REZNOR®

Revision: UBXC-TSL (08-26) REV-H

Supersedes: UBXC-TSL (01-26) REV-G

TECHNICAL SPECIFICATIONS FOR MODEL UBXC

COMMERCIAL/INDUSTRIAL POWER-VENTED HIGH-STATIC BLOWER FAN CONVERTIBLE GAS-FIRED UNIT HEATER

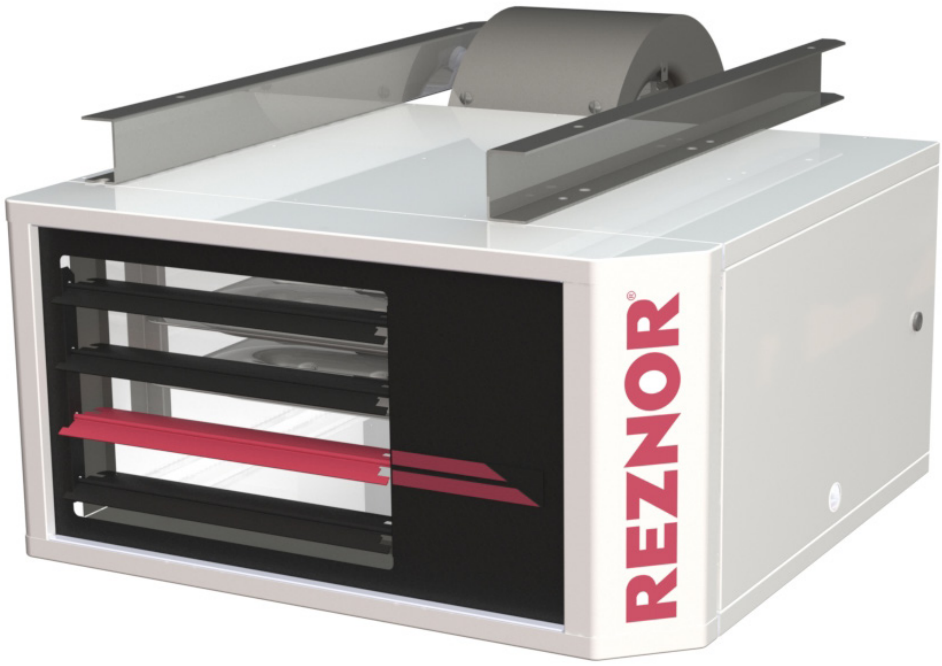


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In keeping with our policy of continuous product improvement, we reserve the right to alter, at any time, the design, construction, dimensions, weights, etc., of equipment information shown here.

TECHNICAL SPECIFICATIONS—CONTINUED

Unit Sizes

These heaters are available in fourteen unit sizes based on 30,000–400,000 BTUh input.

Features

- Voltage/phase/Hz options: 115/1/60, 208/1/60, 230/1/60, 208/3/60, 230/3/60, 460/3/60, and 575/3/60
- 82–83% thermal efficient
- May be converted to separated-combustion for use in installation locations where dirt, dust, or other airborne contaminants are present in the indoor environment
- Natural gas standard (propane conversion kit available)
- Integrated circuit board with seven-segment display
- Easily-viewed status-indicating LED
- Hinged access door panel with quarter-turn latch
- Improved cabinet design with removable front face
- Painted galvanized-steel cabinet with two-toned black and white glossy, scratch-resistant paint scheme
- Patented single-burner combustion system
- TCORE²® titanium-stabilized aluminized-steel heat exchanger
- External terminal strip for 24V wiring
- Built-in disconnect switch
- Four-point suspension standard on all unit sizes

Factory-Installed Options

Some options are not available on all unit sizes. Motor options AL2–AL26 are not available for unit sizes 30–125.

Option	Description
AC1	Aluminized-steel heat exchanger
AC2	409 stainless steel heat exchanger
AC4	316 stainless steel heat exchanger
AG1	Single-stage combination gas valve
AG2	Two-stage combination gas valve
AK1	115/1/60 voltage
AK2	208/1/60 voltage
AK3	230/1/60 voltage
AK5	208/3/60 voltage
AK6	230/3/60 voltage
AK7	460/3/60 voltage
AK8	575/3/60 voltage
AL2	1/4-HP open drip-proof motor
AL3	1/3-HP open drip-proof motor
AL4	1/2-HP open drip-proof motor
AL5	3/4-HP open drip-proof motor
AL6	1-HP open drip-proof motor
AL7	1-1/2-HP open drip-proof motor
AL8	2-HP open drip-proof motor
AL9	3-HP open drip-proof motor
AL10	5-HP open drip-proof motor
AL19	1/4-HP totally-enclosed motor
AL20	1/3-HP totally-enclosed motor
AL21	1/2-HP totally-enclosed motor
AL22	3/4-HP totally-enclosed motor
AL23	1-HP totally-enclosed motor
AL24	1-1/2-HP totally-enclosed motor
AL25	2-HP totally-enclosed motor
AL26	3-HP totally-enclosed motor

Option	Description
AM1	401–450 RPM belt drive
AM2	451–500 RPM belt drive
AM3	501–550 RPM belt drive
AM4	551–600 RPM belt drive
AM5	601–650 RPM belt drive
AM6	651–700 RPM belt drive
AM7	701–750 RPM belt drive
AM8	751–800 RPM belt drive
AM9	801–850 RPM belt drive
AM10	851–900 RPM belt drive
AM11	901–950 RPM belt drive
AM12	951–1000 RPM belt drive
AM13	1001–1050 RPM belt drive
AM14	1051–1100 RPM belt drive
AM15	1101–1150 RPM belt drive
AM16	1151–1200 RPM belt drive
AM17	1201–1250 RPM belt drive
AM18	1251–1300 RPM belt drive
AM19	1301–1350 RPM belt drive
AN2	IEC motor contactor (standard unless starter is required)
AN10	IEC motor starter
AX4	Duct flange
AZ6	Inlet blower and belt guard
AZ7	Inlet blower guard
BY1	US rating plate
BY3	US/Canada rating plate
DR1	Direct-drive blower
DR4	Belt-drive blower

Field-Installed Options

Option	Description
CC1	Vent cap
CC2	Vertical vent terminal kit
CC6	Horizontal vent terminal kit
CC21	Vent cap, stainless steel
CD1	Vertical louvers, direct discharge air to provide wider throw pattern
CD2	Downturn nozzle, 25- to 65-degree variable air deflection range
CD3	Downturn nozzle, 50- to 90-degree variable air deflection range
CD4	Downturn nozzle, 25- to 65-degree variable air deflection range with vertical louvers
CD5	Downturn nozzle, 50- to 90-degree variable air deflection range with vertical louvers
CD9	Duct flange
CD10	Inlet blower and belt guard
CD11	Polytube adapter
CD12	Inlet blower guard
CE1	Manual shutoff valve, natural gas or propane
CG1	208V–115V stepdown transformer
CG4	230V–115V or 460V–115V stepdown transformer
CG5	575V–115V stepdown transformer
CK10	Adapts 3/8-inch hangers for four-point suspension from 1-inch threaded pipe
CL1	Single-stage thermostat
CL22, CL23, CL83, CL84, CL90	Two-stage thermostats
CL31, CL32	Multiple unit control: option CL31 includes components for one control unit and one additional unit—option CL32 includes components for each additional non-control unit
CM1	Locking thermostat cover
CM1B	Large locking thermostat cover
CM3	Bracket assembly for mounting thermostat on unit
DJ20	High-elevation pressure switch
DL2	Propane conversion kit
SC1	Separated-combustion conversion (requires option CC2 or CC6)

Certification

These unit heaters are listed by Intertek for use in industrial and commercial installations in the United States and Canada.

Installation Codes

- These units must be installed in accordance with local building codes. In the absence of local codes, in the United States, the unit must be installed in accordance with the *National Fuel Gas Code* (ANSI Z223.1, latest edition). A Canadian installation must be in accordance with the *Natural Gas and Propane Installation Code* (CSA B149, latest edition). This code is available from CSA Information Services, 1-800-463-6727. Local authorities having jurisdiction should be consulted before installation is made to verify local codes and installation procedure requirements.
- Installations in aircraft hangars should be in accordance with the *Standard for Aircraft Hangars* (ANSI/NFPA 409, latest edition). Installations in public garages should be in accordance with the *Standard for Parking Structures* (ANSI/NFPA 88A, latest edition). Installations in repair garages should be in accordance with the *Standard for Repair Garages* (NFPA 88B), which has been incorporated into the *Code for Motor Fuel Dispensing Facilities and Repair Garages* (NFPA 30A, latest edition). In Canada, installations in aircraft hangars and public garages should be in accordance with CSA B149.
- If the heater is being installed in the Commonwealth of Massachusetts, installation must be performed by a licensed plumber or licensed gas fitter.

Technical Data

Parameter	Unit of Measure	Unit Size (MBTUh)					
		30	45	60	75	100	125
Thermal efficiency	%	82		82		83	
Input heating capacity	BTUh	30,000	45,000	60,000	75,000	105,000	120,000
	kW	8.8	13.2	17.6	22.0	30.8	35.2
Output heating capacity, low fire*	BTUh	—		34,440	43,050	61,005	69,720
	kW			10.1	12.6	17.9	20.4
Output heating capacity, high fire*	BTUh	24,600	36,900	49,200	61,500	87,150	99,600
	kW	7.2	10.8	14.4	18.0	25.6	29.2
Gas connection**	inch	1/2					
Vent connection diameter***		4					
Control, 24V	amp	1.0					
Full load amps, 115V		3.7		7.1		13.0	
Maximum overcurrent protection, 115V†		15		15		30	
Normal power consumption	watt	215		447		537	
Discharge air temperature rise	°F	45–75					
	°C	25–42					
Minimum air volume	CFM	304	456	607	759	1076	1230
	$meter^3$/minute	8.6	12.9	17.2	21.5	30.5	34.8
Maximum air volume	CFM	506	759	1012	1265	1793	2049
	$meter^3$/minute	14.3	21.5	28.7	35.8	50.8	58.0
Discharge air opening area	$foot^2$	0.96		1.25		2.01	
	$meter^2$	0.09		0.12		0.19	
Minimum output velocity	FPM	316	475	486	607	535	612
	meter/minute	96	143	143	179	160	183
Maximum output velocity	FPM	527	791	810	1012	892	1020
	meter/minute	159	239	239	299	267	305
Standard blower motor horsepower	HP	1/6		1/3		3/4	
Blower fan size	inch	9 × 6		9 × 6		10 × 10	
Sound level @ 15 feet	dBa	40		40	49	54	55

*ETL ratings for elevations up to 2,000 feet.

**Size shown is for natural gas or propane gas connection to a single-stage gas valve—not supply line size.

***Smaller and/or larger vent and combustion air pipe diameters may be permissible.

†MOCP = 2.25 × (largest motor FLA) + smallest motor FLA. Answer is rounded to the next lower standard circuit breaker size.

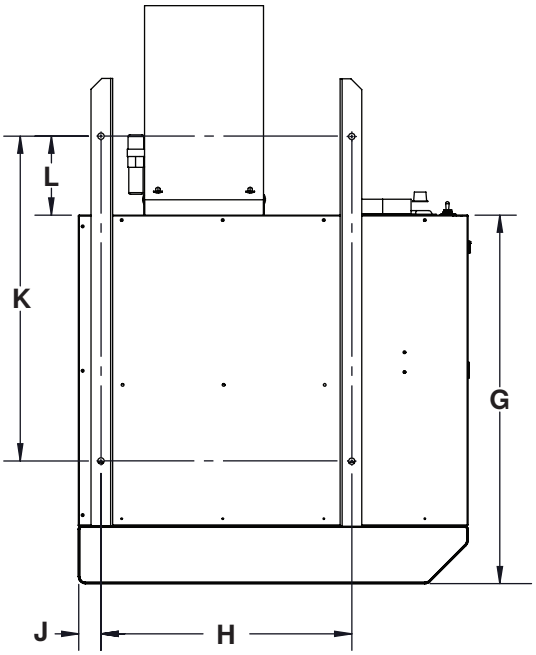
Parameter	Unit of Measure	Unit Size (MBTUh)							
		150	175	200	225	250	300	350	400
Thermal efficiency	%	83			83			83	82
Input heating capacity	BTUh	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kW	43.9	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Output heating capacity, low fire*	BTUh	87,150	101,675	116,200	130,725	145,250	174,300	203,350	229,600
	kW	25.5	29.8	34.0	38.3	42.6	51.0	59.6	67.2
Output heating capacity, high fire*	BTUh	124,500	145,250	166,000	186,750	207,500	249,000	290,500	328,000
	kW	36.4	42.5	48.6	54.7	60.8	72.9	85.1	96.0
Gas connection**	inch	1/2			3/4			3/4	
Vent connection diameter***		5			5		6	6	
Control, 24V	amp	1.0			1.0			1.0	
Full load amps, 115V		5.9	9.6	10.5	12.7		17.7	27.3	
Maximum overcurrent protection, 115V†		15	20	25	30		40	60	
Normal power consumption	watt	230	415	485	675		1260	1635	
Discharge air temperature rise	°F	45–75			45–75			45–75	50–80
	°C	25–42			25–42			25–42	28–44
Minimum air volume	CFM	1537	1793	2049	2306	2562	3074	3586	4100
	meter^3/minute	43.5	50.8	58.0	65.3	72.5	87.0	101.5	116.1
Maximum air volume	CFM	2562	2989	3416	3843	4270	5123	5977	6185
	meter^3/minute	72.5	84.6	96.7	108.8	120.9	145.1	169.2	175.1
Discharge air opening area	foot^2	2.56			3.51		4.79	4.79	
	meter^2	0.24			0.33		0.45	0.45	
Minimum output velocity	FPM	600	700	800	657	730	642	749	856
	meter/minute	183	213	244	200	223	196	228	261
Maximum output velocity	FPM	1001	1168	1334	1095	1217	1070	1248	1291
	meter/minute	305	356	407	334	371	326	380	393
Standard blower motor horsepower	HP	1/4	1/2		3/4		1-1/2	2	
Blower fan size	inch	12 × 12			15 × 11			15 × 15	
Sound level @ 15 feet	dBa	51	52	53	56		59	61	62
*ETL ratings for elevations up to 2,000 feet.									
**Size shown is for natural gas or propane gas connection to a single-stage gas valve—not supply line size.									
***Smaller and/or larger vent and combustion air pipe diameters may be permissible.									
†MOCP = 2.25 × (largest motor FLA) + smallest motor FLA. Answer is rounded to the next lower standard circuit breaker size.									

Clearances

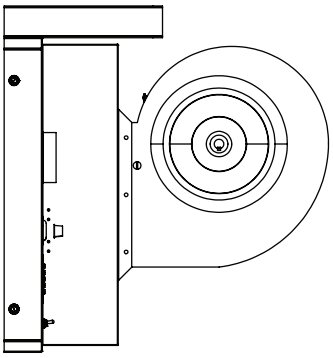
Units must be located so that clearances are provided for with regards to combustion air space, inspection, and service and for proper spacing from combustible construction. Clearance to combustibles is defined as the minimum distance from the heater to a surface or object for which it is necessary to ensure that a surface temperature of 90°F (50°C) above the surrounding ambient temperature is not exceeded.

Heater Surface	Unit Size (MBTUh)	
	30–125	150–400
	Minimum Clearance (Inches (mm))	
Top	1 (25)	4 (102)
Flue connector	6 (152)	
Access panel side	18 (457)	
Non-access side	1 (25)	2 (51)
Bottom*	1 (25)	
Rear**	18 (457)	
Front	Refer to values for variable X (distance from heater to start of floor coverage) in **Heater Throw with Standard Horizontal Louvers** section	
*Suspend the heater so that the bottom is a minimum of 5 feet (1.5 meters) above the floor.		
**Measure rear clearance from the blower motor.		

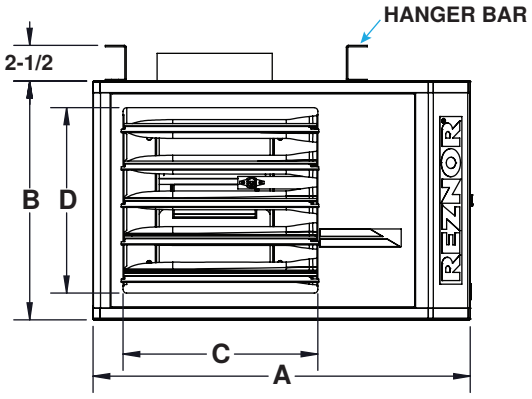
Dimensions



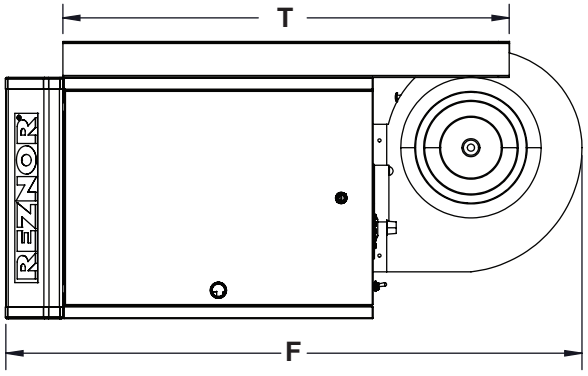
TOP VIEW



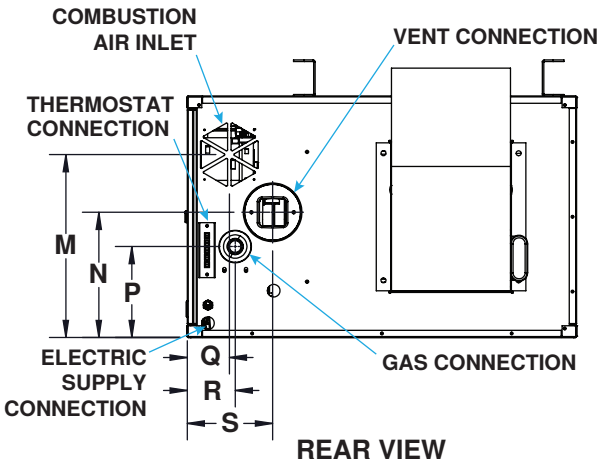
DIRECT-DRIVE BLOWER (UNIT SIZES 100–125)



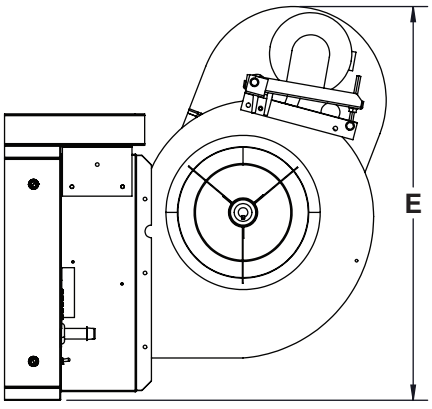
FRONT VIEW



SIDE VIEW
(DIRECT-DRIVE BLOWER, UNIT SIZES 30–75)



REAR VIEW



BELT-DRIVE BLOWER (UNIT SIZES 150–400)

Dimension (See Graphic Above)	Unit Size (MBTUh)								
	30, 45	60	75	100	125	150, 175	200	225, 250	300, 350, 400
	Inches (mm)								
A	27 (686)					38-3/16 (970)			41 (1041)
B	13-3/4 (349)	16-3/4 (425)		24-3/4 (629)		20-1/8 (511)		26-1/8 (664)	34-1/8 (867)
C	13-13/16 (351)					23 (584)			
D	10 (254)	13 (330)		21 (533)		16 (406)		22 (559)	30 (762)
E*	17-3/16 (437)	18-11/16 (475)		24-1/16 (611)		30-31/32 (786)		37-1/32 (941)	41-7/32 (1047)
F	40-3/32 (1018)			48-1/8 (1222)	47-5/8 (1210)	64-3/4 (1645)		68-1/8 (1730)	
G	25-17/32 (649)					40 (1016)			
H**	17-3/8 (441)					25-11/16 (653)			27-11/16 (703)
J	1-9/16 (40)					1-13/32 (36)			
K**	22-1/2 (572)					24-1/2 (622)			23-1/2 (597)
L	6-15/32 (164)		5-15/32 (139)	8-15/32 (215)	7-15/32 (190)	3-29/32 (99)		5-29/32 (150)	1-13/32 (36)
M	10 (254)	12-11/16 (322)		19-5/16 (491)		13-1/2 (343)	14-9/16 (370)	18-1/16 (459)	22-9/16 (573)
N	6 (152)	8-11/16 (221)		15-5/16 (389)		8-1/2 (216)	9-9/16 (243)	13-1/16 (332)	17-1/16 (433)
P	3-1/2 (89)	6-5/16 (160)		9-9/16 (243)		5-7/16 (138)		9 (229)	11-13/16 (300)
Q	2-21/32 (74)					4-3/16 (106)			4-1/2 (114)
R	5-31/32 (152)	3-5/16 (84)				6-1/2 (165)			7-5/16 (186)
S	3-5/16 (84)	5-29/32 (150)				8-3/16 (208)			8-1/2 (216)
T	31 (787)					42 (1067)			

*Varies with motor selection and belt adjustment for unit sizes 150–400.

**Heater suspension points (3/8-16 FEM).

Weights

Type	Unit Size (MBTUh)												
	30	45	60	75	100	125	150	175, 200	225	250	300	350	400
	Pounds (kg)												
Unit	84 (38)	89 (40)	102 (46)	108 (49)	168 (76)	171 (78)	300 (136)	320 (145)	385 (175)	400 (181)	458 (208)	494 (224)	506 (230)
Shipping	94 (43)	99 (45)	114 (52)	120 (54)	182 (83)	187 (85)	322 (146)	342 (155)	409 (186)	424 (192)	484 (220)	520 (236)	536 (243)

Halogenated Hydrocarbons

Halogenated hydrocarbons are a family of chemical compounds characterized by the presence of halogen elements (fluorine, chlorine, bromine, etc.). These compounds are used in refrigerants, cleaning agents, and solvents and are heavier than air, a fact that should be kept in mind when determining the installation location of heaters and building exhaust systems.

⚠ CAUTION ⚠

CORROSION HAZARD: Halogenated hydrocarbons, when exposed to flame, precipitate with any condensation present in the heater to form hydrochloric acid, which readily attacks all metals, including 300 grade stainless steel. Care should be taken to separate these vapors from the combustion process. An outside air supply MUST BE provided to the burner whenever the presence of these compounds is suspected.

Gas Supply Pressure

- The unit is equipped for a maximum gas supply pressure of 1/2 psi, 3.5 kPa, or 14 IN WC for natural gas or propane. The minimum supply pressure, as measured while the unit is operating at full fire, is 5 IN WC for natural gas or 11 IN WC for propane.
- Supply pressure higher than 1/2 psi requires the installation of an additional service regulator external to the unit.
- **Pressure testing supply piping:** For test pressures ***above*** 1/2 psi, disconnect the heater and manual valve from the gas supply line to be tested and cap or plug the supply line. For test pressures ***below*** 1/2 psi, before testing, close the manual valve on the heater.

Gas Supply Piping

- All piping must be in accordance with requirements outlined in the *National Fuel Gas Code* (ANSI/Z223.1, latest edition) or the *Natural Gas and Propane Installation Code* (CSA B149.1, latest edition).
- The heater is orificed for operation with natural gas having a heating value of 1,050 (±50) BTU per cubic foot or with propane gas having a heating value of 2,550 (±100) BTU per cubic foot. Sizing of gas supply lines depends on piping capacity and is based on cubic feet per hour based on a 0.3 IN WC pressure drop, a 0.6 specific gravity for natural gas at 1,050 BTU per cubic feet, and a 1.6 specific gravity for propane at 2,550 BTU per cubic feet. If the gas at the installation does not meet this specification, consult the factory for proper orificing.
- Variables for sizing gas supply lines are listed in the table below. When sizing supply lines, consider the possibility of future expansion and increased requirements. Refer to the *National Fuel Gas Code* for additional information on line sizing.

Pipe Length (Feet)	Natural Gas						Propane					
	Pipe Diameter (Inches)											
	1/2	3/4	1	1-1/4	1-1/2	2	1/2	3/4	1	1-1/4	1-1/2	2
	Cubic Feet per Hour											
20	92	190	350	730	1100	2100	56	116	214	445	671	1281
30	73	152	285	590	890	1650	45	93	174	360	543	1007
40	63	130	245	500	760	1450	38	79	149	305	464	885
50	56	115	215	440	670	1270	34	70	131	268	409	775
60	50	105	195	400	610	1105	31	64	119	244	372	674
70	46	96	180	370	560	1050	28	59	110	226	342	641
80	43	90	170	350	530	990	26	55	104	214	323	604
90	40	84	160	320	490	930	24	51	98	195	299	567
100	38	79	150	305	460	870	23	48	92	186	281	531
125	34	72	130	275	410	780	21	44	79	168	250	476
150	31	64	120	250	380	710	19	39	73	153	232	433
175	28	59	110	225	350	650	17	36	67	137	214	397
200	26	55	100	210	320	610	16	34	61	128	195	372

Electrical Connections

⚠ CAUTION ⚠

- **All electrical wiring and connections, including electrical grounding MUST BE made in accordance with the *National Electric Code* (ANSI/NFPA No. 70, latest edition) or, in Canada, the *Canadian Electric Code* (Part 1, CSA C.22.1). In addition, the installer should be aware of any local ordinances or gas company requirements that might apply.**
- **A dedicated line voltage supply with a disconnect switch MUST BE run directly from the main electrical panel to the heater.**
- **Ensure that all wiring is in accordance with the wiring diagram provided with the unit. A two-stage valve circuit is NOT available on all models.**

Vent Connections

Vent system methods vary depending on whether the vent is dedicated or common and whether the unit is standard or separated-combustion. Refer to the installation manual provided with the unit and select and follow the venting instructions that apply to the installation only. For venting separated-combustion units, refer to the installation manual provided with the unit as well as the separated-combustion conversion instructions provided with the conversion kit.

⚠ CAUTION ⚠

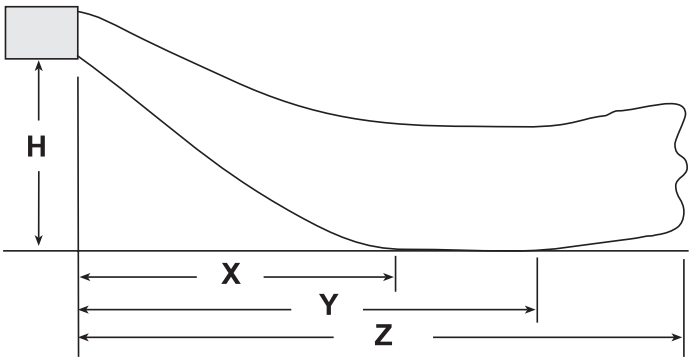
- **When an existing appliance is removed or replaced in a venting system, verify that the venting system is properly sized to vent the new appliance. An improperly sized venting system may result in the formation of condensate, leakage, and/or spillage.**
- **Do not intermix different vent system parts from different manufacturers in the same venting system.**

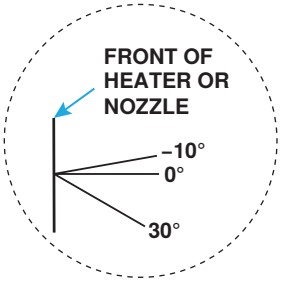
NOTE: Venting must be in accordance with local codes and with the *National Fuel Gas Code* (ANSI Z223.1) or the *Installation Code for Gas Burning Appliances and Equipment* (CSA B149.1). Local requirements supersede national requirements.

Heater Throw with Standard Horizontal Louvers

The graphic shows throw patterns and the tables list throw distances for heaters suspended at varying mounting heights. The throw pattern changes with the addition of optional vertical louvers and/or downturn nozzles.

H = the distance from the bottom of the heater to the floor
X = the distance from the heater to the start of floor coverage
Y = the distance from the heater to the end of floor coverage
Z = the distance at which air velocity drops below 50 feet (15.2 meters) per minute





LOUVER ANGLE DETAIL

TECHNICAL SPECIFICATIONS—CONTINUED

Heater Throw with Standard Horizontal Louvers—Continued

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	Low Speed						75°F (42°C) Rise
		Unit Size (MBTUh)						
		30	45	60	75	100	125	150
		Feet (Meters)						
5 (1.5)	**Angle**	**27°**	**20°**	**15°**	**13°**	**16°**	**14°**	**—**
	X	7 (2.1)	7 (2.1)	11 (3.4)	11 (3.4)	10 (3.0)	10 (3.0)	
	Y	15 (4.6)	17 (5.2)	26 (7.9)	24 (7.3)	23 (7.0)	22 (6.7)	—
	Z	38 (11.6)	44 (13.4)	78 (23.8)	74 (22.6)	74 (22.6)	69 (21.0)	
8 (2.4)	**Angle**	**44°**	**34°**	**23°**	**23°**	**25°**	**24°**	**39**
	X	7 (2.1)	9 (2.7)	14 (4.3)	13 (4.0)	13 (4.0)	12 (3.7)	9 (2.7)
	Y	13 (4.0)	17 (5.2)	26 (7.9)	26 (7.9)	25 (7.6)	24 (7.3)	16 (4.9)
	Z	32 (9.8)	40 (12.2)	76 (23.2)	72 (21.9)	72 (21.9)	65 (19.8)	44 (13.4)
10 (3.0)	**Angle**	**56°**	**42°**	**29°**	**28°**	**31°**	**31°**	**48°**
	X	7 (2.1)	9 (2.7)	15 (4.6)	15 (4.6)	14 (4.3)	13 (4.0)	9 (2.7)
	Y	11 (3.4)	16 (4.9)	27 (8.2)	25 (7.6)	25 (7.6)	24 (7.3)	14 (4.3)
	Z	25 (7.6)	37 (11.3)	72 (21.9)	69 (21.0)	69 (21.0)	62 (18.9)	38 (11.6)
12 (3.7)	**Angle**	**—**	**52°**	**34°**	**34°**	**37°**	**37°**	**58°**
	X		9 (2.7)	16 (4.9)	15 (4.6)	14 (4.3)	14 (4.3)	7 (2.1)
	Y	—	14 (4.3)	26 (7.9)	25 (7.6)	24 (7.3)	23 (7.0)	11 (3.4)
	Z		31 (9.4)	70 (21.3)	65 (19.8)	66 (20.1)	58 (17.7)	30 (9.1)
14 (4.3)	**Angle**	**—**		**40°**	**40°**	**43°**	**43°**	**—**
	X			16 (4.9)	15 (4.6)	14 (4.3)	14 (4.3)	
	Y	—		25 (7.6)	24 (7.3)	23 (7.0)	21 (6.4)	—
	Z			65 (19.8)	62 (18.9)	62 (18.9)	54 (16.5)	
16 (4.9)	**Angle**	**—**		**46°**	**46°**	**49°**	**51°**	**—**
	X			15 (4.6)	15 (4.6)	14 (4.3)	12 (3.7)	
	Y	—		24 (7.3)	23 (7.0)	21 (6.4)	19 (5.8)	—
	Z			60 (18.3)	56 (17.1)	57 (17.4)	47 (14.3)	
18 (5.5)	**Angle**	**—**		**52°**	**52°**	**56°**	**57°**	**—**
	X			14 (4.3)	14 (4.3)	12 (3.7)	11 (3.4)	
	Y	—		22 (6.7)	21 (6.4)	18 (5.5)	17 (5.2)	—
	Z			53 (16.2)	50 (15.2)	51 (15.5)	40 (12.2)	

*See graphic above.

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	Medium Speed						60°F (33°C) Rise
		Unit Size (MBTUh)						
		30	45	60	75	100	125	150
		Feet (Meters)						
5 (1.5)	**Angle**	**24°**	**15°**	**13°**	**11°**	**13°**	**10°**	**—**
	X	7 (2.1)	9 (2.7)	12 (3.7)	11 (3.4)	11 (3.4)	12 (3.7)	
	Y	16 (4.9)	21 (6.4)	28 (8.5)	27 (8.2)	27 (8.2)	29 (8.8)	—
	Z	43 (13.1)	60 (18.3)	91 (27.7)	84 (25.6)	86 (26.2)	96 (29.3)	
8 (2.4)	**Angle**	**38°**	**26°**	**21°**	**19°**	**21°**	**18°**	**28°**
	X	9 (2.7)	11 (3.4)	16 (4.9)	15 (4.6)	15 (4.6)	16 (4.9)	13 (4.0)
	Y	16 (4.9)	23 (7.0)	30 (9.1)	29 (8.8)	28 (8.5)	31 (9.4)	24 (7.3)
	Z	38 (11.6)	57 (17.4)	89 (27.1)	82 (25.0)	83 (25.3)	94 (28.7)	74 (22.6)
10 (3.0)	**Angle**	**48°**	**32°**	**26°**	**25°**	**26°**	**23°**	**35°**
	X	8 (2.4)	13 (4.0)	17 (5.2)	16 (4.9)	17 (5.2)	18 (5.5)	13 (4.0)
	Y	14 (4.3)	22 (6.7)	30 (9.1)	30 (9.1)	29 (8.8)	32 (9.8)	22 (6.7)
	Z	33 (10.1)	54 (16.5)	86 (26.2)	79 (24.1)	81 (24.7)	92 (28.0)	62 (18.9)

*See graphic above.

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	Medium Speed						60°F (33°C) Rise
		Unit Size (MBTUh)						
		30	45	60	75	100	125	150
		Feet (Meters)						
12 (3.7)	**Angle**	**56°**	**39°**	**31°**	**30°**	**32°**	**27°**	**42°**
	X	8 (2.4)	13 (4.0)	18 (5.5)	17 (5.2)	17 (5.2)	19 (5.8)	13 (4.0)
	Y	12 (3.7)	21 (6.4)	31 (9.4)	30 (9.1)	29 (8.8)	32 (9.8)	21 (6.4)
	Z	28 (8.5)	51 (15.5)	83 (25.3)	77 (23.5)	78 (23.8)	89 (27.1)	57 (17.4)
14 (4.3)	**Angle**	**—**	**46°**	**36°**	**34°**	**37°**	**32°**	**49°**
	X	—	12 (3.7)	18 (5.5)	18 (5.5)	18 (5.5)	20 (6.1)	12 (3.7)
	Y		20 (6.1)	30 (9.1)	29 (8.8)	29 (8.8)	32 (9.8)	19 (5.8)
	Z		46 (14.0)	79 (24.1)	74 (22.6)	74 (22.6)	87 (26.5)	51 (15.5)
16 (4.9)	**Angle**	**—**	**53°**	**41°**	**39°**	**42°**	**36°**	**57°**
	X	—	11 (3.4)	19 (5.8)	18 (5.5)	18 (5.5)	20 (6.1)	11 (3.4)
	Y		17 (5.2)	29 (8.8)	28 (8.5)	27 (8.2)	31 (9.4)	16 (4.9)
	Z		40 (12.2)	75 (22.9)	70 (21.3)	70 (21.3)	83 (25.3)	43 (13.1)
18 (5.5)	**Angle**	**—**		**46°**	**44°**	**47°**	**40°**	**—**
	X	—		17 (5.2)	18 (5.5)	17 (5.2)	20 (6.1)	—
	Y			28 (8.5)	26 (7.9)	26 (7.9)	30 (9.1)	
	Z			69 (21.0)	65 (19.8)	64 (19.5)	78 (23.8)	

*See graphic above.

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	High Speed						45°F (25°C) Rise
		Unit Size (MBTUh)						
		30	45	60	75	100	125	150
		Feet (Meters)						
5 (1.5)	**Angle**	**20°**	**11°**	**11°**	**9°**	**10°**	**7°**	**—**
	X	8 (2.4)	11 (3.4)	13 (4.0)	12 (3.7)	13 (4.0)	13 (4.0)	—
	Y	19 (5.8)	28 (8.5)	30 (9.1)	30 (9.1)	32 (9.8)	33 (10.1)	
	Z	51 (15.5)	81 (24.7)	105 (32.0)	97 (29.6)	110 (33.5)	113 (34.4)	
8 (2.4)	**Angle**	**31°**	**19°**	**19°**	**16°**	**17°**	**13°**	**19°**
	X	10 (3.0)	15 (4.6)	17 (5.2)	17 (5.2)	18 (5.5)	19 (5.8)	18 (5.5)
	Y	19 (5.8)	29 (8.8)	33 (10.1)	33 (10.1)	34 (10.4)	36 (11.0)	32 (9.8)
	Z	48 (14.6)	79 (24.1)	103 (31.4)	95 (29.0)	108 (32.9)	111 (33.8)	107 (32.6)
10 (3.0)	**Angle**	**39°**	**24°**	**23°**	**20°**	**21°**	**17°**	**24°**
	X	11 (3.4)	16 (4.9)	19 (5.8)	19 (5.8)	20 (6.1)	21 (6.4)	19 (5.8)
	Y	19 (5.8)	30 (9.1)	34 (10.4)	33 (10.1)	36 (11.0)	37 (11.3)	34 (10.4)
	Z	44 (13.4)	78 (23.8)	100 (30.5)	94 (28.7)	106 (32.3)	109 (33.2)	104 (31.7)
12 (3.7)	**Angle**	**46°**	**29°**	**27°**	**25°**	**25°**	**21°**	**28°**
	X	11 (3.4)	17 (5.2)	21 (6.4)	20 (6.1)	22 (6.7)	23 (7.0)	21 (6.4)
	Y	17 (5.2)	30 (9.1)	35 (10.7)	34 (10.4)	36 (11.0)	39 (11.9)	34 (10.4)
	Z	40 (12.2)	75 (22.9)	98 (29.9)	92 (28.0)	104 (31.7)	107 (32.6)	102 (31.1)
14 (4.3)	**Angle**	**56°**	**34°**	**31°**	**29°**	**29°**	**25°**	**32°**
	X	9 (2.7)	18 (5.5)	22 (6.7)	21 (6.4)	23 (7.0)	24 (7.3)	22 (6.7)
	Y	15 (4.6)	30 (9.1)	34 (10.4)	34 (10.4)	36 (11.0)	39 (11.9)	34 (10.4)
	Z	33 (10.1)	72 (21.9)	95 (29.0)	89 (27.1)	102 (31.1)	105 (32.0)	98 (29.9)
16 (4.9)	**Angle**	**—**	**39°**	**35°**	**33°**	**33°**	**29°**	**36°**
	X	—	19 (5.8)	23 (7.0)	22 (6.7)	24 (7.3)	25 (7.6)	22 (6.7)
	Y		29 (8.8)	33 (10.1)	33 (10.1)	36 (11.0)	40 (12.2)	33 (10.1)
	Z		69 (21.0)	91 (27.7)	86 (26.2)	99 (30.2)	103 (31.4)	94 (28.7)
18 (5.5)	**Angle**	**—**	**44°**	**40°**	**37°**	**37°**	**32°**	**41°**
	X	—	18 (5.5)	21 (6.4)	22 (6.7)	23 (7.0)	26 (7.9)	21 (6.4)
	Y		28 (8.5)	33 (10.1)	33 (10.1)	36 (11.0)	39 (11.9)	33 (10.1)
	Z		64 (19.5)	86 (26.2)	83 (25.3)	95 (29.0)	101 (30.8)	89 (27.1)

*See graphic above.

TECHNICAL SPECIFICATIONS—CONTINUED

Heater Throw with Standard Horizontal Louvers—Continued

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	75°F (42°C) Rise						80°F (44°C) Rise
		Unit Size (MBTUh)						
		175	200	225	250	300	350	400
		Feet (Meters)						
8 (2.4)	**Angle**	**30°**	**27°**	**29°**	**26°**	**32°**	**27°**	**24°**
	X	12 (3.7)	13 (4.0)	13 (4.0)	14 (4.3)	12 (3.7)	13 (4.0)	15 (4.6)
	Y	22 (6.7)	24 (7.3)	24 (7.3)	27 (8.2)	21 (6.4)	25 (7.6)	28 (8.5)
	Z	69 (21.0)	76 (23.2)	82 (25.0)	95 (29.0)	70 (21.3)	82 (25.0)	95 (29.0)
10 (3.0)	**Angle**	**37°**	**33°**	**38°**	**31°**	**39°**	**33°**	**29°**
	X	12 (3.7)	14 (4.3)	12 (3.7)	16 (4.9)	12 (3.7)	14 (4.3)	16 (4.9)
	Y	22 (6.7)	24 (7.3)	21 (6.4)	27 (8.2)	21 (6.4)	25 (7.6)	28 (8.5)
	Z	65 (19.8)	72 (21.9)	66 (20.1)	91 (27.7)	65 (19.8)	77 (23.5)	92 (28.0)
12 (3.7)	**Angle**	**43°**	**39°**	**45°**	**37°**	**47°**	**40°**	**34°**
	X	13 (4.0)	14 (4.3)	12 (3.7)	16 (4.9)	12 (3.7)	14 (4.3)	17 (5.2)
	Y	21 (6.4)	23 (7.0)	20 (6.1)	27 (8.2)	19 (5.8)	24 (7.3)	28 (8.5)
	Z	59 (18.0)	68 (20.7)	60 (18.3)	86 (26.2)	58 (17.7)	72 (21.9)	88 (26.8)
14 (4.3)	**Angle**	**51°**	**46°**	**52°**	**43°**	**55°**	**46°**	**39°**
	X	11 (3.4)	14 (4.3)	11 (3.4)	16 (4.9)	10 (3.0)	14 (4.3)	17 (5.2)
	Y	19 (5.8)	22 (6.7)	18 (5.5)	25 (7.6)	17 (5.2)	22 (6.7)	27 (8.2)
	Z	52 (15.8)	62 (18.9)	53 (16.2)	80 (24.4)	50 (15.2)	66 (20.1)	82 (25.0)
16 (4.9)	**Angle**	**—**	**53°**		**49°**	**—**	**53°**	**45°**
	X		12 (3.7)		16 (4.9)		13 (4.0)	17 (5.2)
	Y	—	20 (6.1)	—	23 (7.0)	—	20 (6.1)	26 (7.9)
	Z		53 (16.2)		73 (22.3)		57 (17.4)	76 (23.2)
18 (5.5)	**Angle**	**—**			**56°**	**—**		**50°**
	X				14 (4.3)			16 (4.9)
	Y	—			21 (6.4)	—		24 (7.3)
	Z				64 (19.5)			69 (21.0)

*See graphic above.

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	60°F (33°C) Rise						70°F (39°C) Rise
		Unit Size (MBTUh)						
		175	200	225	250	300	350	400
		Feet (Meters)						
8 (2.4)	**Angle**	**22°**	**21°**	**24°**	**20°**	**24°**	**20°**	**21°**
	X	15 (4.6)	16 (4.9)	16 (4.9)	19 (5.8)	16 (4.9)	18 (5.5)	17 (5.2)
	Y	29 (8.8)	31 (9.4)	29 (8.8)	34 (10.4)	28 (8.5)	33 (10.1)	31 (9.4)
	Z	92 (28.0)	100 (30.5)	100 (30.5)	127 (38.7)	100 (30.5)	119 (36.3)	111 (33.8)
10 (3.0)	**Angle**	**28°**	**25°**	**29°**	**24°**	**29°**	**25°**	**26°**
	X	16 (4.9)	18 (5.5)	16 (4.9)	20 (6.1)	17 (5.2)	19 (5.8)	18 (5.5)
	Y	29 (8.8)	31 (9.4)	30 (9.1)	35 (10.7)	29 (8.8)	34 (10.4)	32 (9.8)
	Z	89 (27.1)	97 (29.6)	96 (29.3)	123 (37.5)	96 (29.3)	116 (35.4)	107 (32.6)
12 (3.7)	**Angle**	**33°**	**30°**	**34°**	**28°**	**34°**	**29°**	**31°**
	X	17 (5.2)	19 (5.8)	17 (5.2)	21 (6.4)	18 (5.5)	21 (6.4)	19 (5.8)
	Y	29 (8.8)	31 (9.4)	30 (9.1)	36 (11.0)	29 (8.8)	34 (10.4)	32 (9.8)
	Z	85 (25.9)	93 (28.3)	92 (28.0)	120 (36.6)	92 (28.0)	113 (34.4)	103 (31.4)
14 (4.3)	**Angle**	**38°**	**34°**	**38°**	**32°**	**39°**	**33°**	**35°**
	X	17 (5.2)	20 (6.1)	18 (5.5)	22 (6.7)	18 (5.5)	22 (6.7)	20 (6.1)
	Y	28 (8.5)	30 (9.1)	28 (8.5)	35 (10.7)	28 (8.5)	34 (10.4)	31 (9.4)
	Z	80 (24.4)	89 (27.1)	87 (26.5)	116 (35.4)	87 (26.5)	109 (33.2)	99 (30.2)

*See graphic above.

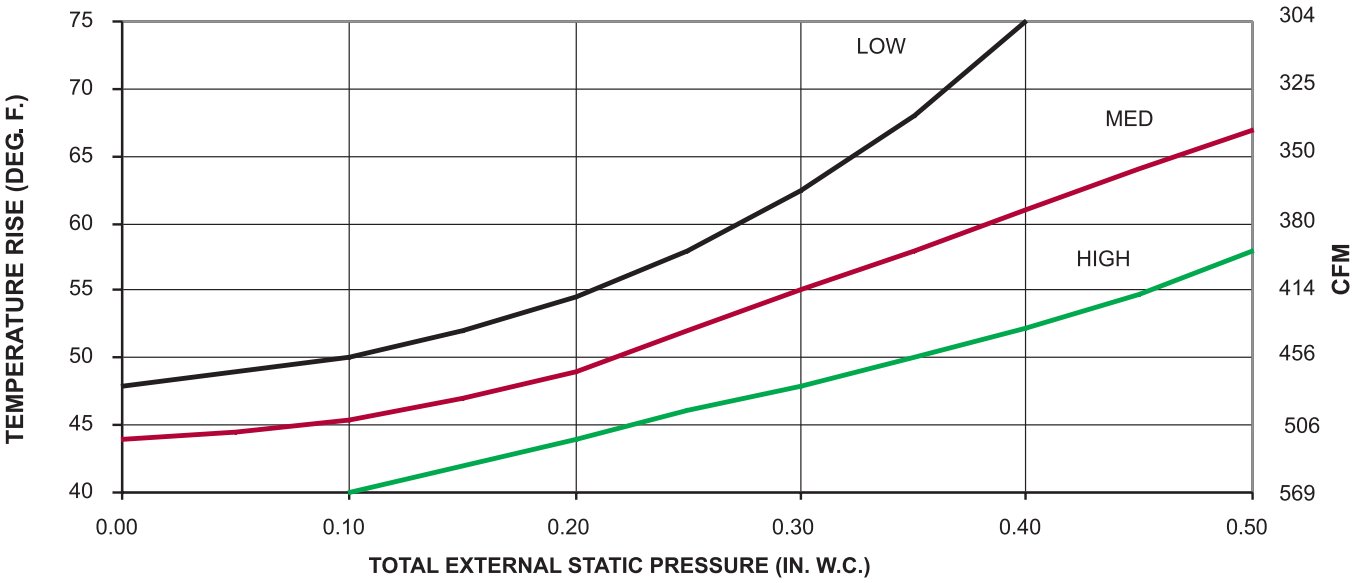
Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	60°F (33°C) Rise						70°F (39°C) Rise
		Unit Size (MBTUh)						
		175	200	225	250	300	350	400
		Feet (Meters)						
16 (4.9)	**Angle**	**43°**	**39°**	**44°**	**37°**	**44°**	**37°**	**40°**
	X	17 (5.2)	20 (6.1)	18 (5.5)	23 (7.0)	18 (5.5)	22 (6.7)	20 (6.1)
	Y	27 (8.2)	29 (8.8)	27 (8.2)	35 (10.7)	27 (8.2)	33 (10.1)	31 (9.4)
	Z	75 (22.9)	84 (25.6)	80 (24.4)	111 (33.8)	81 (24.7)	104 (31.7)	93 (28.3)
18 (5.5)	**Angle**	**48°**	**44°**	**49°**	**41°**	**50°**	**41°**	**44°**
	X	17 (5.2)	19 (5.8)	17 (5.2)	23 (7.0)	17 (5.2)	22 (6.7)	20 (6.1)
	Y	25 (7.6)	29 (8.8)	26 (7.9)	34 (10.4)	25 (7.6)	32 (9.8)	29 (8.8)
	Z	69 (21.0)	79 (24.1)	74 (22.6)	106 (32.3)	73 (22.3)	98 (29.9)	88 (26.8)
*See graphic above.								

Dimension H* (Feet (Meters))	Louver Angle* and Dimension*	45°F (25°C) Rise						50°F (28°C) Rise
		Unit Size (MBTUh)						
		175	200	225	250	300	350	400
		Feet (Meters)						
8 (2.4)	**Angle**	**15°**	**13°**	**16°**	**14°**	**17°**	**14°**	**14°**
	X	22 (6.7)	23 (7.0)	23 (7.0)	26 (7.9)	21 (6.4)	24 (7.3)	24 (7.3)
	Y	41 (12.5)	43 (13.1)	43 (13.1)	48 (14.6)	39 (11.9)	45 (13.7)	44 (13.4)
	Z	146 (44.5)	157 (47.9)	168 (51.2)	198 (60.4)	146 (44.5)	169 (51.5)	169 (51.5)
10 (3.0)	**Angle**	**19°**	**17°**	**19°**	**17°**	**21°**	**18°**	**17°**
	X	24 (7.3)	25 (7.6)	26 (7.9)	29 (8.8)	23 (7.0)	26 (7.9)	26 (7.9)
	Y	43 (13.1)	46 (14.0)	45 (13.7)	50 (15.2)	41 (12.5)	47 (14.3)	46 (14.0)
	Z	144 (43.9)	155 (47.2)	166 (50.6)	196 (59.7)	143 (43.6)	167 (50.9)	167 (50.9)
12 (3.7)	**Angle**	**22°**	**20°**	**22°**	**20°**	**25°**	**21°**	**20°**
	X	26 (7.9)	27 (8.2)	28 (8.5)	31 (9.4)	25 (7.6)	28 (8.5)	28 (8.5)
	Y	43 (13.1)	47 (14.3)	45 (13.7)	52 (15.8)	42 (12.8)	48 (14.6)	48 (14.6)
	Z	141 (43.0)	152 (46.3)	163 (49.7)	194 (59.1)	140 (42.7)	165 (50.3)	165 (50.3)
14 (4.3)	**Angle**	**25°**	**23°**	**25°**	**22°**	**28°**	**24°**	**23°**
	X	28 (8.5)	29 (8.8)	30 (9.1)	32 (9.8)	26 (7.9)	30 (9.1)	31 (9.4)
	Y	44 (13.4)	48 (14.6)	46 (14.0)	54 (16.5)	42 (12.8)	49 (14.9)	48 (14.6)
	Z	137 (41.8)	150 (45.7)	160 (48.8)	191 (58.2)	137 (41.8)	162 (49.4)	162 (49.4)
16 (4.9)	**Angle**	**28°**	**26°**	**29°**	**25°**	**31°**	**26°**	**26°**
	X	29 (8.8)	31 (9.4)	31 (9.4)	34 (10.4)	27 (8.2)	32 (9.8)	32 (9.8)
	Y	44 (13.4)	48 (14.6)	47 (14.3)	53 (16.2)	42 (12.8)	48 (14.6)	49 (14.9)
	Z	134 (40.8)	147 (44.8)	157 (47.9)	189 (57.6)	133 (40.5)	159 (48.5)	159 (48.5)
18 (5.5)	**Angle**	**32°**	**29°**	**32°**	**28°**	**34°**	**29°**	**29°**
	X	29 (8.8)	31 (9.4)	31 (9.4)	34 (10.4)	28 (8.5)	33 (10.1)	32 (9.8)
	Y	44 (13.4)	49 (14.9)	47 (14.3)	54 (16.5)	41 (12.5)	49 (14.9)	49 (14.9)
	Z	131 (39.9)	144 (43.9)	153 (46.6)	185 (56.4)	129 (39.3)	156 (47.5)	156 (47.5)
*See graphic above.								

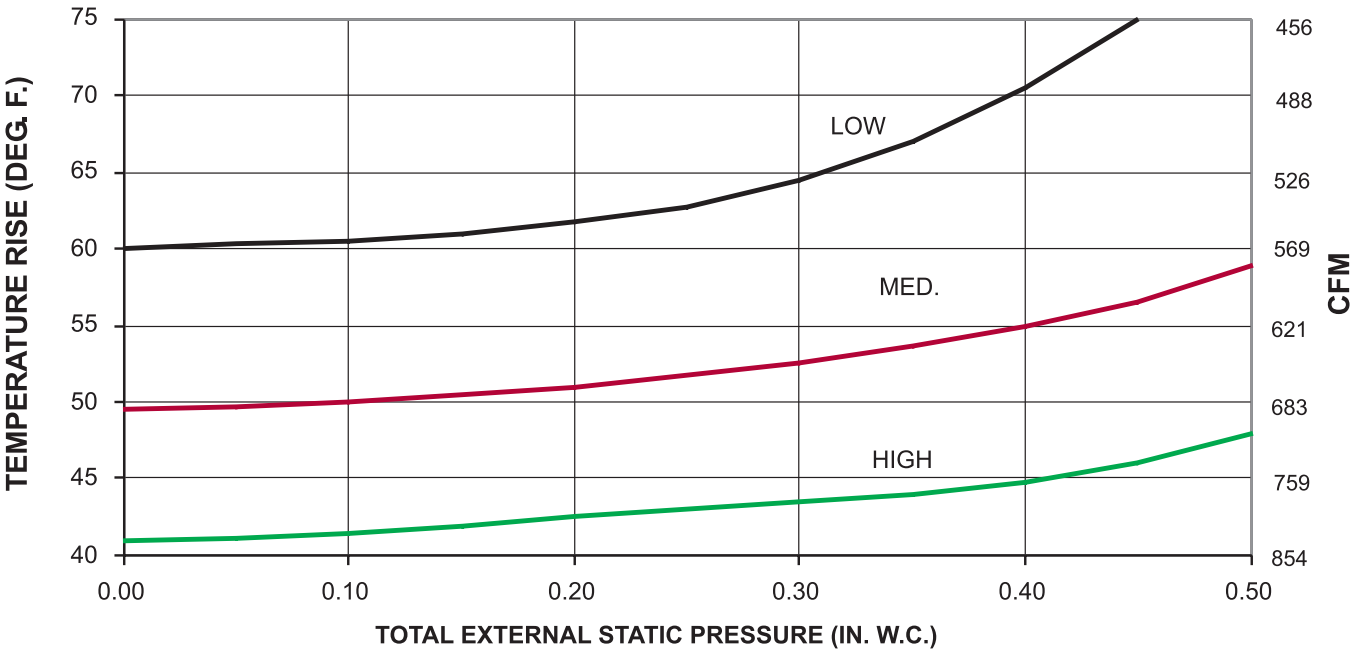
Blower Performance Data for Unit Sizes 30–125 with Direct-Drive Blower Motors

NOTE: Blower performance data shown below are estimations and are subject to change based on product variations, improvements, and local environmental conditions.

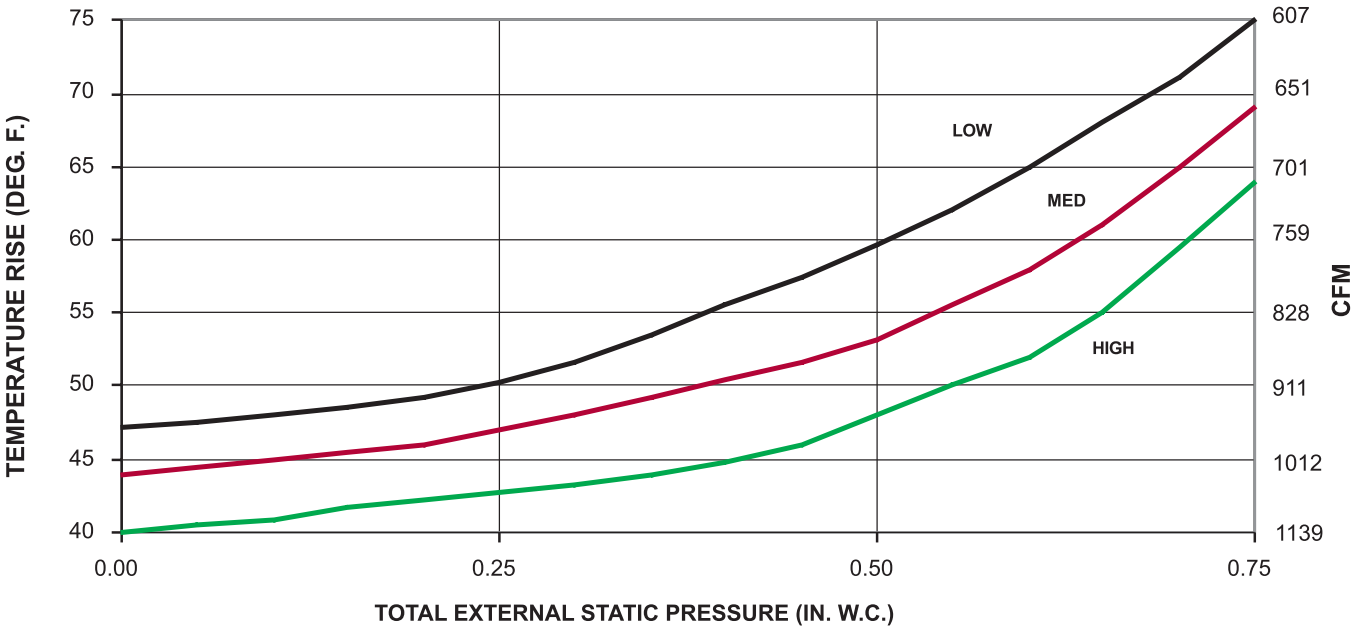
UNIT SIZE 30



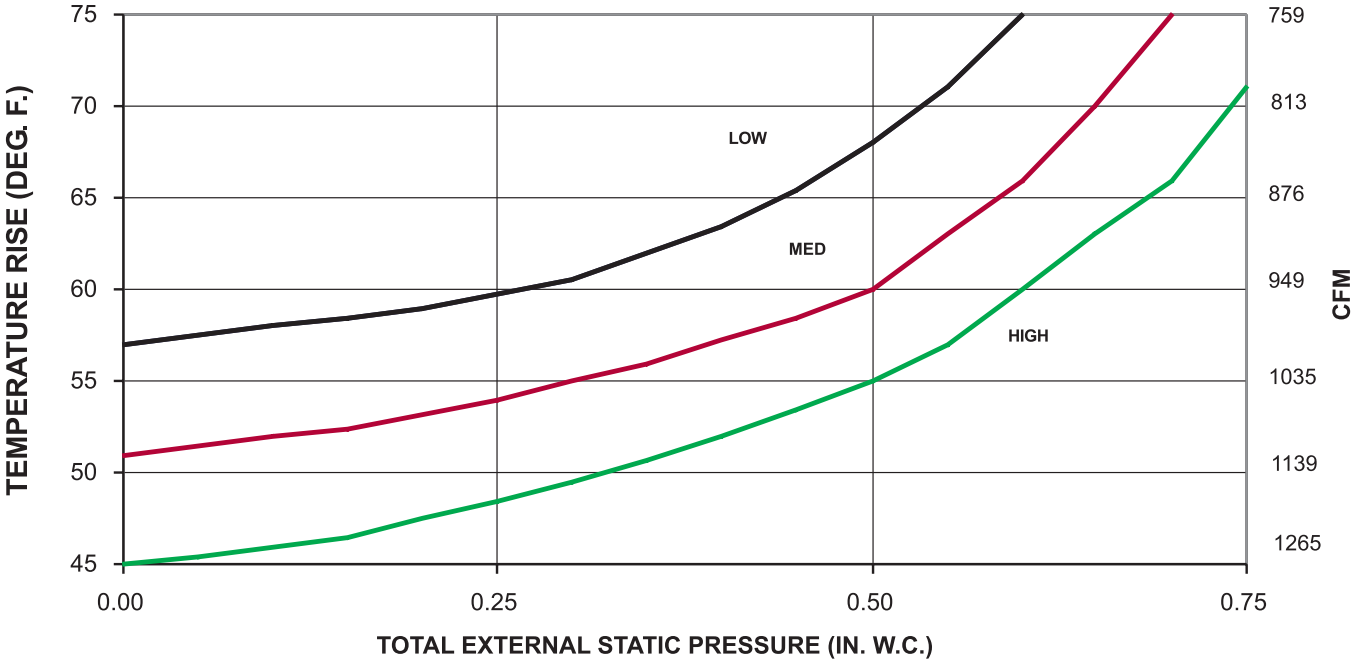
UNIT SIZE 45



UNIT SIZE 60

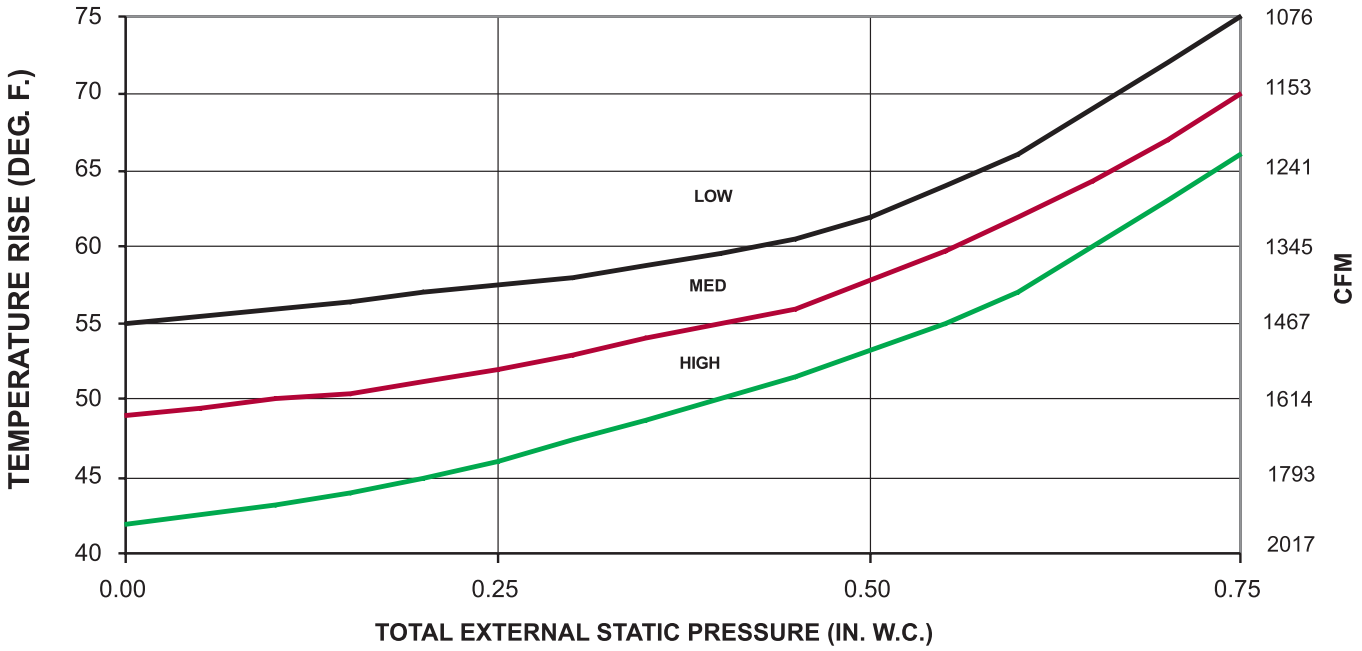


UNIT SIZE 75

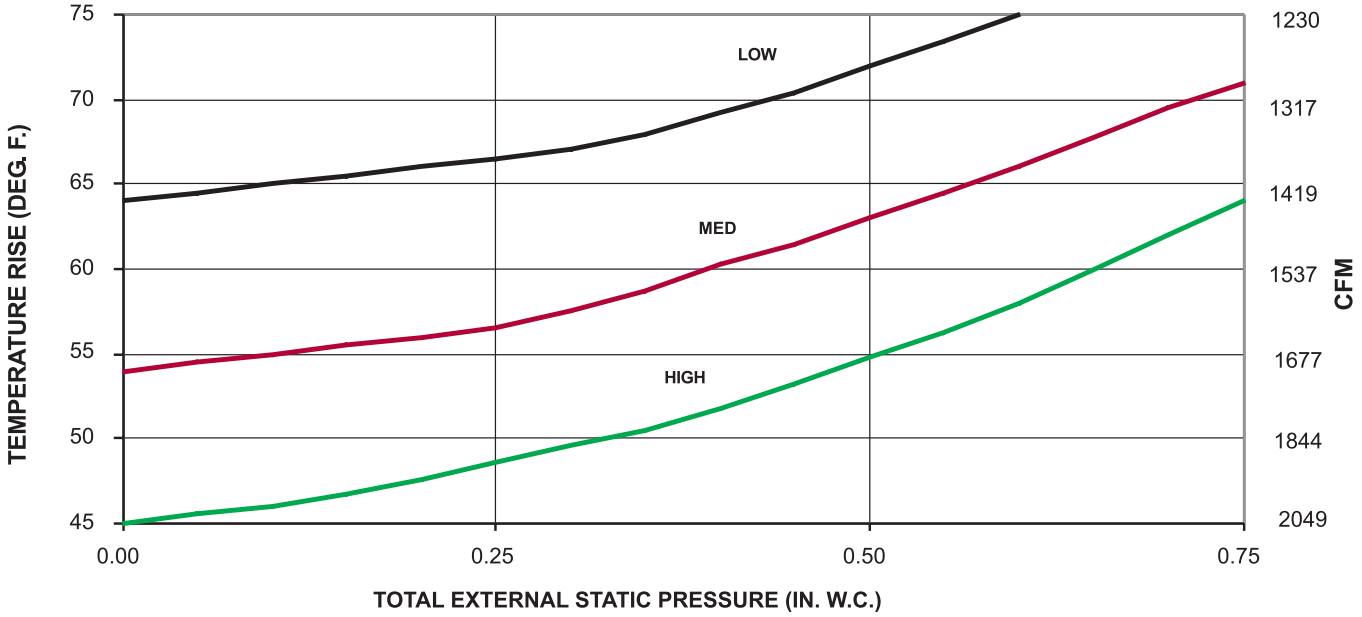


Blower Performance Data for Unit Sizes 30–125 with Direct-Drive Blower Motors—Continued

UNIT SIZE 100



UNIT SIZE 125



Blower Performance Data for Unit Sizes 150–400

NOTE: Blower performance data shown below are estimations and are subject to change based on product variations, improvements, and local environmental conditions.

Unit Size (MBTUh)	Temperature Rise (°F)	CFM	30-Degree Nozzle with Louvers		60-Degree Nozzle with Louvers		External Static Pressure (IN WC)					
							0		0.25		0.50	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	45	2562	730	0.43	730	0.43	730	0.43	840	0.55	930	0.68
	60	1921	520	0.25	520	0.25	520	0.25	655	0.35	780	0.43
	75	1537	405	0.17	405	0.17	405	0.17	—			
175	45	2989	910	0.68	910	0.68	910	0.68	960	0.83	1055	0.98
	60	2242	660	0.44	660	0.44	660	0.44	775	0.51	865	0.63
	75	1793	545	0.28	545	0.28	545	0.28	665	0.38	—	
200	45	3416	1020	0.91	1020	0.91	1020	0.91	1090	1.07	1160	1.24
	60	2562	730	0.49	730	0.49	730	0.49	885	0.63	935	0.76
	75	2049	600	0.34	600	0.34	600	0.34	720	0.45	830	0.51
225	45	3843	740	1.05	740	1.05	740	1.05	845	1.22	885	1.40
	60	2882	530	0.60	530	0.60	530	0.60	670	0.74	730	0.89
	75	2306	430	0.42	430	0.42	430	0.42	565	0.54	640	0.66
250	45	4270	900	1.30	900	1.30	900	1.30	935	1.49	980	1.69
	60	3202	660	0.73	660	0.73	660	0.73	730	0.88	790	1.04
	75	2562	570	0.56	570	0.56	570	0.56	610	0.69	685	0.83
300	45	5123	990	2.04	990	2.04	990	2.04	1020	2.29	1070	2.55
	60	3843	735	1.29	735	1.29	735	1.29	795	1.49	865	1.71
	75	3074	600	0.95	600	0.95	600	0.95	—			
350	45	5977	1040	2.95	1040	2.95	1040	2.95	1075	3.24	1130	3.54
	60	4483	800	1.80	800	1.80	800	1.80	850	2.04	930	2.28
	75	3586	630	1.33	630	1.33	630	1.33	720	1.45	—	
400	45	6185	1055	3.56	1055	3.56	1055	3.56	1090	3.86	1170	4.17
	60	4392	790	1.98	790	1.98	790	1.98	875	2.17	1020	2.42
	75	4100	675	1.76	675	1.76	675	1.76	750	1.99	—	

NOTE: Unit sizes 30–125 do not have standard motors and drives. Standard motors and drives for unit sizes 150–125 are shaded.

⚠ DANGER ⚠

FIRE OR EXPLOSION HAZARD

- **Failure to follow safety warnings exactly could result in serious injury, death, or property damage.**
- **Improper installation, adjustment, alteration, service, or maintenance can cause serious injury, death, or property damage.**
- **Installation and service must be performed by a qualified installer, service agency, or the gas supplier.**
- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Leave the building immediately.**
- **Immediately call your gas supplier from a phone remote from the building. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

For more information on Reznor HVAC products:

- **Contact your local Reznor representative at 1-800-695-1901**
- **Refer to the manuals and additional consumer materials found at www.reznorhvac.com**

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