

Revision: UDXC-TSL (07-25) REV-D

Supersedes: UDXC-TSL (02-25) REV-C

TECHNICAL SPECIFICATIONS FOR MODEL UDXC

COMMERCIAL/INDUSTRIAL/RESIDENTIAL POWER-VENTED LOW-STATIC AXIAL 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.

Unit Sizes

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

Features

- 115/1/60 voltage/phase/Hz
- · 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 (two-point suspension available on unit sizes 30–125 when installed without downturn nozzle or stepdown transformer)

Factory-Installed Options

Option	Description
AC1	Aluminized-steel heat exchanger
AC2	409 SST heat exchanger
AC4	316 SST heat exchanger
AG1	Single-stage combination gas valve
AG2	Two-stage combination gas valve
AL1	Open drip-proof motor
AL14	Totally-enclosed motor

Field-Installed Options

Option	Description
CC1	Vent cap
CC21	SST vent cap
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
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
CK8	Adapts 3/8-inch hangers for two-point suspension from 1-inch threaded pipe
CK10	Adapts 3/8-inch hangers for four-point suspension from 1-inch threaded pipe
CK22	Angle brackets for low ceiling mounting (does not include hanger rods)

Option	Description
CL1	Single-stage thermostat
CL22, CL23, CL83, CL84, CL90	Two-stage thermostat
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 cover for CL1 thermostat
CM1B	Locking cover for CL22 thermostat
CM3	Bracket assembly for mounting thermostat on unit
DJ20	High-elevation pressure switch
DL2	Propane conversion
SC1	Separated-combustion conversion (requires either vertical (option CC2) or horizontal (option CC6) vent/combustion air inlet terminal kit)

Technical Data

D	Unit of	Unit Size (MBTUh)								
Parameter	Measure	30	45	60	75	100	125			
Thermal efficiency	%	82	83	8	3	83				
lanut booting consoits	BTUh	30,000	45,000	60,000	75,000	105,000	120,000			
Input heating capacity	kW	8.8	13.2	17.6	22.0	30.8	35.2			
Output beating agential law first	BTUh			34,860	43,575	61,005	69,720			
Output heating capacity, low fire*	kW	_	_	10.2	12.7	17.9	20.4			
Output heating consoits, high first	BTUh	24,600	37,350	49,800	62,250	87,150	99,600			
Output heating capacity, high fire*	kW	7.2	10.9	14.6	18.2	25.5	29.2			
Gas connection**	inah			1	/2					
Vent connection diameter***	inch				4					
Control, 24V				1	.0					
Full load amps, 115V	amp	1.9	2.4	2.4	3.7	4.3	5.6			
Maximum overcurrent protection, 115V [†]		15								
Normal power consumption	watt	109	155	155	217	276	354			
Discharge six temperature vice	°F	50	50 55			6	60			
Discharge air temperature rise	°C	27.8	30.6	33	33.3		33.3			
Aircontinue	CFM	456	629	769	961	1345	1537			
Air volume	meter ³ /minute	12.9	17.8	21.8	27.5	36.7	45.9			
Disabassa sinasasian sa	foot ²	0.	96	1.	25	2.	01			
Discharge air opening area	meter ²	0.	09	0.	12	0.	19			
Outside all a State	FPM	475	656	616	770	668	763			
Output velocity	meter/minute	145	200	188	235	204	233			
Open fan motor horsepower	LID	0.02	0.03	0.03	0.06	1/30	1/20			
Totally-enclosed fan motor horsepower	HP HP	0.	06	0.	06	1.	/4			
Fan motor speed	RPM	15	550	15	550	10	50			
Fan diameter	inch	1	0	1	2	16				
Sound level @ 15 feet	dBa	4	.0	40	49	54	55			
*CTI										

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

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

Parameter	Unit of	Unit Size (MBTUh)								
Parameter	Measure	150	175	200	225	250	300	350	400	
Thermal efficiency	%		83							
Input booting consoits	BTUh	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000	
Input heating capacity	kW	44.0	51.3	58.6	65.9	73.3	87.9	102.6	117.2	
Out	BTUh	87,150	101,675	116,200	130,725	145,250	174,300	203,350	232,400	
Output heating capacity, low fire*	kW	25.5	29.8	34.0	38.3	42.6	51.0	59.6	68.1	
Outrout hasting appeals, high five*	BTUh	124,500	145,250	166,000	186,750	207,500	249,000	290,500	332,000	
Output heating capacity, high fire*	kW	36.5	42.6	48.7	54.7	60.8	73.0	85.1	97.3	
*ETL ratings for elevations up to 2,000 fe	et.									

^{**}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.

Technical Data—Continued

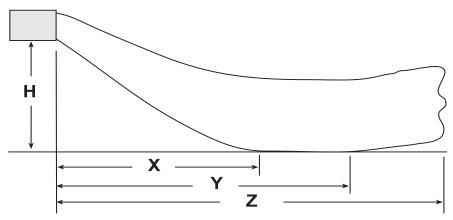
B	Unit of				Unit Size	(MBTUh)				
Parameter	Measure	150	175	200	225	250	300	350	400	
Gas connection**	i na a la		1/2		3/4	3/4				
Vent connection diameter***	inch		į.	5		5		6		
Control, 24V		1.0								
Full load amps, 115V	amp	3	.8	4.6	7.5	7.5		11.0		
Maximum overcurrent protection, 115V [†]			1	5		15		20		
Normal power consumption	watt	39	92	491	747	747		1086		
Discharge oir temperature rice	°F				6	0				
Discharge air temperature rise	°C				33	3.3				
Aircealtura	CFM	1921	2242	2562	2882	3202	3843	4483	5123	
Air volume	meter ³ /minute	54.4	63.5	72.5	81.6	90.7	108.8	126.9	145.1	
Disabassasia	foot ²		2.56			3.51	4.79			
Discharge air opening area	meter ²		0.24		0.33	0.33	0.45			
Outrot valacity	FPM	752	877	1003	820	911	802	936	1069	
Output velocity	meter/minute	229	267	306	250	278	244	285	326	
Open fan motor horsepower	HP		1/6		1/4	1/4		1/2		
Totally-enclosed fan motor horsepower	ПР		1/4		1/4	1/4		1/2		
Fan motor speed	RPM				10	50				
Fan diameter	inch		18		20	20		24		
Sound level @ 15 feet	dBa	51	52	53	56	56	59	61	62	
**Size shown is for natural gas or propan	e gas connection to	a single-	stage gas	valve—no	t supply lin	e size.				
***Smaller and/or larger vent and combu	stion air pipe diame	ters may b	oe permiss	sible.						
†MOCP = 2.25 × (largest motor FLA) + sr	nallest motor FLA.	Answer is	rounded to	the next	lower stan	dard circui	it breaker	size.		

Certification

These unit heaters are listed by Intertek for use in industrial and commercial installations in the United States and Canada. In addition, unit sizes 30, 45, 60, 75, 100, and 125 are listed in the United States and Canada as utility heaters for use in non-living spaces that are attached to, adjacent to, or part of a structure that contains space for family living quarters.

Heater Throw Distances with Standard Horizontal Louvers

The graphic shows throw patterns and the table lists throw distances for heaters suspended at varying mounting heights. The louver angles listed are relative to the top of the heater. The throw pattern changes with the addition of optional vertical louvers and/or downturn nozzles.



H = Distance from bottom of heater to the floor

X = Distance from heater to start of floor coverage

Y = Distance to end of floor coverage

Z = Distance at which air velocity drops below 50 feet (15.2 meters) per minute

H*		Unit Size (MBTUh)										
(Feet	Distance* or Angle	30	45	60	75	100	125	150				
(Meters))					Feet (Meters)							
	X	6 (1.8)	7 (2.1)	8 (2.4)	9 (2.7)	9 (2.7)	10 (3.0)					
5 (1.5)	Y	14 (4.3)	16 (4.9)	18 (5.5)	20 (6.1)	20 (6.1)	22 (6.7)	_				
3 (1.3)	Z	30 (9.1)	40 (12.2)	45 (13.8)	57 (17.4)	59 (18.0)	65 (19.9)	_				
	Downward louver angle	21°	20°	16°	14°	18°	14°					
	X	7 (2.1)	9 (2.7)	10 (3.0)	12 (3.7)	11 (3.4)	12 (3.7)	13 (4.0)				
8 (2.4)	Y	13 (4.0)	16 (4.9)	18 (5.5)	22 (6.7)	21 (6.4)	23 (7.0)	24 (7.3)				
0 (2.4)	Z	26 (7.9)	37 (11.3)	42 (12.8)	54 (16.5)	56 (17.1)	63 (19.2)	73 (22.3)				
	Downward louver angle	39°	34°	29°	25°	28°	24°	26°				
	X	6 (1.8)	9 (2.7)	10 (3.0)	12 (3.7)	12 (3.7)	13 (4.0)	14 (4.3)				
10 (3.0)	Υ	11 (3.4)	15 (4.6)	17 (5.2)	22 (6.7)	20 (6.1)	24 (7.3)	24 (7.3)				
10 (0.0)	Z	22 (6.7)	33 (10.0)	39 (11.9)	52 (15.8)	52 (15.8)	60 (18.3)	69 (21.0)				
	Downward louver angle	52°	43°	37°	32°	36°	30°	32°				
	X	1	8 (2.4)	10 (3.0)	12 (3.7)	11 (3.4)	14 (4.3)	14 (4.3)				
12 (3.7)	Y	_	12 (3.7)	16 (4.9)	21 (6.4)	19 (5.8)	23 (7.0)	24 (7.3)				
12 (0.7)	Z]	27 (8.2)	34 (10.4)	48 (14.6)	47 (14.3)	57 (17.4)	64 (19.5)				
	Downward louver angle		55°	46°	39°	44°	36°	39°				
	X]		9 (2.7)	12 (3.7)	11 (3.4)	14 (4.3)	14 (4.3)				
14 (4.3)	Y	_	_	14 (4.3)	19 (5.8)	17 (5.2)	22 (6.7)	22 (6.7)				
14 (4.0)	Z	1		29 (8.8)	44 (13.4)	42 (12.8)	53 (16.1)	59 (18.0)				
	Downward louver angle			56°	46°	51°	43°	45°				
	X]			11 (3.4)	10 (3.0)	13 (4.0)	13 (4.0)				
16 (4.9)	Y]	_		17 (5.2)	14 (4.3)	20 (6.1)	20 (6.1)				
10 (4.9)	Z	_			38 (11.6)	34 (10.4)	47 (14.3)	53 (16.2)				
	Downward louver angle		1	50°	51°							
	X	1					11 (3.4)	11 (3.4)				
18 (5.5)	Y]		17 (5.2)	17 (5.2)							
10 (0.0)	l z			40 (12.2)	44 (13.4)							
i i		-					<u> </u>	· · · · · · · · · · · · · · · · · · ·				
	Downward louver angle	1					57°	58°				
H*					nit Size (MBTL		57°	58°				
(Feet	Downward louver angle Distance* or Angle	175	200	225	250	300	<u> </u>	`				
	Distance* or Angle			225	250 Feet (Meters)	300	57°	58°				
(Feet	Distance* or Angle	15 (4.6)	16 (4.9)	225 14 (4.3)	250 Feet (Meters) 16 (4.9)	300 15 (4.6)	57° 350 17 (5.2)	58° 400 18 (5.5)				
(Feet	Distance* or Angle X Y	15 (4.6) 28 (8.5)	16 (4.9) 30 (9.1)	225 14 (4.3) 27 (8.2)	250 Feet (Meters) 16 (4.9) 29 (8.8)	300 15 (4.6) 28 (8.5)	57° 350 17 (5.2) 31 (9.4)	58° 400 18 (5.5) 34 (11.3)				
(Feet (Meters))	Distance* or Angle X Y Z	15 (4.6) 28 (8.5) 90 (27.4)	16 (4.9) 30 (9.1) 93 (28.0)	225 14 (4.3) 27 (8.2) 86 (26.2)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3	300 15 (4.6) 28 (8.5) 94 (28.7)	57° 350 17 (5.2) 31 (9.4) 105 (32.0)	58° 400 18 (5.5) 34 (11.3) 113 (34.4)				
(Feet (Meters))	Distance* or Angle X Y Z Downward louver angle	15 (4.6) 28 (8.5) 90 (27.4) 22°	16 (4.9) 30 (9.1) 93 (28.0) 20°	225 14 (4.3) 27 (8.2) 86 (26.2) 24°	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21°	300 15 (4.6) 28 (8.5) 94 (28.7) 24°	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20°	18 (5.5) 34 (11.3) 113 (34.4) 17°				
(Feet (Meters))	Distance* or Angle X Y Z Downward louver angle X	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5)	18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1)				
(Feet (Meters))	Distance* or Angle X Y Z Downward louver angle X Y	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7)				
(Feet (Meters)) 8 (2.4)	Distance* or Angle X Y Z Downward louver angle X Y Z	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4	300 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5)				
(Feet (Meters)) 8 (2.4)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27°	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25°	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30°	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26°	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29°	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25°	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21°				
(Feet (Meters)) 8 (2.4)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X X X X X X X X X X X X X X X X X X X	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4)				
(Feet (Meters)) 8 (2.4)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0)				
(Feet (Meters)) 8 (2.4) 10 (3.0)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9)				
(Feet (Meters)) 8 (2.4) 10 (3.0)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32°	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30°	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35°	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31°	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34°	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30°	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25°				
(Feet (Meters)) 8 (2.4) 10 (3.0)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0)				
(Feet (Meters)) 8 (2.4) 10 (3.0)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7)				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z T Z Downward louver angle X Y Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0)				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37°	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34°	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41°	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36°	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40°	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34°	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29°				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y X Y Z Downward louver angle X	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37° 18 (5.5)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34° 19 (5.8)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41° 16 (4.9)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36° 19 (5.8)	300 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40° 17 (5.2)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34° 21 (6.4)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29° 23 (7.0)				
(Feet (Meters)) 8 (2.4) 10 (3.0)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Y Z Downward louver angle X Y Y	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37° 18 (5.5) 27 (8.2)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34° 19 (5.8) 29 (8.8)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41° 16 (4.9) 24 (7.3)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36° 19 (5.8) 28 (8.5)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40° 17 (5.2) 25 (7.6)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34° 21 (6.4) 31 (9.4)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29° 23 (7.0) 35 (10.7)				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Z Downward louver angle X Y Z Z Downward louver angle X	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37° 18 (5.5) 27 (8.2) 74 (22.6)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34° 19 (5.8) 29 (8.8) 79 (24.1)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41° 16 (4.9) 24 (7.3) 67 (20.4)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36° 19 (5.8) 28 (8.5) 78 23.8	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40° 17 (5.2) 25 (7.6) 74 (22.6)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34° 21 (6.4) 31 (9.4) 90 (27.4)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29° 23 (7.0) 35 (10.7) 101 (30.8)				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Downward louver angle X Y Z Downward louver angle	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37° 18 (5.5) 27 (8.2) 74 (22.6) 42°	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34° 19 (5.8) 29 (8.8) 79 (24.1) 39°	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41° 16 (4.9) 24 (7.3) 67 (20.4) 47°	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36° 19 (5.8) 28 (8.5) 78 23.8 41°	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40° 17 (5.2) 25 (7.6) 74 (22.6) 45°	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34° 21 (6.4) 31 (9.4) 90 (27.4) 38°	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29° 23 (7.0) 35 (10.7) 101 (30.8) 33°				
(Feet (Meters)) 8 (2.4) 10 (3.0) 12 (3.7)	Distance* or Angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X Y Z Downward louver angle X X Y Z Downward louver angle X X Y Z Downward louver angle X X Y	15 (4.6) 28 (8.5) 90 (27.4) 22° 17 (5.2) 29 (8.8) 87 (26.6) 27° 18 (5.5) 29 (8.8) 84 (25.6) 32° 18 (5.5) 28 (8.5) 79 (24.1) 37° 18 (5.5) 27 (8.2) 74 (22.6) 42° 17 (5.2)	16 (4.9) 30 (9.1) 93 (28.0) 20° 17 (5.2) 31 (9.4) 91 (27.7) 25° 18 (5.5) 31 (9.4) 88 (26.8) 30° 19 (5.8) 30 (9.1) 84 (25.6) 34° 19 (5.8) 29 (8.8) 79 (24.1) 39° 19 (5.8)	225 14 (4.3) 27 (8.2) 86 (26.2) 24° 15 (4.6) 27 (8.2) 82 (25.0) 30° 16 (4.9) 27 (8.2) 78 (23.8) 35° 16 (4.9) 26 (7.9) 73 (22.3) 41° 16 (4.9) 24 (7.3) 67 (20.4) 47° 14 (4.3)	250 Feet (Meters) 16 (4.9) 29 (8.8) 93 28.3 21° 17 (5.2) 30 (9.1) 90 27.4 26° 18 (5.5) 30 (9.1) 87 26.5 31° 18 (5.5) 30 (9.1) 83 25.3 36° 19 (5.8) 28 (8.5) 78 23.8 41° 18 (5.5)	300 15 (4.6) 28 (8.5) 94 (28.7) 24° 16 (4.9) 28 (8.5) 89 (27.1) 29° 17 (5.2) 28 (8.5) 85 (25.9) 34° 17 (5.2) 27 (8.2) 80 (24.4) 40° 17 (5.2) 25 (7.6) 74 (22.6) 45° 16 (4.9)	57° 350 17 (5.2) 31 (9.4) 105 (32.0) 20° 18 (5.5) 32 (9.8) 103 (31.4) 25° 19 (5.8) 32 (9.8) 98 (29.9) 30° 20 (6.1) 32 (9.8) 95 (29.0) 34° 21 (6.4) 31 (9.4) 90 (27.4) 38° 20 (6.1)	58° 400 18 (5.5) 34 (11.3) 113 (34.4) 17° 20 (6.1) 35 (10.7) 110 (33.5) 21° 21 (6.4) 36 (11.0) 108 (32.9) 25° 23 (7.0) 35 (10.7) 105 (32.0) 29° 23 (7.0) 35 (10.7) 101 (30.8) 33° 23 (7.0)				
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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.

Clearances

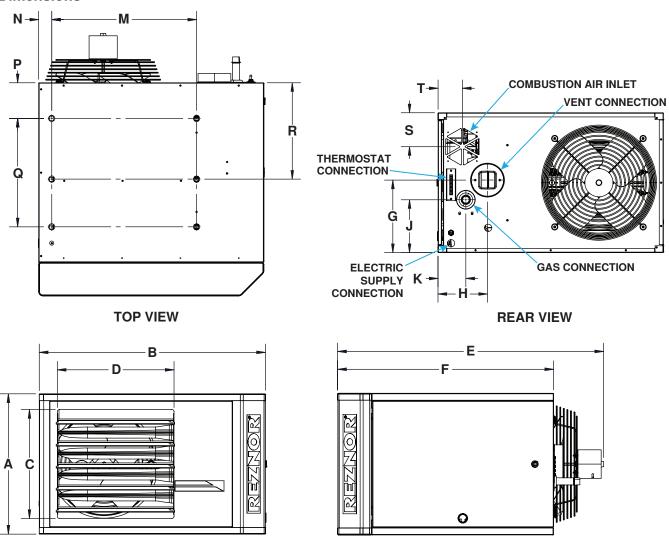
Units must be located so that clearances are provided for with regards to combustion air space, inspection, and service and for proper spacing from combustible construction. Clearance to combustibles is defined as the minimum distance from the heater to a surface or object for which it is necessary to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

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

Weights

	Unit Size (MBTUh)												
Туре	30	45	60	75	100	125	150	175, 200	225	250	300	350	400
	Pounds (kg)												
Unit	57 (26)	62 (28)	71 (32)	76 (34)	101 (46)	106 (48)	178 (81)	193 (88)	211 (96)	223 (101)	277 (126)	303 (137)	316 (143)
Shipping	63 (29)	68 (31)	76 (34)	81 (37)	120 (54)	125 (57)	206 (93)	221 (100)	247 (112)	259 (117)	323 (147)	348 (158)	360 (163)

Dimensions



FRONT VIEW

SIDE VIEW

Dimension	Unit Size (MBTUh)										
(See Graphic	30, 45	60	75	100	125	150, 175, 200	225, 250	300, 350, 400			
Above)											
Α	13-3/4 (349)	16-3/4	(425)	24-3/4	(629)	20-1/8 (511)	26-1/8 (664)	34-1/8 (867)			
В			27 (686)			38-3/1	6 (970)	41 (1041)			
С	10 (254)	13 (330)	21 (533)	16 (406)	22 (559)	30 (762)			
D			13-13/16 (351)				23 (584)				
E	29-3/4 (756)	32-23/32 (831)	31-29/32 (810)	34-9/32 (871)	34-9/32 (871)	48-7/16	3 (1230)	48-29/32 (1243)			
F			25-9/16 (649)				40 (1016)				
G	6 (152)	8-11/1	8-11/16 (221) 15-5/16 (389)		6 (389)	9-5/8 (244)	13-1/16 (332)	17-1/16 (433)			
Н			5-15/16 (151)			8-5/16 (211) 8-1/2 (216)					
J	3-1/2 (89)	6 (1	52)	8-29/3	2 (226)	5-3/8 (137)	9 (229)	11-13/16 (300)			
K			3-11/32 (85)			6-1/2 (165) 7-5/16 (1					
M*			17-3/8 (441)			25-11/1	6 (652)	27-11/16 (703)			
N*			1-9/16 (40)				1-13/32 (36)				
P*			4-9/32 (109)				8-1/8 (206)				
Q*			13 (330)				22-3/16 (564)			
R**			11-9/16 (294)			16-3/8 (416)	15-5/8 (397)	16-1/4 (413)			
S	3-3/4 (95)	4-1/16	5 (103)	5-15/32	2 (139)	5-1/2 (140)	8-1/16 (205)	11-9/16 (294)			
Т			2-15/16 (75)			4-1/4 (108)	4-5/16 (110)	4-1/2 (114)			
*Heater suspen	sion points (3/	8-16 FEM).									
		r two-point susp	ension (3/8-16 F	EM).							

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.

			Natura	al Gas			Propane					
Pipe						Pipe Dia	ameter (Inc	hes)				
Length (Feet)	1/2	3/4	1	1-1/4	1-1/2	2	1/2	3/4	1	1-1/4	1-1/2	2
(1 551)						Cubic	Feet per H	our				
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

Vent Connections

Vent system methods vary depending on whether the installation is residential or commercial/industrial, 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.

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



