

UDZ Series

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.

FEATURES and BENEFITS

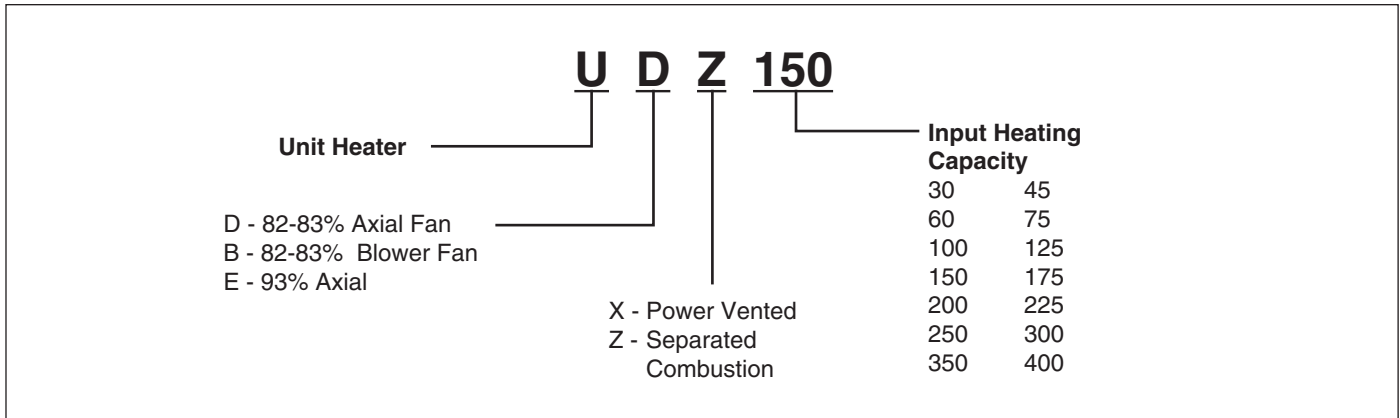
- Sizes 30-400 MBTUH certified for commercial/industrial heating application
- Sizes 30-125 MBTUH carry an additional approval for use in residential garage/workshop heating applications
- 50-60°F Rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removeable front face and two tone white and black powder paint
- Integrated horizontal louvers in front face
- Reznor logo embossed on bottom of unit
- Tcore2 titanium stabilized aluminized steel heat exchanger
- Patented 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 9,000 ft. elevation)*
- Vibration/noise isolated fan and venter motors ~ designed for low noise operation
- 2-point and 4-point suspension
- External terminal strip for 24-volt wiring
- External gas pipe connection
- Sealed junction box for supply wiring
- Full fan guard
- Built-in disconnect switch (20A @ 115V rating)

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 9,000 ft.)*
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed fan motor (sizes 30-400)
- 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)

*Note: Pressure switch change required for installations above 6,000 ft.

MODEL IDENTIFICATION CODES



TECHNICAL DATA

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

^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."

TECHNICAL DATA (Continued)

Size		150	175	200	225	250	300	350	400
Input Heating Capacity	BTUH	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	44.0	51.3	58.6	65.9	73.3	87.9	(102.6)	(117.2)
Thermal Efficiency (%)		83	83	83	83	83	83	83	83
Output Heating Capacity ^c	BTUH	124,500	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	kw/h	36.5	42.6	48.7	54.7	60.8	73.0	85.1	97.3
Gas Connection (inches) ^d	Natural	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size ^e (inches diameter)		5	5	5	5	5	6	6	6
Combustion Air Inlet ^f (inches diameter)		6	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	1.0
Full Load Amps (115 volt)		3.8	3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) ^f		15	15	15	15	15	20	20	20
Normal Power Consumption (watts)		392	392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		60	60	60	60	60	60	60	60
Air Volume	CFM	1921	2242	2562	2882	3202	3843	4483	5123
	M ³ /minute	54.4	63.5	72.5	81.6	90.7	108.8	126.9	145.1
Discharge Air Opening Area	ft ²	2.56	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Output Velocity	FPM	752	877	1003	820	911	802	936	1069
	M/minute	229	267	306	250	278	244	285	326
Fan Motor HP ^g	Open	1/6	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	1/4	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor RMP		1050	1050	1050	1050	1050	1050	1050	1050
Fan Diameter (inches)		18	18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	51	52	53	56	56	59	61	62
Approximate Net Weight	lbs	179	194	194	212	224	278	304	317
	kg	81	88	88	96	102	126	138	144
Approximate Ship Weight	lbs	212	227	227	255	267	331	357	370
	kg	96	103	103	116	121	150	162	168

^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.

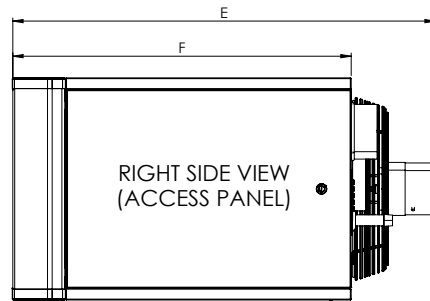
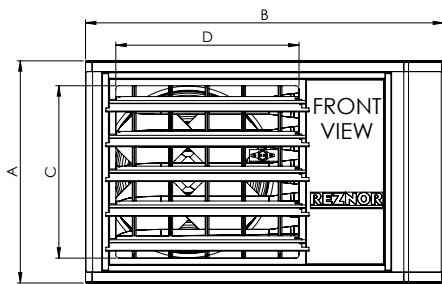
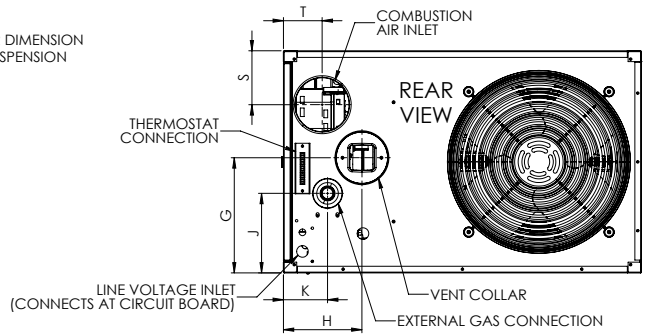
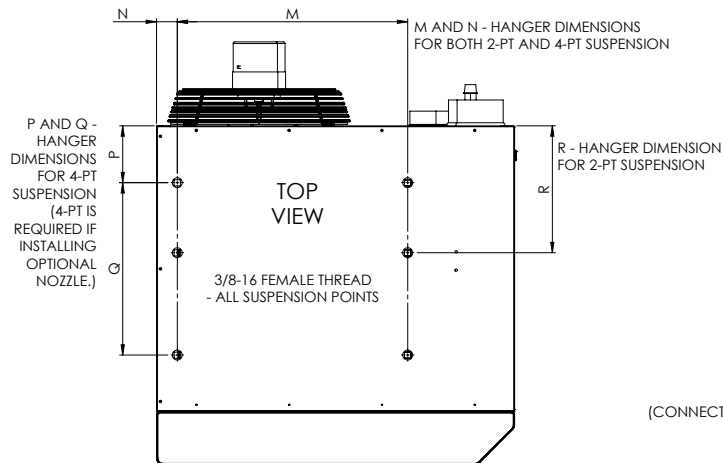
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^f MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

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

DIMENSIONS

Size (in)	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T							
30, 45	13 3/4	27	10	13 13/16	29 3/4	25 9/16	6	8 11/16	3 1/2	5 15/16	17 3/8	1 9/16	4 9/32	13	9 9/16	3 3/4	2 15/16							
60	16 3/4		13		27		6		6							4 1/16								
75	24 3/4		21		27 5/8		8 29/32		3 11/32							17 3/8		1 9/16	4 9/32	13	9 9/16	4 1/16		
100	24 3/4		21		34 9/32		15 5/16		8 29/32							3 11/32		17 3/8	1 9/16	4 9/32	13	9 9/16	4 1/16	2 15/16
125																								
150, 175, 200	20 1/8	38 3/16	16	23	48 7/16	40	9 5/8	8 5/16	5 3/8	6 1/2	25 11/16	1 13/32	8 1/8	22 3/16	16 3/8	5 1/2	4 1/4							
225, 250	26 1/8		22		13 1/16		9	11 13/32	8 1/8	22 3/16	8 1/16				4 5/16									
300, 350, 400	34 1/8		41		30		48 29/32	17 1/16	8 1/2	11 13/16	7 5/16				27 11/16	16 1/4	11 9/16	16 3/16						
Size (mm)	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T							
30,45	349	686	254	351	756	649	152	151	89	85	441	40	109	330	243	95	75							
60	425		330		831		221		152							103								
75	629		533		871		389		226							139								
100																		140	108					
125	205		110																					
150, 175, 200	511	970	406	584	1230	1016	244	211	137	165	652	36	206	564	416	140	108							
225,250	664		559		332		229	36	206	564	416				205	110								
300, 350, 400	867		1041		762		1243	433	216	300	186				703	413	294	114						



CLEARANCES FROM COMBUSTIBLES

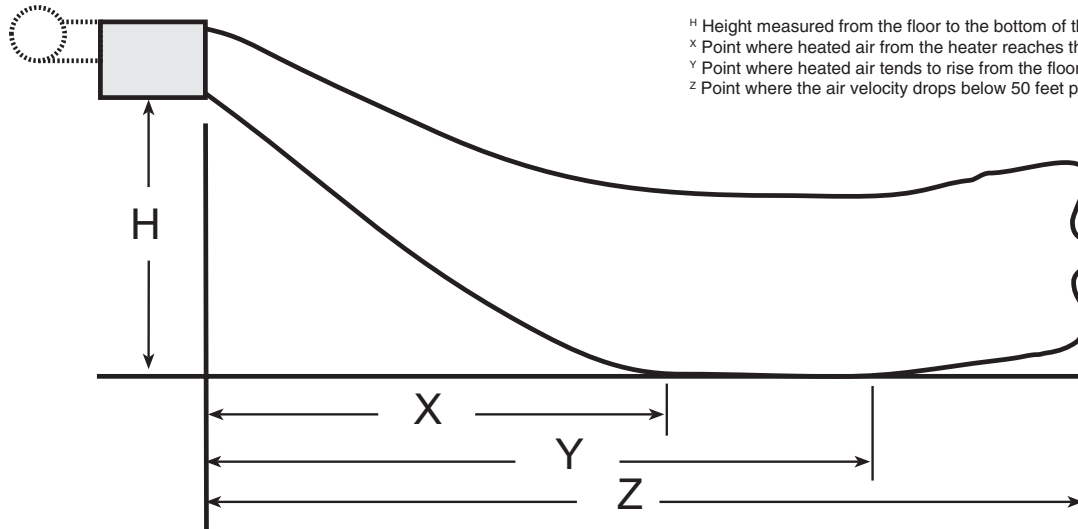
Size	Top		Flue Connector		Access Panel ^J		Non-Access Side		Bottom ^K		Rear ^L	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

^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.

THROW/FLOOR COVERAGE



- ^H Height measured from the floor to the bottom of the unit heater.
- ^X Point where heated air from the heater reaches the floor.
- ^Y Point where heated air tends to rise from the floor.
- ^Z Point where the air velocity drops below 50 feet per minute (254 mm/sec).

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	--	--	--	--	--	--	--	--	--	--	--	--	11	17	38	-54°	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	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 Meters

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	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	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.

GENERAL INFORMATION

WARNING: Gas-fired appliances are not designed for use in hazardous atmospheres containing flammable vapors or combustible dust, or atmospheres containing chlorinated or halogenated hydrocarbons.

Installations in public garages or airplane hangars are permitted when in accordance with ANSI Z223.1 and NFPA 54 codes or CAN1-B149 and enforcing authorities.

FOR YOUR SAFETY

What to do if you smell gas:

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

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

Requirements for installation vary depending on the model of heater and the type of installation. Follow the manufacturer's instructions and comply with all applicable codes.



HRAI
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For complete catalog information including submittals, energy calculations, dimension drawings, and more go to www.ReznorHVAC.com or call 800-695-1901.

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

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