

# HLA Series Hazardous Location Fan Forced Unit Heater

FAN-FORCED SUSPENDED UNIT HEATERS 3-25 KW FOR T-3B CLASS I, GROUP C & D, DIVISION 1 & 2 AND CLASS II, GROUPS E, F & G, DIVISIONS 1 & 2.

4



Shown with optional pilot light and disconnect switch



- Designed for rugged industrial applications in hazardous locations where the possibility of explosion or fire exists due to the presence of certain flammable gases, vapors, powdered metals or dust.
- Permanently sealed, liquid to air, finned tube heat exchanger core.
- Ethylene Glycol to water mixture used as a heat transfer fluid in the heater core, providing -45° C. (-49° F) freeze damage protection.
- High-performance electric motor driven fan blows air across finned tubes to effect uniform heat transfer and area heat distribution.
- Manual Reset capillary type limit provides high temperature regulation and is rated for 6,000 cycles of service.
- Stainless steel and aluminum pressure relief valve for overpressure.
- A back-up contactor is included for additional protection.
- 14 gauge steel cabinet powder coated epoxy paint finish contains heater core, motor, and fan assembly.
- Narrow gap safety fan guard shields all moving parts.
- Adjustable louvers allow directional control of air.
- Copper conductor wires enclosed in rigid metal conduits carry all electrical power.
- Box lugs furnished for field connections within approved enclosure.
- Made in U.S.A.



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## Product Specifications

### Heat Exchanger and Elements:

Heavy walled, painted carbon steel with aluminum fins liquid heat exchanger, liquid filled with three-immersion type copper sheathed elements. The elements shall have the highest quality nickel-chromium resistance wire encased in a magnesium oxide dielectric and be hermetically sealed into the heat exchanger core. The heat transfer fluid is Ethylene-glycol solution for operation to -49 degrees F (-45 degrees C). Stainless steel and aluminum pressure relief valve for overpressure.

### Thermal Cutout High Limit Protection and Optional Pilot Light:

The capillary type manual reset thermal cutout shall be rated for 6000 cycles of service and mounted in the liquid filled heat exchanger. An optional pilot light to indicate manual reset tripped, if safe operating temperatures are exceeded, is located on control enclosure.

### Motor:

The motor shall be a permanent split capacitor type, permanently lubricated, ball bearing type. The motor shall be rated for hazardous location and operate at rated voltage of heater, 60 Hz, 1725 RPM.

### Control Enclosure:

All controls shall be factory installed and wired in a hazardous location enclosure. Contactors and back-up contactors are heavy duty type and break all ungrounded conductors and be rated for 100,000 cycles at full load. Standard 24-Volt control circuit shall be supplied by internal class II transformer. An optional factory wired integral thermostat or standard terminal block for field wiring to optional remote wall thermostat are wired in control panel. No fan delay relay.

### Disconnect Switch:

Factory mounted and wired hazardous location disconnect switch is available as optional accessory.

### Cabinet With Adjustable Louvers:

The Cabinet shall be 14 gauge, cold rolled steel with powder coated epoxy finish. Plated fan guards with less than 1/4 inch spacing to cover motor and fan shall conform to OSHA Requirements.

### Note:

Before selecting a hazardous location electric heater refer to Article 500 or other applicable standard referenced in the National Electric Code.



Liquid-to-air heat exchanger



Optional built-in thermostat



Hazardous Location Rated Motor

# HLA Series Hazardous Location Fan Forced Unit Heater

## Rating Definitions

**CLASS I:** Equipment does not have surface operating temperature in excess of the ignition temperature of the specific gas or vapor.

Application Examples:

- Offshore and land based drilling rigs, petroleum exploration and testing facilities.
- Petroleum refineries, gasoline storage and dispensing areas.
- Industrial firms that use flammable liquids in dip tanks for parts cleaning or other operations.
- Petrochemical companies that manufacture chemicals from gas or oil.
- Dry cleaning facilities where vapors from cleaning fluids may be present.
- Aircraft hangers and fuel servicing areas.
- Utility gas plants and operations involving storage and handling of liquefied petroleum or natural gas.

**GROUP C:** Atmospheres such as but not limited to acetaldehyde, allyl alcohol, hydrogen sulfide, ethylene, carbon monoxide, or other gases or vapors of equivalent hazard.

**GROUP D:** Atmospheres such as but not limited to acetone, alcohol, gasoline, lacquer solvent vapors, natural gas, propane or other gases or vapors of equivalent hazard.

**CLASS II:** Equipment does not have surface temperature greater than the ignition temperature of the specified dust.

Application Examples:

- Coal preparation plants and other carbon handling or processing areas.
- Grain elevators, flour and feed mills.
- Plants which manufacture, use or store Magnesium or Aluminum powders.
- Plants that have chemical or metallurgical processes.
- Producers of starch products or candy.
- Spice grinding plants, sugar plants and cocoa plants.

**GROUP E:** Atmosphere containing combustible metal dust regardless of resistivity, or other combustible dust of similar hazard characteristics having resistivity of less than  $10^5$  OHM - Centimeter.

**GROUP F:** Atmosphere containing carbon black, charcoal, coal or coke dust.

**GROUP G:** Atmospheres containing combustible dust having resistivity of  $10^5$  OHM-Centimeter or greater.

**DIVISION I:** A location in which ignitable concentrations of flammable material exist under normal operating conditions.

**DIVISION II:** Locations in which flammable materials will normally be confined within closed containers and escape only in the case of accidental rupture, breakdown or during maintenance operations. Any equipment approved for Division I is automatically also approved for Division II.

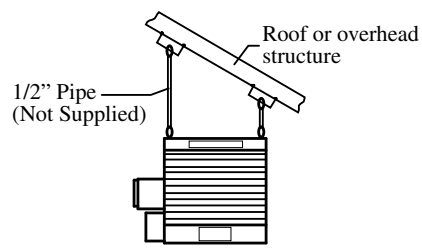
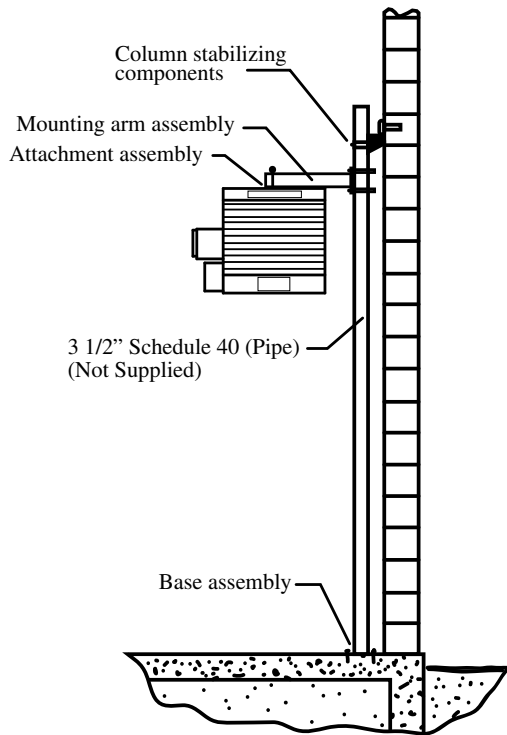
## Standard Hazardous Location Models

MFG CATALOG NUMBER	MFG MODEL NUMBER	KW	BTUs	VOLTS	PH	AMPS	Control Voltage	Temp Rise °F	Air Throw	CFM	Recom'd Mounting Ht.	WT. (LBS)	
07343502	HLA 12-208160-3.0-24	3	10250	208	1	16.3	24	16.5			8'	167	
07340002	HLA 12-208360-3.0-24			208	3	9.8							
07340102	HLA 12-240160-3.0-24			240	1	14.8							
07340202	HLA 12-240360-3.0-24			240	3	8.6							
07340302	HLA 12-480360-3.0-24			480	3	4.3							
07343602	HLA 12-208160-5.0-24	5	17100	208	1	26		27.6	24'	580	8'	167	
07340502	HLA 12-208360-5.0-24			208	3	15.4							
07340602	HLA 12-240160-5.0-24			240	1	23.1							
07340702	HLA 12-240360-5.0-24			240	3	13.4							
07340802	HLA 12-480360-5.0-24			480	3	6.7							
07343702	HLA 12-208160-7.5-24	7.5	25600	208	1	38		41.4			8'	193	
07341002	HLA 12-208360-7.5-24			208	3	22.3							
07341102	HLA 12-240160-7.5-24			240	1	33.6							
07341202	HLA 12-240360-7.5-24			240	3	19.4							
07341302	HLA 12-480360-7.5-24			480	3	9.7							
07341502	HLA 16-208360-10.0-24	10	34150	208	3	29.3	21.7	40'	1500	10'	193		
07341602	HLA 16-240160-10.0-24			240	1	44							
07341702	HLA 16-240360-10.0-24			240	3	25.5							
07341802	HLA 16-480360-10.0-24			480	3	12.7							
07342002	HLA 20-208360-15.0-24			208	3	43.5							
07342102	HLA 20-240360-15.0-24	15	51200	240	3	38.1	19.2	43'	2450	13'	225		
07342202	HLA 20-480360-15.0-24			480	3	19							
07342302	HLA 20-600360-15.0-24			600	3	15.2							
07342402	HLA 20-480360-20.0-24			480	3	25.1							
07342502	HLA 20-600360-20.0-24			600	3	20							
07342602	HLA 20-480360-25.0-24	20	68300	480	3	31.1	26.2				225		
07342702	HLA 20-600360-25.0-24			600	3	24.9							
07342702	HLA 20-600360-25.0-24	25	85400	480	3	31.1	32.8						

Note: Products listed in this section are custom built and subject to 100% cancellation/restock charges.

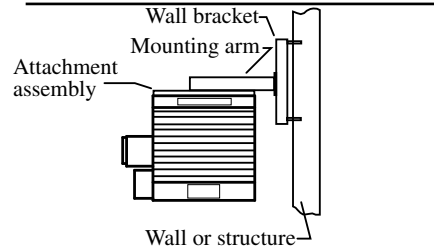
# HLA Series Hazardous Location Fan Forced Unit Heater

## Mounting Bracket Kits



### HLHM Hanging Mounting Kit

Simple and economical if adequate overhead structure exists. Requires 1/2" pipe, cut and threaded (not supplied).



### HLWM Wall Mounting Kit

Ideal for use in buildings that have substantial walls. Arm only can also be bolted directly to structural steel.

### HLPM Pipe Mounting Kit

Particularly useful in buildings with insufficient strength to use other types of mounts. Requires 3 1/2" pipe (4" O.D. - not supplied).

MFG CATALOG NUMBER	MFG MODEL NUMBER	USE WITH HEATERS	WT. (LBS)
07342802	HLPM37	3.0 kW - 7.5 kW	37
07342902	HLPM10	10.0 kW	38
07343002	HLPM1525	15.0 kW - 25.0 kW	40
07343102	HLHM	ALL	5
07343202	HLWM37	3.0 kW - 7.5 kW	27
07343302	HLWM10	10.0 kW	28
07343402	HLWM1525	15.0 kW - 25.0 kW	29

## EPET Series and HLT Series Hazardous Location Thermostats For Single Phase



HLT Series



Motor Rating	Rating	Rated*
(full load) 1 1/2 HP @ 250V	22A @ 125-277VAC; 125 VA @ 24VAC	Class I Group C & D, Class II Group E, F, G

\*Thermostat is not rated for use in Group B environments.

MFG CATALOG NUMBER	MFG MODEL NUMBER	DESCRIPTION	LOAD RATINGS	RANGE
05380702	EPETD8D	DPDT - Bi-Metal	22A @120-277VAC	50-90°F
05381002	EPETD8S	SPDT - Bi-Metal	22A @120-277VAC	50-90°F
05280702	EPETP8D	DPDT - Bi-Metal	22A @120-480VAC	50-90°F
05280602	EPETP8S	SPDT - Bi-Metal	22A @120-480VAC	50-90°F
05231502	HLT-1	SPDT - Capillary	22A @120-277VAC	40-110°F
05231602	HLT-2	DPDT - Capillary	22A @120-277VAC	40-110°F

Master ctn: 4 pcs, 24 lbs (varies slightly by model), 16" x 14.5" x 6"

EPET Series incorporate plastic knob & Bi-Metal Sensor housing.

HLT Series incorporates screwdriver temperature adjustment slot and all metal housing. External bulb and capillary sensor.

### Features

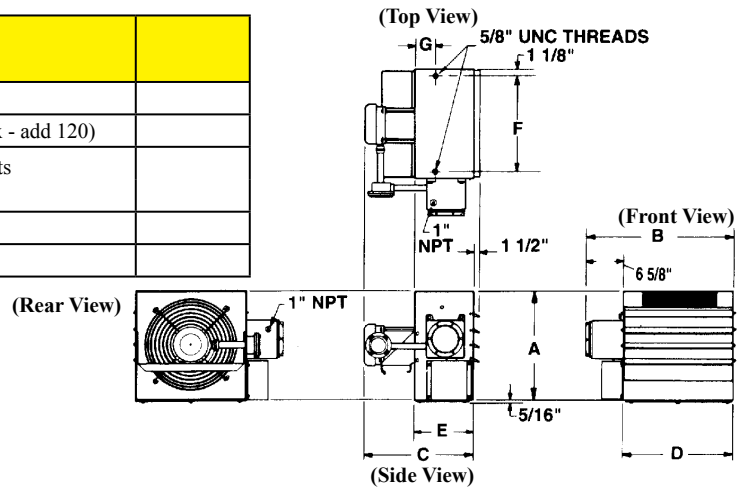
- SPDT & DPDT Models
- Heat or cool compatible
- Celsius and Fahrenheit temperature scale
- Bi-Metal or capillary sensor
- Snap action switch
- Casting tapped top and bottom for 3/4" conduit
- 1/2" thick cast aluminum housing
- All EPET/T1/T2 optional thermostats manufactured with anti-static plastic
- Dimension 5.75" x 6.375" x 5.57"
- Made in U.S.A.

# HLA Series Hazardous Location Fan Forced Unit Heater

## Factory Installed Accessories & Physical Dimensions

SUFFIX	DESCRIPTION
T	In-Built single pole thermostat 50° - 90° F
120	Control transformer w/ primary fusing (Delete 24 suffix - add 120)
208	208/240V Control available on 208/240V units (Delete 24 suffix and add 208 OR 240)
240	
D	Disconnect Switch
P	Pilot Light

MFG MODEL	A	B	C		D	E	F	G
			3 ph.	1 ph.				
HLA 12	17 ¾	22 ¾	19 ¾	20 ¾	16 ¼	10 ½	14	3
HLA 16	20 ¾	26 ¾	20 ¾	21 ¾	20 ¼	11 ½	18	4
HLA 20	24 ¾	30 ¾	22 ½	N/A	24 ¼	12 ½	22	4 ½



## PHLA Series Portable Hazardous Location Fan Forced Unit Heater



- 3.0 through 25 KW rating
- 208, 240, 480, 600 Volt available in selected capacities
- Cart has anti-static wheels to reduce the risk of static discharge
- Wheeled cart allows for easy maneuverability
- Cart has integrated fork-lift channels to provide ease of lifting on to ramps or trucks
- Excellent for providing seasonal heating in hazardous environments
- All units have disconnect switch, pilot light, and thermostat - standard
- 24 Volt control, transformer, and contactor in NEMA 7 enclosure
- Durable epoxy coating on heater housing
- Hazardous location unit mounted male / female plug
- Adjustable louvers; manual reset
- Made in U.S.A.

### Standard Portable Hazardous Location Models

MFG CATALOG NUMBER	MFG MODEL NUMBER	KW	BTUs	VOLTS	PH	AMPS	TEMP RISE F	AIR THROW	CFM	WT. (LBS)	LIST
07393402	PHLA12-208160-3.0-24-TDP	3	10,250	208	1	16.3	16.5	24'	580		
07393302	PHLA12-208360-3.0-24-TDP			208	3	9.8					
07393202	PHLA12-240160-3.0-24-TDP			240	1	14.8					
07393102	PHLA12-240360-3.0-24-TDP			240	3	8.6					
07393002	PHLA12-480360-3.0-24-TDP			480	3	4.3					
07394302	PHLA12-600360-3.0-24-TDP			600	3	3.5					
07392902	PHLA12-208160-5.0-24-TDP	5	17,100	208	1	26	27.6	24'	580	260	
07392802	PHLA12-208360-5.0-24-TDP			208	3	15.4					
07392702	PHLA12-240160-5.0-24-TDP			240	1	23.1					
07392602	PHLA12-240360-5.0-24-TDP			240	3	13.4					
07392502	PHLA12-480360-5.0-24-TDP			480	3	6.7					
07394202	PHLA12-600360-5.0-24-TDP			600	3	5.4					
07392402	PHLA12-208160-7.5-24-TDP	7.5	25,600	208	1	38	41.4	24'	580		
07392302	PHLA12-208360-7.5-24-TDP			208	3	22.3					
07392202	PHLA12-240160-7.5-24-TDP			240	1	33.6					
07392102	PHLA12-240360-7.5-24-TDP			240	3	19.4					
07392002	PHLA12-480360-7.5-24-TDP			480	3	9.7					
07394102	PHLA12-600360-7.5-24-TDP			600	3	7.8					
07391902	PHLA16-208360-10.0-24-TDP	10	34,150	208	3	29.3	21.7	40'	1500	305	
07391802	PHLA16-240160-10.0-24-TDP			240	1	44					
07391702	PHLA16-240360-10.0-24-TDP			240	3	25.5					
07391602	PHLA16-480360-10.0-24-TDP			480	3	12.7					
07394002	PHLA16-600360-10.0-24-TDP			600	3	10.2					
07391502	PHLA20-208360-15.0-24-TDP	15	51,200	208	3	43.5	19.2	43'	2450	350	
07391402	PHLA20-240360-15.0-24-TDP			240	3	38.1					
07391302	PHLA20-480360-15.0-24-TDP			480	3	19					
07393902	PHLA20-600360-15.0-24-TDP			600	3	15.2					
07391202	PHLA20-480360-20.0-24-TDP	20	68,300	480	3	25.1	26.2	43'	2450		
07393802	PHLA20-600360-20.0-24-TDP			600	3	20					
07391102	PHLA20-480360-25.0-24-TDP	25	85,400	480	3	31.1	32.8	43'	2450		
07393702	PHLA20-600360-25.0-24-TDP			600	3	24.9					

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