



REZNOR®

UNIT HEATER CATALOG

COMMERCIAL/INDUSTRIAL HEATERS
RESIDENTIAL GARAGE HEATERS

FUEL

Natural Gas

Propane

CAPACITIES

25 - 1,200 MBH

80% - 93% Thermal
Efficiency

380 - 16,750 CFM

AIR DELIVERY

Propeller Fan

Centrifugal Blower
(Ductable)



TIME TESTED. CONTRACTOR APPROVED.

REZNOR® IS YOUR GLOBAL LEADER IN HVAC TECHNOLOGY

BACKGROUND

Reznor was founded in 1888 to manufacture the “Reznor” reflector heater, which used a luminous flame gas burner developed by George Reznor. This technological breakthrough was an immediate success and hastened the expansion of gas heating in residential and commercial applications. Technological development and innovation have been the hallmarks of Reznor products through the years. As a result of this pioneering role in the heating, makeup air and ventilating equipment field, the products offered today are the most advanced in engineering design to satisfy a wide variety of applications.

SERVICES

Product service requirements are handled through contractors and/or distributors, with backup from local representatives and factory-based service team. Replacement parts inventories for both warranty and non-warranty requirements are maintained at service centers throughout the country and at the manufacturing facilities.

ABOUT NORTEK GLOBAL HVAC

For more than 100 years, Nortek Global HVAC has brought the latest innovations in heating, cooling and ventilation to homes, businesses and every place in between. Our vast portfolio of residential and light commercial brands offers efficient and dependable products that live up to their trusted reputation. We're always looking for the next advancement in HVAC because innovation is not only our legacy, it is our future.

In addition to Reznor product, Nortek Global HVAC and its subsidiaries build and sell HVAC systems under the Maytag®, Frigidaire®, Mammoth® and Gibson® brands, among others.



When its cold outside, Reznor® brings the **heat**.

OUR LATEST INNOVATION

For more than 100 years, we've brought our customers the latest innovations in unit heater technology. Reznor's complete line of unit heaters come with added serviceability and installation features, increased monitoring capabilities and an aesthetically appealing design.

Reznor unit heaters are built compact to save space in any given application, and each unit includes an external gas connection for easier installation, single burner combustion system and transformer for 24-volt controls for easy hookup to a thermostat. Units also have the option for integration of downturn nozzles and vertical louvers.

Our most recent innovation helps to minimize downtime by making it easier to identify when a unit needs attention. An external LED is fixed to the bottom of each unit that blinks if there is a problem that needs service. When servicing a unit, the quarter turn latch on the hinged service door can be easily opened with a screwdriver, and the door remains attached to the chassis to prevent door drops that can cause injury and damage. Once inside the unit, the 7-segment display board shows a fault code to make troubleshooting quick and easy.



Why choose Reznor®?

With more than 130 years of experience in gas heating and air conditioning, Reznor manufactures a wide range of industrial and commercial HVAC solutions. Founded in 1888 in Pennsylvania, Reznor is a global leader thanks to its innovative and economical solutions for heating, cooling, ventilation and air quality.

Contents

	Page		Page		Page
UEZ Unit Heater	5	LDAP Packaged Downflow Heater	21	LDAP Indoor Air Economizer	32
UDZ Unit Heater	9	Throw/Floor Coverage	25	Options and Accessories	33
UBZ Unit Heater	12	Sound Data	29	Model LDAP Discharge Air Options	34
UDX Unit Heater	15	Blower Charts	30	Separated Combustion Systems	35
UBX Unit Heater	18	Motor Full Load Amp Table	31	Blower Charts	36

UEZ UNIT HEATER

HIGH EFFICIENCY, SEPARATED COMBUSTION, LOW STATIC AXIAL FAN COMMERCIAL/ INDUSTRIAL UNIT HEATERS

91 – 93% THERMAL EFFICIENCY

Reznor® Model UEZ gas-fired unit heaters are available in 7 sizes ranging from 55,000 to 305,000 BTUH gas input. Model UEZ heaters are approved for installation in the United States and Canada by ETL.

The secondary heat exchanger has a 1/2" PVC pipe for attaching a coupling for ease of installation and cleaning of the required condensate drain. A 4" PVC cleanout cap that is drilled and tapped for a 1/2" NPT fitting is furnished with the heater for attaching the vent condensate drain.

Reznor model UEZ unit heaters offer a sleek design sure to complement any space. The UEZ features a two-tone black and white powder coated, scratch-resistant paint scheme with a single red louver. Each unit has clean rounded corners and edges with no visible screws or fasteners, and the bottom is embossed with the Reznor logo. Model UEZ unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.

STANDARD FEATURES AND BENEFITS

- Arranged for use with natural gas (propane conversion kit included with unit)
- 50-60°F temperature rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with 1/4 turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- Reznor logo embossed on bottom of unit
- T_{CORE}³® 409 stainless steel primary heat exchanger with extruded aluminum secondary heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- 115V, 1 phase, 60 Hz Supply voltage
- 115V open fan motor with internal overload protection
- Transformer for 24-volt controls
- Multi-try direct ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve
- Vibration/noise isolated fan motor
- Sealed control compartment houses all electrical components
- 48 frame, ball bearing, PSC venter motor
- 4-point Suspension
- Built-in disconnect switch (20A @ 115V Rating)
- External terminal strip for 24-volt wiring
- Sealed junction box for supply wiring
- External gas connection
- Fully gasketed door panel with safety door switch
- Full fan guard – engineered for safety

OPTIONAL FEATURES

- Primary/Secondary controls for zoning up to 6 units
- Totally enclosed fan motor (115v only)
- Horizontal or vertical combustion air/vent kit including concentric adapter^B
- Thermostat
- Thermostat guard with locking cover
- Vertical louvers
- Integrated 30° & 60° downturn nozzles
- Manual shutoff valves

NOTE: Model UEZ should not be used in applications where space temperature is set below 45°F.

^A U.S. Patent Numbers 6,889,686 & 8,113,269

^B Selection of either a horizontal or vertical combustion air/vent kit is required.

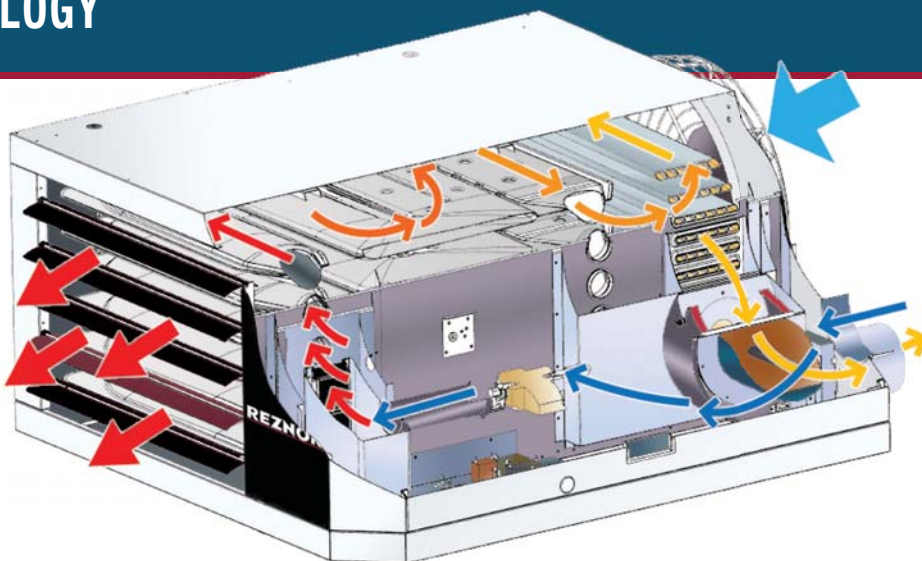
REZNOR®



UEZ UNIT HEATER TECHNOLOGY

HOW IT WORKS

Diagram shows the air flow patterns for Model UEZ. Thin arrows show air flow from combustion air intake, across the burner, through primary and secondary heat exchangers and out exhaust vent. Larger arrows show air flow across the heat exchanger to provide heat to the space.



UEZ TECHNICAL DATA

Size		055	085	110	130	180	260	310
Input Heating Capacity	BTUh	55,000	85,000	110,000	131,000	175,000	260,000	305,000
	kW	16.1	24.9	32.2	38.4	51.2	76.1	89.3
Thermal Efficiency (%)		93				91	92	91
Output Heating Capacity	BTUh*	51,150	79,050	102,300	121,830	159,250	239,200	277,550
	kW*	15.0	23.2	30.0	35.7	46.6	70.0	81.3
Gas Connection (Inches)	Natural**	1/2					3/4	
	Propane**	1/2					3/4	
Vent Connection Diameter (inches)		2			4			
Combustion Air Inlet Diameter (inches)		2			6			
Control, 24V (amps)		1.0						
Full-Load Amps, 115V (amps)		1.6	2.2	4.4	6.3		10.0	
Maximum Overcurrent Protection, 115V (amps)***		15.0					20.0	
Normal Power Consumption (watts)		180	240	403	657		1020	
Discharge Air Temperature Rise (°F)		50	55		50	60	50	60
Air Volume	cfm	967	1206	1793	2256	2458	4430	4283
	meters ³ /minute	27.4	34.2	50.8	63.9	69.6	125.4	121.3
Discharge Air Opening Area	feet ²	1.38	1.86	2.24	2.56		4.79	
	meters ²	0.13	0.17	0.21	0.2		0.5	
Outlet Velocity	fpm	701	659	800	883	962	924	894
	meters/minute	214	201	244	269	293	282	272
Fan Motor Size (horsepower)	Standard Open	1/20		1/6	1/4		1/2	
	Optional Enclosed	1/20		1/6	1/4		1/2	
Fan Motor Speed (rpm)		1050						
Fan Diameter (inches)		12	16	18			24	
Approximate Condensate Per Hour	gallons	1/2			1		2	
	liters	1.5			3.8		7.6	

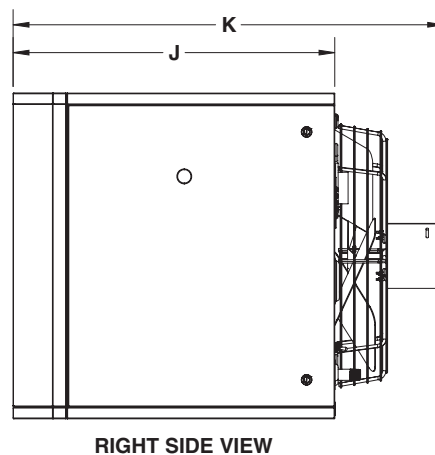
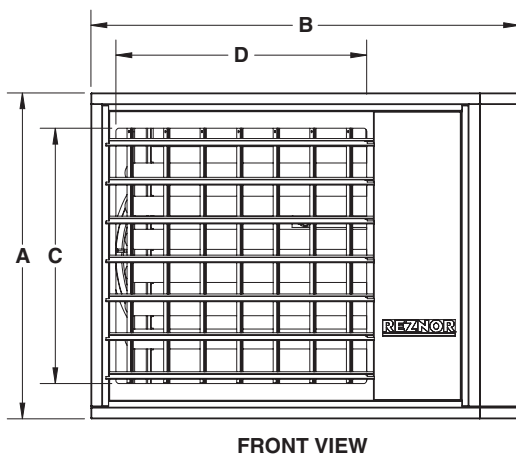
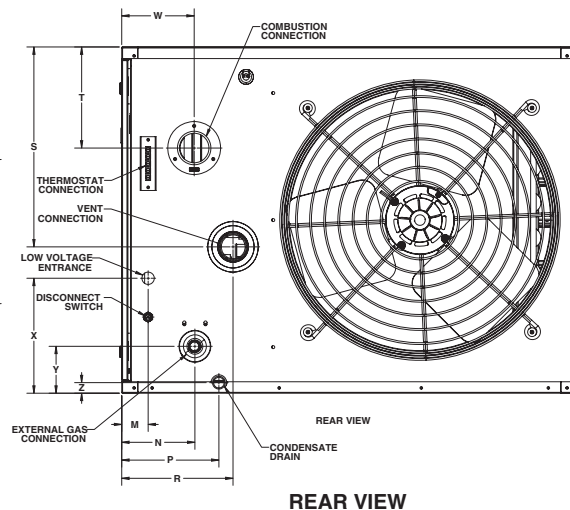
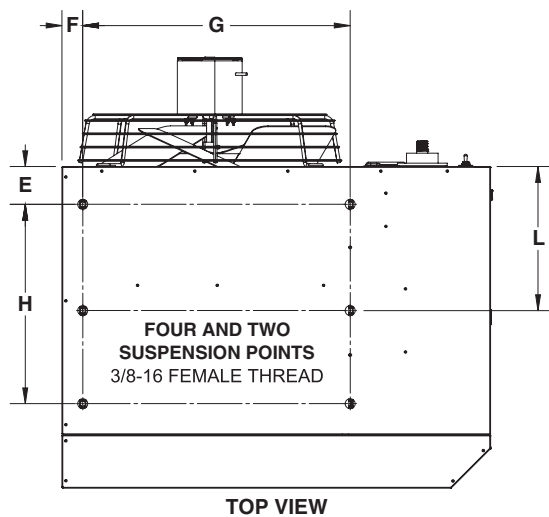
* CSA ratings for elevations up to 2,000 feet

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

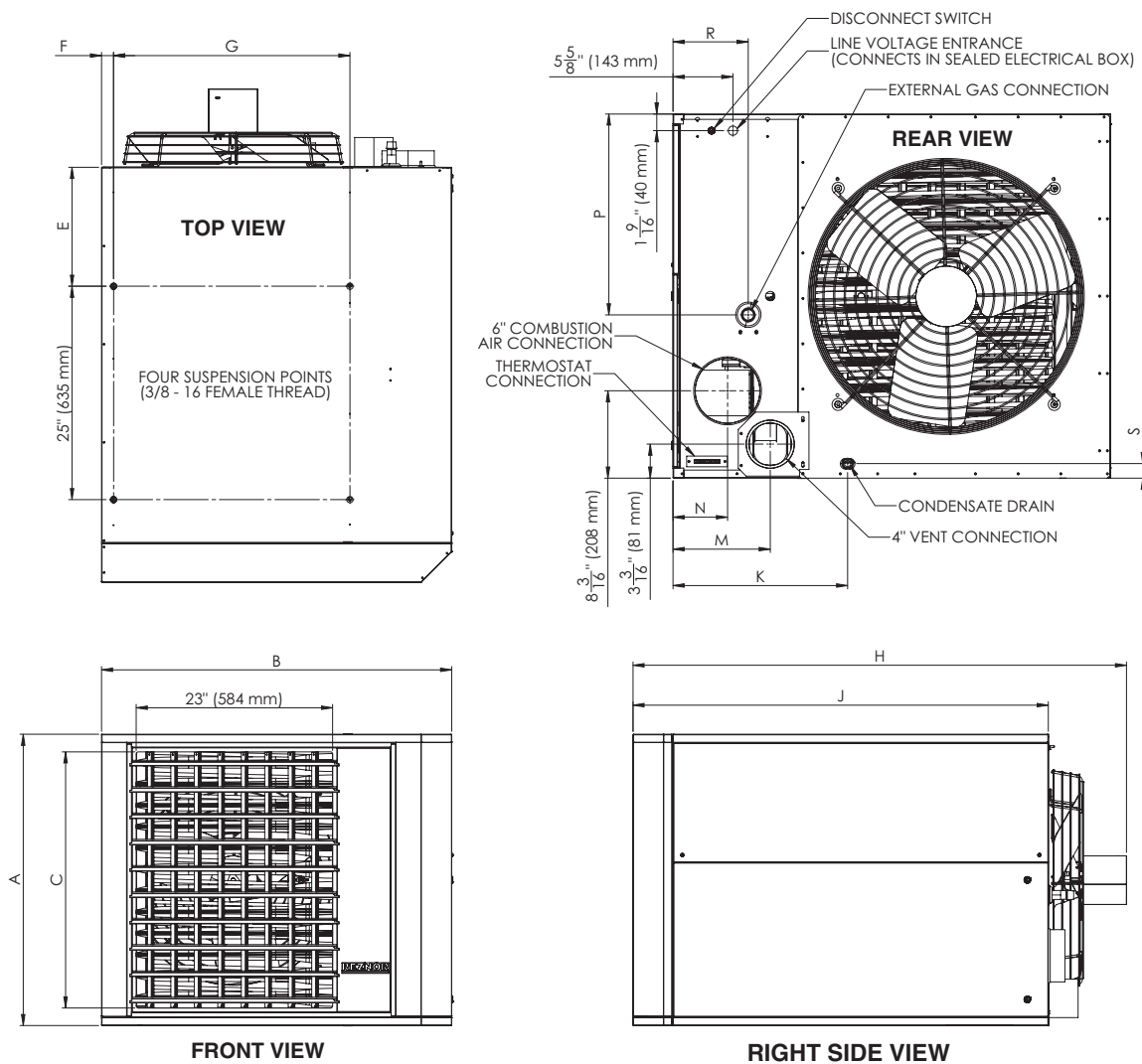
*** MOCP = 2.25 × (largest motor FLA) + smallest motor FLA . Answer is rounded to the next lower standard circuit breaker size

UEZ DIMENSIONS

Dimension*	Unit Size				
	055	085	110	130, 180	260, 310
	Inches (±1/8) (mm (±3))				
A	17-5/8 (448)	21 (533)	24-1/2 (622)	20-1/8 (511)	34-1/8 (867)
B	28-1/4 (718)	30-1/4 (768)	32-1/4 (819)	39-3/16 (995)	41 (1041)
C	12-1/2 (318)	16-7/8 (429)	19-1/4 (489)	16-1/16 (408)	30 (762)
D	15-7/8 (403)	17-7/8 (454)	18-7/8 (479)	—	
E	2-27/32 (72)			11-31/32 (304)	13-31/32 (355)
F	1-9/16 (40)			2-3/8 (60)	1-13/32 (36)
G	18-1/8 (460)	20-1/8 (511)		25-11/16 (652)	27-11/16 (703)
H	15 (381)			55-13/32 (1407)	58 (1473)
J	24-1/4 (616)			46-1/32 (1169)	48-21/32 (1236)
K	31 (787)	33 (838)		15-19/32 (396)	16-15/32 (418)
L	12 (305)		10-7/8 (276)	—	
M	2 (51)	1-7/8 (48)		8-5/16 (211)	9-3/32 (231)
N	3-3/16 (81)		5-3/16 (132)	4-5/16 (110)	5-3/32 (129)
P	4-7/8 (124)		6-7/8 (175)	5-1/16 (129)	18-13/16 (478)
R	6 (152)		7-7/8 (200)	6-9/32 (160)	7 1/32 (179)
S	7-1/4 (184)	10-11/16 (271)	14-1/8 (359)	1-3/4 (45)	1-3/8 (35)
T	3-1/4 (83)	3-11/16 (94)	7-7/8 (200)	—	
W	3-3/16 (81)		5-1/8 (130)	—	
X	6-1/8 (156)	10-11/16 (271)	8-1/8 (206)	—	
Y	2-1/4 (57)		3-3/8 (86)	—	
Z	3/4 (19)			—	



UEZ DIMENSIONS continued



Unit Sizes 130 – 310

CLEARANCES

Clearances required from combustible material unless otherwise noted.

Top		Flue Connector		Access Panel ^A		Non-Access Side		Bottom ^B		Rear ^C	
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
4	102	6	152	18	457	2	51	1	25	18	457

^A Access Panel clearance required for access to controls for service.
^B Bottom clearance to combustible. Heater should be suspended a minimum of 5 feet (1.5M) above the floor.
^C Rear clearance required for airflow. Clearance should be measured from the fan motor.

UDZ UNIT HEATER

SEPARATED COMBUSTION, LOW STATIC AXIAL FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY



Reznor® Model UDZ gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UDZ heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from either 2 or 4 suspension points. Or, an optional hanger kit for sizes 30-125 allows for ceiling mounting. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a “G” terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UDZ unit heaters offer a sleek design sure to complement any space. The UDZ features a two-tone black and white powder coated, scratch-resistant paint scheme with a single red louver. Each unit has clean rounded corners and edges with no visible screws or fasteners, and the bottom is embossed with the Reznor logo. Model UDZ unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.

STANDARD FEATURES AND BENEFITS

- Sizes 30-400 MBTUH certified for commercial/industrial heating application
- Sizes 30-125 MBTUH carry an additional approval for use in residential garage/workshop heating applications
- 50-60°F Rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- Reznor logo embossed on bottom of unit
- TCORE²® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- Built-in disconnect switch (20A @ 115V Rating)
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open fan motor with internal overload protection
- Transformer for 24-volt controls
- Sealed control compartment houses all electrical components
- Multi-try direct spark ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation)
- Vibration/noise isolated fan and venter motors – designed for low noise operation
- 2-pt and 4-pt Suspension – standard on all sizes
- External terminal strip for 24-volt wiring
- External gas pipe connection
- Sealed junction box for supply wiring
- Full fan guard
- Disconnect switch

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed fan motor (sizes 30-400, 115v only)
- Horizontal or vertical combustion air/vent kit including concentric adapter
- Thermostat
- Thermostat guard with locking cover
- Integrated vertical louvers
- Integrated 30° & 60° downturn nozzles
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Ceiling suspension kit - Sizes 30-125
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UDZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

UDZ TECHNICAL DATA

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	(8.8)	(13.2)	(17.6)	(22.0)	(30.8)	(35.2)	(44.0)
Thermal Efficiency (%)		82	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	24,600	37,350	49,800	62,250	87,150	99,600	124,500
	kw/h	(7.2)	(10.9)	(14.6)	(18.2)	(25.5)	(29.2)	(36.5)
Gas Connection (inches) ^E	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^F		4	4	4	4	4	4	5
Combustion Air Inlet (inches diameter) ^F		4	4	4	4	4	4	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		1.9	2.4	2.4	3.7	4.3	5.6	3.8
Maximum Over Current Protection (115V) ^G		15	15	15	15	15	15	15
Normal Power Consumption (watts)		109	155	155	228	292	370	392
Discharge Air Temperature Rise (°F)		50	55	60	60	60	60	60
Air Volume	CFM	456	629	769	961	1345	1537	1921
	M ³ /minute	(12.9)	(17.8)	(21.8)	(27.2)	(38.1)	(43.5)	(54.4)
Discharge Air Opening Area	ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	(0.09)	(0.09)	(0.12)	(0.12)	(0.19)	(0.19)	(0.24)
Outlet Velocity	FPM	475	656	616	770	668	763	752
	M/minute	(145)	(200)	(188)	(235)	(204)	(233)	(229)
Fan Motor HP ^H	Open	0.02	0.03	0.03	0.06	1/30	1/20	1/6
	Enclosed	0.06	0.06	0.06	0.06	1/4	1/4	1/4
Fan Motor RPM		1550	1550	1550	1550	1050	1050	1050
Fan Diameter (inches)		10	10	12	12	16	16	18
Sound Level	dba @ 15 ft	40	40	40	49	54	55	51
Approximate Net Weight	lbs	58	63	71	77	102	107	179
	kg	26	29	32	35	46	49	81
Approximate Ship Weight	lbs	66	71	79	85	125	130	212
	kg	30	32	36	39	57	59	96

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	(51.3)	(58.6)	(65.9)	(73.3)	(87.9)	(102.6)	(117.2)
Thermal Efficiency (%)		83	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	kw/h	(42.6)	(48.7)	(54.7)	(60.8)	(73.0)	(85.1)	(97.3)
Gas Connection (inches) ^E	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^F		5	5	5	5	6	6	6
Combustion Air Inlet (inches diameter) ^F		6	6	6	6	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) ^G		15	15	15	15	20	20	20
Normal Power Consumption (watts)		392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		60	60	60	60	60	60	60
Air Volume	CFM	2242	2562	2882	3202	3843	4483	5123
	M ³ /minute	(63.5)	(72.5)	(81.6)	(90.7)	(108.8)	(126.9)	(145.1)
Discharge Air Opening Area	ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	(0.24)	(0.24)	(0.33)	(0.33)	(0.45)	(0.45)	(0.45)
Outlet Velocity	FPM	877	1003	820	911	802	936	1069
	M/minute	(267)	(306)	(250)	(278)	(244)	(285)	(326)
Fan Motor HP ^H	Open	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor RPM		1050	1050	1050	1050	1050	1050	1050
Fan Diameter (inches)		18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	52	53	56	56	59	61	62
Approximate Net Weight	lbs	194	194	212	224	278	304	317
	kg	88	88	96	102	126	138	144
Approximate Ship Weight	lbs	227	227	255	267	331	357	370
	kg	103	103	116	121	150	162	168

^C ETL rating for altitudes to 2000 ft.

^E Size shown is for gas connection to a single stage gas valve, not supply line size.

^F Smaller and/or larger vent and combustion air pipe diameters may be allowed; refer to the Venting Installation Manual for Separated Combustion Units, Form I-V-SC. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

^G MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

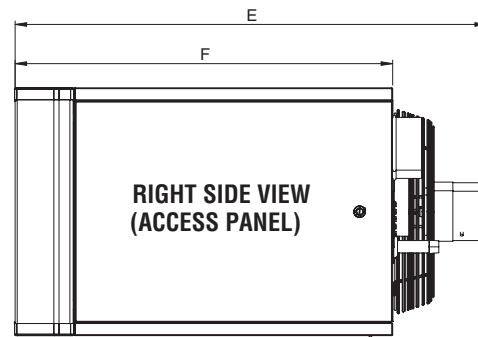
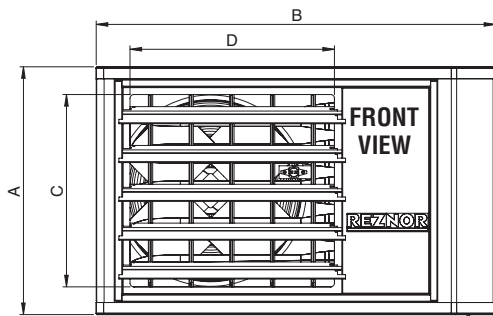
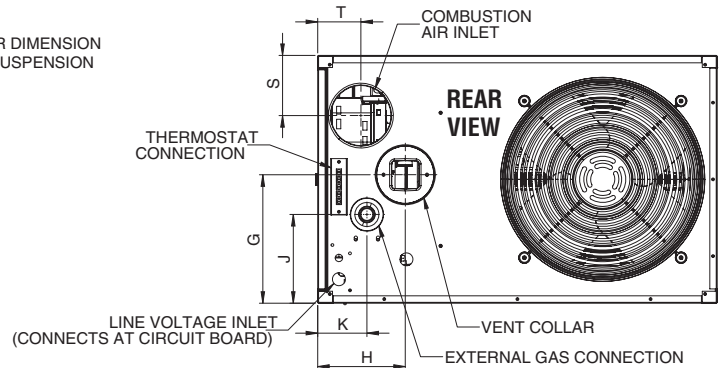
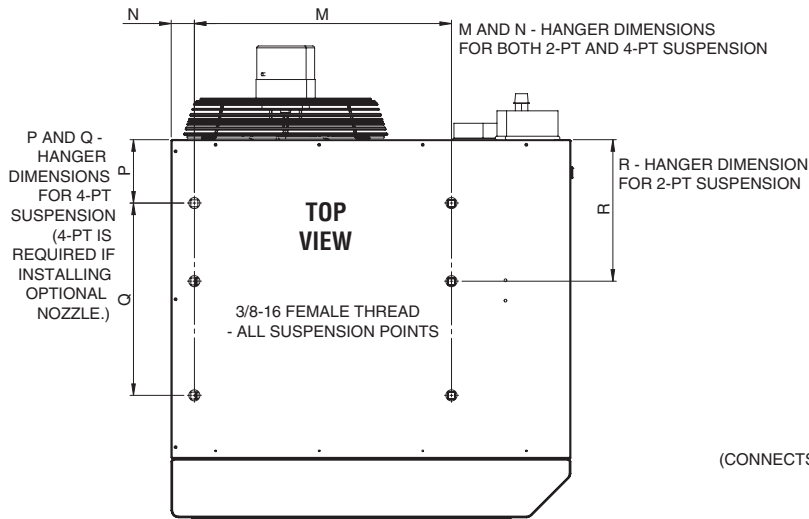
^H All other information in this table is based on a heater equipped with a standard 115 volt open fan motor.

REZNOR®

UDZ DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T			
	INCHES (±1/16) (mm (± 2))																			
030, 045	13 3/4 (349)	27 (686)	10 (254)	13 13/16 (351)	29 3/4 (756)	25 9/16 (649)	6 (152)	5 15/16 (151)	3 1/2 (89)	3 11/32 (85)	17 3/8 (441)	1 9/16 (40)	4 9/32 (109)	13 (330)	9 9/16 (243)	3 3/4 (95)	2 15/16 (75)			
060	16 3/4 (425)		13 (330)		32 23/32 (831)		8 11/16 (221)		6 (152)											
075					31 29/32 (810)											8 29/32 (226)				
100					24 3/4 (629)													21 (533)	34 9/32 (871)	15 5/16 (389)
125																				
150,175,200	20 1/8 (511)	38 3/16 (970)	16 (406)	23 (584)	48 7/16 (1230)	40 (1016)	9 5/8 (244)	8 5/16 (211)	5 3/8 (137)	6 1/2 (165)	25 11/16 (652)	1 13/32 (36)	8 1/8 (206)	22 3/16 (564)	16 3/8 (416)		5 1/2 (140)	4 1/4 (108)		
225,250	26 1/8 (664)		22 (559)		13 1/16 (332)		9 (229)		8 1/16 (205)						4 5/16 (110)					
300,350,400	34 1/8 (867)		41 (1041)		30 (762)		48 29/32 (1243)		17 1/16 (433)						8 1/2 (216)	11 13/16 (300)	7 5/16 (186)	27 11/16 (703)	16 1/4 (413)	11 9/16 (294)



CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^J		Non-Access Side		Bottom ^K		Rear ^L	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

^J Access Panel clearance is required for service clearance to controls

^K Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.

^L Rear clearance is required for air movement. Rear clearance should be measured from the fan motor.

UBZ UNIT HEATER

SEPARATED COMBUSTION, HIGH STATIC BLOWER FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY

Reznor® Model UBZ gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UBZ heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from 4 suspension points. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UBZ unit heaters offer a sleek design sure to complement any space. The UBZ features a two-tone black and white powder coated, scratch-resistant paint scheme with a single red louver. Each unit has clean rounded corners and edges with no visible screws or fasteners, and the bottom is embossed with the Reznor logo. Model UBZ unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.



STANDARD FEATURES AND BENEFITS

- Certified for commercial/industrial heating application
- 45-75°F Rise range - Sizes 30-350
- 50-80°F Rise range - Size 400
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- Reznor logo embossed on bottom of unit
- TCORE²® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- Built-in disconnect switch - Sizes 30-125, 20A @ 115V rating; Sizes 150-400 30A @ 115V rating
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open drip proof blower motor with internal overload protection - Sizes 30-125
- 115 Volt open drip proof blower motor with internal overloads and definite purpose motor contactor - Sizes 150-400
- Direct drive blower with multispeed taps - Sizes 30-125
- Adjustable belt drive blower - Sizes 150-400
- Transformer for 24-volt controls
- Sealed control compartment houses all electrical components
- Multi-try direct spark ignition with timed lockout
- Blower relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation)
- Vibration/noise isolated fan and venter motors ~ designed for low noise operation
- 4-pt Suspension ~ standard on all sizes
- External terminal strip for 24-volt wiring

- External gas pipe connection
- Sealed junction box for supply wiring
- Full fan guard
- Disconnect switch

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed blower motor (sizes 150-400)
- Horizontal or vertical combustion air/vent kit including concentric adapter
- Thermostat / guard with locking cover
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves
- Integrated 30° & 60° downturn nozzles
- Integrated vertical louvers

For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UBZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

UBZ TECHNICAL DATA

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	8.8	13.2	17.6	22.0	30.8	35.2	43.9
Thermal Efficiency (%)		82	82	82	82	83	83	83
Output Heating Capacity ^D	BTUH	24,600	36,900	49,200	61,500	87,150	99,600	124,500
	kw/h	7.2	10.8	14.4	18.0	25.6	29.2	36.4
Gas Connection (inches) ^E	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^F		4	4	4	4	4	4	5
Combustion Air Inlet (inches diameter) ^F		4	4	4	4	4	4	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
FLA (with standard HP 115V motor)		3.7	3.7	7.1	7.3	13.2	13.2	5.9
Maximum OCP (115V) ^G		15	15	15	15	30	30	15
Minimum Discharge Air Temperature Rise	°F	45	45	45	45	45	45	45
Maximum Discharge Air Temperature Rise	°F	75	75	75	75	75	75	75
Maximum Air Volume	CFM	506	759	1012	1265	1793	2049	2562
	M ³ /minute	14.3	21.5	28.7	35.8	50.8	58.0	72.5
Minimum Air Volume	CFM	304	456	607	759	1076	1230	1537
	M ³ /minute	8.6	12.9	17.2	21.5	30.5	34.8	43.5
Discharge Air Opening Area	Ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	0.09	0.09	0.12	0.12	0.19	0.19	0.24
Maximum Output Velocity	FPM	527	791	810	1012	892	1020	1001
	M ³ /minute	159	239	239	299	267	305	305
Minimum Output Velocity	FPM	316	475	486	607	535	612	600
	M ³ /minute	96	143	143	179	160	183	183
Standard Blower Motor HP		1/6	1/6	1/3	1/3	3/4	3/4	1/4
Blower Size	inches	9 X 6	9 X 6	9 X 6	9 X 6	10 X 10	10 X 10	12 x 12
Approximate Net Weight	lbs	85	90	103	109	169	172	301
	kg	39	41	47	49	77	78	137
Approximate Ship Weight	lbs	95	100	115	121	183	188	323
	kg	43	45	52	55	83	85	147

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Thermal Efficiency (%)		83	83	83	83	83	83	82
Output Heating Capacity ^D	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	328,000
	kw/h	42.5	48.6	54.7	60.8	72.9	85.1	96.0
Gas Connection (inches) ^E	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^F		5	5	5	5	6	6	6
Combustion Air Inlet (inches diameter) ^F		6	6	6	6	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
FLA (with standard HP 115V motor)		6.3	10.5	12.7	12.7	17.7	27.3	27.3
Maximum OCP (115V) ^G		15	25	30	30	40	60	60
Minimum Discharge Air Temperature Rise	°F	45	45	45	45	45	45	50
Maximum Discharge Air Temperature Rise	°F	75	75	75	75	75	75	80
Maximum Air Volume	CFM	2989	3416	3843	4270	5123	5977	6185
	M ³ /minute	84.6	96.7	108.8	120.9	145.1	169.2	175.1
Minimum Air Volume	CFM	1793	2049	2306	2562	3074	3586	4100
	M ³ /minute	50.8	58.0	65.3	72.5	87.0	101.5	116.1
Discharge Air Opening Area	Ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Maximum Output Velocity	FPM	1168	1334	1095	1217	1070	1248	1291
	M ³ /minute	356	407	334	371	326	380	393
Minimum Output Velocity	FPM	700	800	657	730	642	749	856
	M ³ /minute	213	244	200	223	196	228	261
Standard Blower Motor HP		1/2	1/2	3/4	3/4	1-1/2	2	2
Blower Size	inches	12 x 12	12 x 12	15 x 11	15 x 11	15 x 15	15 x 15	15 x 15
Approximate Net Weight	lbs	321	321	386	401	459	495	507
	kg	146	146	175	182	208	225	230
Approximate Ship Weight	lbs	343	343	410	425	485	521	537
	kg	156	156	186	193	220	236	244

^D ETL rating for altitudes to 2000 ft.

^E Size shown is for gas connection to a single stage gas valve, not supply line size.

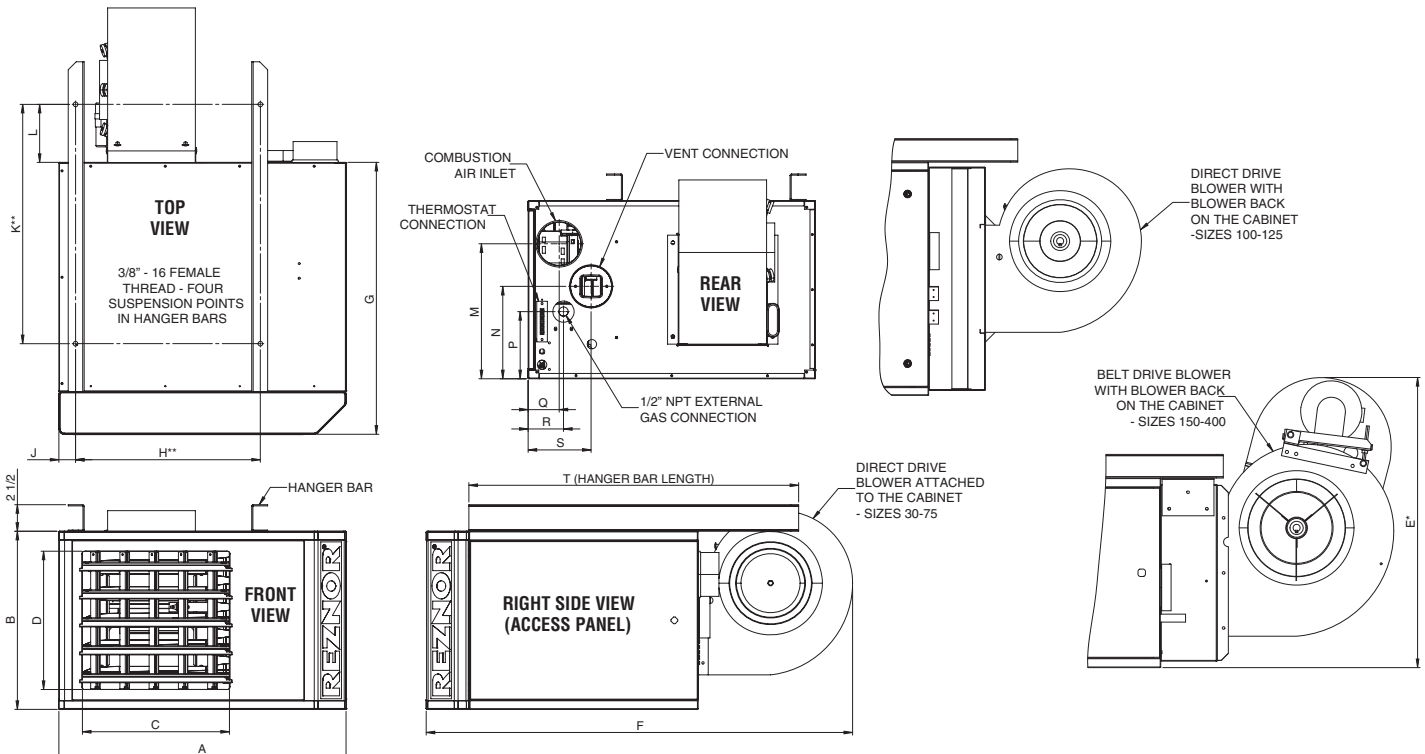
^F Smaller and/or larger vent and combustion air pipe diameters may be allowed; refer to the Venting Installation Manual for Separated Combustion Units, Form I-UD-V-SC. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

^G MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

UBZ DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T											
	INCHES (±1/16) (mm (± 2))																												
030, 045	27 (686)	13 3/4 (349)	13 13/16 (351)	10 (254)	17 3/16 (437)	40 3/32 (1018)	25 17/32 (649)	17 3/8 (441)	1 9/16 (40)	22 1/2 (572)	6 15/32 (164)	10 (254)	6 (152)	3 1/2 (89)	2 21/32 (74)	5 31/32 (152)	3 5/16 (84)	31 (787)											
060		16 3/4 (425)		13 (330)	18 11/16 (475)						5 15/32 (139)	12 11/16 (322)	8 11/16 (221)	6 5/16 (160)		3 5/16 (84)	5 29/32 (150)												
075		24 3/4 (629)		21 (533)	24 1/16 (611)						8 15/32 (215)	19 5/16 (491)	15 5/16 (389)	9 9/16 (243)															
100											7 15/32 (190)																		
125												48 1/8 (1222)																	
150,175	38 3/16 (970)	20 1/8 (511)	23 (584)	16 (406)	30 31/32 (786)	64 3/4 (1645)	40 (1016)	25 11/16 (653)	1 13/32 (36)	24 1/2 (622)	3 29/32 (99)	13 1/2 (343)	8 1/2 (216)	5 7/16 (138)	4 3/16 (106)	6 1/2 (165)	8 3/16 (208)	42 (1067)											
200		26 1/8 (664)		22 (559)	37 1/32 (941)	68 1/8 (1730)					5 29/32 (150)	18 1/16 (459)	13 1/16 (332)	9 (229)															
225,250		34 1/8 (867)		30 (762)	41 7/32 (1047)						1 13/32 (36)	22 9/16 (573)	17 1/16 (433)	11 13/16 (300)															
300,350,400	41 (1041)							27 11/16 (703)		23 1/2 (597)	1 13/32 (36)	22 9/16 (573)	17 1/16 (433)	11 13/16 (300)	4 1/2 (114)	7 5/16 (186)	8 1/2 (216)												

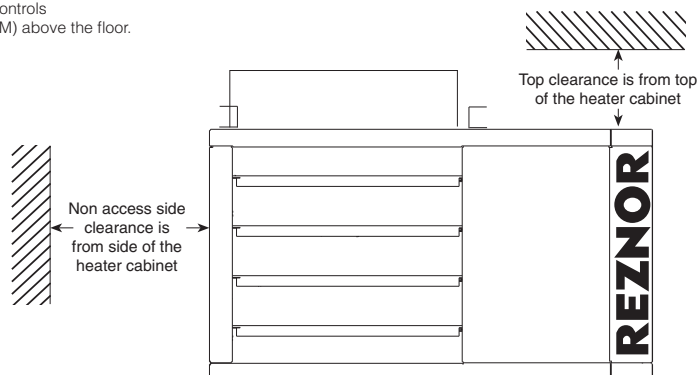


NOTES: * Sizes 150-400 - Dimension E varies with motor selection and belt adjustment.
** Dimensions H and K are the heater suspension points.

CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^H		Non-Access Side		Bottom ^J		Rear ^K	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	6	152	6	152	18	457	24	610	1	25	18	457
150-400	14	356	6	152	18	457	24	610	1	25	18	457

^H Access Panel clearance is required for service clearance to controls
^J Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.
^K Rear clearance is measured from the back of the blower.



REZNOR

UDX UNIT HEATER

POWER VENTED, LOW STATIC AXIAL FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY

Reznor® Model UDX gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UDX heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from either 2 or 4 suspension points. Or, an optional hanger kit for Sizes 30-125 allows for ceiling mounting. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UDX unit heaters feature a two-tone black and white powder coated, scratch-resistant paint scheme. Each unit has clean rounded corners and edges with no visible screws or fasteners. Model UDX unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.

STANDARD FEATURES AND BENEFITS

- Sizes 30-400 MBTUH certified for commercial/industrial heating application
- Sizes 30-125 MBTUH carry an additional approval for use in residential garage/workshop heating applications
- 50-60°F Rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- TCORE²® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open fan motor with internal overload protection
- Transformer for 24-volt controls
- Multi-try direct spark ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation^B)
- Vibration/noise isolated fan and venter motors – designed for low noise operation
- 2-pt and 4-pt Suspension – standard on all sizes
- External terminal strip for 24-volt wiring
- External gas pipe connection
- Full fan guard

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed fan motor (sizes 30-400, 115v only)
- Vent cap
- Thermostat
- Integrated vertical louvers
- Integrated 30° & 60° downturn nozzles
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Ceiling suspension kit - Sizes 30-125
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UDZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

^B Pressure switch change required for installations above 6,000 ft.



UDX TECHNICAL DATA

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	8.8	13.2	17.6	22.0	30.8	35.2	43.9
Thermal Efficiency (%)		82	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	24,600	37,350	49,800	62,250	87,150	99,600	124,500
	kw/h	7.2	11.0	14.6	18.3	25.6	29.2	36.4
Gas Connection (inches) ^D	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^E		4	4	4	4	4	4	5
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		1.9	2.4	2.4	3.7	4.3	5.6	3.8
Maximum Over Current Protection (115V) ^F		15	15	15	15	15	15	15
Normal Power Consumption (watts)		109	155	155	217	276	354	392
Discharge Air Temperature Rise (°F)		50	55	60	60	60	60	60
Air Volume	CFM	456	629	769	961	1345	1537	1921
	M ³ /minute	12.9	17.8	21.8	27.5	36.7	45.9	54.4
Discharge Air Opening Area	ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	0.09	0.09	0.12	0.12	0.19	0.19	0.24
Outlet Velocity	FPM	475	656	616	770	668	763	752
	M/minute	145	200	188	238	196	245	229
Fan Motor HP ^G	Open	0.02	0.03	0.03	0.06	1/30	1/20	1/6
	Enclosed	0.06	0.06	0.06	0.06	1/4	1/4	1/4
Fan Motor RPM		1550	1550	1550	1550	1050	1050	1050
Fan Diameter (inches)		10	10	12	12	16	16	18
Sound Level	dba @ 15 ft	40	40	40	49	54	55	51
Approximate Net Weight	lbs	57	62	71	76	101	106	178
	kg	26	28	32	34	46	48	81
Approximate Ship Weight	lbs	63	68	76	81	120	125	206
	kg	29	31	34	37	54	57	93

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Thermal Efficiency (%)		83	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	kw/h	42.5	48.6	54.7	60.8	72.9	85.1	97.2
Gas Connection (inches) ^D	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^E		5	5	5	5	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) ^F		15	15	15	15	20	20	20
Normal Power Consumption (watts)		392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		60	60	60	60	60	60	60
Air Volume	CFM	2242	2562	2882	3202	3843	4483	5123
	M ³ /minute	63.5	72.5	81.6	90.7	108.8	126.9	145.1
Discharge Air Opening Area	ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Outlet Velocity	FPM	877	1003	820	911	802	936	1069
	M/minute	267	306	250	278	244	285	326
Fan Motor HP ^G	Open	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor RPM		1050	1050	1050	1050	1050	1050	1050
Fan Diameter (inches)		18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	52	53	56	56	59	61	62
Approximate Net Weight	lbs	193	193	211	223	277	303	316
	kg	88	88	96	101	126	137	143
Approximate Ship Weight	lbs	221	221	247	259	323	348	360
	kg	100	100	112	117	147	158	163

^C ETL rating for altitudes to 2000 ft.

^D Size shown is for gas connection to a single stage gas valve, not supply line size.

^E Smaller or larger vent pipe diameters may be allowed; refer to the Venting Installation Manual, Form I-V-PV. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

^F MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

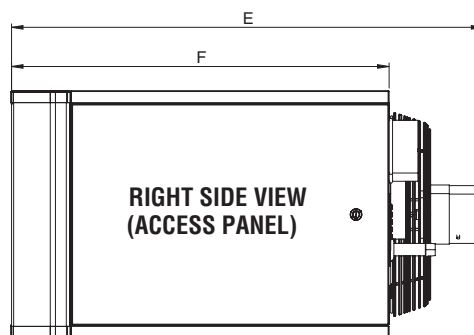
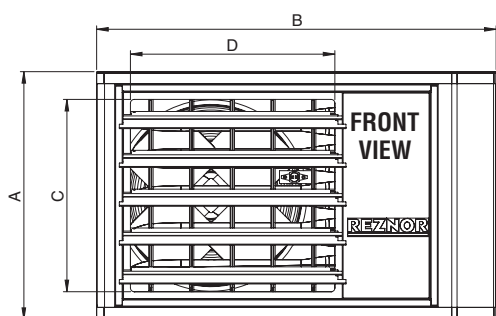
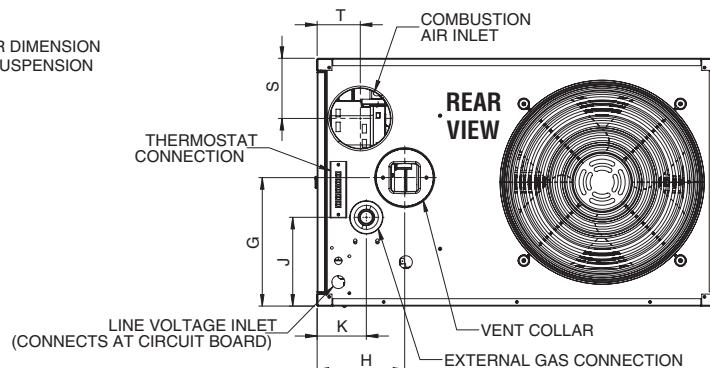
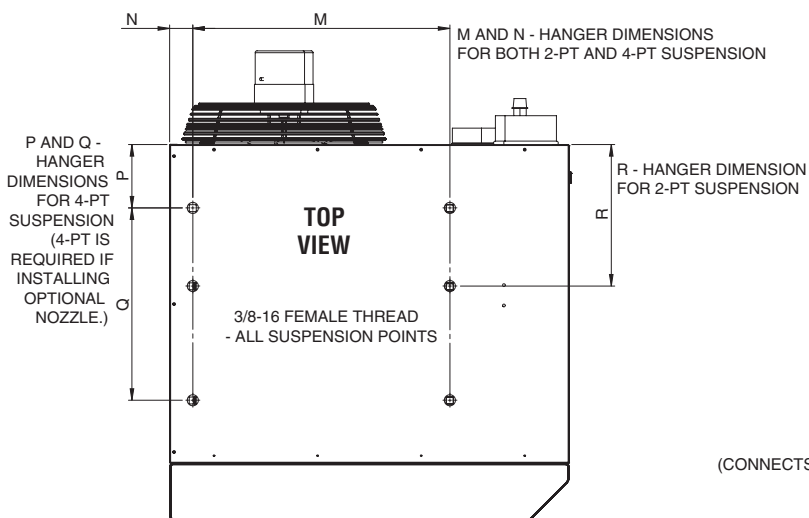
^G All other information in this table is based on a heater equipped with a standard 115 volt open fan motor.

REZNOR

UDX DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T		
	INCHES (±1/16) (mm (± 2))																		
030, 045	13 3/4 (349)	27 (686)	10 (254)	13 13/16 (351)	29 3/4 (756)	25 9/16 (649)	6 (152)	5 15/16 (151)	3 1/2 (89)	3 11/32 (85)	17 3/8 (441)	1 9/16 (40)	4 9/32 (109)	13 (330)	9 9/16 (243)	3 3/4 (95)	2 15/16 (75)		
060	16 3/4 (425)		13 (330)		32 23/32 (831)		8 11/16 (221)		6 (152)							4 1/16 (103)			
075					31 29/32 (810)		8 29/32 (226)		5 15/32 (139)										
100					24 3/4 (629)											21 (533)		34 9/32 (871)	15 5/16 (389)
125																			
150,175,200	20 1/8 (511)	38 3/16 (970)	16 (406)	23 (584)	48 7/16 (1230)	40 (1016)	9 5/8 (244)	8 5/16 (211)	5 3/8 (137)	6 1/2 (165)	25 11/16 (652)	1 13/32 (36)	8 1/8 (206)	22 3/16 (564)	16 3/8 (416)	5 1/2 (140)	4 1/4 (108)		
225,250	26 1/8 (664)		22 (559)		13 1/16 (332)		9 (229)		8 1/16 (205)							4 5/16 (110)			
300,350,400	34 1/8 (867)		41 (1041)		30 (762)		48 29/32 (1243)		17 1/16 (433)							8 1/2 (216)	11 13/16 (300)	7 5/16 (186)	27 11/16 (703)



CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^J		Non-Access Side		Bottom ^K		Rear ^L	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

^J Access Panel clearance is required for service clearance to controls

^K Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.

^L Rear clearance is required for air movement. Rear clearance should be measured from the fan motor.

REZNOR

UBX UNIT HEATER

POWER VENTED, HIGH STATIC BLOWER FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY

Reznor® Model UBX gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UBX heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from 4 suspension points. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UBX unit heaters feature a two-tone black and white powder coated, scratch-resistant paint scheme. Each unit has clean rounded corners and edges with no visible screws or fasteners. Model UBX unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.



STANDARD FEATURES AND BENEFITS

- Certified for commercial/industrial heating application
- 45-75°F Rise range - Sizes 30-350
- 50-80°F Rise range - Size 400
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged Door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint
- TCORE2® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open drip proof blower motor with internal overload protection - Sizes 30-125
- 115 Volt open drip proof blower motor with internal overloads and definite purpose motor contactor - Sizes 150-400
- Direct drive blower with multispeed taps - Sizes 30-125
- Adjustable belt drive blower - Sizes 150-400
- Transformer for 24-volt controls
- Integrated circuit board with diagnostic indicator lights
- Multi-try direct spark ignition with timed lockout
- Blower relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation^B)
- Vibration/noise isolated fan and venter motors – designed for low noise operation
- 4-pt Suspension – standard on all sizes
- External terminal strip for 24-volt wiring
- External gas pipe connection

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed blower motor (sizes 150-400)
- Vent cap
- Thermostat
- Integrated 30° & 60° downturn nozzles
- Integrated vertical louvers
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Duct Flange
- Polytube adapters
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

For installations where dirt, dust, and other airborne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UBZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

^B Pressure switch change required for installations above 6,000 ft.

UBX TECHNICAL DATA

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	8.8	13.2	17.6	22.0	30.8	35.2	43.9
Thermal Efficiency (%)		82	82	82	82	83	83	83
Output Heating Capacity ^C	BTUH	24,600	36,900	49,200	61,500	87,150	99,600	124,500
	kw/h	7.2	10.8	14.4	18.0	25.6	29.2	36.4
Gas Connection (inches) ^D	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^E		4	4	4	4	4	4	5
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full Load Amps (with standard HP 115V motor)		3.7	3.7	7.1	7.1	13.0	13.0	5.9
Maximum Over Current Protection (115V) ^F		15	15	15	15	30	30	15
Minimum Discharge Air Temperature Rise	°F	45	45	45	45	45	45	45
	°F	75	75	75	75	75	75	75
Maximum Air Volume	CFM	506	759	1012	1265	1793	2049	2562
	M ³ /minute	14.3	21.5	28.7	35.8	50.8	58.0	72.5
Minimum Air Volume	CFM	304	456	607	759	1076	1230	1537
	M ³ /minute	8.6	12.9	17.2	21.5	30.5	34.8	43.5
Discharge Air Opening Area	Ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	0.09	0.09	0.12	0.12	0.19	0.19	0.24
Maximum Output Velocity	FPM	527	791	810	1012	892	1020	1001
	M ³ /minute	159	239	239	299	267	305	305
Minimum Output Velocity	FPM	316	475	486	607	535	612	600
	M ³ /minute	96	143	143	179	160	183	183
Standard Blower Motor HP		1/6	1/6	1/3	1/3	3/4	3/4	1/4
Blower Size		inches	9 X 6	9 X 6	9 X 6	10 X 10	10 X 10	12 x 12
Approximate Net Weight	lbs	84	89	102	108	168	171	300
	kg	38	40	46	49	76	78	136
Approximate Ship Weight	lbs	94	99	114	120	182	187	322
	kg	43	45	52	54	83	85	146

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Thermal Efficiency (%)		83	83	83	83	83	83	82
Output Heating Capacity ^C	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	328,000
	kw/h	42.5	48.6	54.7	60.8	72.9	85.1	96.0
Gas Connection (inches) ^D	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^E		5	5	5	5	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full Load Amps (with standard HP 115V motor)		9.6	10.5	12.7	12.7	17.7	27.3	27.3
Maximum Over Current Protection (115V) ^F		20	25	30	30	40	60	60
Minimum Discharge Air Temperature Rise	°F	45	45	45	45	45	45	50
	°F	75	75	75	75	75	75	80
Maximum Air Volume	CFM	2989	3416	3843	4270	5123	5977	6185
	M ³ /minute	84.6	96.7	108.8	120.9	145.1	169.2	175.1
Minimum Air Volume	CFM	1793	2049	2306	2562	3074	3586	4100
	M ³ /minute	50.8	58.0	65.3	72.5	87.0	101.5	116.1
Discharge Air Opening Area	Ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Maximum Output Velocity	FPM	1168	1334	1095	1217	1070	1248	1291
	M ³ /minute	356	407	334	371	326	380	393
Minimum Output Velocity	FPM	700	800	657	730	642	749	856
	M ³ /minute	213	244	200	223	196	228	261
Standard Blower Motor HP		1/2	1/2	3/4	3/4	1-1/2	2	2
Blower Size		inches	12 x 12	12 x 12	15 x 11	15 x 15	15 x 15	15 x 15
Approximate Net Weight	lbs	320	320	385	400	458	494	506
	kg	145	145	175	181	208	224	230
Approximate Ship Weight	lbs	342	342	409	424	484	520	536
	kg	155	155	186	192	220	236	243

^C ETL rating for altitudes to 2000 ft.

^D Size shown is for gas connection to a single stage gas valve, not supply line size.

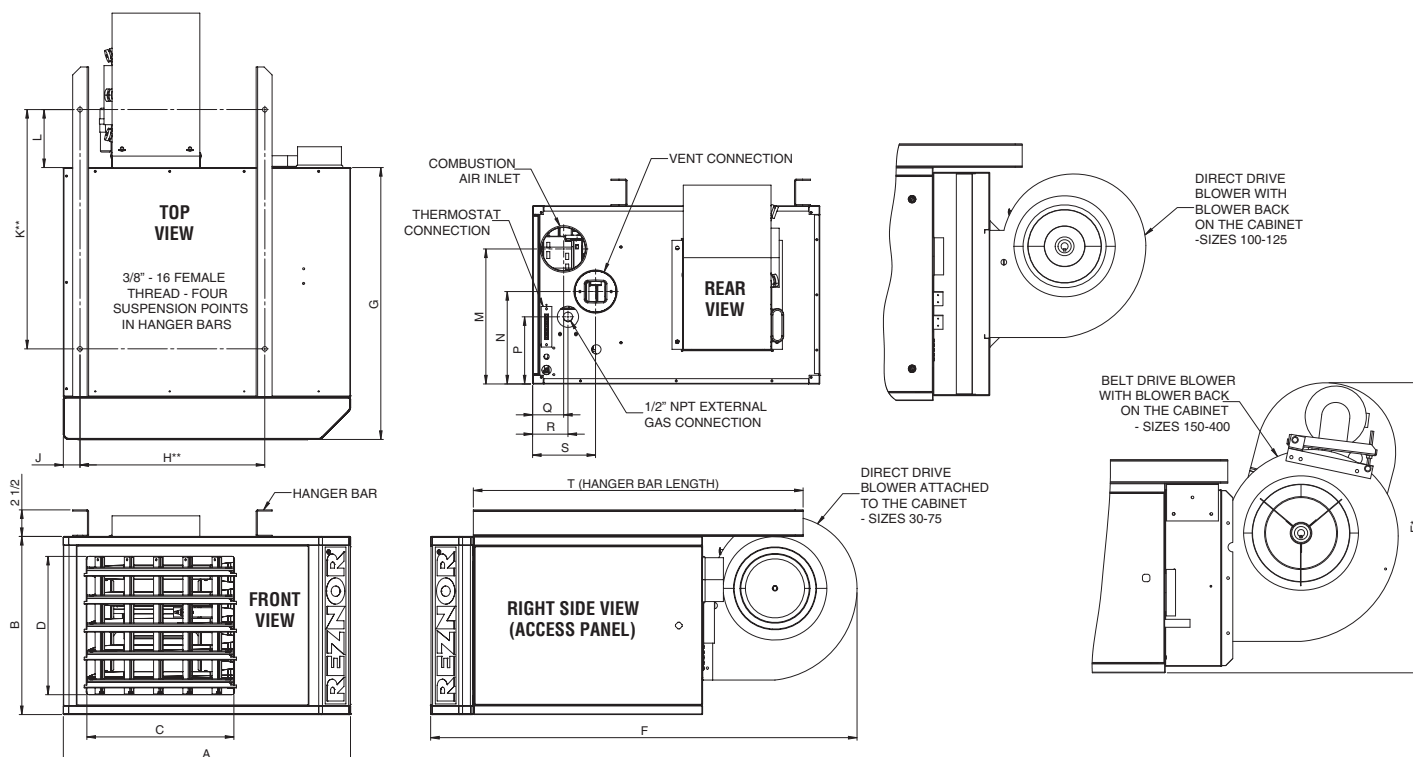
^E Smaller or larger vent pipe diameters may be allowed; refer to the Venting Installation Manual, Form I-UD-V-PV. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

^F MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

UBX DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T							
	INCHES (±1/16) (mm (± 2))																								
030, 045	27 (686)	13 3/4 (349)	13 13/16 (351)	10 (254)	17 3/16 (437)	40 3/32 (1018)	25 17/32 (649)	17 3/8 (441)	1 9/16 (40)	22 1/2 (572)	6 15/32 (164)	10 (254)	6 (152)	3 1/2 (89)	2 21/32 (74)	5 31/32 (152)	3 5/16 (84)	31 (787)							
060		16 3/4 (425)		13 (330)	18 11/16 (475)						12 11/16 (322)	8 11/16 (221)	6 5/16 (160)	3 5/16 (84)		5 29/32 (150)									
075		24 3/4 (629)		21 (533)	24 1/16 (611)						5 15/32 (139)	19 5/16 (491)	15 5/16 (389)				9 9/16 (243)								
100											8 15/32 (215)														
125											7 15/32 (190)														
150,175	38 3/16 (970)	20 1/8 (511)	23 (584)	16 (406)	30 31/32 (786)	64 3/4 (1645)	40 (1016)	25 11/16 (653)	1 13/32 (36)	24 1/2 (622)	3 29/32 (99)	13 1/2 (343)	8 1/2 (216)	5 7/16 (138)	4 3/16 (106)	6 1/2 (165)	8 3/16 (208)	42 (1067)							
200		26 1/8 (664)		22 (559)	37 1/32 (941)	68 1/8 (1730)					5 29/32 (150)	18 1/16 (459)	13 1/16 (332)	9 (229)											
225,250		34 1/8 (867)		30 (762)	41 7/32 (1047)						1 13/32 (36)	22 9/16 (573)	17 1/16 (433)	11 13/16 (300)											
300,350,400	41 (1041)	34 1/8 (867)		30 (762)	41 7/32 (1047)			27 11/16 (703)		23 1/2 (597)	1 13/32 (36)	22 9/16 (573)	17 1/16 (433)	11 13/16 (300)	4 1/2 (114)	7 5/16 (186)	8 1/2 (216)								

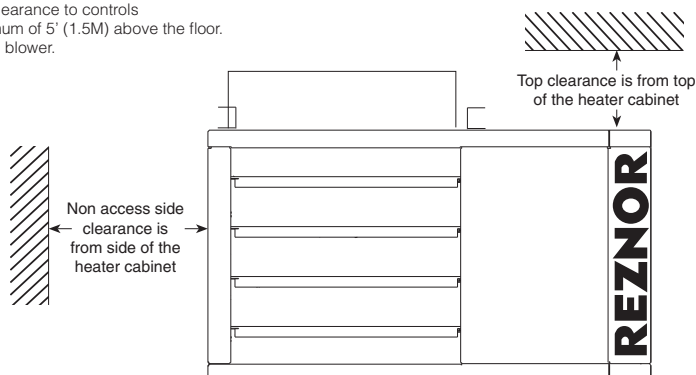


NOTES: * Sizes 150-400 - Dimension E varies with motor selection and belt adjustment.
** Dimensions H and K are the heater suspension points.

CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^H		Non-Access Side		Bottom ^J		Rear ^K	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	6	152	6	152	18	457	24	610	1	25	18	457
150-400	14	356	6	152	18	457	24	610	1	25	18	457

^H Access Panel clearance is required for service clearance to controls
^J Suspend the heater so that the bottom is a minimum of 5" (1.5M) above the floor.
^K Rear clearance is measured from the back of the blower.



REZNOR

LDAP SERIES

INDIRECT FIRED, INDOOR, DOWNFLOW, PACKAGED HEATER

400,000 – 1,200,000 BTUH

83% EFFICIENCY

Reznor® Model LDAP Series Packaged Downflow Heaters are available in three sizes - 400 MBH, 800 MBH and 1200 MBH. Model LDAP 400 has one heat section; Model LDAP 800 has two heat sections; and Model LDAP 1200 has three heat sections. All Model LDAP heaters are 83% thermal efficient for use with either natural or propane gas.



Each heat section features the Reznor Tcore² heat exchanger and single burner combustion system. Other features include a single-stage gas valve, multi-try direct spark ignition with timed lockout, pressure switch to verify venter flow, resiliently isolated venter motor, resiliently isolated axial fan and motor assembly, a high temperature limit control, a destratification fan control, and a built-in disconnect switch. Operation is controlled through an integrated circuit board. The circuit board monitors heater operation and has LED diagnostic indicator lights to identify abnormalities in control functions.

Cabinet has four suspension points for hanging or may be wall mounted. Designed for ease of installation with an external 24-volt terminal strip and gas line connection.

Model LDAP heaters are certified by the ETL Testing Agency for commercial and industrial installations in United States and Canada.

All Model LDAP high bay packaged heaters are design certified by ETL for use in industrial and commercial installations.

These heaters must be installed in accordance with local building codes. In the absence of local codes, in the United States, the heater must be installed in accordance with the National Fuel Gas Code, ANSI Z223.1. A Canadian installation must be in accordance with the CSA B149 Installation Codes.

STANDARD FEATURES AND BENEFITS

- 83% Thermal efficient
- 55°F Temperature rise range
- Patented^A combustion system
- Titanium stabilized aluminized steel heat exchanger(s)
- 208 or 230 Single phase supply voltage
- Open fan motor(s) with internal overload protection
- Transformer for 24-volt controls
- Integrated circuit board(s) with diagnostic indicator lights
- Multi-try direct ignition with timed lockout
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft / 3,045M elevation)
- Destratification adjustable fan control (air economizer)
- High temperature limit controls
- Vibration/noise isolated fan and venter motors
- 4-point Suspension
- Built-in disconnect switch
- External terminal strip for 24-volt wiring
- External gas connection
- Full fan guard(s)
- Ready for field connection to Building Automation Systems

FACTORY INSTALLED OPTIONS

- Single-stage, propane gas valve (field adjustable to 10,000 ft. / 3045M elevation)
- Two-stage natural or propane gas valve - Size 400 only
- 409 Stainless steel heat exchanger(s)

FIELD INSTALLED OPTIONS

- Manual Shutoff Valve
- Multiple Heater Control
- High Altitude Adjustment Kit (above 6,000 ft. / 1,830 M)
- 4-Way Louvers
- Multiple Position Discharge Nozzles
- Vent Cap
- 1" Pipe Coupling (Swivel) Hanger Kit
- Thermostats

^A U.S. Patent Number 6,889,686

LDAP TECHNICAL DATA

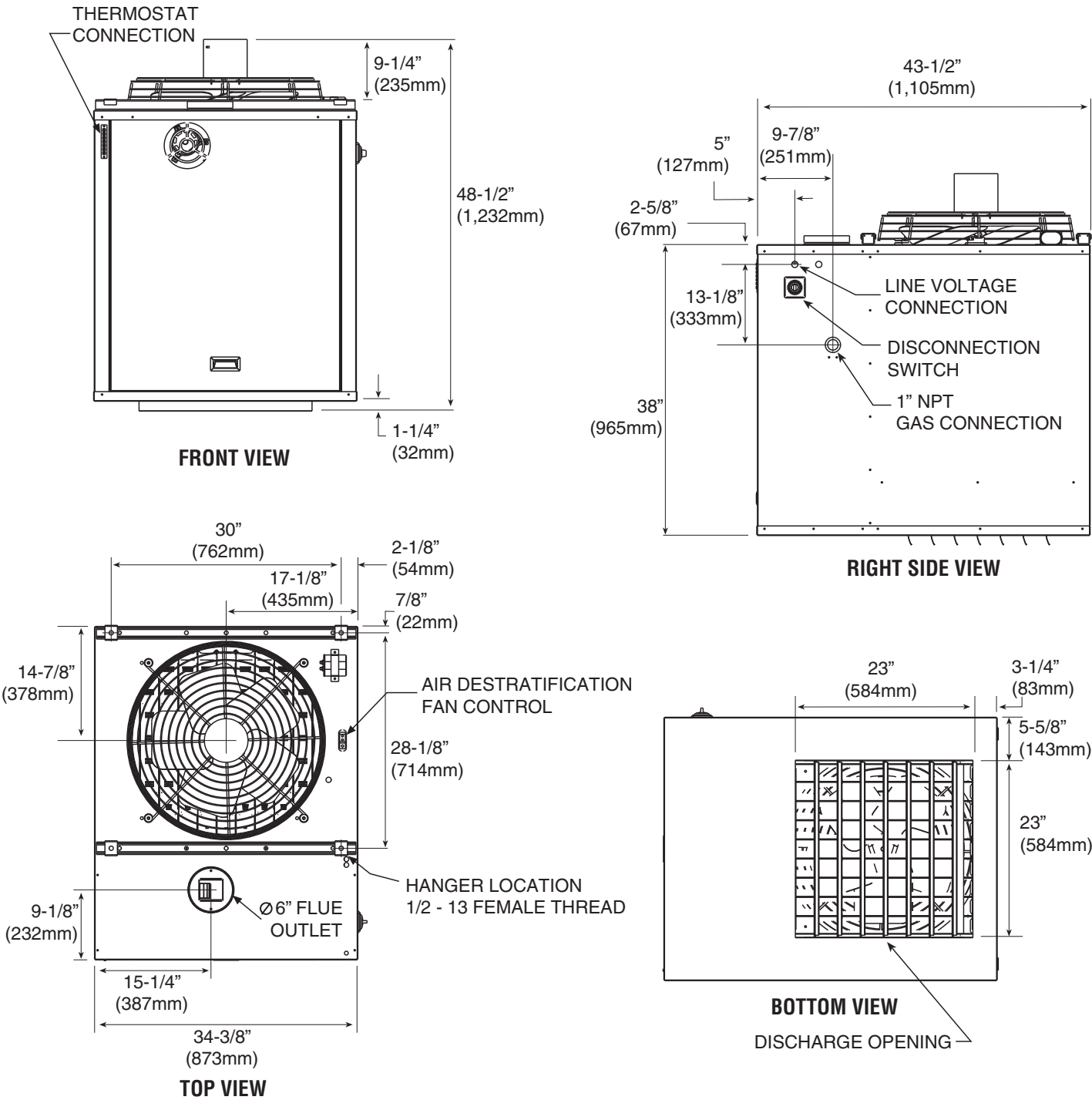
Size		400		800		1200	
Input Heating Capacity	BTUH (kW/h)	400,000	(117.1)	800,000	(234.2)	1,200,000	(351.4)
Thermal Efficiency (%)		83		83		83	
Output Heating Capacity	BTUH (kW/h)	332,000	(97.2)	664,000	(194.4)	996,000	(291.6)
Gas Connection (inches)		1		1-1/4		1-1/4	
Vent Connection Diameter (inches)		6		8		8	
Control Amps (24 volt)		1.0		2.0		3.0	
Full-Load Amps (208 volt)		5.6		13.6		19.4	
Full-Load Amps (230 volt)		5.5		12.8		18.5	
Normal Power Consumption @ 208V (watts)		1150		2448		3730	
Normal Power Consumption @ 230V (watts)		1230		2597		3959	
Discharge Air Temperature Rise (°F)		55		55		55	
Air Volume	CFM (M ³ /minute)	5,589	(158)	11,178	(317)	16,768	(475)
Discharge Air Opening Area	ft ² (M ²)	3.67	(0.34)	7.35	(0.68)	11.02	(1.02)
Outlet Velocity	FPM (M/minute)	1521	(464)	1521	(464)	1521	(464)
Air Volume (Destratification @ Medium Speed)	CFM (M ³ /minute)	4,650	(132)	9,300	(263)	13,950	(395)
Outlet Velocity (Destratification @ Medium Speed)	FPM (M/minute)	1266	(386)	1266	(386)	1266	(386)
Air Volume (Destratification @ Low Speed)	CFM (M ³ /minute)	3,250	(92)	6,500	(184)	9,750	(276)
Outlet Velocity (Destratification @ Low Speed)	FPM	885	(270)	885	(270)	885	(270)
Fan Motor HP (Quantity)		1 (1)		1 (2)		1 (3)	
Fan Motor RPM		1050		1050		1050	
Fan Diameter (Inches)		24		24		24	
Approximate Net Weight	lbs (kg)	375	(170)	805	(365)	1195	(542)
Approximate Ship Weight	lbs (kg)	672	(305)	1309	(594)	1847	(838)

CLEARANCES

Size	Top ^A		Flue Connector		Front (Access Panel)		Rear		Disconnect Side		Side		Bottom	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
400	12	(305)	6	(152)	18	(457)	2	(51)	18	(457)	2	(51)	18	(457)
800	12	(305)	6	(152)	18	(457)	2	(51)	18	(457)	2	(51)	18	(457)
1200	12	(305)	6	(152)	18	(457)	2	(51)	18	(457)	2	(51)	18	(457)

A Top clearance on size 400 measured from fan motor. Top clearance on sizes 800 and 1200 measured from flue collector.

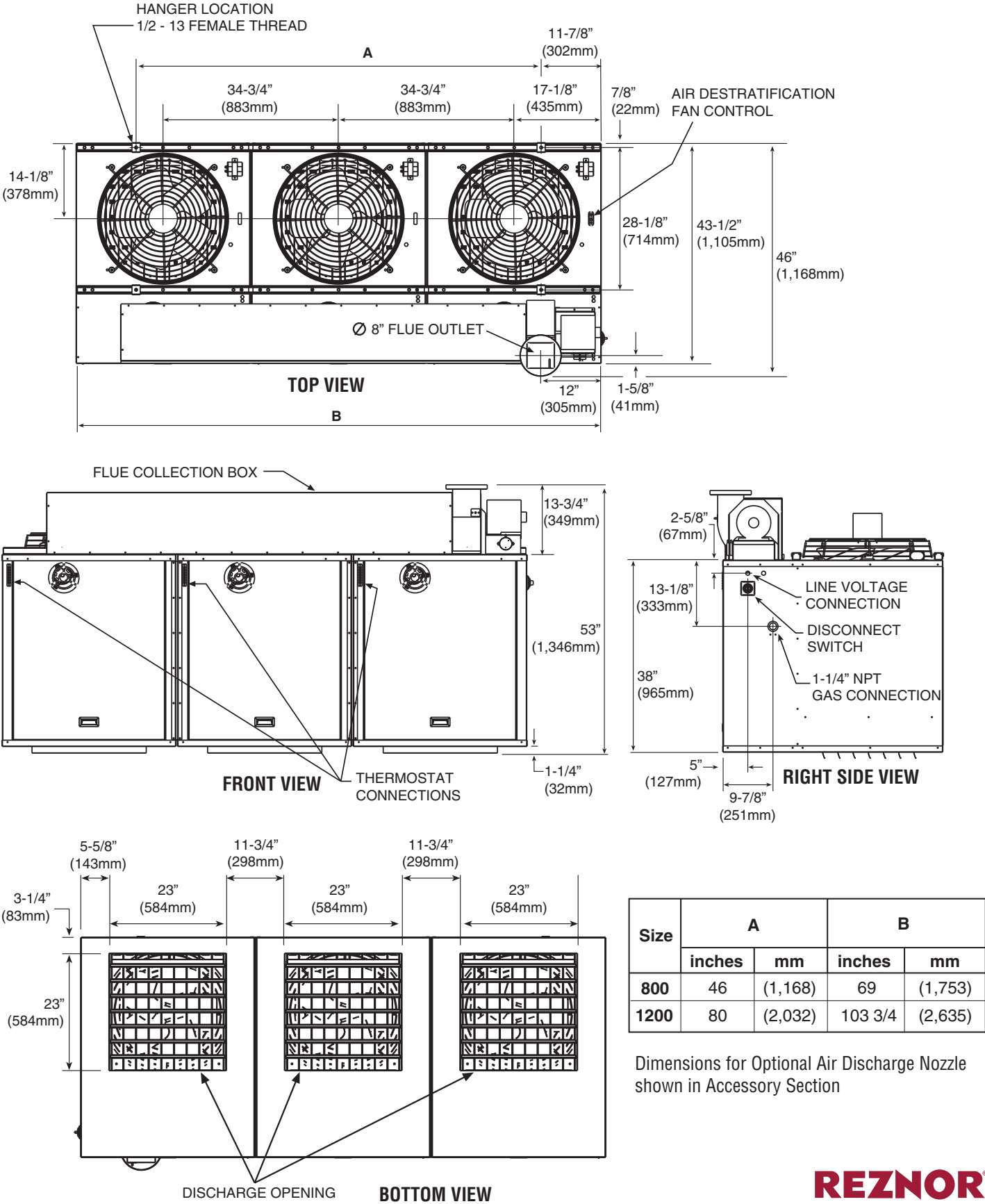
LDAP 400 DIMENSIONS



More dimensions shown on following pages

LDAP 800 & 1200 DIMENSIONS

Model LDAP 1200 is illustrated. Model LDAP 800 has two heat sections. Model LDAP 800 is the same as the layout shown without the middle section.

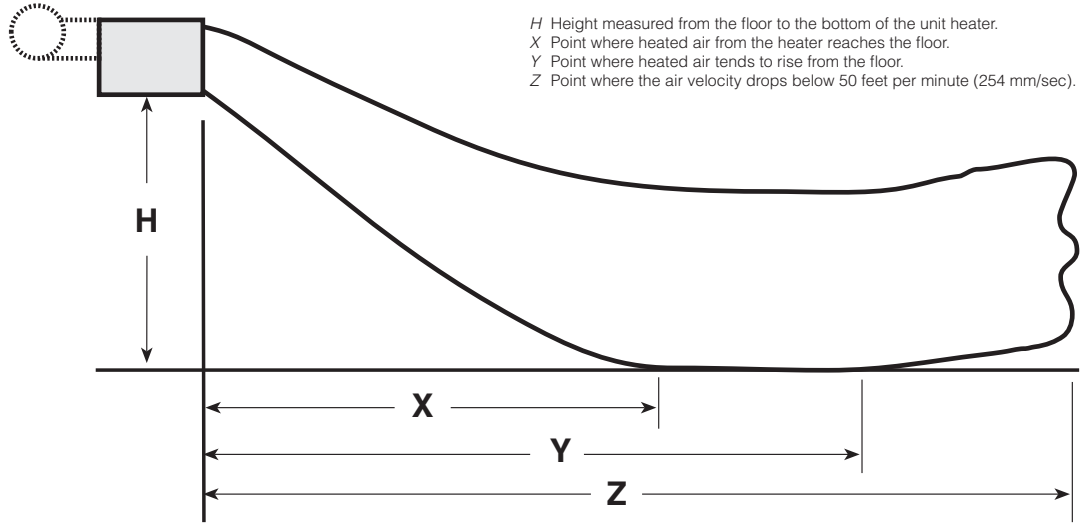


Size	A		B	
	inches	mm	inches	mm
800	46	(1,168)	69	(1,753)
1200	80	(2,032)	103 3/4	(2,635)

Dimensions for Optional Air Discharge Nozzle shown in Accessory Section

THROW/FLOOR COVERAGE

Applies to both
Model UDZ and Model UDX



DIMENSIONS IN FEET

Size	30				45				60				75				100				125				150			
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
5	6	14	30	-21°	7	16	40	-20°	8	18	45	-16°	9	20	57	-14°	9	20	59	-18°	10	22	65	-14°	--	--	--	--
8	7	13	26	-39°	9	16	37	-34°	10	18	42	-29°	12	22	54	-25°	11	21	56	-28°	12	23	63	-24°	13	24	73	-26°
10	6	11	22	-52°	9	15	33	-43°	10	17	39	-37°	12	22	52	-32°	12	20	52	-36°	13	24	60	-30°	14	24	69	-32°
12	--	--	--	--	8	12	27	-55°	10	16	34	-46°	12	21	48	-39°	11	19	47	-44°	14	23	57	-36°	14	24	64	-39°
14	--	--	--	--	--	--	--	--	9	14	29	-56°	12	19	44	-46°	11	17	42	-51°	14	22	53	-43°	14	22	59	-45°
16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	14	34	-58°	13	20	47	-50°	13	20	53	-51°
18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	17	40	-57°	11	17	44	-58°
Size	175				200				225				250				300				350				400			
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
8	15	28	90	-22°	16	30	93	-20°	14	27	86	-24°	16	29	93	-21°	15	28	94	-24°	17	31	105	-20°	18	34	113	-17°
10	17	29	87	-27°	17	31	91	-25°	15	27	82	-30°	17	30	90	-26°	16	28	89	-29°	18	32	103	-25°	20	35	110	-21°
12	18	29	84	-32°	18	31	88	-30°	16	27	78	-35°	18	30	87	-31°	17	28	85	-34°	19	32	98	-30°	21	36	108	-25°
14	18	28	79	-37°	19	30	84	-34°	16	26	73	-41°	18	30	83	-36°	17	27	80	-40°	20	32	95	-34°	23	35	105	-29°
16	18	27	74	-42°	19	29	79	-39°	16	24	67	-47°	19	28	78	-41°	17	25	74	-45°	21	31	90	-38°	23	35	101	-33°
18	17	26	68	-48°	19	28	74	-44°	14	22	60	-53°	18	27	72	-46°	16	24	66	-51°	20	30	85	-43°	23	35	97	-37°

DIMENSIONS IN METRIC

Size	30				45				60				75				100				125				150			
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
1.5	1.8	4.3	9.1	-21°	2.1	4.9	12.2	-20°	2.4	5.5	13.7	-16°	2.7	6.1	17.4	-14°	2.7	6.1	18.0	-18°	3.0	6.7	19.8	-14°	--	--	--	--
2.4	2.1	4.0	7.9	-39°	2.7	4.9	11.3	-34°	3.0	5.5	12.8	-29°	3.7	6.7	16.5	-25°	3.4	6.4	17.1	-28°	3.7	7.0	19.2	-24°	4.0	7.3	22.3	-26°
3.0	1.8	3.4	6.7	-52°	2.7	4.6	10.1	-43°	3.0	5.2	11.9	-37°	3.7	6.7	15.8	-32°	3.7	6.1	15.8	-36°	4.0	7.3	18.3	-30°	4.3	7.3	21.0	-32°
3.7	--	--	--	--	2.4	3.7	8.2	-55°	3.0	4.9	10.4	-46°	3.7	6.4	14.6	-39°	3.4	5.8	14.3	-44°	4.3	7.0	17.4	-36°	4.3	7.3	19.5	-39°
4.3	--	--	--	--	--	--	--	--	2.7	4.3	8.8	-56°	3.7	5.8	13.4	-46°	3.4	5.2	12.8	-51°	4.3	6.7	16.2	-43°	4.3	6.7	18.0	-45°
4.9	--	--	--	--	--	--	--	--	--	--	--	--	3.4	5.2	11.6	-54°	3.0	4.3	10.4	-58°	4.0	6.1	14.3	-50°	4.0	6.1	16.2	-51°
5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4	5.2	12.2	-57°	3.4	5.2	13.4	-58°
Size	175				200				225				250				300				350				400			
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
2.4	4.6	8.5	27.4	-22°	4.9	9.1	28.3	-20°	4.3	8.2	26.2	-24°	4.9	8.8	28.3	-21°	4.6	8.5	28.7	-24°	5.2	9.4	32.0	-20°	5.5	10.4	34.4	-17°
3.0	5.2	8.8	26.5	-27°	5.2	9.4	27.7	-25°	4.6	8.2	25.0	-30°	5.2	9.1	27.4	-26°	4.9	8.5	27.1	-29°	5.5	9.8	31.4	-25°	6.1	10.7	33.5	-21°
3.7	5.5	8.8	25.6	-32°	5.5	9.4	26.8	-30°	4.9	8.2	23.8	-35°	5.5	9.1	26.5	-31°	5.2	8.5	25.9	-34°	5.8	9.8	29.9	-30°	6.4	11.0	32.9	-25°
4.3	5.5	8.5	24.1	-37°	5.8	9.1	25.6	-34°	4.9	7.9	22.3	-41°	5.5	9.1	25.3	-36°	5.2	8.2	24.4	-40°	6.1	9.8	29.0	-34°	7.0	10.7	32.0	-29°
4.9	5.5	8.2	22.6	-42°	5.8	8.8	24.1	-39°	4.9	7.3	20.4	-47°	5.8	8.5	23.8	-41°	5.2	7.6	22.6	-45°	6.4	9.4	27.4	-38°	7.0	10.7	30.8	-33°
5.5	5.2	7.9	20.7	-48°	5.8	8.5	22.6	-44°	4.3	6.7	18.3	-53°	5.5	8.2	21.9	-46°	4.9	7.3	20.1	-51°	6.1	9.1	25.9	-43°	7.0	10.7	29.6	-37°

Louver angle listed in the table is relative to the top of the unit heater.

THROW/FLOOR COVERAGE

Applies to both Model UDZ and Model UDX (See illustration on page 24)

DIMENSIONS IN FEET

	Low Speed																								75°F Rise			
Size	30				45				60				75				100				125				150			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
5	7	15	38	-27°	7	17	44	-20°	11	26	78	-15°	11	24	74	-13°	10	23	74	-16°	10	22	69	-14°	--	--	--	--
8	7	13	32	-44°	9	17	40	-34°	14	26	76	-23°	13	26	72	-23°	13	25	72	-25°	12	24	65	-24°	9	16	44	-39°
10	7	11	25	-56°	9	16	37	-42°	15	27	72	-29°	15	25	69	-28°	14	25	69	-31°	13	24	62	-31°	9	14	38	-48°
12	--	--	--	--	9	14	31	-52°	16	26	70	-34°	15	25	65	-34°	14	24	66	-37°	14	23	58	-37°	7	11	30	-58°
14	--	--	--	--	--	--	--	--	16	25	65	-40°	15	24	62	-40°	14	23	62	-43°	14	21	54	-43°	--	--	--	--
16	--	--	--	--	--	--	--	--	15	24	60	-46°	15	23	56	-46°	14	21	57	-49°	12	19	47	-51°	--	--	--	--
18	--	--	--	--	--	--	--	--	14	22	53	-52°	14	21	50	-52°	12	18	51	-56°	11	17	40	-57°	--	--	--	--
	Medium Speed																								60°F Rise			
Size	30				45				60				75				100				125				150			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
5	7	16	43	-24°	9	21	60	-15°	12	28	91	-13°	11	27	84	-11°	11	27	86	-13°	12	29	96	-10°	--	--	--	--
8	9	16	38	-38°	11	23	57	-26°	16	30	89	-21°	15	29	82	-19°	15	28	83	-21°	16	31	94	-18°	13	24	74	-28°
10	8	14	33	-48°	13	22	54	-32°	17	30	86	-26°	16	30	79	-25°	17	29	81	-26°	18	32	92	-23°	13	22	62	-35°
12	8	12	28	-56°	13	21	51	-39°	18	31	83	-31°	17	30	77	-30°	17	29	78	-32°	19	32	89	-27°	13	21	57	-42°
14	--	--	--	--	12	20	46	-46°	18	30	79	-36°	18	29	74	-34°	18	29	74	-37°	20	32	87	-32°	12	19	51	-49°
16	--	--	--	--	11	17	40	-53°	19	29	75	-41°	18	28	70	-39°	18	27	70	-42°	20	31	83	-36°	11	16	43	-57°
18	--	--	--	--	--	--	--	--	17	28	69	-46°	18	26	65	-44°	17	26	64	-47°	20	30	78	-40°	--	--	--	--
	High Speed																								45°F Rise			
Size	30				45				60				75				100				125				150			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
5	8	19	51	-20°	11	28	81	-11°	13	30	105	-11°	12	30	97	-09°	13	32	110	-10°	13	33	113	-7°	--	--	--	--
8	10	19	48	-31°	15	29	79	-19°	17	33	103	-19°	17	33	95	-16°	18	34	108	-17°	19	36	111	-13°	18	32	107	-19°
10	11	19	44	-39°	16	30	78	-24°	19	34	100	-23°	19	33	94	-20°	20	36	106	-21°	21	37	109	-17°	19	34	104	-24°
12	11	17	40	-46°	17	30	75	-29°	21	35	98	-27°	20	34	92	-25°	22	36	104	-25°	23	39	107	-21°	21	34	102	-28°
14	9	15	33	-56°	18	30	72	-34°	22	34	95	-31°	21	34	89	-29°	23	36	102	-29°	24	39	105	-25°	22	34	98	-32°
16	--	--	--	--	19	29	69	-39°	23	33	91	-35°	22	33	86	-33°	24	36	99	-33°	25	40	103	-29°	22	33	94	-36°
18	--	--	--	--	18	28	64	-44°	21	33	86	-40°	22	33	83	-37°	23	36	95	-37°	26	39	101	-32°	21	33	89	-41°
	75°F Rise																								80°F Rise			
Size	175				200				225				250				300				350				400			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
8	12	22	69	-30°	13	24	76	-27°	13	24	82	-29°	14	27	95	-26°	12	21	70	-32°	13	25	82	-27°	15	28	95	-24°
10	12	22	65	-37°	14	24	72	-33°	12	21	66	-38°	16	27	91	-31°	12	21	65	-39°	14	25	77	-33°	16	28	92	-29°
12	13	21	59	-43°	14	23	68	-39°	12	20	60	-45°	16	27	86	-37°	12	19	58	-47°	14	24	72	-40°	17	28	88	-34°
14	11	19	52	-51°	14	22	62	-46°	11	18	53	-52°	16	25	80	-43°	10	17	50	-55°	14	22	66	-46°	17	27	82	-39°
16	--	--	--	--	12	20	53	-53°	--	--	--	--	16	23	73	-49°	--	--	--	--	13	20	57	-53°	17	26	76	-45°
18	--	--	--	--	--	--	--	--	--	--	--	--	14	21	64	-56°	--	--	--	--	--	--	--	--	16	24	69	-50°
	60°F Rise																								70°F Rise			
Size	175				200				225				250				300				350				400			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
8	15	29	92	-22°	16	31	100	-21°	16	29	100	-24°	19	34	127	-20°	16	28	100	-24°	18	33	119	-20°	17	31	111	-21°
10	16	29	89	-28°	18	31	97	-25°	16	30	96	-29°	20	35	123	-24°	17	29	96	-29°	19	34	116	-25°	18	32	107	-26°
12	17	29	85	-33°	19	31	93	-30°	17	30	92	-34°	21	36	120	-28°	18	29	92	-34°	21	34	113	-29°	19	32	103	-31°
14	17	28	80	-38°	20	30	89	-34°	18	28	87	-38°	22	35	116	-32°	18	28	87	-39°	22	34	109	-33°	20	31	99	-35°
16	17	27	75	-43°	20	29	84	-39°	18	27	80	-44°	23	35	111	-37°	18	27	81	-44°	22	33	104	-37°	20	31	93	-40°
18	17	25	69	-48°	19	29	79	-44°	17	26	74	-49°	23	34	106	-41°	17	25	73	-50°	22	32	98	-41°	20	29	88	-44°
	45°F Rise																								50°F Rise			
Size	175				200				225				250				300				350				400			
Mounting Height	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
8	22	41	146	-15°	23	43	157	-13°	23	43	168	-16°	26	48	198	-14°	21	39	146	-17°	24	45	169	-14°	24	44	169	-14°
10	24	43	144	-19°	25	46	155	-17°	26	45	166	-19°	29	50	196	-17°	23	41	143	-21°	26	47	167	-18°	26	46	167	-17°
12	26	43	141	-22°	27	47	152	-20°	28	45	163	-22°	31	52	194	-20°	25	42	140	-25°	28	48	165	-21°	28	48	165	-20°
14	28	44	137	-25°	29	48	150	-23°	30	46	160	-25°	32	54	191	-22°	26	42	137	-28°	30	49	162	-24°	31	48	162	-23°
16	29	44	134	-28°	31	48	147	-26°	31	47	157	-29°	34	53	189	-25°	27	42	133	-31°	32	48	159	-26°	32	49	159	-26°
18	29	44	131	-32°	31	49	144	-29°	31	47	153	-32°	34	54	185	-28°	28	41	129	-34°	33	49	156	-29°	32	49	156	-29°

THROW/FLOOR COVERAGE

Applies to both Model UDZ and Model UDX (See illustration on page 24)

DIMENSIONS IN METRIC

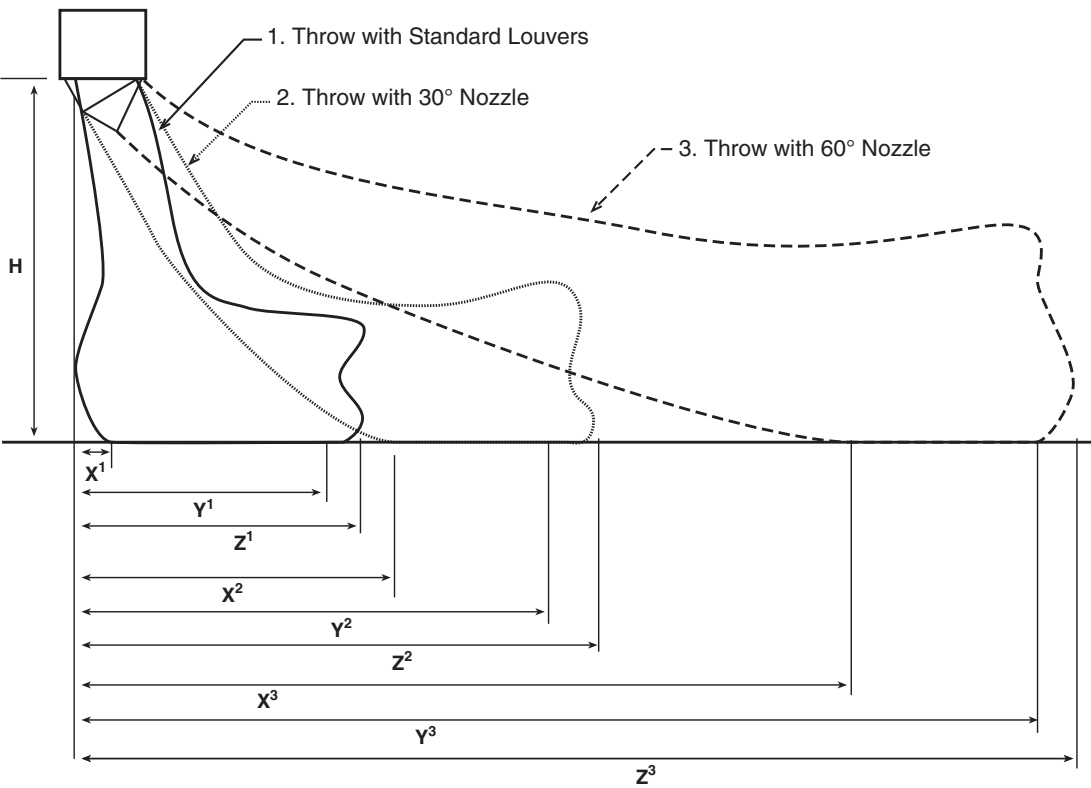
Size		Low Speed																				42°C Rise						
Mounting Height	30				45				60				75				100				125				150			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
1.5	2.1	4.6	11.6	-27°	2.1	5.2	13.4	-20°	3.4	7.9	23.8	-15°	3.4	7.3	22.6	-13°	3.0	7.0	22.6	-16°	3.0	6.7	21.0	-14°	--	--	--	--
2.4	2.1	4.0	9.8	-44°	2.7	5.2	12.2	-34°	4.3	7.9	23.2	-23°	4.0	7.9	21.9	-23°	4.0	7.6	21.9	-25°	3.7	7.3	19.8	-24°	2.7	4.9	13.4	-39°
3.0	2.1	3.4	7.6	-56°	2.7	4.9	11.3	-42°	4.6	8.2	21.9	-29°	4.6	7.6	21.0	-28°	4.3	7.6	21.0	-31°	4.0	7.3	18.9	-31°	2.7	4.3	11.6	-48°
3.7	--	--	--	--	2.7	4.3	9.4	-52°	4.9	7.9	21.3	-34°	4.6	7.6	19.8	-34°	4.3	7.3	20.1	-37°	4.3	7.0	17.7	-37°	2.1	3.4	9.1	-58°
4.3	--	--	--	--	--	--	--	--	4.9	7.6	19.8	-40°	4.6	7.3	18.9	-40°	4.3	7.0	18.9	-43°	4.3	6.4	16.5	-43°	--	--	--	--
4.9	--	--	--	--	--	--	--	--	4.6	7.3	18.3	-46°	4.6	7.0	17.1	-46°	4.3	6.4	17.4	-49°	3.7	5.8	14.3	-51°	--	--	--	--
5.5	--	--	--	--	--	--	--	--	4.3	6.7	16.2	-52°	4.3	6.4	15.2	-52°	3.7	5.5	15.5	-56°	3.4	5.2	12.2	-57°	--	--	--	--
Size		Medium Speed																				33°C Rise						
Mounting Height	30				45				60				75				100				125				150			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
1.5	2.1	4.9	13.1	-24°	2.7	6.4	18.3	-15°	3.7	8.5	27.7	-13°	3.4	8.2	25.6	-11°	3.4	8.2	26.2	-13°	3.7	8.8	29.3	-10°	--	--	--	--
2.4	2.7	4.9	11.6	-38°	3.4	7.0	17.4	-26°	4.9	9.1	27.1	-21°	4.6	8.8	25.0	-19°	4.6	8.5	25.3	-21°	4.9	9.4	28.7	-18°	4.0	7.3	22.6	-28°
3.0	2.4	4.3	10.1	-48°	4.0	6.7	16.5	-32°	5.2	9.1	26.2	-26°	4.9	9.1	24.1	-25°	5.2	8.8	24.7	-26°	5.5	9.8	28.0	-23°	4.0	6.7	18.9	-35°
3.7	2.4	3.7	8.5	-56°	4.0	6.4	15.5	-39°	5.5	9.4	25.3	-31°	5.2	9.1	23.5	-30°	5.2	8.8	23.8	-32°	5.8	9.8	27.1	-27°	4.0	6.4	17.4	-42°
4.3	--	--	--	--	3.7	6.1	14.0	-46°	5.5	9.1	24.1	-36°	5.5	8.8	22.6	-34°	5.5	8.8	22.6	-37°	6.1	9.8	26.5	-32°	3.7	5.8	15.5	-49°
4.9	--	--	--	--	3.4	5.2	12.2	-53°	5.8	8.8	22.9	-41°	5.5	8.5	21.3	-39°	5.5	8.2	21.3	-42°	6.1	9.4	25.3	-36°	3.4	4.9	13.1	-57°
5.5	--	--	--	--	--	--	--	--	5.2	8.5	21.0	-46°	5.5	7.9	19.8	-44°	5.2	7.9	19.5	-47°	6.1	9.1	23.8	-40°	--	--	--	--
Size		High Speed																				25°C Rise						
Mounting Height	30				45				60				75				100				125				150			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
1.5	2.4	5.8	15.5	-20°	3.4	8.5	24.7	-11°	4.0	9.1	32.0	-11°	3.7	9.1	29.6	-09°	4.0	9.8	33.5	-10°	4.0	10.1	34.4	-7°	--	--	--	--
2.4	3.0	5.8	14.6	-31°	4.6	8.8	24.1	-19°	5.2	10.1	31.4	-19°	5.2	10.1	29.0	-16°	5.5	10.4	32.9	-17°	5.8	11.0	33.8	-13°	5.5	9.8	32.6	-19°
3.0	3.4	5.8	13.4	-39°	4.9	9.1	23.8	-24°	5.8	10.4	30.5	-23°	5.8	10.1	28.7	-20°	6.1	11.0	32.3	-21°	6.4	11.3	33.2	-17°	5.8	10.4	31.7	-24°
3.7	3.4	5.2	12.2	-46°	5.2	9.1	22.9	-29°	6.4	10.7	29.9	-27°	6.1	10.4	28.0	-25°	6.7	11.0	31.7	-25°	7.0	11.9	32.6	-21°	6.4	10.4	31.1	-28°
4.3	2.7	4.6	10.1	-56°	5.5	9.1	21.9	-34°	6.7	10.4	29.0	-31°	6.4	10.4	27.1	-29°	7.0	11.0	31.1	-29°	7.3	11.9	32.0	-25°	6.7	10.4	29.9	-32°
4.9	--	--	--	--	5.8	8.8	21.0	-39°	7.0	10.1	27.7	-35°	6.7	10.1	26.2	-33°	7.3	11.0	30.2	-33°	7.6	12.2	31.4	-29°	6.7	10.1	28.7	-36°
5.5	--	--	--	--	5.5	8.5	19.5	-44°	6.4	10.1	26.2	-40°	6.7	10.1	25.3	-37°	7.0	11.0	29.0	-37°	7.9	11.9	30.8	-32°	6.4	10.1	27.1	-41°
Size		42°C Rise																				44°C Rise						
Mounting Height	175				200				225				250				300				350				400			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
2.4	3.7	6.7	21.0	-30°	4.0	7.3	23.2	-27°	4.0	7.3	25.0	-29°	4.3	8.2	29.0	-26°	3.7	6.4	21.3	-32°	4.0	7.6	25.0	-27°	4.6	8.5	29.0	-26°
3.0	3.7	6.7	19.8	-37°	4.3	7.3	21.9	-33°	3.7	6.4	20.1	-38°	4.9	8.2	27.7	-31°	3.7	6.4	19.8	-39°	4.3	7.6	23.5	-33°	4.9	8.5	28.0	-31°
3.7	4.0	6.4	18.0	-43°	4.3	7.0	20.7	-39°	3.7	6.1	18.3	-45°	4.9	8.2	26.2	-37°	3.7	5.8	17.7	-47°	4.3	7.3	21.9	-40°	5.2	8.5	26.8	-37°
4.3	3.4	5.8	15.8	-51°	4.3	6.7	18.9	-46°	3.4	5.5	16.2	-52°	4.9	7.6	24.4	-43°	3.0	5.2	15.2	-55°	4.3	6.7	20.1	-46°	5.2	8.2	25.0	-43°
4.9	--	--	--	--	3.7	6.1	16.2	-53°	--	--	--	--	4.9	7.0	22.3	-49°	--	--	--	--	4.0	6.1	17.4	-53°	5.2	7.9	23.2	-49°
5.5	--	--	--	--	--	--	--	--	--	--	--	--	4.3	6.4	19.5	-56°	--	--	--	--	--	--	--	--	4.9	7.3	21.0	-56°
Size		33°C Rise																				39°C Rise						
Mounting Height	175				200				225				250				300				350				400			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
2.4	4.6	8.8	28.0	-22°	4.9	9.4	30.5	-21°	4.9	8.8	30.5	-24°	5.8	10.4	38.7	-20°	4.9	8.5	30.5	-24°	5.5	10.1	36.3	-20°	5.2	9.4	33.8	-21°
3.0	4.9	8.8	27.1	-28°	5.5	9.4	29.6	-25°	4.9	9.1	29.3	-29°	6.1	10.7	37.5	-24°	5.2	8.8	29.3	-29°	5.8	10.4	35.4	-25°	5.5	9.8	32.6	-26°
3.7	5.2	8.8	25.9	-33°	5.8	9.4	28.3	-30°	5.2	9.1	28.0	-34°	6.4	11.0	36.6	-28°	5.5	8.8	28.0	-34°	6.4	10.4	34.4	-29°	5.8	9.8	31.4	-31°
4.3	5.2	8.5	24.4	-38°	6.1	9.1	27.1	-34°	5.5	8.5	26.5	-38°	6.7	10.7	35.4	-32°	5.5	8.5	26.5	-39°	6.7	10.4	33.2	-33°	6.1	9.4	30.2	-35°
4.9	5.2	8.2	22.9	-43°	6.1	8.8	25.6	-39°	5.5	8.2	24.4	-44°	7.0	10.7	33.8	-37°	5.5	8.2	24.7	-44°	6.7	10.1	31.7	-37°	6.1	9.4	28.3	-40°
5.5	5.2	7.6	21.0	-48°	5.8	8.8	24.1	-44°	5.2	7.9	22.6	-49°	7.0	10.4	32.3	-41°	5.2	7.6	22.3	-50°	6.7	9.8	29.9	-41°	6.1	8.8	26.8	-44°
Size		25°C Rise																				28°C Rise						
Mounting Height	175				200				225				250				300				350				400			
	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle	X	Y	Z	Louver Angle
2.4	6.7	12.5	44.5	-15°	7.0	13.1	47.9	-13°	7.0	13.1	51.2	-16°	7.9	14.6	60.4	-14°	6.4	11.9	44.5	-17°	7.3	13.7	51.5	-14°	7.3	13.4	51.5	-14°
3.0	7.3	13.1	43.9	-19°	7.6	14.0	47.2	-17°	7.9	13.7	50.6	-19°	8.8	15.2	59.7	-17°	7.0	12.5	43.6	-21°	7.9	14.3	50.9	-18°	7.9	14.0	50.9	-17°
3.7	7.9	13.1	43.0	-22°	8.2	14.3	46.3	-20°	8.5	13.7	49.7	-22°	9.4	15.8	59.1	-20°	7.6	12.8	42.7	-25°	8.5	14.6	50.3	-21°	8.5	14.6	50.3	-20°
4.3	8.5	13.4	41.8	-25°	8.8	14.6	45.7	-23°	9.1	14.0	48.8	-25°	9.8	16.5	58.2	-22°	7.9	12.8	41.8	-28°	9.1	14.9	49.4	-24°	9.4	14.6	49.4	-23°
4.9	8.8	13.4	40.8	-28°	9.4	14.6	44.8	-26°	9.4	14.3	47.9	-29°	10.4	16.2	57.6	-25°	8.2	12.8	40.5	-31°	9.8	14.6	48.5	-26°	9.8	14.9	48.5	-26°
5.5	8.8	13.4	39.9	-32°	9.4	14.9	43.9	-29°	9.4	14.3	46.6	-32°	10.4	16.5	56.4	-28°	8.5	12.5	39.3	-34°	10.1	14.9	47.5	-29°	9.8	14.9	47.5	-29°

THROW/FLOOR COVERAGE

Applies to Model LDAP
(in heat mode)

NOTES:

“Z” is the point where the air velocity drops below 50 feet (15.2M) per minute. Throws listed are with standard louvers facing one direction and fully open. Throw pattern changes with louver angle, 2-way louver direction, and or optional 4-way louvers.



Mounting Height		Standard Louvers						30° Degree Nozzle						60° Degree Nozzle					
H		X^1		Y^1		Z^1		X^2		Y^2		Z^2		X^3		Y^3		Z^3	
Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M	Ft.	M
20	6.1	5	(1.5)	55	(16.8)	134	(40.8)	40	(12.2)	90	(27.4)	146	(44.5)	70	(21.3)	125	(38.1)	158	(48.2)
30	9.1	8	(2.4)	53	(16.2)	121	(36.9)	44	(13.4)	86	(26.2)	133	(40.5)	76	(23.2)	119	(36.3)	145	(44.2)
40	12.2	12	(3.7)	49	(14.9)	109	(33.2)	47	(14.3)	81	(24.7)	120	(36.6)	=		=		=	
50	15.2	17	(5.2)	45	(13.7)	96	(29.3)	=		=		=		=		=		=	

SOUND DATA

Sound (in dBA) for Models UDX and UDZ at various distances.

Size	5 Feet	10 Feet	15 Feet
	1.5 meters	3.0 meters	4.6 meters
30	59	47	40
45	59	47	40
60	59	47	40
75	69	55	49
100	N/A	58	54
125	N/A	59	55
150	N/A	55	51
175	N/A	55	52
200	N/A	56	53
225	N/A	59	56
250	N/A	59	56
300	N/A	62	59
350	N/A	64	61
400	N/A	65	62

Sound (in dBA) for Models UBX and UBZ at a distance of 15 feet (4.6 meters).

Blower Speed	Size					
	30	45	60	75	100	125
Low	57	50	59	60	59	59
Medium	58	53	62	63	63	63
High	60	57	64	64	66	66

Temperature Rise	Size							
	150	175	200	225	250	300	350	400 *
75°F (24°C)	51	56	58	61	63	64	65	67
60°F (16°C)	56	59	62	63	66	70	72	71
45°F (7°C)	62	69	71	71	75	76	78	79

* **NOTE:** The temperature rises of the Model 400 are 80°F (27°C), 70°F (21°C), and 50°F (10°C).

Sound for Model LDAP at various distances.

Size	DISTANCE (FT.)														
	20			25			30			35			40		
	db	Pa	μbar	db	Pa	μbar	db	Pa	μbar	db	Pa	μbar	db	Pa	μbar
400	69	0.058	0.580	65	0.037	0.371	62	0.026	0.258	60	0.019	0.189	57	0.015	0.145
800	72	0.080	0.800	68	0.051	0.512	65	0.036	0.356	62	0.026	0.261	60	0.020	0.200
1200	74	0.100	1.000	70	0.064	0.640	67	0.044	0.444	64	0.033	0.327	62	0.025	0.250

μbar = microbar
Pa = Pascal

BLOWER CHARTS

MODELS UBX AND UBZ

Blower Chart for Sizes 150 - 400 (Standard motor and drive shown shaded)

Sizes 30 to 125 do not show a standard drive because they have a Direct drive blower with multispeed/Multitap. They are available in 115/1/60 voltage only.

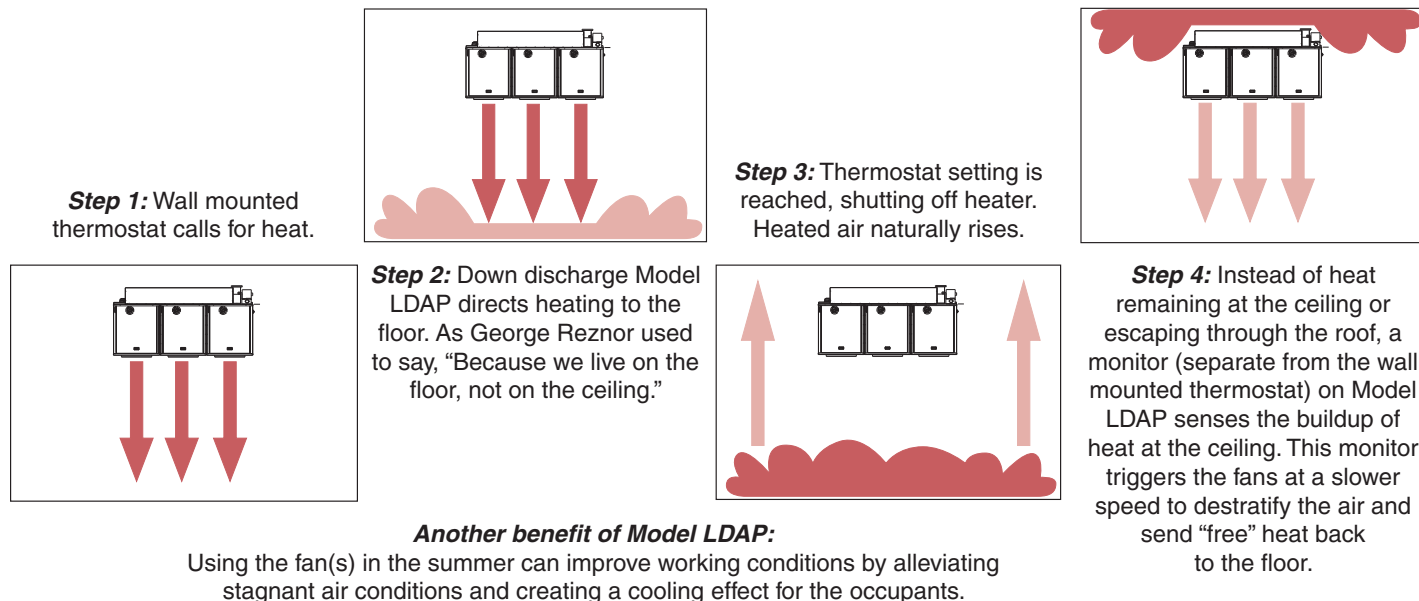
UBX and UBZ	TEMP RISE °F	CFM	Nozzle Option with Louvers				EXTERNAL Static Pressure					
			30°		60°		0"		.25"		.50"	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	45°	2562	730	0.43	730	0.43	730	0.43	840	0.55	930	0.68
	60°	1921	520	0.25	520	0.25	520	0.25	655	0.35	780	0.43
	75°	1537	405	0.17	405	0.17	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	--	--

MOTOR FULL LOAD AMP TABLE

HP	Type	FLA	RPM	V	PH	HP	Type	FLA	RPM	V	PH	HP	Type	FLA	RPM	V	PH
0.25	Open	5.1	1750	120	1	0.75	Open	11	1750	120	1	1.5	TEFC	16.4	1750	120	1
		2.1	1750	208	1			6.3	1750	208	1			9.5	1750	208	1
		2.3	1750	230	1			5.5	1750	240	1			8.2	1750	230	1
		1.1	1750	208	3			2.9	1750	208	3			4.3	1750	208	3
		1.4	1750	230	3			2.6	1750	240	3			4.4	1750	230	3
		0.75	1750	460	3			1.3	1750	460	3			2.2	1750	460	3
0.25	TEFC	3.6	1750	120	1	0.75	TEFC	11	1750	120	1	2	Open	1.6	1750	575	3
		2.2	1750	208	1			5.4	1750	208	1			20.4	1750	120	1
		1.9	1750	230	1			5.5	1750	230	1			10	1750	208	1
		1.6	1750	208	3			2	1750	208	3			10.2	1750	230	1
		1.4	1750	230	3			2.2	1750	230	3			7	1750	208	3
		0.7	1750	460	3			1.1	1750	460	3			6.6	1750	230	3
0.33	Open	5.5	1750	120	1	1	Open	0.8	1750	575	3	2	TEFC	3.5	1750	460	3
		3.2	1750	208	1			13	1750	120	1			2.1	1750	575	3
		2.8	1750	230	1			7.5	1750	208	1			24	1750	120	1
		1.4	1750	208	3			6.5	1750	240	1			12	1750	230	1
		1.6	1750	230	3			3.7	1750	208	3			6.5	1750	208	3
		0.8	1750	460	3			3.2	1750	240	3			5.8	1750	230	3
0.33	TEFC	4.6	1750	120	1	1	TEFC	1.6	1750	460	3	3	Open	2.9	1750	460	3
		2.3	1750	208	1			1.1	1750	575	3			2.3	1750	575	3
		2.4	1750	230	1			13	1750	120	1			14	3600	208	1
		1.2	1750	208	3			6.5	1750	230	1			12.4	3600	230	1
		1.2	1750	230	3			3.3	1750	208	3			9	3600	208	3
		0.6	1750	460	3			3.4	1750	230	3			8.6	3600	230	3
0.5	Open	8.8	1750	120	1	1.5	Open	1.7	1750	460	3	3	TEFC	4.3	3600	460	3
		5.1	1750	208	1			1.4	1750	575	3			3.6	3600	575	3
		4.4	1750	230	1			15	1750	120	1			30	3600	120	1
		3	1750	208	3			8.3	1750	208	1			15	3600	230	1
		2.5	1750	230	3			7.5	1750	230	1			8.5	3600	208	3
		1	1750	460	3			5.6	1750	208	3			8.2	3600	230	3
0.5	TEFC	7	1750	120	1	1.5	Open	5	1750	230	3	3	TEFC	4.1	3600	460	3
		3.4	1750	208	1			2.7	1750	460	3			3	3600	575	3
		3.5	1750	230	1			1.6	1750	575	3						
		2.3	1750	208	3												
		2	1750	230	3												
		1	1750	460	3												
		0.7	1750	575	3												

LDAP SERIES

THE INDOOR AIR ECONOMIZER FEATURE ON MODEL LDAP PROVIDES “FREE” HEAT.
HERE’S HOW IT WORKS...



SUSPENDING THE HEATER

Ceiling Suspension

WARNINGS: Check the supporting structure to be used to verify that it has sufficient load carrying capacity to support the weight of the heater. Suspend the heater only from the threaded nut retainers or with a manufacturer provided kit. Do NOT suspend from the heater cabinet.

See dimensional drawings for hanger locations, and install the ½”-13 spring nuts in the strut that is attached to the top of the unit. Comply with the requirements shown below when using threaded rod. If ordered with swivel connectors for 1” pipe, Option CK10, attach the swivels to the spring nuts according to illustration shown below and suspend with 1” pipe.

Locate the hardware kit shipped with the heater. The kit contains spring nuts, hex nuts, “U”-shape fittings, and lock washers for suspending the heater. It also includes louvers and the compression springs needed to install them.

When the heater is lifted for suspension, support the bottom of the heater with the crate bottom. If the bottom is not supported, damage could occur. After hanging or mounting, verify that any screws used for holding shipping brackets were reinstalled in the cabinet.

WARNING: All heaters must be level for proper operation. Do not place or add additional weight to the suspended heater.

Wall Mounting

Guidelines for Wall Mounting Model LDAP Heaters

Mounting is the responsibility of the installer. Verify that the supporting structure has sufficient load-carrying capacity to support the weight.

Prior to installation, be sure that the method of support is in agreement with all local building codes. Check for service platform requirements.

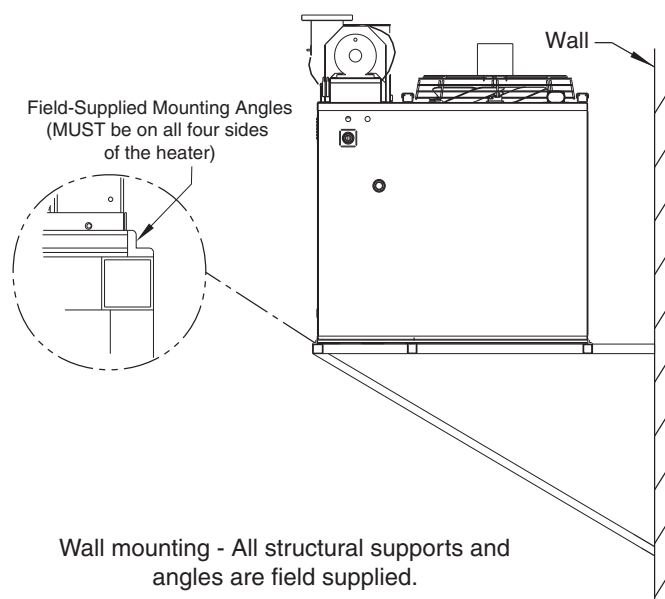
Maintain a minimum of 2” (51mm) clearance from the discharge air openings to structural supports. Additional clearance will be required if an optional nozzle is to be field installed.

Determining the need for installing vibration or noise isolation is the responsibility of the installer.

To prevent potential movement, field-supplied angles must be placed around the perimeter of the heater to anchor it to the structural supports.

Structural supports must be placed as shown to prevent damage to the heater.

All structural supports must be noncombustible materials.



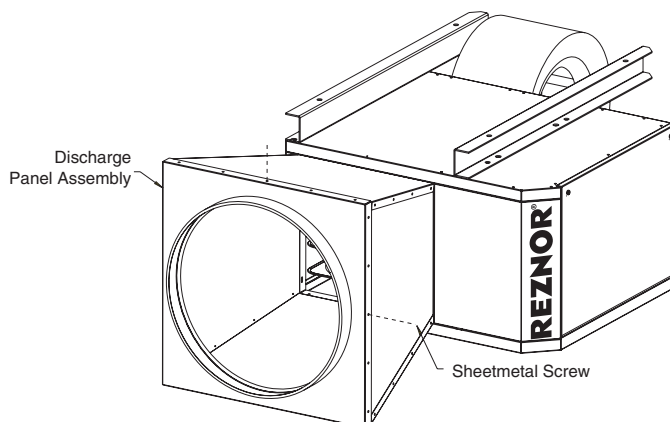
REZNOR®

OPTIONS AND ACCESSORIES

OPTIONAL POLYTUBE OUTLET ADAPTER - APPLY TO MODELS UDX/UDZ

The optional polytube adapter is designed to adapt suspended Model UDX and UDZ blower type unit heaters for use with polytube ductwork. Directly in line with the heater discharge, the adapter is installed on the front of the heater and is equipped with a collar for attaching the field-supplied polytube.

The most common application of polytube ductwork for distribution of tempered air is in greenhouses. Polytubes are also used in industrial buildings to improve operating efficiency by recovering stratified air and reducing the need for complete area heating.

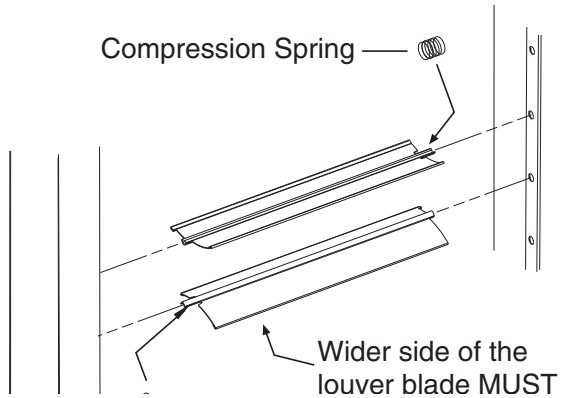


Size	CFM at 60°F Temp Rise	Polytube Diameter (inches)	Approximate Free Area (square inches)	Suggested Hole Sizes and Locations					
				Holes	Length of Polytube				
					50 Ft	75 Ft	100 Ft	125 Ft	150 Ft
75*	960	18	115	Quantity	75	75	75	75	75
				Diameter (inches)	1	1	1	1	1
				Spacing (inches)	8	12	16	20	24
100*	1345	18	160	Quantity	48	48	48	48	48
				Diameter (inches)	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
				Spacing (inches)	12 1/2	18 3/4	25	31 1/4	37 1/2
125*	1540	18	185	Quantity	50	50	50	50	50
				Diameter (inches)	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
				Spacing (inches)	12	18	24	30	36
150	1920	24	230	Quantity	40	40	40	40	45
				Diameter (inches)	2	2	2	2	1 7/8
				Spacing (inches)	15	22 1/2	30	37 1/2	40
175	2240	24	270	Quantity	50	50	80	80	80
				Diameter (inches)	1 7/8	1 7/8	1 1/2	1 1/2	1 1/2
				Spacing (inches)	12	18	15	18 3/4	22 1/2
200	2560	24	300	Quantity	50	50	50	50	50
				Diameter (inches)	2	2	2	2	2
				Spacing (inches)	12	18	24	30	36
225	2880	24	340	Quantity	42	42	42	42	42
				Diameter (inches)	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
				Spacing (inches)	14	21	28	35	42
250	3200	24	380	Quantity	50	50	50	60	60
				Diameter (inches)	2 1/4	2 1/4	2 1/4	2	2
				Spacing (inches)	12	18	24	25	30
300	3840	24	460	Quantity	60	60	75	75	75
				Diameter (inches)	2 1/4	2 1/4	2	2	2
				Spacing (inches)	10	15	16	20	24
350	4480	24	540	Quantity	50	50	50	50	50
				Diameter (inches)	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
				Spacing (inches)	12	18	24	30	36
400	5120	24	600	Quantity	60	60	75	75	75
				Diameter (inches)	2 1/2	2 1/2	2 1/4	2 1/4	2 1/4
				Spacing (inches)	10	15	16	20	24

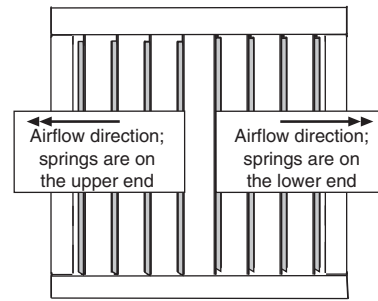
* Required direct drive blower speed.

Size	Speed
75	Low
100	Low
125	Medium

MODEL LDAP DISCHARGE AIR OPTIONS



Airflow direction depends on how the louvers are installed



INSTALLING LOUVERS

After the unit is suspended/mounted, install the air directional louvers or optional nozzle. If an optional nozzle is being installed, follow the instructions included with the nozzle. If a nozzle is not being used, install the louvers in the discharge opening(s).

Louvers and springs are in the hardware kit shipped with the heater.

Before actually installing the louvers, note the louver curve and determine how the louvers should be positioned to provide the optimal throw pattern. Opening is square so louvers may be installed in any direction. Louvers may be installed with the curve all the same direction (either way) or the right half one way and left the other as illustrated above.

LOUVER INSTALLATION INSTRUCTIONS

- 1) With the wider section of the louver facing out of the heater, place one of the compression springs over the tab on the notched end of a louver. The end of the louver with the spring will fit in any direction in the square opening. How the louver turns depends on which end of the louver is inserted first.
- 2) Depending on the throw pattern selected, push the louver tab with the spring into a hole in the discharge opening and insert the louver tab on the other end into the corresponding hole on the opposite side.
- 3) Airflow direction depends on how the louvers are installed (see illustration above).

FOUR-WAY DISCHARGE LOUVERS (Option CD32)

Option CD32 consists of additional louvers that are installed perpendicular to the standard individually adjustable louvers. By installing the optional perpendicular louvers, the two sets of louvers can be adjusted to direct airflow in any of the four directions, enabling the installer to select and increase or decrease the coverage area.

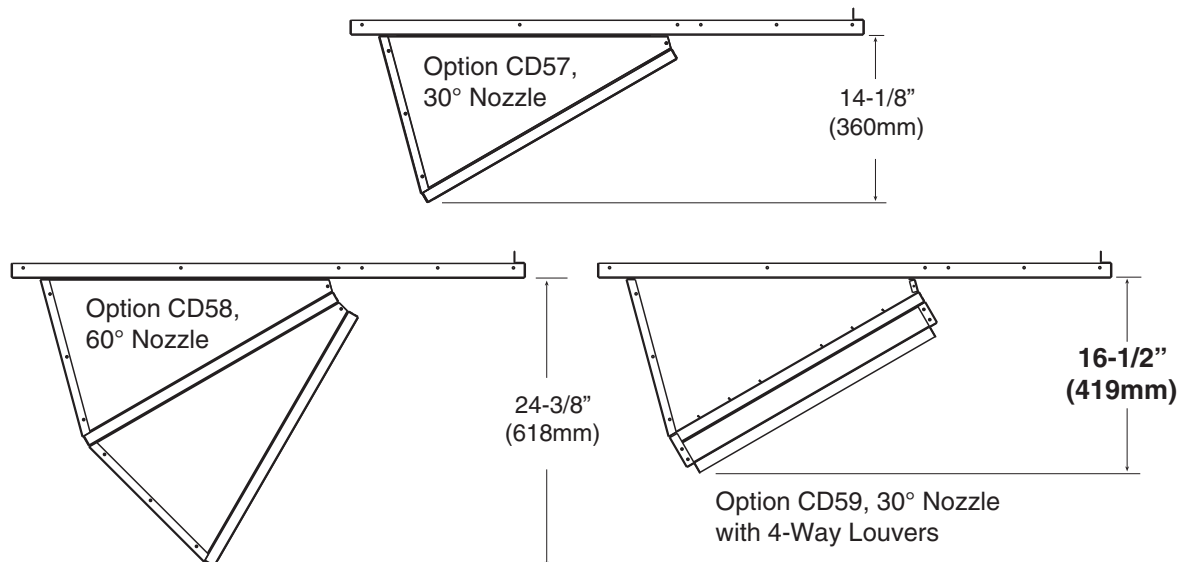
MULTIPLE POSITION DISCHARGE NOZZLE

Option CD57 is a 30° angle discharge nozzle. Option CD58 is a 60° angle discharge nozzle. Option CD59 is a 30° angle discharge nozzle with 4-way louvers. A nozzle may be installed at each discharge air opening in any direction.

NOTE: Do not install 4-way louvers with a 60° nozzle.

Nozzles should be attached after the unit is suspended. Follow the installation instructions in the nozzle package.

Standard louvers are installed in the nozzle opening as shown in the photo on the left.



REZNOR® SEPARATED COMBUSTION SYSTEMS

Following is an overall description of Separated Combustion Systems as it relates to Models UDZ and UBZ. For more specific separated combustion venting information, especially as it relates to Model UEZ, please see the appropriate installation manual.

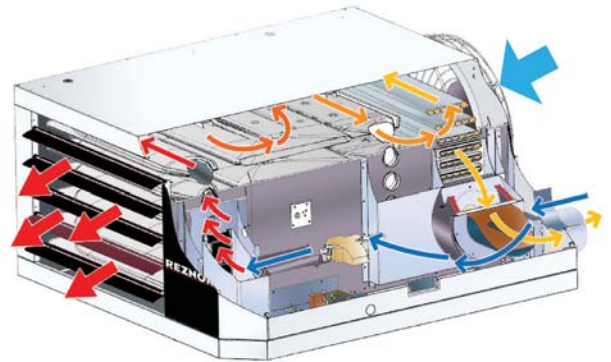
The manufacturer of Reznor heating equipment, for years, has pioneered in separated combustion system technology, eliminating “open flame” combustion problems. This has resulted in a complete line of Reznor products using the separated combustion principle-

- air for combustion is mechanically induced from outside the building, preventing dirt, lint, dust or other contaminants in the indoor atmosphere from entering the burner and combustion zone of the furnace,
- the airflow is metered to provide optimum and efficient combustion that is unaffected by negative building pressure or wind,
- after combustion, the air is exhausted back to the outdoor atmosphere.

Reznor separated combustion products provide all of the benefits while requiring only one building penetration. See the venting illustrations below.

Use only approved vent terminals. No other venting arrangements are approved or certified for use with Models UDZ, UBZ or UEZ heaters. Either the horizontal vent/combustion air terminal kit (Option CC6 or Option CC14) or the vertical vent/combustion air terminal kit (Option CC2) is required.

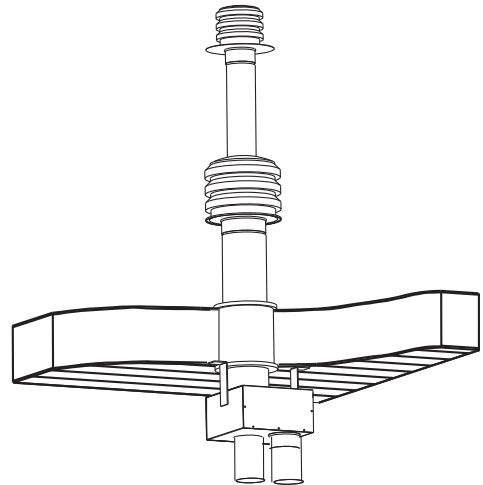
Refer to Venting Installation Manual Form I-UBX-UDX-UDX-UDZ for Models UBX & UDX; Form I-UBX-UDX-UDX-UDZ for Models UBZ & UDZ; Form I-UEZ for Model UEZ. Or contact your Reznor Representative at 800-695-1901 for more detailed information.



VERTICAL VENTING OF SEPARATED COMBUSTION UNIT THROUGH ROOF

- See the illustration to the right for a typical installation of one vertical vent terminal and concentric adapter. If vertical vent (Option CC2) is selected, a vertical vent terminal/combustion-air inlet assembly is provided.

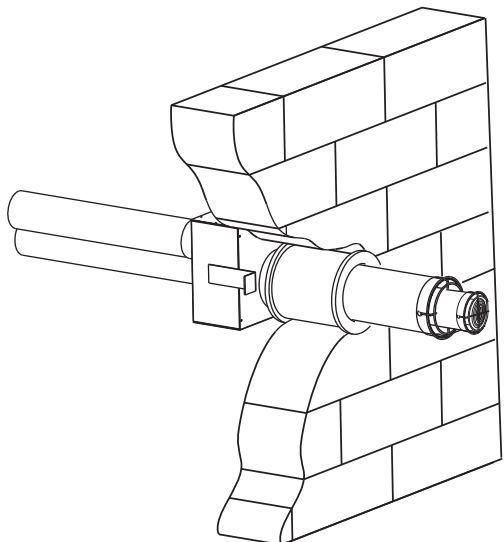
NOTE: Illustration for typical installation example only. Vent terminals may vary based on heater size and model.



HORIZONTAL VENTING OF SEPARATED COMBUSTION UNIT THROUGH WALL

- See the illustration to the right for a typical installation of a single horizontal vent terminal and concentric adapter. When Option CC6 is ordered, one horizontal vent terminal/combustion air inlet assembly is provided.

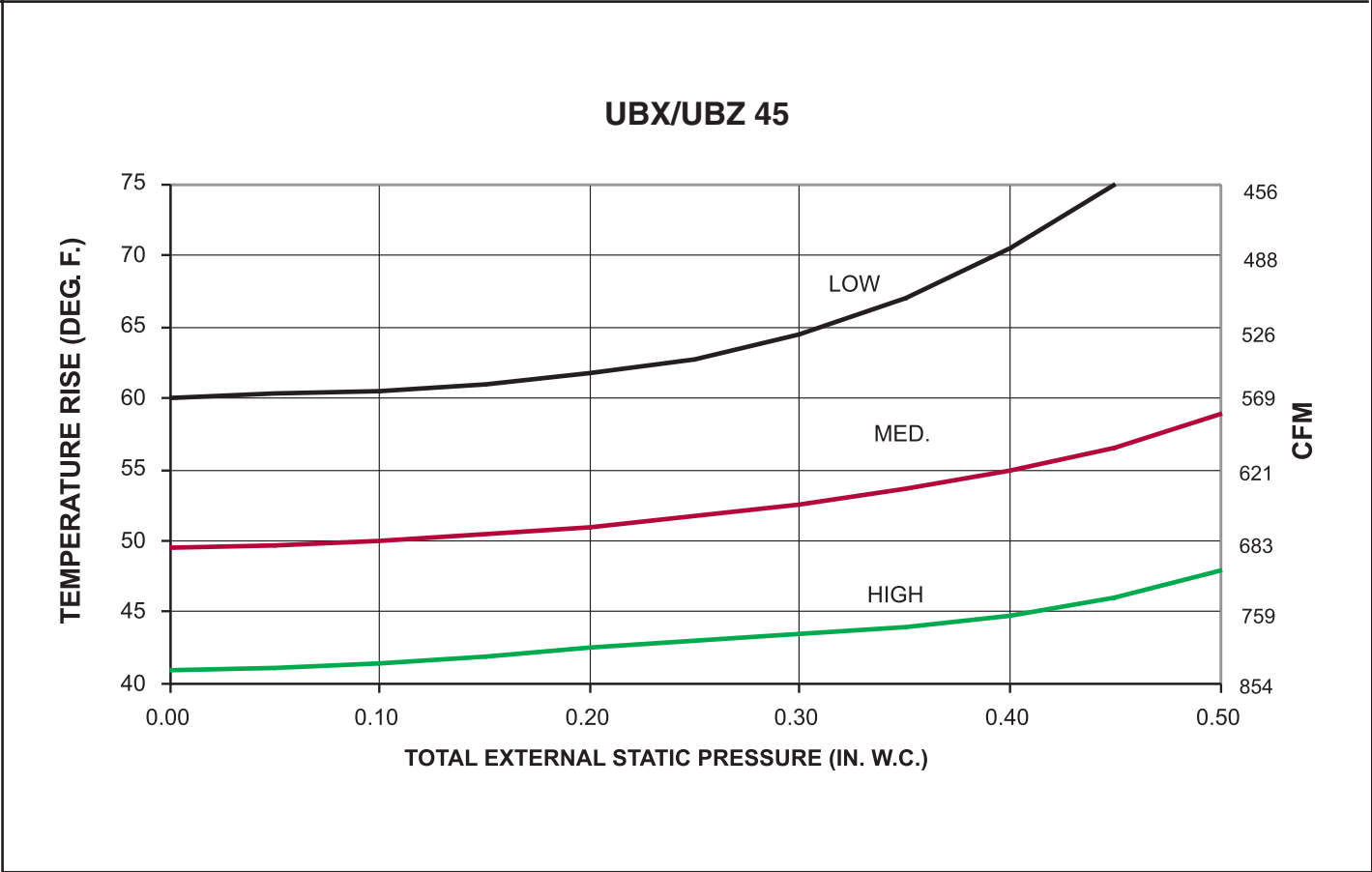
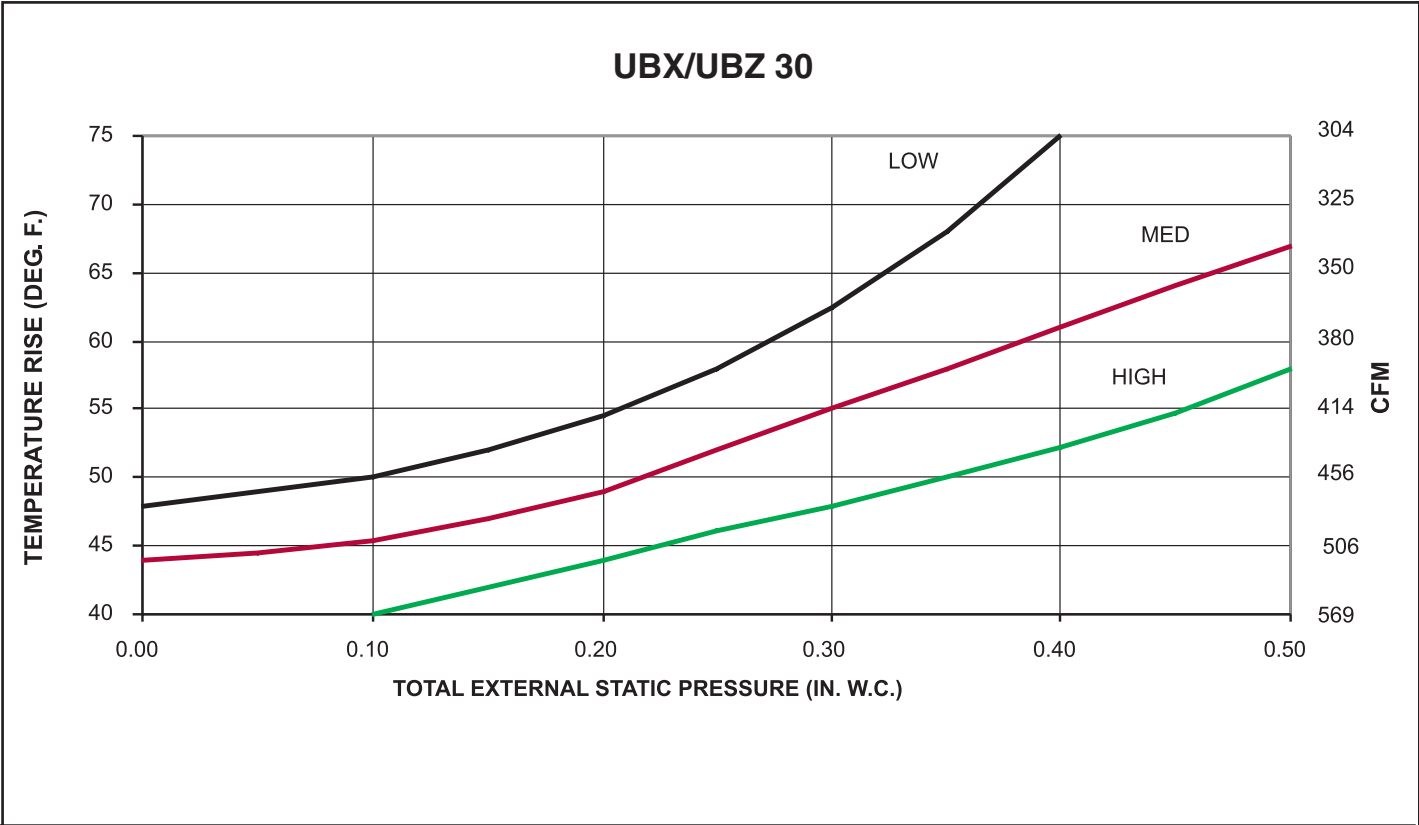
NOTE: Illustration for typical installation example only. Vent terminals may vary based on heater size and model.



For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (UDZ, UBZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

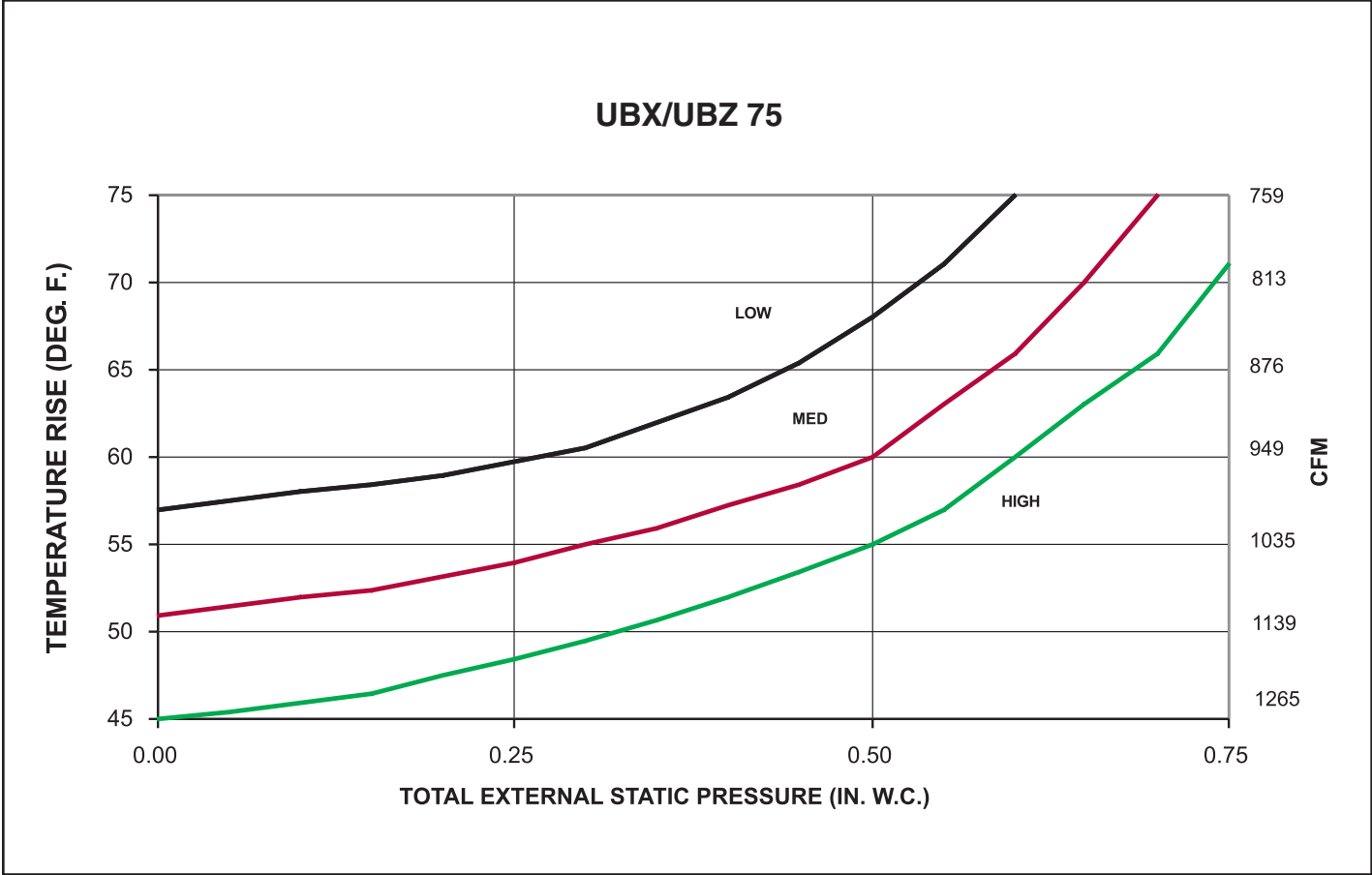
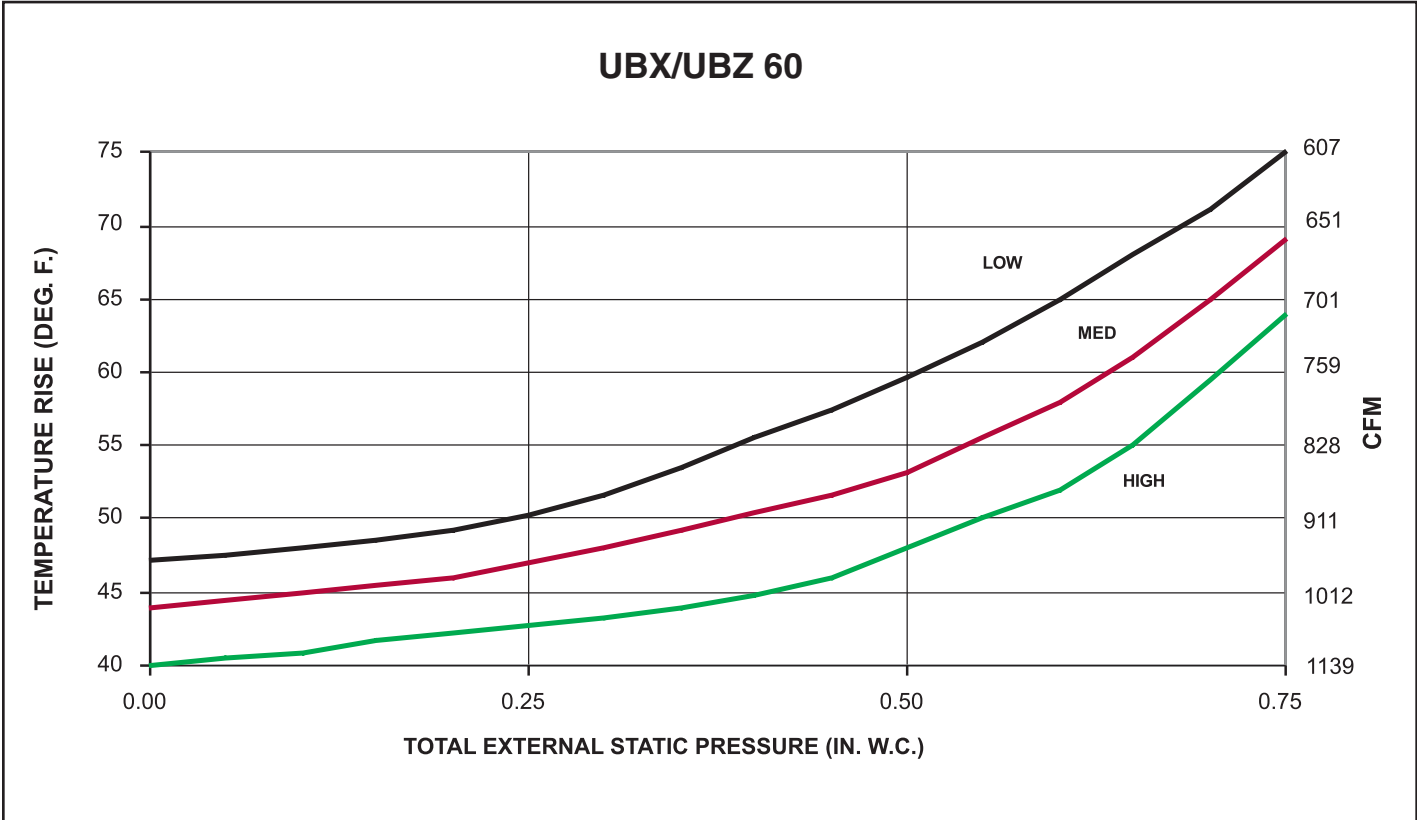
BLOWER CHARTS - MODELS UBX AND UBZ

BLOWER CURVES FOR SIZES 30 - 45 (DIRECT DRIVE BLOWER MOTORS)



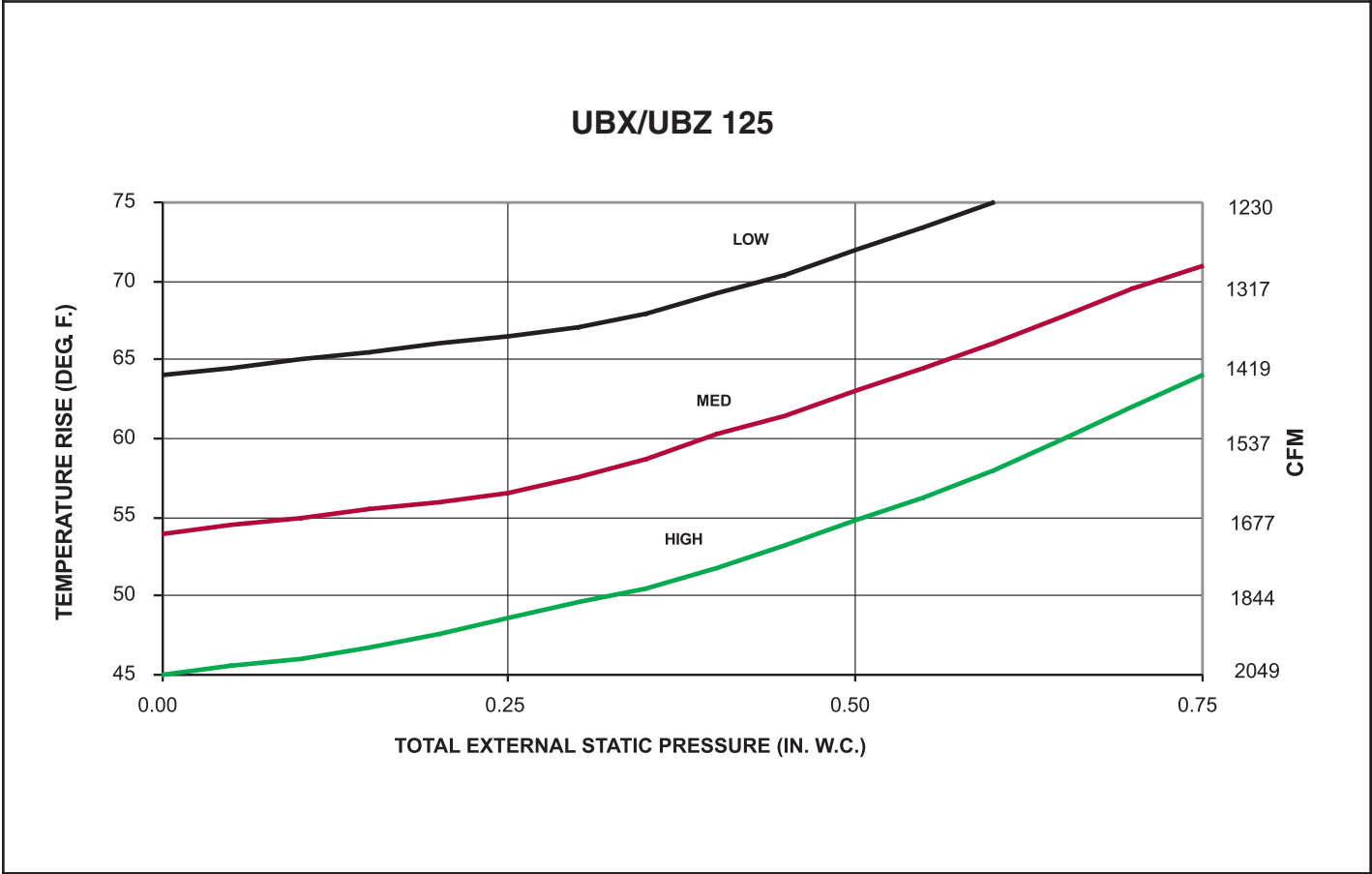
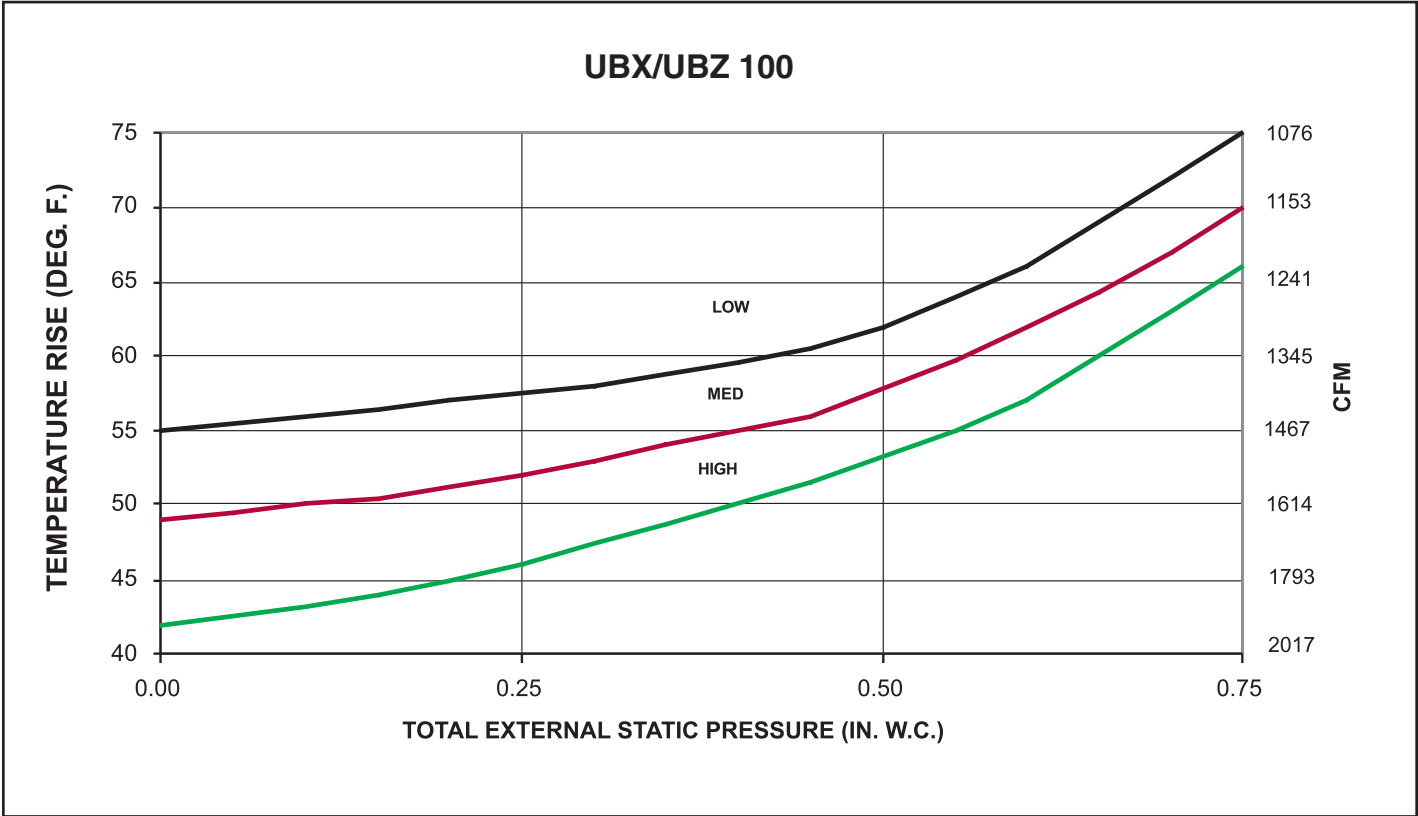
BLOWER CHARTS - MODELS UBX AND UBZ

BLOWER CURVES FOR SIZES 60 - 75 (DIRECT DRIVE BLOWER MOTORS)



BLOWER CHARTS - MODELS UBX AND UBZ

BLOWER CURVES FOR SIZES 100 - 125 (DIRECT DRIVE BLOWER MOTORS)





Specifications & illustrations subject to change without notice or incurring obligations.

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