

UH SERIES SEPARATED COMBUSTION UNIT HEATER

SUBMITTAL DATA GAS-FIRED INDUCED DRAFT, HOT AIR HEATERS

SUBMITTED BY: _____ DATE: _____

JOB TITLE: _____ CONTRACTOR: _____

ADDRESS: _____ PHONE #: _____

CITY: _____ ADDRESS: _____

STATE: _____ ZIP: _____ CITY: _____

STATE: _____ ZIP: _____

ENGINEER: _____

LOCAL REPRESENTATIVE: _____

NOTES: _____

QTY.	MODEL NO.	TAG	INDICATE GAS TYPE	BTU/h		TYPICAL OR RECOMMENDED MOUNTING HEIGHT	APPROX. HEAT THROW	AVERAGE AIR TEMP RISE	VENT LENGTH ¹		SHIP WEIGHT
				INPUT	OUTPUT				MIN.	MAX.	
	UH-30		Nat or Prop	30,000	24,000	8 to 12 Ft.	26 Ft.	45°F	3 Ft.	30 Ft.	77 Lbs.
	UH-45		Nat or Prop	45,000	36,000	8 to 14 Ft.	28 Ft.	45°F	3 Ft.	30 Ft.	77 Lbs.
	UH-60		Nat or Prop	60,000	48,000	10 to 16 Ft.	37 Ft.	45°F	3 Ft.	30 Ft.	98 Lbs.
	UH-75		Nat or Prop	75,000	60,000	10 to 18 Ft.	39 Ft.	45°F	3 Ft.	30 Ft.	98 Lbs.

¹Deduct 3 Ft. (on 3 in. vent) or 5 Ft. (on 4 in. vent) for each elbow added to the venting.

DETROIT RADIANT PRODUCTS CO.



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UH SERIES SPECIFICATIONS



VOLTAGE:

- 120/60Hz. VAC (primary).
- 24 VAC (thermostatic).
- Single phase.

MANIFOLD PRESSURE:

- Natural gas - 3.5" W.C.
- Propane gas - 10.0" W.C.

INLET PRESSURE:

- Natural gas: 5.0 to 14.0" W.C.
- Propane gas :11.0 to 14.0" W.C.

GAS CONNECTION:

- 1/2" N.P.T.
- Field connect to valve.

VENT & INLET CONNECTION:

- Category I or III venting.
- Rear, horizontal discharge/inlet.
- 3" to 4" inlet adapter included.

MOUNTING:

- Four (4) suspension points.
- Slotted mounting brackets accommodate joists on 16 or 24 inch centers.
- 180° mounting.

OTHER:

- Finger-proof fan guards standard.
- External indicator lights.
- External thermostatic connection.

- Approved for elevations 0 - 2,000 ft. without modifications.
- Supplied standard as separated combustion.

CERTIFICATIONS:

- ANSI Z83.8/CSA 2.6.
- Commercial & industrial use.
- Residential use.
- Indoor use only.



LIMITED WARRANTY:

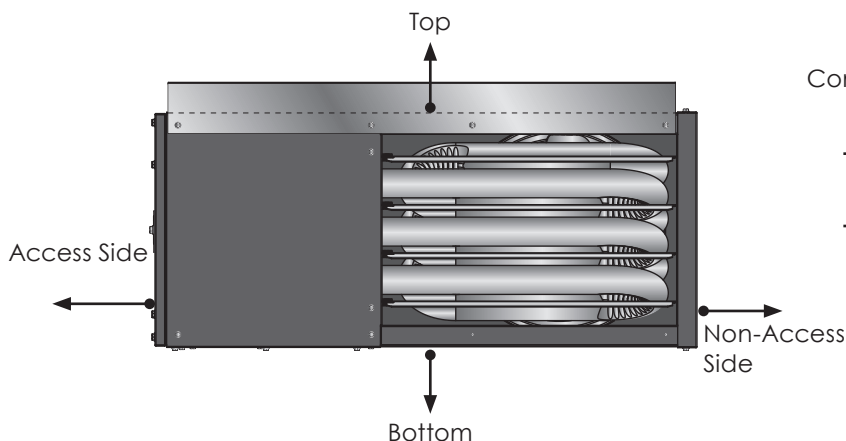
- 1 year - Components
- 5 years - Heat exchangers
- 10 years - Burners

MODEL	FLA AMPS	MOTOR TYPE	MOTOR HP	FAN DIAMETER	AXIAL FAN ROTATION	GAS CONNECTION	INLET & VENT CONNECTION
UH-30	2.7	SP	1/15	10 in.	CCW	1/2" NPT	3" O.D.
UH-45	2.7	SP	1/15	10 in.	CCW	1/2" NPT	3" O.D.
UH-60	4.0	PSC	1/12	14 in.	CCW	1/2" NPT	4" O.D.
UH-75	4.0	PSC	1/12	14 in.	CCW	1/2" NPT	4" O.D.

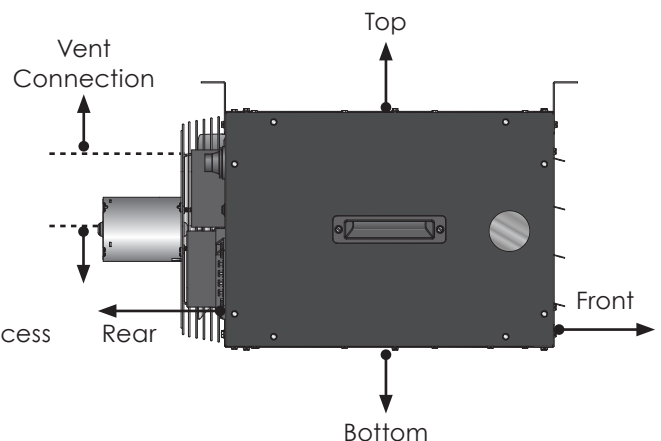
UH SERIES CLEARANCES TO COMBUSTIBLES

ALL MODELS	FRONT	TOP AND BOTTOM	ACCESS SIDE	NON-ACCESS SIDE	REAR	VENT CONNECTION
Clearance to Combustibles	60 in.	1 in.	18 in.	1 in.	1 in.	6 in.
Clearance to Allow Service	60 in.	1 in.	18 in.	1 in.	18 in.	6 in.

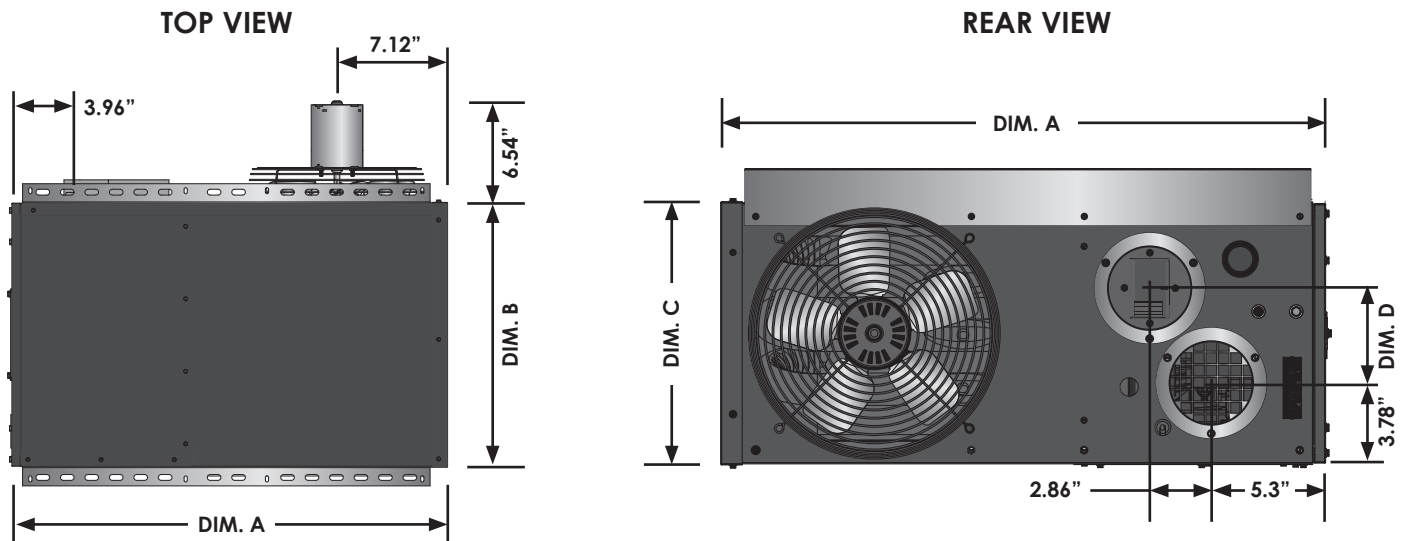
CLEARANCES TO COMBUSTIBLES
DIAGRAM: FRONT VIEW



CLEARANCES TO COMBUSTIBLES
DIAGRAM: SIDE VIEW



DIMENSIONAL INFORMATION



MODEL NO.	HEATER WIDTH DIM "A"	HEATER DEPTH DIM "B"	HEATER HEIGHT DIM "C"	AIR TO VENT DIM "D"
UH-30	28 in.	17 in.	12 in.	4.4 in.
UH-45	28 in.	17 in.	12 in.	4.4 in.
UH-60	28 in.	17 in.	17 in.	7.4 in.
UH-75	28 in.	17 in.	17 in.	7.4 in.

FIELD CONVERSION REFERENCE CHART

SUPPLIED AS	CONVERSION TO	AVAILABILITY	PART REFERENCE ²
Separated Combustion	Power Vented, Room Air	Standard	See IOPM
Natural Gas	Propane Gas	Optional	HKP
0 - 2,000 MSL	2,001 - 4,500 MSL	Optional	HKN or HKP
0 - 2,000 MSL	4,501 - 7,000 MSL	Optional	HKN or HKP
0 - 2,000 MSL	7,001 - 9,500 MSL	Optional	HKN or HKP

²Consult heater Installation, Operation, Parts and Maintenance Manual for conversion kit reference and instructions.

OPTIONAL ACCESSORIES

QTY.	PART #	DESCRIPTION
	CVK-3	3" Concentric Vent Kit for use when venting and combustion air is desired through a single wall or roof penetration. For use with UH-30 and UH-45 models. No vent pipe or B-vent material is included.
	CVK-4	4" Concentric Vent Kit for use when venting and combustion air is desired through a single wall or roof penetration. For use with UH-60 and UH-75. No vent pipe or B-vent material is included.
	4-DSK	4" Duravent sidewall vent kit. For use with FA-100 and FA-125 models. Includes sidewall vent cap and wall thimble. No vent pipe material is included. 29" long when fully assembled.
	6-DSK	6" Duravent sidewall vent kit. For use with FA-150 through FA-250 models. Includes sidewall vent cap, 18" of double wall B-vent and wall thimble. No vent pipe material is included. 30" long when fully assembled.
	RTVP-4	4" in. roof top vent/intake package for use with FA-100 and FA-125 models. Complete kit for vertical venting through the roof. Includes rooftop vent cap, draft hood connector, fire stop, adjustable roof flashing, storm collar, 90° vent elbow and tube of high temperature sealant. Vent and B-vent must be ordered separately.
	RTVP-6	6" Roof top vent/intake kit. 6" Version of RTVP-4. For use with FA-150 through FA-250 models.
	SWD-4	4" Duravent sidewall vent cap. All aluminum construction. Diameter is 8-3/4 in.
	SWD-6	6" Duravent sidewall vent cap. All aluminum construction. Diameter is 10.5 in.

WRITTEN SPECIFICATIONS

SECTION 235533.16 – GAS-FIRED UNIT HEATERS. SEPARATED COMBUSTION OR POWER VENTED.

Products:

1. Gas-fired unit heaters. Separated combustion or power vented.
 - A. Basis-of-design product: Subject to compliance with requirements, provide Detroit Radiant Products Company; model **UH Series**:
 1. Reznor/Thomas & Betts Corporation.
 2. Enerco
 3. <Insert manufacturer's name.>
 - B. Fuel type: burner shall be designed for [natural] [propane] gas having characteristics same as those of gas available at project site.
 - C. Unit Casing:
 1. The unit heater(s) casing shall be constructed of not less than 20 gauge aluminized steel.
 2. The unit shall be furnished with air deflectors blades. 304 series brushed stainless steel.
 3. The deflectors blades are adjustable to provide for directional airflow (up or down).
 - D. Furnace Section:
 1. The tubular heat exchanger shall be constructed of a minimum of 18 gauge aluminized steel tubes.
 2. The thermal efficiency of the unit shall be above 80%.
 3. The burner(s) shall be in-shot type, firing directly into each heat exchanger tube individually.
 - E. Ignition System: direct spark igniter with flame rod sensing capabilities.
 1. Single-stage gas controls with a single-stage combination gas control.
 - F. Burner Safety Controls:
 1. Heater controls shall include a safety differential pressure switch to monitor combustion air flow, as to provide complete burner shutdown due to insufficient combustion air or flue blockage.
 2. The heater shall incorporate a self-diagnostic ignition module, and recycle the heater after an inadvertent shutdown.
 3. The heater's control system shall be designed to shut off the gas flow to the main burner in the event either a gas supply or power supply interruption occurs.
 4. The heater's blower motor shall be thermally protected and the motor's impeller shall be balanced.
 5. Heater control assembly shall include two indicator lights that define the units operating features. One indicator shall validate air flow. One indicator light shall indicate gas valve energization.
 6. An automatic reset high limit switch shall be mounted in the air stream to shut off the gas supply in the event of overheating.
 7. A time delay relay shall be incorporated that delays the start of the air blower fan to allow the heat exchanger a warm-up upon a call for heat. A time delay relay shall be incorporated to continue the air blower fan operation after the thermostat has been satisfied to help remove any residual heat in the exchanger.
 8. No condensation shall form in the exchanger tubes while at operating temperatures.
- G. Air Movement:
 1. The motor type shall be single-speed, open drip proof (ODP).
 2. The motor shall be rated for: (115V/60Hz/1Ph).
 3. Swept winged fan blade designed to optimize air flow and reduce noise levels.
 4. Stainless steel, adjustable air discharge louvers with seamless airfoil design to maximize airflow.
- H. Venting: shall be per manufacturer approval and specifications.
- I. Thermostat: devices and wiring are specified in Division 23 Section "Instrumentation and Control for HVAC."
 1. Thermostat: digital programmable wall-mounting type with 50 to 90 deg F (10 to 32 deg C) operating range.
 2. Other approved operating device.
 3. Control transformer: internally mounted.