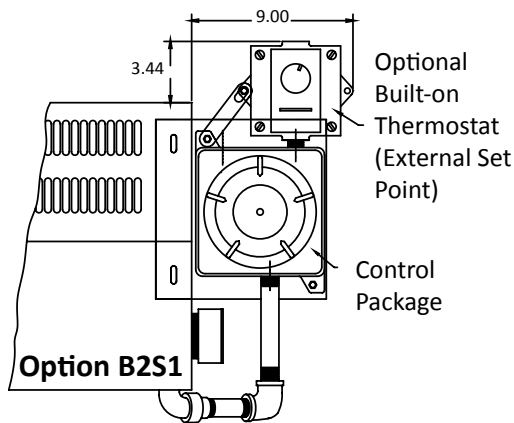
# CONVECTOR



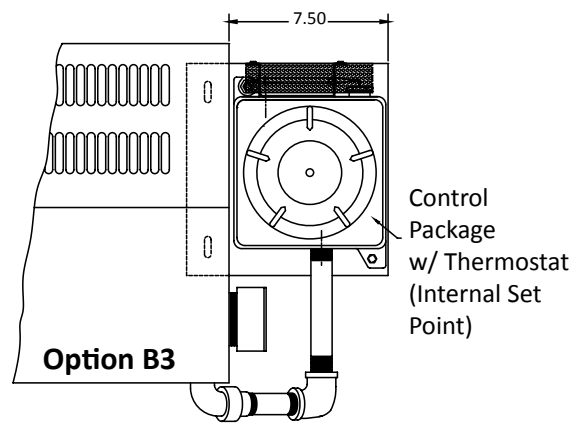
Thermostat is rated for Class I, Groups C and D  
Class II Groups E, F and G



Thermostat is rated for Class I, Groups B, C and D  
Class II Groups E, F and G



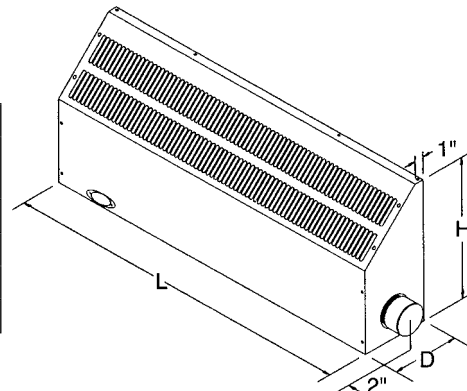
Thermostat is rated for Class I, Groups C and D  
Class II Groups E, F and G



Thermostat is rated for Class I, Groups B, C and D  
Class II Groups E, F and G

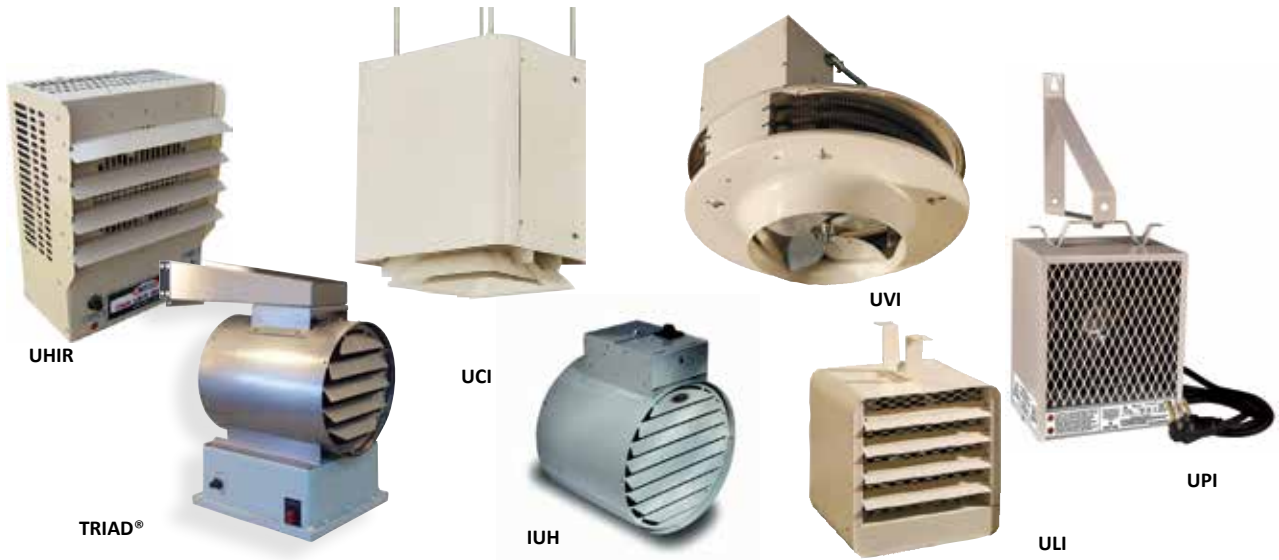
## Dimensions and Weights

Unit Size	Dimensions - In. (cm)			Weight - Lb (kg)
	Length (L)	Height (H)	Depth (D)	Without Controls
1	26 (66)	6 (15)	4-1/2 (11)	13 (5.9)
2	26 (66)	16 (41)	8 (20)	27 (12.2)
3	39 (99)	16 (41)	8 (20)	36 (16.3)
4	67-1/2 (171)	16 (41)	8 (20)	60 (27.2)





# COMPARISON CHART



Features	Washdown TRIAD®	IUH	UHIR	UCI	ULI	Vertical UVI	Portable UPI
<b>Typical Applications</b>	Food processing plants Marine duty Wastewater treatment plants	Factories Warehouses	Factories Mechanical rooms Workshops	Mechanical rooms Warehouses Workshops	Mechanical rooms Storage rooms	Gyms High bay areas Warehouses	Job Sites Workshops
<b>KW Range</b>	2 to 47	3 to 38.4	3.3 to 50	2 to 60	3 to 5	5 to 30	4.8
<b>Voltages</b>	up to 600/3	Up to 480/3	Up to 480/3	Up to 480/3	240/208/1	Up to 480/3	240/1
<b>Airflow CFM</b>	Up to 2400	Up to 1774	Up to 3100	Up to 2000	300	Up to 2300	300
<b>Discharge</b>	Horizontal	Horizontal	Horizontal or Vertical	Horizontal or Vertical	Horizontal	Vertical	Horizontal
<b>Element Type</b>	Stainless steel finned tubular	Stainless steel finned tubular	Stainless steel finned tubular	Stainless steel tubular or steel finned tubular	Stainless steel tubular	Steel finned tubular	Stainless steel tubular
<b>Standard Construction</b>	16 gauge stainless steel shroud and non-metallic NEMA 4X control enclosure	16 gauge galvanized steel shroud and control enclosure	20-14 gauge (depending on size) galvanized steel cabinet	8 & 20 gauge steel cabinet	20 gauge galvanized steel cabinet	18 gauge galvanized steel cabinet	22 gauge galvanized steel cabinet
<b>Finish</b>	Stainless steel	Beige polyester powder paint	Camel polyester powder paint	Almond polyester powder paint	Almond polyester powder paint	Almond polyester powder paint	Almond polyester powder paint
<b>Mounting</b>	Ceiling or wall	Ceiling or wall	Ceiling or wall	Ceiling or wall	Ceiling or wall	Ceiling	Portable
<b>Agency Approvals</b>	cUL <sub>us</sub> & ABS	cUL <sub>us</sub>	cUL <sub>us</sub>	CSA <sub>us</sub>	CSA <sub>us</sub>	CSA	CSA <sub>us</sub>

# TRIAD®

## Washdown/Corrosion Resistant Unit Heater



The INDEECO TRIAD® unit heater is the perfect solution to the problem of heating people or equipment in non-hazardous environments where moisture and corrosion exist. Advantages of the TRIAD® include:

- **Built-in Controls:** All necessary safety and temperature controls are included in a single package. Components and motor are factory-wired to a single terminal block for field wiring, eliminating the chance for field error and reducing installation costs.
- **Single Point Electrical Hook-up:** Heater, fan motor and controls are all connected to the same branch circuit.
- **Corrosion Resistant:** Stainless steel construction, powder-coated aluminum fan blade and nonmetallic NEMA 4X terminal enclosure resist corrosion found in sewage treatment plants, swimming pool areas, car washes, paper mills and marine installations.
- **Washable:** This watertight construction can be hosed down without disconnecting the heater, which makes it ideal for coal handling areas, steel mills, foundries, ships, wood finishing plants, cement, sand, grain and food processing facilities.

### Applications

- Car Washes
- Cement Plants
- Coal Handling Areas
- Dairies
- Food Processing Plants
- Marine and Offshore
- Power Generating Stations
- Steel Mills and Foundries
- Swimming Pool Areas
- Wastewater Treatment Plants

## Standard Construction Features

**Heating Elements** – Industrial grade, Type 316 stainless steel tubular elements with stainless steel fins, manufactured by INDEECO.

**Fan Motor Assembly** – Totally enclosed, epoxy coated, UL Recognized motor with permanently lubricated ball bearings for longer life. Designed to resist moisture and corrosion. Factory-wired to NEMA 4X enclosure. Fitted with a powder-coated, aluminum fan blade suitable for corrosive salt spray environments.

**Housing** – Heating elements and motor are enclosed in a round, heavy 16-gauge stainless steel shroud.

**Inlet/Outlet Grilles** – Adjustable, stainless steel, louvered outlet grille can be rotated 90° to direct airflow up, down, left or right. Heavy gauge, stainless steel rear grille protects against accidental contact with the fan blade.

**Control Enclosure** – The non-metallic enclosure, which houses the element terminals and built-in controls, will not rust and meets NEMA 4X hose-down requirements.

**Built-in Controls** – Include automatic reset overtemperature cutout, fan delay relay, controlling contactor, transformer for 24-volt control circuit, terminal block for field wiring and a separate motor contactor (when required).

**Mounting Bracket** – The heater comes complete with a stainless steel swivel mounting bracket which can be used either for wall or ceiling mounting. Four field-supplied 3/8-16 threaded rods can also be used for ceiling installation.

## Washdown/Corrosion Resistant Unit Heater

### Factory Built-in Options

Code	Description	Availability Code (2)
B	Delete swivel mounting bracket. Heater installs from the ceiling with field furnished threaded rods.	AS
C	Epoxy painted stainless steel parts, housing, grilles and fan blade	C
D	Power disconnect switch	AS
E	Monel finned tubular elements	C
F8	Fan motor fusing with disconnecting contactor	C
L	"Heater on" pilot light	AS
M	Secondary manual reset overtemperature cutout. Required for U.S. Coast Guard and ABS Approved designs.	AS
S	Three-position selector switch (heater-standby-fan)	AS
T	1- Stage Built-in thermostat 40 to 100° F (5 to 38° C) range	AS
	2- Stage Built-in thermostat 40 to 120° F (5 to 49° C) range (Option "X" required)	C
V	120 volt control circuit	AS
X	2-Stage Control	C

(2) AS = Assembly Stock, C = Custom. Assembly Stock heaters ordered with custom options are subject to longer delivery.

### Remote Room Thermostat

Catalog Number	Switch Type	Ratings	Type	Tamper-proof	Thermo-meter	Amps	Pilot Duty	Temperature Range °F (°C)
1004328	Bulb	NEMA 4X	SPDT	No	No	25A @ 120-240V 22A @ 277V	125VA	40-110 (4-43)
1026347	2-Stage Bulb	NEMA 4X	2 SPDT	No	No	25A @ 120-240V 22A @ 277V	125VA	40-100 (4-38)



1004328



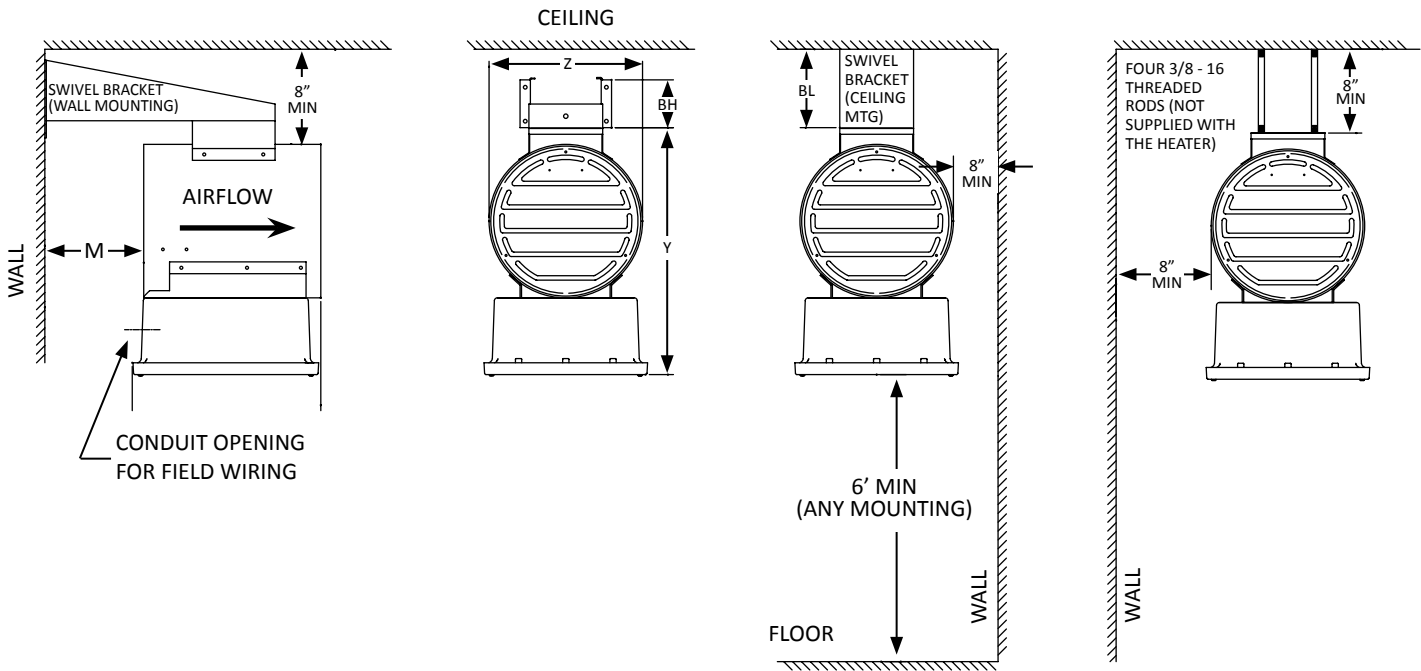
1026347

# TRIAD<sup>®</sup>

## Washdown/Corrosion Resistant Unit Heater

### Dimensions, Airflow and Weights

Dimensions, Airflows and Weights		KW		
		2 - 7.5	7.6 - 12	12.1 - 47
Overall Heater Dimensions	"X" Inch (cm)	15-1/2 (39)	15-1/2 (39)	26 (66)
	"Y" Inch (cm)	21-1/2 (55)	21-1/2 (55)	28 (71)
	"Z" Inch (cm)	13 (33)	13 (33)	20 (51)
Mounting Hole Dimensions	"BH" Inch (cm)	4-1/4 (11)	4-1/4 (11)	7-1/8 (18)
	"BL" Inch (cm)	19-1/2 (50)	19-1/2 (50)	22-1/4 (57)
	"M" Inch (cm)	8-1/2 (22)	8-1/2 (22)	3-1/4 (8)
Airflow Characteristics	Air Volume CFM (cubic meters/hr)	700 (1189)	1450 (2463)	2400 (4077)
	Air Throw Feet (m)	26 (8)	43 (13)	50 (15)
	Outlet Velocity FPM (meters/min)	760 (232)	1575 (481)	1200 (366)
Weight	Net Lbs (kgs)	56 (25)	56 (25)	115 (52)
	Shipping Lbs (kgs)	70 (32)	70 (32)	130 (60)



KW Range	Dimensions (Inches)					
	X	Y	Z	BH	BL	M
1 - 2	15-1/2	21-1/8	13	4-1/4	19-1/2	8-1/2
12.1 - 47	26	28	20	7-1/8	22-1/4	3-1/4

## Washdown/Corrosion Resistant Unit Heater

### TRIAD® Unit Heater Listing

For Non-Hazardous Areas

KW	Volts	Ph	Total Amps (1)	Approximate Air Temperature Rise °F (°C)	Motor			Catalog Number	2-Stage Control	Availability Code (2)(3)
					HP	Volts	Ph			
2	120	1	21	9 (5)	1/4	120	1	234-U11R-0020B	1B	AS
	208	1	12	9 (5)	1/4	208	1	234-U11R-0020C	1B	
	240	1	11	9 (5)	1/4	240	1	234-U11R-0020J	1B	
	277	1	10	9 (5)	1/4	277	1	234-U11R-0020N	1B	
3	120	1	29	14 (8)	1/4	120	1	234-U11N-0030B	1B	
	208	1	17	14 (8)	1/4	208	1	234-U11N-0030C	1B	
	240	1	15	14 (8)	1/4	240	1	234-U11N-0030J	1B	
	277	1	13	14 (8)	1/4	277	1	234-U11N-0030N	1B	
	480	1	8	14 (8)	1/4	480	1	234-U11N-0030T	1B	
	208	3	11	14 (8)	1/4	208	1	234-U11N-0030D	1A	
	240	3	10	14 (8)	1/4	240	1	234-U11N-0030K	1A	
	480	3	5	14 (8)	1/4	480	1	234-U11N-0030U	1A	
5	600	3	4	14 (8)	1/4	600	1	234-U11N-0030Z	1A	
	208	1	27	24 (13)	1/4	208	1	234-U11R-0050C	1B	
	240	1	23	24 (13)	1/4	240	1	234-U11R-0050J	1B	
	277	1	20	24 (13)	1/4	277	1	234-U11R-0050N	1B	
	480	1	12	24 (13)	1/4	480	1	234-U11R-0050T	1B	
	208	3	16	24 (13)	1/4	208	1	234-U11N-0050D	1A	
	240	3	15	24 (13)	1/4	240	1	234-U11N-0050K	1A	
	480	3	8	24 (13)	1/4	480	1	234-U11N-0050U	1A	
7.5	600	3	6	24 (13)	1/4	600	1	234-U11N-0050Z	1A	
	208	1	39	35 (19)	1/4	208	1	234-U11N-0080C	1B	
	240	1	34	35 (19)	1/4	240	1	234-U11N-0080J	1B	
	277	1	29	35 (19)	1/4	277	1	234-U11N-0080N	1B	
	480	1	17	35 (19)	1/4	480	1	234-U11N-0080T	1B	
	208	3	23	35 (19)	1/4	208	1	234-U11N-0080D	1A	
	240	3	21	35 (19)	1/4	240	1	234-U11N-0080K	1A	
	480	3	11	35 (19)	1/4	480	1	234-U11N-0080U	1A	
9	600	3	9	35 (19)	1/4	600	1	234-U11N-0080Z	1A	
	208	1	46	20 (11)	1/4	208	1	234-U11N-0090C	1B	
	240	1	40	20 (11)	1/4	240	1	234-U11N-0090J	1B	
	277	1	35	20 (11)	1/4	277	1	234-U11N-0090N	1B	
	480	1	20	20 (11)	1/4	480	1	234-U11N-0090T	1B	
	208	3	28	20 (11)	1/4	208	1	234-U11N-0090D	1A	
	240	3	24	20 (11)	1/4	240	1	234-U11N-0090K	1A	
	480	3	12	20 (11)	1/4	480	1	234-U11N-0090U	1A	
10	600	3	10	20 (11)	1/4	600	1	234-U11N-0090Z	1A	
	240	1	44	22 (12)	1/4	240	1	234-U11N-0100J	1B	
	277	1	39	22 (12)	1/4	277	1	234-U11N-0100N	1B	
	480	1	22	22 (12)	1/4	480	1	234-U11N-0100T	1B	
	208	3	30	22 (12)	1/4	208	1	234-U11N-0100D	1A	
	240	3	27	22 (12)	1/4	240	1	234-U11N-0100K	1A	
	480	3	14	22 (12)	1/4	480	1	234-U11N-0100U	1A	
	600	3	11	22 (12)	1/4	600	1	234-U11N-0100Z	1A	
12	277	1	46	26 (14)	1/4	277	1	234-U11N-0120N	1A	
	480	1	27	26 (14)	1/4	480	1	234-U11N-0120T	1B	
	208	3	36	26 (14)	1/4	208	1	234-U11N-0120D	1A	
	240	3	32	26 (14)	1/4	240	1	234-U11N-0120K	1A	
	480	3	16	26 (14)	1/4	480	1	234-U11N-0120U	1A	
	600	3	13	26 (14)	1/4	600	1	234-U11N-0120Z	1A	
12.5	208	3	37	17 (9)	1/4	208	1	234-U11L-0130D	1A	
	240	3	33	17 (9)	1/4	240	1	234-U11L-0130K	1A	
	480	3	17	17 (9)	1/4	480	1	234-U11L-0130U	1A	
	600	3	14	17 (9)	1/4	600	1	234-U11L-0130Z	1A	
15	208	3	44	21 (12)	1/4	208	1	234-U11L-0150D	1A	
	240	3	39	21 (12)	1/4	240	1	234-U11L-0150K	1A	
	480	3	20	21 (12)	1/4	480	1	234-U11L-0150U	1A	
	600	3	16	21 (12)	1/4	600	1	234-U11L-0150Z	1A	
20	480	3	26	28 (16)	1/4	480	1	234-U11L-0200U	1A	
	600	3	21	28 (16)	1/4	600	1	234-U11L-0200Z	1A	
25	480	3	32	35 (19)	1/4	480	1	234-U11A-0250U	1B	
	600	3	26	35 (19)	1/4	600	1	234-U11A-0250Z	1B	
30	480	3	38	42 (23)	1/4	480	1	234-U11A-0300U	1B	
	600	3	31	42 (23)	1/4	600	1	234-U11A-0300Z	1B	
35	480	3	44	48 (27)	1/4	480	1	234-U11A-0350U	1B	
	600	3	35	48 (27)	1/4	600	1	234-U11A-0350Z	1B	
38.4	480	3	48	54 (30)	1/4	480	1	234-U11A-0390U	1B	
	600	3	38	54 (30)	1/4	600	1	234-U11A-0390Z	1B	
47	600	3	47	64 (36)	1/4	600	1	234-U11A-0470Z	1B	

(1) Total Amps = Heating element amps and motor amps.  
 (2) Availability Code: AS = Assembly Stock,  
 (3) Stock heaters ordered with custom options subject to longer delivery.

NOTE: 2-Stage heaters can be field wired as single stage.  
 1A = Optional 2-stage control, unbalanced (option 'X').  
 1B = Optional 2-stage control, balanced (option 'X')

# IUH SERIES

## Industrial Unit Heater



INDEECO's industrial unit heater is designed for maximum heating performance in non-hazardous and non-corrosive environments. Features include:

- **Unique Design:** Round design of the industrial unit heater provides uniform airflow over the elements to prevent hot spots and ensure even discharge temperatures. Circular stainless steel finned tubular elements have a longer life due to lower operating temperatures.
- **Built-in Controls:** Heaters are completely assembled with all electrical components built-in at the factory to reduce installation costs.
- **Improved Performance:** High CFM's and air throw up to 50 feet promote air circulation within the space. More uniform temperature increases comfort levels and helps to eliminate cold spots.
- **Single Point Electrical Hook-up:** Heater, fan motor and controls are all connected to the same branch circuit.

### Applications

- Aircraft Hangars
- Entryways
- Factories
- Garages
- Power Generating Stations
- Pump Houses
- Service Stations

### Standard Construction Features

**Heating Elements** – Industrial grade, Type 304 stainless steel finned tubular elements, manufactured by INDEECO.

**Housing** – Heating elements and motor are enclosed in a round, 16-gauge galvanized steel enclosure which has a beige powder coat finish for durability.

**Inlet/Outlet Grilles** – Inlet grille complies with OSHA requirements for fan blade guard. Outlet grille has 45° angled louvers to direct airflow.

**Fan Motor** – Motor is UL Recognized with built-in thermal protection.

**Built-in Controls** – Include main control magnetic contactor, control voltage transformer, automatic reset thermal cut-out and fan thermostat.

**Mounting Bracket** – Wall mounting bracket with single point suspension allows the heater to rotate a full 360°.

### Thermostats

Catalog Number	Switch Type	Color	Type	Tamper-proof	Thermo-meter	Amps @ 120-240V	Amps @ 277V	Pilot Duty	Positive Off	Temperature Range °F
1006998	Bimetal	White	SPDT	No	No	—	—	30VA at 30V max	Yes	50-90

# IUH SERIES Industrial Unit Heater

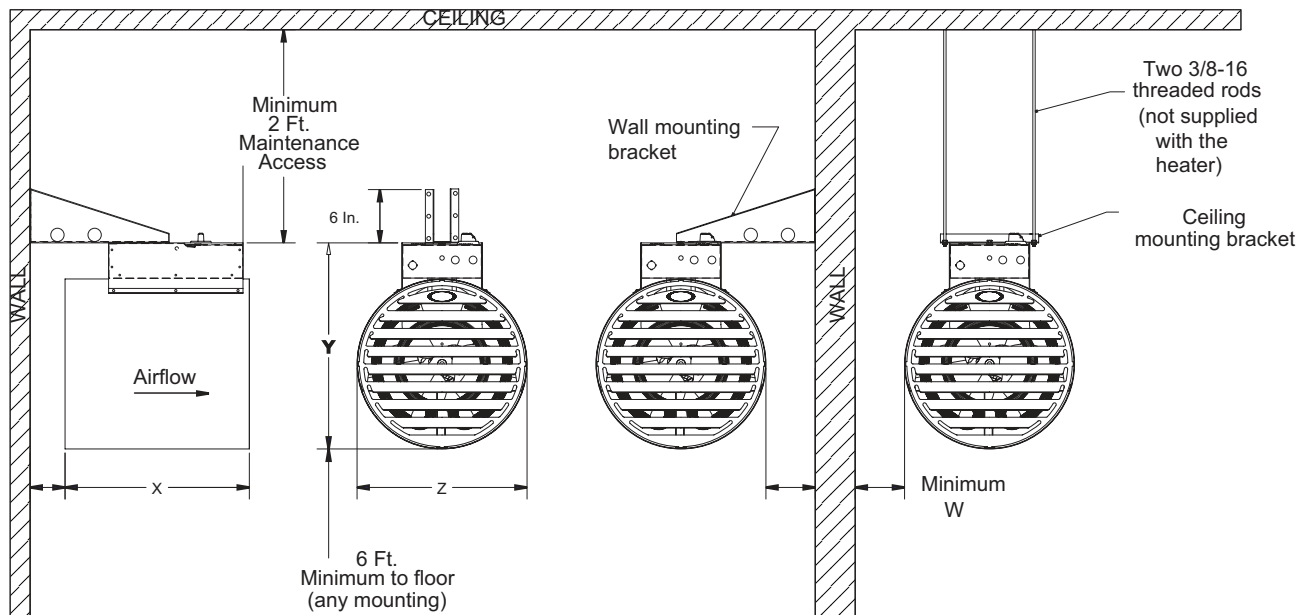
## Factory Built-in Options

Code	Description	Availability Code (2)
B	No mounting bracket	AS
C	Substitute wall mounting bracket with ceiling bracket	AS
D	Power Disconnect Switch	AS
G	Adjustable Outlet Louvers	AS
H	Premium Fan Motor	AS
L	"Heater On" Pilot Light	AS
M	Manual Reset Thermal Cutout	AS
R	Built-in Fan Relay - Required for Remote Fan Switch	AS
S	Three-position Selector Switch (Heater-Standby-Fan)	AS
T	Built-in Thermostat 40° to 120° F (4° to 49° C) Range	AS
X	No Transformer - Customer supplied control voltage	AS

(2) AS = Assembly Stock, C = Custom. Assembly stock heaters ordered with custom options subject to longer delivery.

## Dimensions, Weights and Air Throws

KW	Dimensions - In. (cm)					Weight Lb (kgs)	Maximum Air Throw-Ft. (m)
	M	W	X	Y	Z		
1 - 12	8-1/4 (21)	8-3/4 (22)	15 (38)	17 (43)	13 (41)	45 (20)	15 (5)
12.5 - 20	7 (18)	5-1/2 (14)	16-1/4 (41)	23-1/2 (60)	19-1/4 (49)	60 (27)	50 (15)
25 - 38.4	4 (10)	5-1/2 (14)	20-3/4 (53)	23-1/2 (60)	19-1/4 (49)	80 (36)	50 (15)



## Motor Data

Description	RPM	Airflow - CFM (cubic meters/hr)			Noise Level (dB)		
		1-12 KW	12.5-20 KW	25-38.4 KW	1-12 KW	12.5-20 KW	25-38.4 KW
Standard	1200	362 (615)	1342 (2280)	1237 (2102)	64	68	68
Premium	1800	618 (1050)	1774 (3014)	1635 (2778)	75	84	84

# IUH SERIES

## Industrial Unit Heater

For Non-Hazardous Areas  
For Non-Corrosive Areas



### Heater Listing

KW	Volts	Phase	Total Amps (1)	Approximate Air Temperature Rise °F (°C)	Motor			Catalog Number	Availability Code (2)
					HP	Volts	Phase		
3	208	1	17	21 (12)	1/4	208	1	238-UT03C	AS
	240	1	15	21 (12)	1/4	240	1	238-UT03J	
	480	1	8	21 (12)	1/4	480	1	238-UT03T	
	208	3	11	21 (12)	1/4	208	1	238-UT03D	
	240	3	10	21 (12)	1/4	240	1	238-UT03K	
	480	3	5	21 (12)	1/4	480	1	238-UT03U	
5	208	1	27	35 (19)	1/4	208	1	238-UT05C	
	240	1	23	35 (19)	1/4	240	1	238-UT05J	
	480	1	12	35 (19)	1/4	480	1	238-UT05T	
	208	3	16	35 (19)	1/4	208	1	238-UT05D	
	240	3	15	35 (19)	1/4	240	1	238-UT05K	
	480	3	8	35 (19)	1/4	480	1	238-UT05U	
7.5	208	1	39	53 (29)	1/4	208	1	238-UT08C	
	240	1	34	53 (29)	1/4	240	1	238-UT08J	
	480	1	17	53 (29)	1/4	480	1	238-UT08T	
	208	3	23	53 (29)	1/4	208	1	238-UT08D	
	240	3	21	53 (29)	1/4	240	1	238-UT08K	
	480	3	11	53 (29)	1/4	480	1	238-UT08U	
9	208	1	46	64 (36)	1/4	208	1	238-UT09C	
	240	1	40	64 (36)	1/4	240	1	238-UT09J	
	480	1	20	64 (36)	1/4	480	1	238-UT09T	
	208	3	28	64 (36)	1/4	208	1	238-UT09D	
	240	3	24	64 (36)	1/4	240	1	238-UT09K	
	480	3	12	64 (36)	1/4	480	1	238-UT09U	
10	240	1	44	52 (29)	1/4	240	1	*238-UT10J	
	480	1	22	52 (29)	1/4	480	1	*238-UT10T	
	208	3	30	52 (29)	1/4	208	1	*238-UT10D	
	240	3	27	52 (29)	1/4	240	1	*238-UT10K	
	480	3	14	52 (29)	1/4	480	1	*238-UT10U	
12	480	1	27	62 (34)	1/4	480	1	* 238-UT12T	
	208	3	36	62 (34)	1/4	208	1	* 238-UT12D	
	240	3	32	62 (34)	1/4	240	1	* 238-UT12K	
	480	3	16	62 (34)	1/4	480	1	* 238-UT12U	
12.5	208	3	37	31 (17)	1/4	208	1	238-UL13D	
	240	3	33	31 (17)	1/4	240	1	238-UL13K	
	480	3	17	31 (17)	1/4	480	1	238-UL13U	
15	208	3	44	38 (21)	1/4	208	1	238-UL15D	
	240	3	39	38 (21)	1/4	240	1	238-UL15K	
	480	3	20	38 (21)	1/4	480	1	238-UL15U	
20	480	3	26	35 (19)	1/4	480	1	*238-UL20U	
25	480	3	32	66 (37)	1/4	480	1	238-UA25U	
30	480	3	38	79 (44)	1/4	480	1	238-UA30U	
35	480	3	44	61 (34)	1/4	480	1	*238-UA35U	
38.4	480	3	48	70 (39)	1/4	480	1	*238-UA39U	

\* Premium motor comes standard with heater.

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

(2) AS = Assembly Stock, C = Custom. Assembly stock heaters ordered with custom options subject to longer delivery.



# UHIR SERIES Unit Heater



The UHIR unit heater is available in 50 standard models with ratings up to 50 KW at voltages of 208, 240, 277, and 480 single or three-phase. They are available with a wide variety of factory built-in or field-installed options.

**Temperature Control:** Single-stage or two-stage control with built-in or remote-mounted thermostats are available on all heaters.

**Control Options:** Available as factory built-in or field-installed to meet job specifications.

**Custom KW's:** Custom KW's are available up to 50 KW.

**Discharge Direction:** The UHIR heater can be mounted for horizontal or vertical discharge using an optional universal wall/ceiling mounting bracket or with field-furnished threaded rods for ceiling mounting.

**Color Options:** The standard color is camel. Six optional colors are available: grey, yellow, red, white, blue or textured beige. Heaters may also be supplied with unpainted corrosion resistant galvanized steel. See back cover for color samples.



## Applications

- Factories
- Garages
- Mechanical Rooms
- Pump Houses
- Service Areas in Air Handling Units
- Shipping and Receiving Areas
- Storage Areas
- Warehouses
- Workshops

## Standard Construction Features

**Heating Elements** - Industrial grade, 0.475" diameter steel sheath with brazed copper plated steel fins and epoxy sealed ends. Draw-thru airflow design pulls air across the heating elements to ensure cool element operation and even air distribution resulting in long element life.

**Housing** - Heating elements and motor are enclosed in a heavy gauge galvanized steel cabinet with a durable camel polyester powder coat finish.

**Outlet Grille** - Individually adjustable louvers are provided to direct airflow. A protective outlet fan guard is provided to prevent insertion of foreign objects.

**Fan Motor** - Permanently lubricated and thermally protected motor.

**Built-in Controls** - All units include an automatic reset thermal cutout that will de-energize the heater if an overtem-

perature condition occurs. A manual reset thermal cutout, in addition to an automatic reset thermal cutout, is standard on heaters 10 KW and above. A fan relay is provided to allow the elements to heat up before fan startup and purges the heater of residual heat after shutdown. A 24-volt transformer and disconnecting contactor are provided on most heaters. Single-phase heaters rated at 5 KW or less have line voltage controls; 24-volt control and contactor are available. Power fusing is standard on all heaters rated over 48 amps.

**Mounting** - Universal horizontal or vertical discharge. Optional diffusers are available for vertical discharge. An Anemostat diffuser can be used to provide draft-free air movement at lower mounting heights. For higher mounting heights, radial diffuser with adjustable fins can be used to increase floor coverage or adjusted for a vertical down blast of air.

# UHIR SERIES

## Unit Heater

### Factory Built-in Options

Code	Description
Consult Factory	Custom KW - CONSULT FACTORY
D	Power disconnect switch
F	Fusing under 48 Amps, not available on heaters 3 to 10 KW
M	Manual Reset Cutout (In addition to automatic cutout) on heaters up to 10KW
P (1)	"Heater On" Pilot Light
R1	Built-in 24V transformer and contactor for 3 to 5 KW, single phase heaters.
R2 (1) (2)	120V Transformer to replace 24V Transformer
S1	Summer Fan Switch
S2 (1)	Summer Fan Switch – Remote Pilot Duty
T	Built-in Thermostat - 1 - Stage Built-in Thermostat - 2 - Stage (Option 'X' required)
V1*	Anemostat (Cone) Diffuser
V2	Radial Diffuser
X (2)	2-Stage Control

\* consult factory for lead times

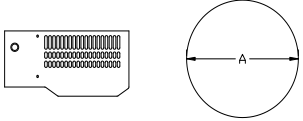
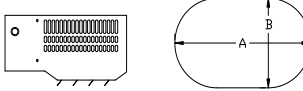
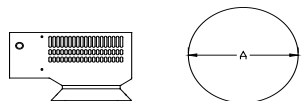
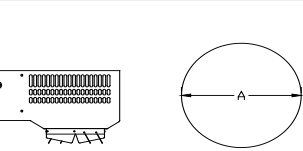
- (1) Disconnect switch unavailable on 240-U3199C-X and 240-U3200J-X.
- (2) Option 'R2' (120V control) and Option 'X' (2-stage control) cannot be combined on heaters rated up to 5 KW.
- (3) When specifying these options with single-phase heaters rated up to 5kW, Option 'R1' must also be specified.
- (4) When specifying this option, with any heater, option 'R2' must also be specified.

### Field-Installed Options

(shipped loose for field installation into heater)

Catalog Number	Description
1024155	Anemostat (Cone) Diffuser up to 5 kW
1024156	Anemostat (Cone) Diffuser over 5 kW up to 20 kW
1024157	Anemostat (Cone) Diffuser over 20 kW
1024152	Radial Diffuser up to 5 kW
1024153	Radial Diffuser over 5 kW up to 20 kW
1024154	Radial Diffuser over 20 kW
1023941	Horizontal Dust Shield up to 10 kW
1024059	Horizontal Dust Shield over 20 kW up to 20 kW
1024060	Horizontal Dust Shield over 20 kW
1024162	Disconnect Switch, 600V, Three-Pole, 32 Amp
1024163	Disconnect Switch, 600V, Three-Pole, 64 Amp
1024164	Disconnect Switch, 600V, Three-Pole, 80 Amp
1024166	Built-in Thermostat - 1 - Stage
1024167	Built-in Thermostat - 2 - Stage (Option 'X' required)
1024168 (1)(3)	Heater On Pilot Light (24V)
1024169 (2)(4)	Heater On Pilot Light (120V)
1024170	Summer Fan Switch - Built-in up to 277V
1024171	Summer Fan Switch- Built-in, over 277V
1024172 (1)(3)	Summer Fan Switch - Remote, 24V Control

### Vertical Mounting Air Pattern Table

Description	Used on	Max Mtg. Height ft. (m)	A ft (m)	B ft (m)
<b>WITHOUT DIFFUSER</b> For a straight downward air pattern, directional louvers can be removed in order to maximize airflow. 	up to 5 kW over 5 up to 10 kW over 10 up to 20 kW over 20 up to 50 kW	10 (3.0) 15 (4.6) 20 (6.1) 25 (7.6)	17 (5.2) 28 (8.5) 38 (11.6) 68 (20.7)	— — — —
<b>DIRECTIONAL LOUVERS (standard)</b> Provides a directional (straight line) airflow which results in a rectangular air pattern. Louvers can be adjusted through a 35 degree range of motion 	up to 5 kW over 5 up to 10 kW over 10 up to 20 kW over 20 up to 50 kW	10 (3.0) 15 (4.6) 20 (6.1) 25 (7.6)	22 (6.7) 40 (12.2) 53 (16.2) 85 (25.9)	12 (3.7) 20 (6.1) 27 (8.2) 45 (13.7)
<b>ANEMOSTAT DIFFUSER</b> Ideal for low mounting heights. Fabricated using 3 diverging hollow cones which disperse heat to the floor area at a minimum velocity for comfort. 	up to 5 kW over 5 up to 10 kW over 10 up to 20 kW over 20 up to 50 kW	9 (2.7) 13 (4.0) 17 (5.2) 21 (6.4)	17 (5.2) 29 (8.8) 40 (12.2) 68 (20.7)	— — — —
<b>RADIAL DIFFUSER</b> Ideal for high ceiling mounting. Louvers can be adjusted to direct airflow straight down when fully open to 45 degrees in a radial pattern which increases floor coverage by approximately 20%. 	<b>OPEN</b> up to 5 kW over 5 up to 10 kW over 10 up to 20 kW over 20 up to 50 kW	10 (3.0) 15 (4.6) 20 (6.1) 25 (7.6)	20 (6.1) 30 (9.1) 38 (11.6) 65 (19.8)	— — — —
	<b>45°</b> up to 5 kW over 5 up to 10 kW over 10 up to 20 kW over 20 up to 50 kW	9 (2.7) 11 (3.4) 15 (4.5) 18 (5.5)	24 (7.3) 36 (11.0) 46 (14.0) 78 (23.8)	— — — —

# UHIR SERIES

## Unit Heater

### Heater Listing

KW	Volts	Ph	Total Amps*	Approx. Air Temperature Rise °F (°C)	2-Stage Control	Std. Control Voltage	Unit Size	Catalog Number (2)
2.5	208	1	12.30	27 (15)	1B	208	1	240-U1025C
	240	1	10.7		1B	240	1	240-U1025J
	277	1	9.40		1B	277	1	240-U1025N
3.3	208	1	16.17	27 (15)	1B	208	1	240-U1033C
	240	1	14.05		1B	240	1	240-U1033J
	277	1	12.21		1B	277	1	240-U1033N
3.7	480	3	4.66	27 (15)	1A	24	1	240-U1037U
3.8	208	3	10.85		1A	24	1	240-U1038D
	240	3	9.44		1A	24	1	240-U1038K
5	208	1	24.34	46 (26)	1B	208	1	240-U1050C
	240	1	21.13		1B	240	1	240-U1050J
	277	1	18.35		1B	277	1	240-U1050N
	208	3	14.18		1A	24	1	240-U1050D
	240	3	12.33		1A	24	1	240-U1050K
	480	3	6.22		1A	24	1	240-U1050U
6.7	208	1	32.91	37 (21)	1B	24	2	240-U2067C
	240	1	28.62		1B	24	2	240-U2067J
	277	1	24.79		1B	24	2	240-U2067N
7.5	208	1	36.80	37 (21)	1B	24	2	240-U2075C
	240	1	32.00		1B	24	2	240-U2075J
	208	3	21.52		1A	24	2	240-U2075D
	240	3	18.74		1A	24	2	240-U2075K
	480	3	9.39		1A	24	2	240-U2075U
9.9	208	1	48.30	49 (27)	1B	24	2	240-U2099C
10	240	1	42.37		1B	24	2	240-U2100J
	277	1	36.70		1B	24	2	240-U2100N
	208	3	28.46		1A	24	2	240-U2100D
	240	3	24.76		1A	24	2	240-U2100K
480	3	12.40	1A	24	2	240-U2100U		
13.2	277	1	48.35	52 (29)	1B	24	3	240-U3132N
13.3	208	1	64.79		Standard	24	3	240-U3133C-X (1)
	240	1	56.27		Standard	24	3	240-U3133J-X
15	208	3	42.48		1B	24	3	240-U3150D
	240	3	36.93		1B	24	3	240-U3150K
	480	3	18.44	1B	24	3	240-U3150U	
19.9	208	1	96.52	60 (33)	Standard	24	3	240-U3199C-X (1)
	240	3	48.72		1B	24	3	240-U3199K
20	240	1	84.18		Standard	24	3	240-U3200J-X (1)
	277	1	72.90		Standard	24	3	240-U3200N-X (1)
	208	3	56.36		Standard	24	3	240-U3200D-X
	480	3	24.46	1B	24	3	240-U3200U	
25	208	3	70.90	49 (27)	Standard	24	4	240-U4250D-X
	240	3	61.64		Standard	24	4	240-U4250K-X
	480	3	30.77		1B	24	4	240-U4250U
33.3	208	3	93.93		Standard	24	4	240-U4333D-X
	240	3	81.61		Standard	24	4	240-U4333K-X
	480	3	40.75	1B	24	4	240-U4333U	
37.5	208	3	105.59	61 (34)	Standard	24	4	240-U4375D-X
	240	3	91.71		Standard	24	4	240-U4375K-X
	480	3	45.80		1A	24	4	240-U4375U
49.8	208	3	139.73	68 (38)	Standard	24	4	240-U4498D-X
50	240	3	121.8		Standard	24	4	240-U4500K-X
	480	3	60.84		Standard	24	4	240-U4500U-X

\*Total Amps = Heating element amps and motor amps.

(1) Disconnect switch unavailable.

(2) All Standard heaters are supplied with 24V transformer and contactor except up to 5 KW single-phase units. Optional low voltage transformer and contactor are available for these heaters, see Factory Built-in Option 'R1'.

2-stage heaters can be field wired as single stage.

1A = Optional 2-stage control, unbalanced (option X)

1B = Optional 2-stage control, balanced (option X).

# UHIR SERIES

## Unit Heater

### Heater Dimensions

KW	W In. (mm)	H In. (mm)	Depth In. (mm)	A In. (mm)	B In. (mm)	C In. (mm)	D In. (mm)	E In. (mm)	F In. (mm)	G In. (mm)	H In. (mm)	I In. (mm)	J In. (mm)
up to 5	12.875 (327)	17.750 (450)	7.625 (194)	8 (203)	10.188 (284)	18 (457)	10 (254)	8 (203)	16 (406)	5 (127)	6.44 (164)	6.44 (164)	5 (127)
5.1 to 10	16.875 (429)	24.250 (616)	7.625 (194)	6 (152)	10.188 (237)	18 (457)	10 (254)	8 (203)	16 (406)	5 (127)	6.44 (164)	6.44 (164)	5 (127)
10.1 to 20	16.875 (429)	24.250 (616)	11.375 (289)	6 (152)	8.313 (237)	18 (457)	12 (305)	12 (305)	32 (813)	5 (127)	10.13 (257)	5 (127)	10.13 (257)
20.1 to 50	26.937 (684)	35.500 (902)	15.625 (397)	6.281 (236)	11.937 (380)	13 (330)	12 (305)	16 (406)	32 (813)	7 (178)	12.92 (328)	7 (178)	12.92 (328)

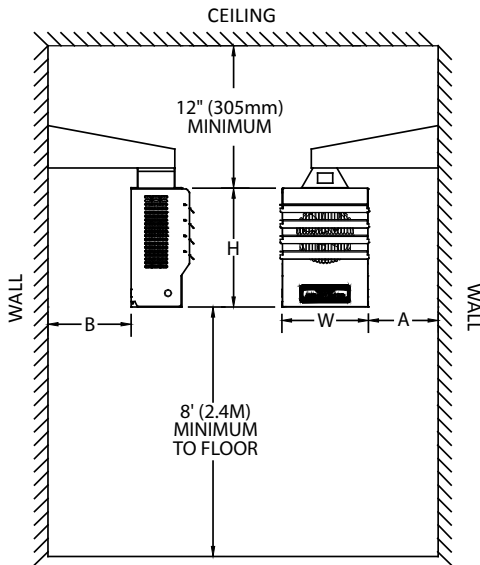


FIG. 1 HORIZONTAL WALL MOUNTING WITH MOUNTING ARM

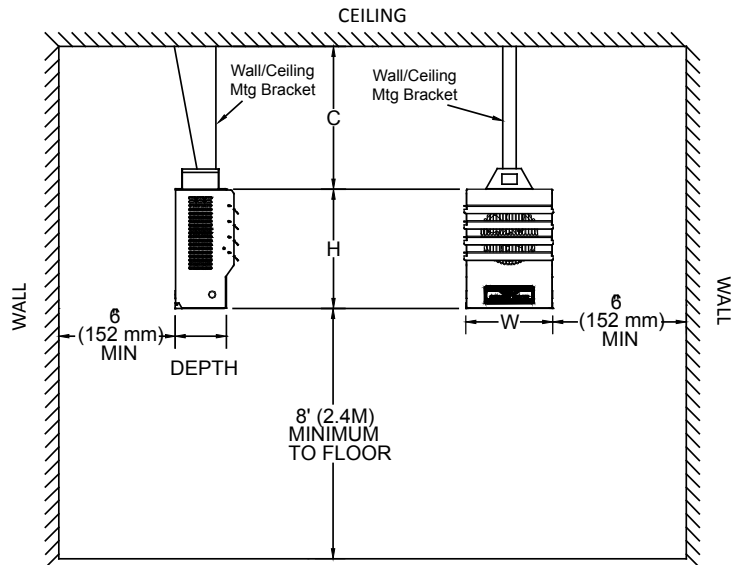


FIG. 2 HORIZONTAL CEILING MOUNT WITH MTG ARM

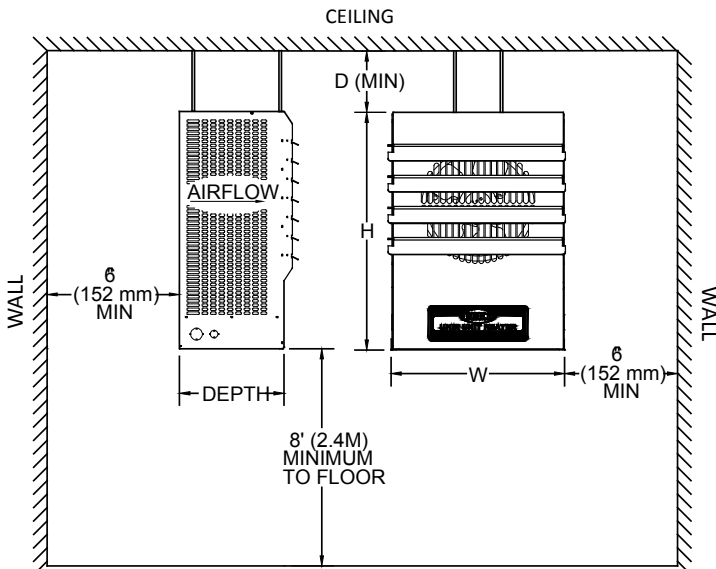


FIG. 3 HORIZONTAL CEILING MOUNT WITH THREADED ROD

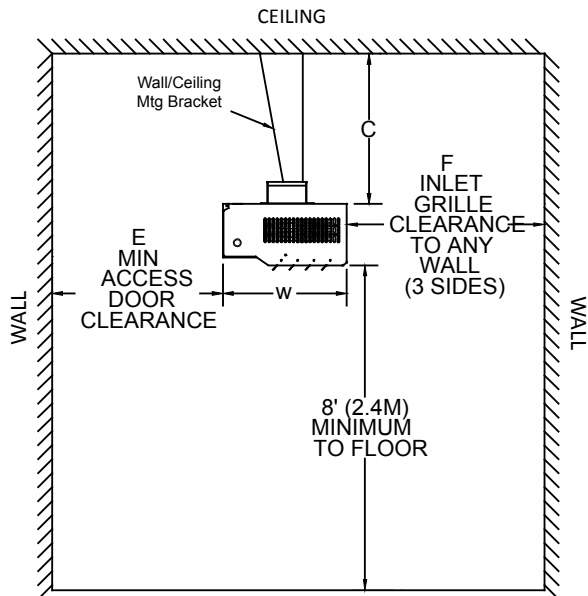


FIG. 4 VERTICAL CEILING MOUNT WITH MTG ARM

# UHIR SERIES Unit Heater

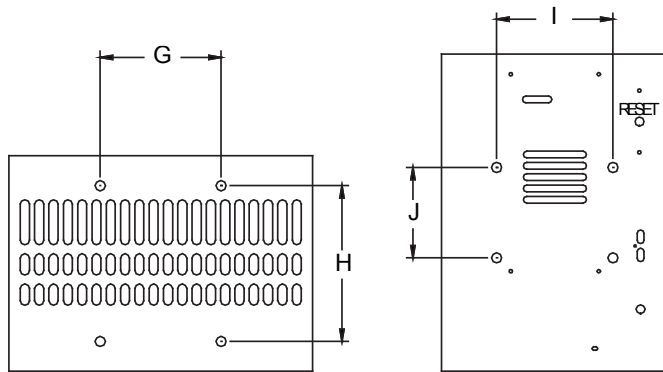


FIG. 5 THREADED ROD (3/8 - 16) ATTACHMENT POINT DIMENSIONS

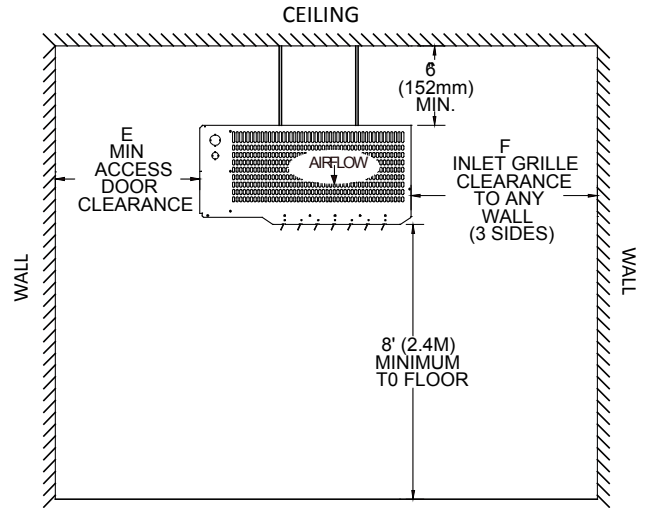


FIG. 6 VERTICAL CEILING MOUNT WITH THREADED ROD

## Mounting Brackets

Catalog Number	Description
1024149	Universal wall & ceiling mounting bracket up to 10 KW
1024150	Universal wall & ceiling mounting bracket over 10 KW up to 20 KW
1024151	Universal wall & ceiling mounting bracket over 20 KW

## Remote Thermostat Selection Chart

KW	Catalog Number	Volts	Ph	1-Stage Line Voltage	1-Stage Low Voltage (b)	2-Stage Low Voltage (b)
2.5	240-U1025C	208	1	1007014	1006998 (a)	1007030 (a)
	240-U1025J	240	1	1007014	1006998 (a)	1007030 (a)
	240-U1025U	277	1	1007014	1006998 (a)	1007030 (a)
3.3	240-U1033C	208	1	1007014	1006998 (a)	1007030 (a)
	240-U1033J	240	1	1007014	1006998 (a)	1007030 (a)
	240-U1033N	277	1	1007014	1006998 (a)	1007030 (a)
3.7	240-U1037U	480	3	NA	1006998	1007030
3.8	240-U1038D	208	3	NA	1006998	1007030
	240-U1038K	240	3	NA	1006998	1007030
5	240-U1050C	208	1	NA	1006998 (a)	1007030 (a)
	240-U1050J	240	1	1007014	1006998 (a)	1007030 (a)
	240-U1050N	277	1	1007014	1006998 (a)	1007030 (a)
<b>All Other UHIR Heaters</b>				NA	1006998	1007030

(a) Add option 'R1' for 24V control on these units.

(b) Option 'R2' is unavailable with any INDEECO supplied remote low voltage thermostats.



1007030



1007014



1006998

## Finish/Color Options

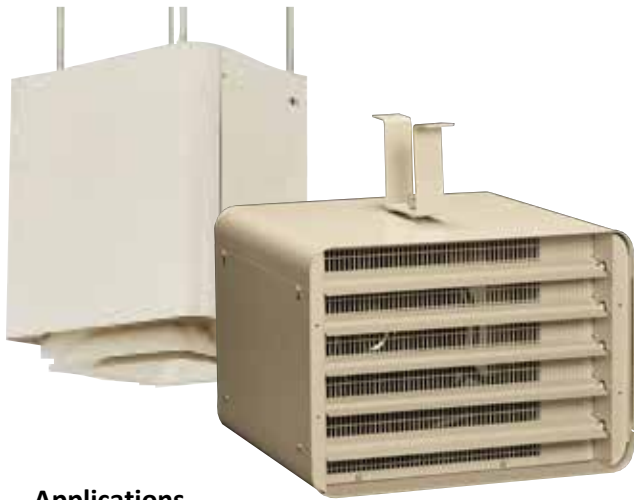
Code	Finish	Color
None	Polyester Powder Coat	Camel
A0		Grey
A1		Yellow
A2		Red
A3		White
A4		Blue
A5	Steel (unpainted)	Galvanized
A7	Polyester Powder Coat	Beige

## Airflows, Weights and Air Throw

Unit Size	CFM	Installed Weight lb (kg)	Max. Air Throw ft. (m)
1	350	25 (11.3)	15 (4.6)
2	650	40 (18.1)	18 (5.5)
3	1500	55 (25)	41 (12.5)
4	3100	155 (70.3)	62 (18.9)

# UCI SERIES

## Unit Heater



### Applications

- Garages
- Mechanical Rooms
- Stairwells
- Vestibules
- Warehouses
- Workshops

The UCI unit heater is designed for industrial and commercial applications.

- **Large Capacity:** Heavy-duty construction with ratings up to 60 KW at 2,000 CFM.
- **Control Options:** Wide range of factory built-in or field-installed control options to meet job specifications.
- **Single Point Electrical Hook-up:** Heater, fan motor and controls are all connected to the same branch circuit. Field connections and built-in controls are easily accessed in the side-mounted control compartment.
- **Discharge Direction:** The UCI heater may be mounted horizontally using one of two brackets (supplied) or vertically using four threaded rods (not included).

---

## Standard Construction Features

**Heating Elements** – Industrial grade stainless steel tubular elements in 2-10 KW units and steel finned tubular elements in 15-60 KW units.

**Housing** – Cabinet is constructed of 18 and 20-gauge galvanized steel finished with durable almond polyester powder paint.

**Outlet Grille** – The outlet grille has individually adjustable louvers to direct airflow. A protective outlet mesh screen, provided on 2-30 KW heaters, allows for lower mounting heights.

**Fan Motor** – Totally enclosed, thermally protected motor with factory-lubricated ball bearings (except for 15 to 25 kW at 208/240V) operates at 58 dBA (2-10 kW), 67 dBA (15-30 kW) or 77 dBA (40-60 kW). Blow-through design reduces motor operating temperature for longer life.

**Built-in Controls** – Include 240/208 volt control circuit (with transformer if necessary), automatic reset thermal cutout, fan override and factory-installed contactor. Power fusing is supplied for heaters over 48 amps.

**Mounting Bracket** – Wall and ceiling bracket provided with each unit under 40 KW for horizontal mounting. 40-60 KW heaters furnished with four corner support brackets for ceiling mounting.

**Installation Requirements** – For best performance, do not install unit heaters above recommended maximum mounting heights of 2-10 KW, 8-feet; 15-30 KW, 10-feet; 40-60 KW, 15-feet. All but 40-60 KW heaters can be installed at lower mounting heights. Minimum height for 40-60 KW heaters is 8-feet. Maximum ambient room temperature for proper operation is 85°F. These units are not for residential use in the United States.

# UCI SERIES Unit Heater

## Factory Built-in Options

Code	Description
C	Three Pole Contactor
D1	Disconnect Switch 32 Amp (2)
D2	Disconnect Switch 64 Amp (2)
D5	Disconnect Switch 80 Amp (2)
G	Fusing
M	Manual Reset
R1	24V Relay
R2	24V Relay with Transformer (1)
T	Thermostat (2)
U	Fan "ON" Switch
X	120V Control, fused secondary and grounded

(1) Add option "R2" when a low voltage remote thermostat is required.

(2) Not available with heater part number 926U1000CA.

## Field-Installed Options

(shipped loose for field installation into heater)

Catalog Number	Description
926-124513	Diffuser cone (2-10 kW)
926-124514	Diffuser cone (15-30 kW)
926-161077	Diffuser cone (40-60 kW)
926-124515	Thermostat Kit
926-124516	24V Relay Kit
926-124518	24V Relay Kit with Transformer
926-124517	24V Relay Kit with 208V Transformer
926-124520	24V Relay Kit with 480V Transformer

## Line Voltage Thermostats

Catalog Number	Switch Type	Color	Type	Tamper-proof	Thermo-meter	Amps @ 120-240V	Amps @ 277V	Pilot Duty	Positive Off	Temperature Range °F
901-124640	Bimetal	Beige	SPST	No	No	22	19	—	No	40-80
901-124642	Bimetal	White	SPST	No	No	22	19	—	No	40-80
901-124643	Bimetal	White	DPST	No	No	22	19	—	Yes	40-80
901-TH114-A-420	Electronic	White	DPST	No	Digital	15A @ 240V	—	—	No	40-86

## Low Voltage Thermostats

901-1006998	Bimetal	White	SPST	No	No	—	—	30VA at 30V max	Yes	50-90
901-219981	Precision Snap Action	White	SPST	No	No	—	—	36VA at 30V max	No	45-95

**Accessories -** Clear universal thermostat guard. Protects both line and low voltage thermostats against vandalism, damage, and unauthorized adjustment of thermostat settings.

Catalog Number	Description
901-124644	Inside dimensions: 6-3/8" (length), 3-1/2" (height), 3" (depth)
901-F29-0198	Inside dimensions: 8-1/4" (length), 5-3/8" (height), 3-1/2" (depth)



901-124640



901-124642  
901-124643



901-TH114-A-420



901-1006998



901-219981



901-124644



901-F29-0198

# UCI SERIES

## Unit Heater

### Heater Listing

KW	Volts	Phase	Total Amps (1)	CFM	Approximate Air Temperature Rise °F (°C)	Motor Data			Catalog Number
						HP	RPM	Voltage	
2	208	1	10.3	510	13 (7)	1/30	1550	240/208	926U02000CA
	208	3	6.3	510	13 (7)	1/30	1550	240/208	926U02000DA
	240	1	9.0	510	13 (7)	1/30	1550	240/208	926U02000JA
	240	3	5.5	510	13 (7)	1/30	1550	240/208	926U02000KA
	277	1	7.9	510	13 (7)	1/30	1550	240/208	926U02000NA
	480	1	4.9	510	13 (7)	1/30	1550	240/208	926U02000TA
	480	3	3.1	510	13 (7)	1/30	1550	240/208	926U02000UA
3	208	1	15.1	510	18 (10)	1/30	1550	240/208	926U03000CA
	208	3	9.0	510	18 (10)	1/30	1550	240/208	926U03000DA
	240	1	13.2	510	18 (10)	1/30	1550	240/208	926U03000JA
	240	3	7.9	510	18 (10)	1/30	1550	240/208	926U03000KA
	277	1	11.5	510	18 (10)	1/30	1550	240/208	926U03000NA
	480	1	7.0	510	18 (10)	1/30	1550	240/208	926U03000TA
	480	3	4.3	510	18 (10)	1/30	1550	240/208	926U04000UA
4	208	1	19.9	510	25 (14)	1/30	1550	240/208	926U04000CA
	208	3	11.8	510	25 (14)	1/30	1550	240/208	926U04000DA
	240	1	17.4	510	25 (14)	1/30	1550	240/208	926U04000JA
	240	3	10.3	510	25 (14)	1/30	1550	240/208	926U04000KA
	277	1	15.1	510	25 (14)	1/30	1550	240/208	926U04000NA
	480	1	9.0	510	25 (14)	1/30	1550	240/208	926U04000TA
	480	3	5.5	510	25 (14)	1/30	1550	240/208	926U04000UA
5	208	1	24.7	700	23 (13)	1/30	1550	240/208	926U05000CA
	208	3/1*	14.6	700	23 (13)	1/30	1550	240/208	926U05000DA
	240	1	21.5	700	23 (13)	1/30	1550	240/208	926U05000JA
	240	3/1*	12.7	700	23 (13)	1/30	1550	240/208	926U05000KA
	277	1	18.8	700	23 (13)	1/30	1550	240/208	926U05000NA
	480	1	11.1	700	23 (13)	1/30	1550	240/208	926U05000TA
	480	3	6.7	700	23 (13)	1/30	1550	240/208	926U05000UA
7.5	208	1	36.8	700	34 (19)	1/30	1550	240/208	926U07500CA
	208	3/1*	21.5	700	34 (19)	1/30	1550	240/208	926U07500DA
	240	1	32.0	700	34 (19)	1/30	1550	240/208	926U07500JA
	240	3/1*	18.7	700	34 (19)	1/30	1550	240/208	926U07500KA
	277	1	27.8	700	34 (19)	1/30	1550	240/208	926U07500NA
	480	1	16.3	700	34 (19)	1/30	1550	240/208	926U07500TA
	480	3	9.7	700	34 (19)	1/30	1550	240/208	926U07500UA
10	208	1	48.8	700	45 (25)	1/30	1550	240/208	926U10000CA
	208	3	28.5	700	45 (25)	1/30	1550	240/208	926U10000DA
	240	1	42.4	700	45 (25)	1/30	1550	240/208	926U10000JA
	240	3/1*	24.8	700	45 (25)	1/30	1550	240/208	926U10000KA
	480	1	21.5	700	45 (25)	1/30	1550	240/208	926U10000TA
	480	3	12.7	700	45 (25)	1/30	1550	240/208	926U10000UA

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

Other voltages available. Consult factory.

Only available with almond finish.

\* Can be converted from 3 to 1-phase in the field.



# UCI SERIES Unit Heater

## Heater Listing (cont.)

KW	Volts	Phase	Total Amps (1)	CFM	Approximate Air Temperature Rise °F (°C)	Motor Data			Catalog Number
						HP	RPM	Voltage	
15	208	1	73.2	1300	36 (20)	1/8	1550	240/208	926U15000CA
	208	3	42.7	1300	36 (20)	1/8	1550	240/208	926U15000DA
	240	1	63.6	1300	36 (20)	1/8	1550	240/208	926U15000JA
	240	3	37.2	1300	36 (20)	1/8	1550	240/208	926U15000KA
	480	1	32.2	1400	34 (19)	1/3	1725	480 (1 ph)	926U15000TA
	480	3	18.9	1400	34 (19)	1/3	1725	480 (1 ph)	926U15000UA
20	208	1	97.3	1300	49 (27)	1/8	1550	240/208	926U20000CA
	208	3	56.6	1300	49 (27)	1/8	1550	240/208	926U20000DA
	240	1	84.4	1300	49 (27)	1/8	1550	240/208	926U20000JA
	240	3	49.2	1300	49 (27)	1/8	1550	240/208	926U20000KA
	480	1	42.6	1400	45 (25)	1/3	1725	480 (1 ph)	926U20000TA
	480	3	25	1400	45 (25)	1/3	1725	480 (1 ph)	926U20000UA
25	208	1	121.3	1300	61 (34)	1/8	1550	240/208	926U25000CA
	208	3	70.5	1300	61 (34)	1/8	1550	240/208	926U25000DA
	240	1	105.3	1300	61 (34)	1/8	1550	240/208	926U25000JA
	240	3	61.2	1300	61 (34)	1/8	1550	240/208	926U25000KA
	480	1	53	1400	56 (31)	1/3	1725	480 (1 ph)	926U25000TA
	480	3	31	1400	56 (31)	1/3	1725	480 (1 ph)	926U25000UA
30	480	3	37	1400	68 (38)	1/3	1725	480 (1 ph)	926U30000UA
40	480	3	49.6	2000	63 (35)	3/4	1140	480 (3 ph)	926U40000UA
50	480	3	61.6	2000	79 (44)	3/4	1140	480 (3 ph)	926U50000UA
60	480	3	73.7	2000	95 (53)	3/4	1140	480 (3 ph)	926U60000UA

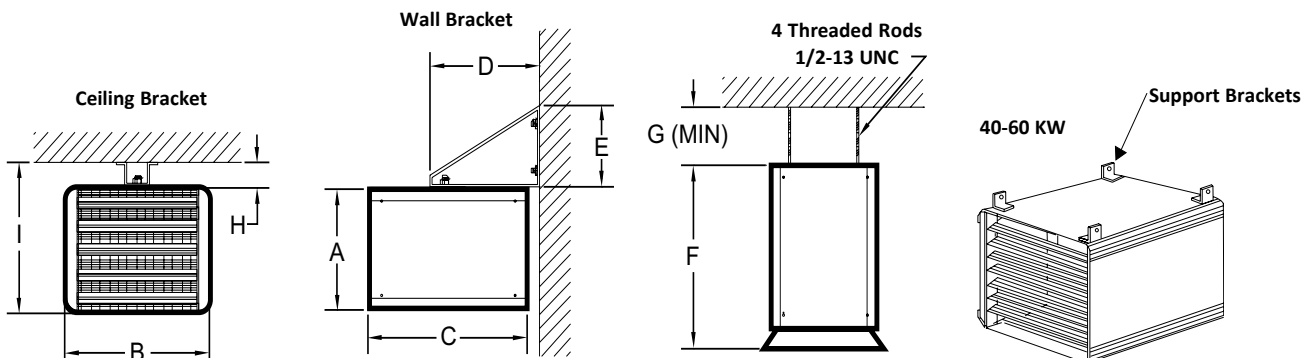
(1) Total Amps = Heating element amps and motor amps.

Other voltages available. Consult factory.

Only available with almond finish.

## Dimensions and Weights

KW	A In. (mm)	B In. (mm)	C In. (mm)	D In. (mm)	E In. (mm)	F In. (mm)	G In. (mm)	H In. (mm)	I In. (mm)	Weight lb (kg)
2-10	12 (305)	16-1/2 (419)	17 (432)	14-1/16 (357)	11-7/16 (290)	195/16 (490)	12 (305)	4-7/8 (123)	16-7/8 (428)	45 (20)
15-30	17-1/2 (444)	21-7/8 (556)	22-1/2 (572)	18-1/2 (470)	16 (407)	24-13/16 (630)	12 (305)	5-13/16 (148)	23-5/16 (592)	85 (39)
40-60	23 (585)	25-1/4 (641)	34-1/4 (870)	—	—	36-3/8 (924)	12 (305)	12 (305)	35 (890)	150 (68)



# ULI SERIES Unit Heater



The ULI unit heater is an economical choice for commercial heating applications.

- **Compact Design:** Ideal for primary or spot heating applications. Units can be wall or ceiling-mounted for horizontal airflow.
- **Versatility:** Three different heater KW ratings can be field converted to either 240 or 208 single-phase power.
- **Built-in Adjustable Thermostat:** Minimum temperature setting on thermostat can be used to disable the heater.

## Applications

- Basements
- Entrances
- Garages
- Mechanical Rooms
- Storage Rooms
- Workshops
- Service Areas in Air Handling Units

## Standard Construction Features

**Heating Elements** – Stainless steel tubular elements.

**Housing** – Cabinets are constructed of 20-gauge galvanized steel with an almond polyester powder paint finish.

**Outlet Grille** – The outlet grille has adjustable louvers to direct airflow and a protective screen for additional safety.

**Fan/Motor** – The fan supplies 300 CFM at 51 dBA. The motor is permanently lubricated and totally enclosed.

**Built-in Controls** – Automatic reset thermal cutout and adjustable thermostat.

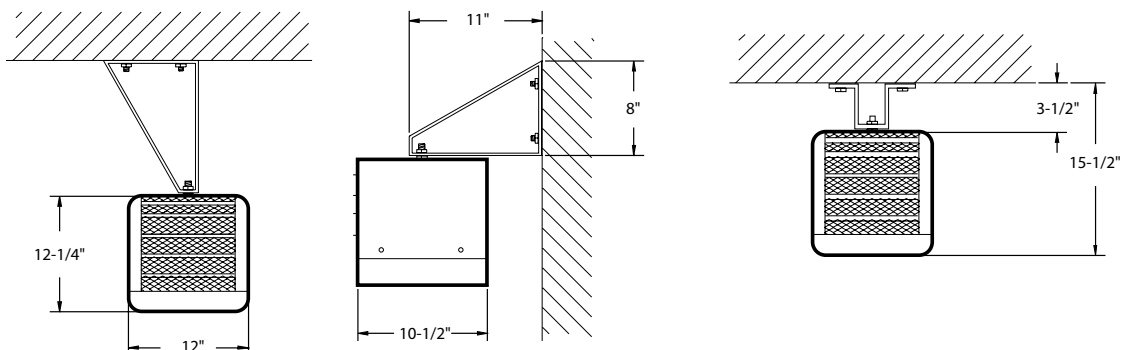
**Mounting Bracket** – A universal mounting bracket for either wall or ceiling installation allows for 360° rotation of the heater.

## Dimensions, Airflows and Weights

Watts	Volts	Phase	Total Amps (1)	CFM	Approximate Air Temperature Rise °F (°C)	Weight lb (kg)	Catalog Number
2000/1500	240/208	1	8.7/7.6	300	21/16 (12/9)	20 (9)	924U02000VA
3000/2250	240/208	1	12.9/11.2	300	32/24 (18/13)	20 (9)	924U03000VA
5000/3750	240/208	1	21.2/18/4	300	53/40 (29/22)	20 (9)	924U05000VA

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

Only available with almond finish.



# UVI SERIES Vertical Unit Heater



The UVI unit heater is designed to heat buildings with high ceilings. It may also be used to re-circulate warm air that builds up near ceilings. UVI heaters can be used as primary, supplemental or dual heating systems in commercial or industrial buildings.

- **Vertical Airflow:** Suitable for applications in high bay industrial buildings where columns, machinery or warehouse stock would obstruct horizontal air movement.
- **Air Distribution Patterns:** Three optional air diffusers produce different air distribution patterns to accommodate various applications.

## Applications

- Aircraft Hangars
- Factories
- Garages
- Gyms
- High Bay Areas
- Malls
- Power Generating Stations
- Shipping and Receiving Areas
- Warehouses

## Standard Construction Features

**Heating Elements** – Steel finned tubular elements are grounded for extra safety.

**Housing** – Cabinet is constructed of 18-gauge galvanized steel with an almond polyester powder paint finish.

**Fan Motor** – Quiet, totally enclosed motor is thermally protected.

**Built-in Controls** – Contactor, fan override, terminal block for remote fan control and linear automatic reset thermal cut-out.

**Installation Requirements** – Do not install heater closer than 24 inches from walls and ceiling. Mount heaters out of reach, at least eight feet from the floor.

## Factory Built-in Options

Code	Description
D1	Disconnect Switch 40A, 600V, 3-Pole
D2	Disconnect Switch 80A, 600V, 3-Pole
R1	24V Relay
R2	24V Relay with Transformer
X	120V Control, fused secondary and grounded

## Field-Installed Options

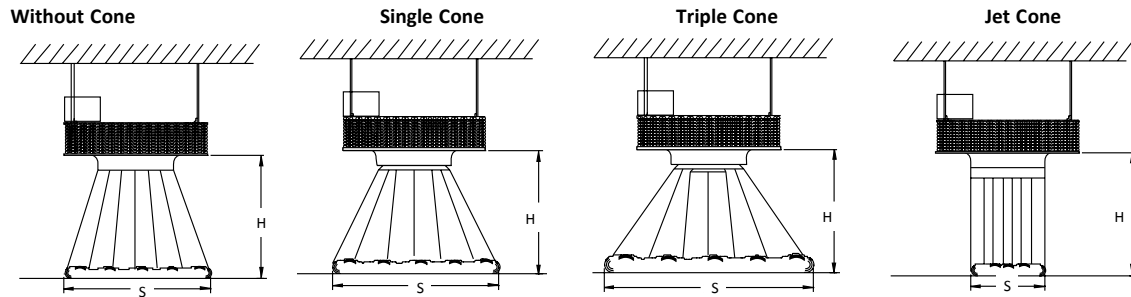
(shipped loose for field installation into heater)

Catalog Number	Description	
928-124521*	Single Cone Diffuser	5-10 KW
928-124522	Single Cone Diffuser	15-30 KW
928-124523*	Triple Cone Diffuser	5-10 KW
928-124524	Triple Cone Diffuser	15-30 KW
928-124525*	Jet Cone Diffuser	5-10 KW
928-124526	Jet Cone Diffuser	15-30 KW
928-124527	24V Relay Kit	
928-124528	24V Relay Kit with Transformer-208V	
928-124529	24V Relay Kit with Transformer-240V	

\* For heater part number 928C09600UA, all diffusers must be ordered in the 15-30 kW size.

# UVI SERIES Vertical Unit Heater

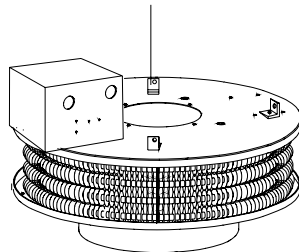
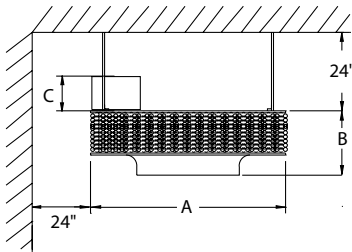
## Air Distribution Patterns



## Maximum Mounting Height

KW	Without Cone		Single Cone		Triple Cone		Jet Cone	
	H Ft (m)	S Ft (m)	H Ft (m)	S Ft (m)	H Ft (m)	S Ft (m)	H Ft (m)	S Ft (m)
5-10	12 (4)	19 (6)	8 (3)	22 (7)	10 (3)	31 (10)	16 (5)	20 (6)
15-30	18 (6)	20 (9)	10 (4)	33 (10)	14 (4)	43 (13)	22 (7)	26 (9)

## Support Brackets



Model (Without Cone)	A	B	C
	In. (mm)	In. (mm)	In. (mm)
5-10 KW	23-1/8 (587)	8 (203)	6-15/16 (176)
15-30 KW	30-1/4 (768)	12-3/16 (310)	6-11/16 (170)

## Line Voltage Thermostats

Catalog Number	Switch Type	Color	Type	Tamper-proof	Thermo-meter	Amps @ 120-240V	Amps @ 277V	Pilot Duty	Positive Off	Temperature Range °F
901-124640	Bimetal	Beige	SPST	No	No	22	19	—	No	40-80
901-124642	Bimetal	White	SPST	No	No	22	19	—	No	40-80
901-124643	Bimetal	White	DPST	No	No	22	19	—	Yes	40-80
901-TH114-A-420	Electronic	White	DPST	No	Digital	15A @ 240V	—	—	No	40-86

## Low Voltage Thermostats

901-1006998	Bimetal	White	SPST	No	No	—	—	30VA at 30V max	Yes	50-90
901-219981	Precision Snap Action	White	SPST	No	No	—	—	36VA at 30V max	No	45-95

# UVI SERIES Vertical Unit Heater

## Heater Listing

KW	Volts	Phase	Total Amps (1)	CFM	Approx. Air Temp. Rise °F (C°)	Motor Data			Weight lb (kg)	Catalog Number
						HP	RPM	Voltage		
3.2	480	3	4.7	450	22 (12)	1/25	1050	208/240	75 (34)	928C03200UA
4.8	480	3	6.6	450	34 (19)	1/25	1050	208/240	75 (34)	928C04800UA
5	208	1	24.9	450	34 (19)	1/25	1050	208/240	75 (34)	928C05000CA
	208	3	14.7	450	34 (19)	1/25	1050	208/240	75 (34)	928C05000DA
	240	1	21.7	450	34 (19)	1/25	1050	208/240	75 (34)	928C05000JA
	240	3	12.9	450	34 (19)	1/25	1050	208/240	75 (34)	928C05000KA
6.4	480	3	8.6	600	34 (19)	1/25	1050	208/240	75 (34)	928C06400UA
7.5	208	3	21.7	600	40 (22)	1/25	1050	208/240	75 (34)	928C07500DA
	240	1	32.1	600	40 (22)	1/25	1050	208/240	75 (34)	928C07500JA
	240	3	18.9	600	40 (22)	1/25	1050	208/240	75 (34)	928C07500KA
9.6	480	3	12.5	1200	25 (14)	1/6	1140	208/240	100 (48)	928C09600UA
10	208	3	28.6	750	41 (23)	1/25	1050	208/240	75 (34)	928C10000DA
	240	1	42.5	750	41 (23)	1/25	1050	208/240	75 (34)	928C10000JA
	240	3	24.9	750	41 (23)	1/25	1050	208/240	75 (34)	928C10000KA
12.8	480	3	16.3	1200	34 (19)	1/6	1140	208/240	100 (48)	928C12800UA
15	208	3	42.6	1200	40 (22)	1/6	1140	208/240	100 (48)	928C15000DA
	240	1	63.4	1200	40 (22)	1/6	1140	208/240	100 (48)	928C15000JA
	240	3	37	1200	40 (22)	1/6	1140	208/240	100 (48)	928C15000KA
16	480	3	20.2	1600	32 (18)	1/6	1140	208/240	100 (48)	928C16000UA
19.2	480	3	24	1600	38 (21)	1/6	1140	208/240	100 (48)	928C19200UA
20	208	3	56.5	1600	40 (22)	1/6	1140	208/240	100 (48)	928C20000DA
	240	1	84.2	1600	40 (22)	1/6	1140	208/240	100 (48)	928C20000JA
	240	3	49.1	1600	40 (22)	1/6	1140	208/240	100 (48)	928C20000KA
25	208	3	70.4	2000	40 (22)	1/6	1140	208/240	100 (48)	928C25000DA
	240	1	105.0	2000	40 (22)	1/6	1140	208/240	100 (48)	928C25000JA
	240	3	61.1	2000	40 (22)	1/6	1140	208/240	100 (48)	928C25000KA
30	208	3	84.2	2300	41 (23)	1/6	1140	208/240	100 (48)	928C30000DA
	240	1	125.9	2300	41 (23)	1/6	1140	208/240	100 (48)	928C30000JA
	240	3	73.2	2300	41 (23)	1/6	1140	208/240	100 (48)	928C30000KA

(1) Total Amps = Heating element amps and motor amps.  
Only available with almond finish.

## Accessories - Clear universal thermostat guard. Protects both line and low voltage thermostats against vandalism, damage, and unauthorized adjustment of thermostat settings.

Catalog Number	Description
901-124644	Inside dimensions: 6-3/8" (length), 3-1/2" (height), 3" (depth)
901-F29-0198	Inside dimensions: 8-1/4" (length), 5-3/8" (height), 3-1/2" (depth)



901-124640



901-124642  
901-124643



901-TH114-A-420



901-1006998



901-219981



901-124644



901-F29-0198

# UPI SERIES

## Portable Unit Heater



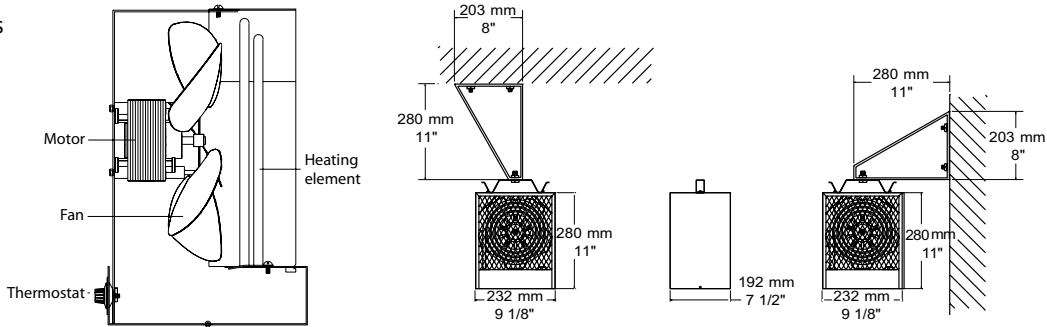
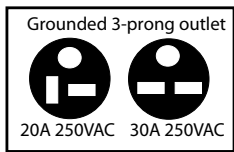
The UPI portable unit heater provides clean, odorless backup heat in indoor work areas. Rugged enough to provide temporary heat at construction sites, this portable unit is well suited for commercial heating applications.

927-MB Almond Portable Heater with Wall Bracket

927 Almond Portable Heater

### Applications

- Commercial Workshops
- Construction Job Sites
- Large Unheated Areas



### Standard Construction Features

**Heating Elements** – Stainless steel tubular elements provide durability.

**Housing** – Heavy 22-gauge galvanized steel cabinet has a polyester powder paint finish.

**Inlet/Outlet Grilles** – Inlet and discharge grilles are made of industrial gauge steel and both have a finger-proof design for added safety.

**Built-in Controls** – Unit comes with an automatic reset thermal cutout and adjustable thermostat.

**Fan Motor** – Durable factory-lubricated fan motor with 300 CFM.

**Heavy-duty Cord** – A six-foot heavy-duty cord is provided with each heater. The handle of the heater may be used as a reel for the cord set. The 4000 watt heater is provided with a 3-pronged, 20A 250 VAC NEMA type #6-20P plug; 4800 watt heater with a 3-pronged, 30A 250VAC #6-30P plug.

**Mounting Bracket** – Mounting bracket for wall or ceiling installation included on heaters ending with (MB).

### Portable Unit Heater Listing

Adjustable thermostat and six-foot cord with 3-pronged, 30 amp, 240 volt plug included.

Watts	Volts 1 Phase	Total Amps (1)	CFM	Approx. Air Temperature Rise °F (°C)	Weight Lb (kg)	Catalog Number
4000	240	18.0	300	43 (24)	11 (5)	927U04000JA
4800	240	21.0	300	51 (28)	11 (5)	927U04800JA
4000	240	18.0	300	43 (24)	11 (5)	927U04000JA-MB(2)
4800	240	21.0	300	51 (28)	11(5)	927U04800JA-MB(2)

(1) Total Amps = Heating element amps and motor amps.  
 (2) Mounting bracket for wall or ceiling installation is included.

Not for use outdoors or in wet areas.  
 Color is almond.

# COLOR SELECTION CHART

## Standard Colors 900 Series



Almond (A)

## Standard Color 240 Series



Camel

## Optional Colors 240 Series



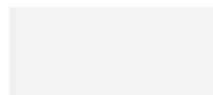
Grey



Yellow



Red



White



Blue



Textured  
Beige

Refer to catalog listings for standard and special color availability. Use color codes in parentheses when specifying and ordering. Custom colors are also available on 900 Series. Special and Optional Colors subject to setup charges. Colors represented are approximate.

Industrial Engineering and Equipment Company (INDEECO) new products are warranted against defects in workmanship, material, design, labeling and packaging. No other warranty, expressed or implied, written or oral, applies. No person other than an officer or the general manager of INDEECO is authorized to give any other warranty or assume any liability.

### WARRANTY PERIOD

This warranty is effective for eighteen months from the date of shipment of the product from INDEECO's factory, or for twelve months from the date the product is first placed into service, whichever period lapses first.

### CONDITIONS OF WARRANTY

INDEECO products must be installed, operated, and maintained in accordance with INDEECO's instructions. INDEECO is not liable for damage or unsatisfactory performance of the product resulting from accident, negligence, alteration, unauthorized repair, improper application or installation of the product, improper specifications, or corrosion. INDEECO IS NOT LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims against carriers for damage in transit must be filed by the purchaser with the carrier.

## LIMITED WARRANTY

### REMEDY

Contact the INDEECO sales department at (314) 644-4300, for a Return Material Authorization Number (RMA#) and return instructions.

If after receipt of the product and the claim, INDEECO finds to its reasonable satisfaction that the product is defective in workmanship, material, design, labeling or packaging, the product will be repaired or replaced, or the purchase price refunded at INDEECO's option. There will be no charge to the purchaser for parts or labor. Removal and reinstallation of the product, and shipment of the product to INDEECO for repair or inspection, shall be at the purchaser's risk and expense.

THE REPAIR, REPLACEMENT, OR REFUND PROVIDED FOR IN THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE TERMS OF THIS LIMITED WARRANTY.



425 HANLEY INDUSTRIAL COURT  
ST. LOUIS, MO 63144  
314-644-4300 • Fax: 314-644-5332  
[www.indeeco.com](http://www.indeeco.com) • [sales@indeeco.com](mailto:sales@indeeco.com)

FOR YOUR NEAREST INDEECO REPRESENTATIVE CALL:  
800-243-8162