

FA SERIES SEPARATED COMBUSTION UNIT HEATER

SUBMITTAL DATA GAS-FIRED INDUCED DRAFT, HOT AIR HEATERS

SUBMITTED BY: _____

DATE: _____

JOB TITLE: _____

CONTRACTOR: _____

ADDRESS: _____

PHONE #: _____

CITY: _____

ADDRESS: _____

PROVINCE: _____ POSTAL CODE: _____

CITY: _____

PROVINCE: _____ POSTAL CODE: _____

ENGINEER: _____

LOCAL REPRESENTATIVE: _____

NOTES: _____

QTY.	MODEL NUMBER	GAS TYPE	BTU/h		TYPICAL MOUNTING HEIGHT	APPROX. HEAT THROW	AVERAGE AIR TEMP RISE	VENT LENGTH*		SHIP WEIGHT
			INPUT	OUTPUT				MIN.	MAX.	
	FA-100	Nat. or LP	100,000	80,000	12 to 14 Ft.	43 Ft.	50°F	3 Ft.	40 Ft.	143 Lbs.
	FA-125	Nat. or LP	125,000	100,000	14 to 16 Ft.	57 Ft.	50°F	3 Ft.	40 Ft.	143 Lbs.
	FA-150	Nat. or LP	150,000	120,000	14 to 16 Ft.	52 Ft.	50°F	3 Ft.	40 Ft.	195 Lbs.
	FA-175	Nat. or LP	175,000	140,000	15 to 17 Ft.	51 Ft.	50°F	3 Ft.	40 Ft.	195 Lbs.
	FA-200	Nat. or LP	200,000	160,000	15 to 17 Ft.	55 Ft.	50°F	3 Ft.	40 Ft.	195 Lbs.
	FA-225	Nat. or LP	225,000	180,000	16 to 18 Ft.	59 Ft.	50°F	3 Ft.	40 Ft.	212 Lbs.
	FA-250	Nat. or LP	250,000	200,000	16 to 18 Ft.	63 Ft.	50°F	3 Ft.	40 Ft.	212 Lbs.

*Deduct 5 Ft. (on 4 in. vent) or 7 Ft. (on 6 in. vent) for each elbow added to the venting.

BRANT RADIANT HEATERS LTD.



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- LSFA-1M-10/16 (BRH)

FA SERIES SPECIFICATIONS



VOLTAGE:

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

MANIFOLD PRESSURE:

- Natural Gas - 3.5 Inches W.C.
- Propane Gas - 10.0 Inches W.C.

INLET PRESSURE:

- Natural Gas - 5.0 to 14.0" W.C.
- Propane Gas - 11.0 to 14.0" W.C.

GAS CONNECTION:

- FA-100-200: 1/2" N.P.T.
- FA-225-250: 3/4" N.P.T.
- Field connect to valve.

VENT & INLET CONNECTION:

- Category I or III venting.
- Rear, horizontal discharge/inlet.

MOUNTING:

- Non-reversible horizontal mounting.
- Mounting with (4x) - 3/8"-16 threaded inserts.

CERTIFICATIONS:

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

OTHER:

- External indicator lights.
- External thermostatic connection.
- Approved for elevations 0 - 2,000 ft. without modifications.
- Supplied standard as separated combustion.

LIMITED WARRANTY:

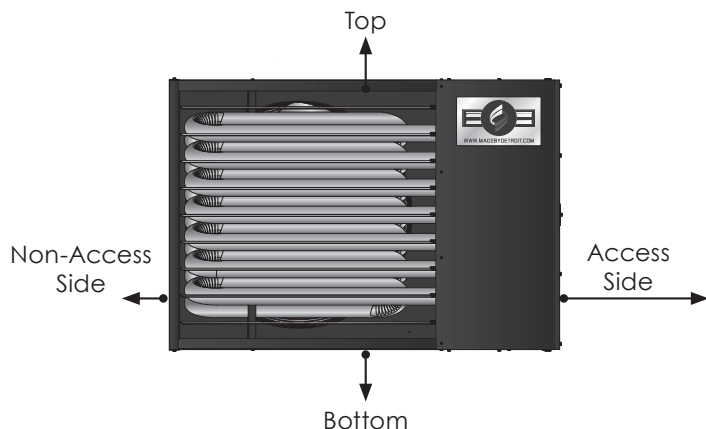
- 1 year - Components
- 5 years - Heat exchangers
- 10 years - Burners

MODEL	FLA AMPS	MOTOR TYPE	MOTOR HP	FAN DIAMETER	AXIAL FAN ROTATION	GAS CONNECTION	INLET & VENT CONNECTION
FA-100	5.2	PSC	1/8	18 in.	CCW	1/2" NPT	4" O.D.
FA-125	5.0	PSC	1/6	18 in.	CCW	1/2" NPT	4" O.D.
FA-150	10.7	PSC	1/3	22 in.	CCW	1/2" NPT	6" O.D.
FA-175	10.7	PSC	1/3	22 in.	CCW	1/2" NPT	6" O.D.
FA-200	10.7	PSC	1/3	22 in.	CCW	1/2" NPT	6" O.D.
FA-225	10.7	PSC	1/3	22 in.	CCW	3/4" NPT	6" O.D.
FA-250	10.7	PSC	1/3	22 in.	CCW	3/4" NPT	6" O.D.

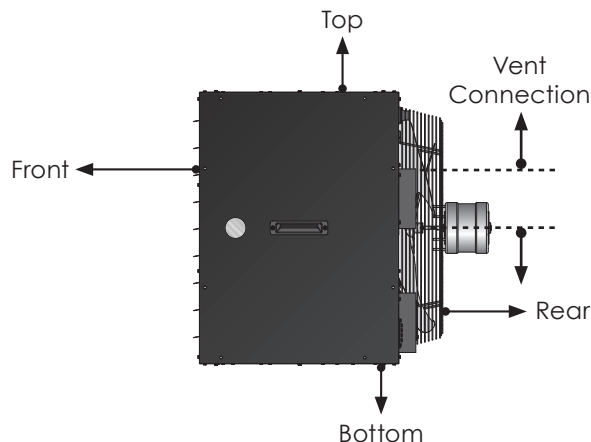
FA SERIES CLEARANCES TO COMBUSTIBLES

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.

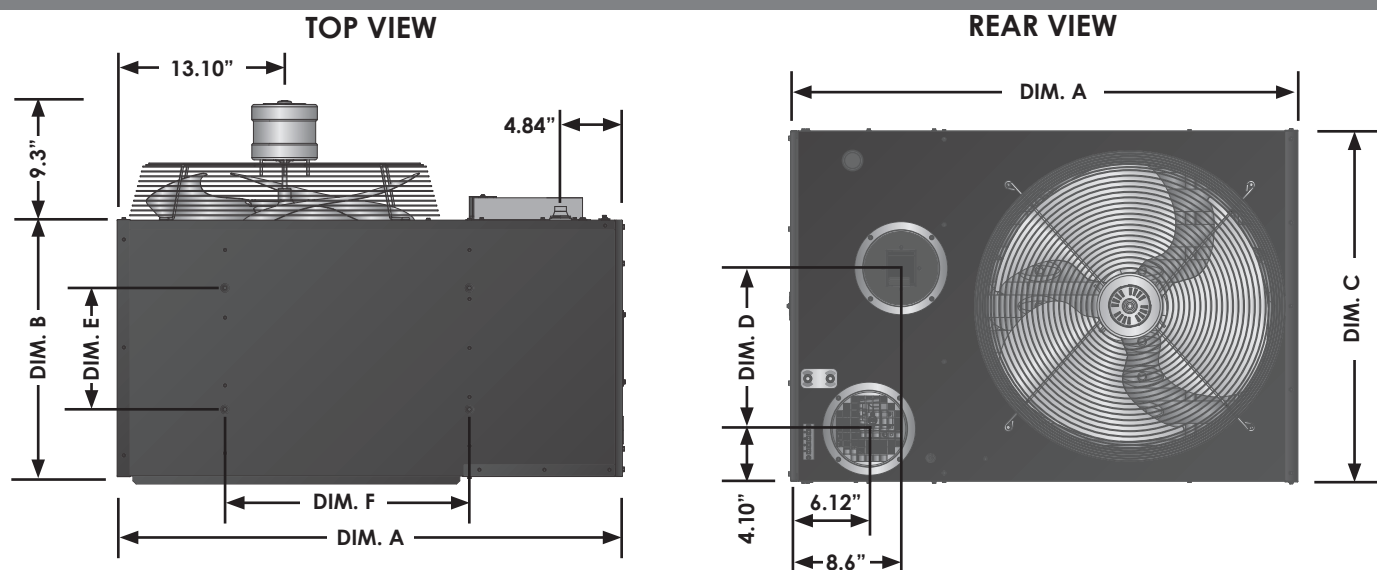
CLEARANCES TO COMBUSTIBLES
DIAGRAM: FRONT VIEW



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"	MOUNTS AXIS DIM "E"	MOUNTS AXIS DIM "F"
FA-100, 125	40 in.	20 in.	21 in.	9.375 in.	9.5 in.	19.125 in.
FA-150, 175, 200	40 in.	20 in.	27 in.	12.5 in.	9.5 in.	19.125 in.
FA-225, 250	40 in.	20 in.	30 in.	13.875 in.	9.5 in.	19.125 in.

FIELD CONVERSION REFERENCE CHART

SUPPLIED AS	CONVERSION TO	AVAILABILITY	PART REFERENCE*
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

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

OPTIONAL ACCESSORIES

QTY.	PART #	DESCRIPTION
	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 FA-100 and FA-125 models. No vent pipe or B-vent material is included.
	CVK-6	6" Concentric Vent Kit for use when venting and combustion air is desired through a single wall or roof penetration. For use with FA-150, FA-175, FA-200, FA-225 and FA-250 models. 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" Roof top vent/intake kit. 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.

PART 2 – Products:

1. Gas-fired unit heaters. Separated combustion or power vented.
 - A. Basis-of-design product: subject to compliance with requirements, provide Brant Radiant Heaters Limited; model FA 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.
 4. S.S model heaters are upgraded to 409 S.S tubular exchangers.
 - 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, totally enclosed (TE) (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.