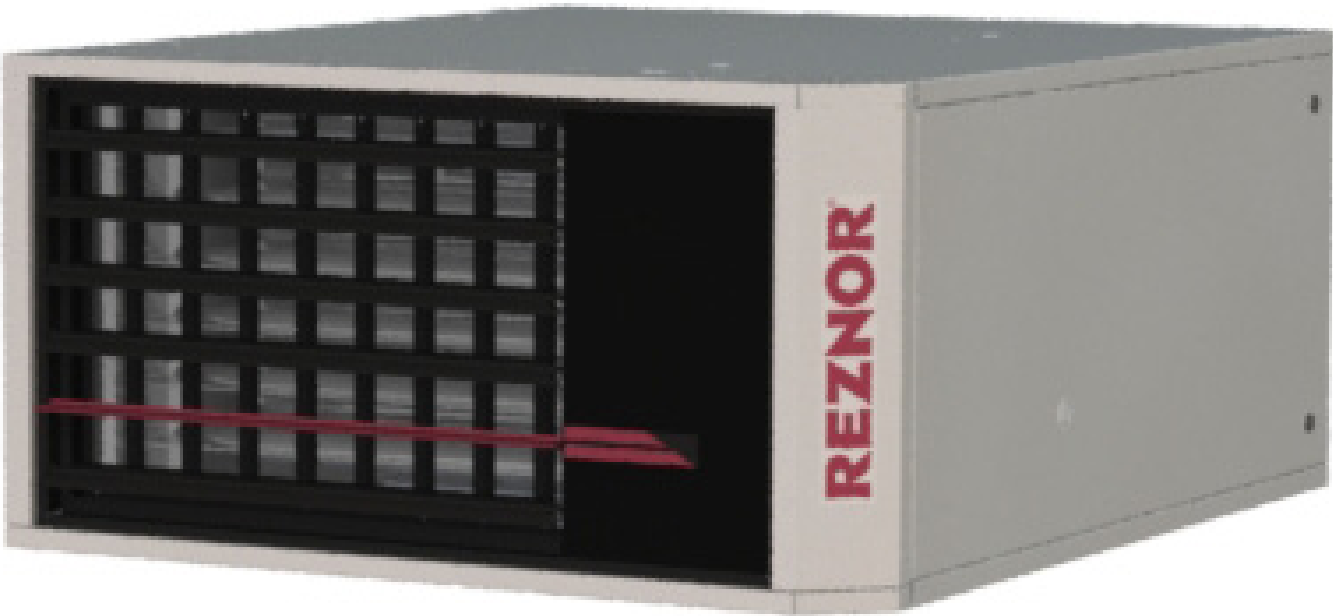


**TECHNICAL SPECIFICATIONS FOR MODEL UEZ**

**COMMERCIAL/INDUSTRIAL/RESIDENTIAL HIGH-EFFICIENCY  
SEPARATED-COMBUSTION LOW-STATIC AXIAL FAN GAS-FIRED UNIT HEATER**



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

## TECHNICAL SPECIFICATIONS—CONTINUED

### Unit Sizes

These heaters are available in seven unit sizes based on 55,000–305,000 BTU<sub>h</sub> input.

### Features

- 115/1/60 voltage/phase/Hz
- 91–93% thermal efficient
- Integrated circuit board with seven-segment display
- Easily-viewed status-indicating LED
- Hinged access door panel with quarter-turn latch
- Improved cabinet design with removable front face
- Painted galvanized-steel cabinet with two-tone black and white glossy, scratch-resistant paint scheme
- Unit sizes 130–310 have patented single-burner combustion system and TCORE® heat exchanger
- Factory-equipped for use with natural gas (propane conversion kit provided with each heater)
- 50–60°F temperature rise
- External terminal strip for 24V wiring
- Built in disconnect switch (20A @ 115V)
- Integrated horizontal louvers
- Four-point suspension standard on all unit sizes (unit sizes 55–110 may use two-point suspension)

### Factory-Installed Options

| Option | Description                              |
|--------|------------------------------------------|
| AA1    | Natural gas                              |
| AB1    | Installations at ≤6000 (≤1830) elevation |
| AB14   | Installations at >6000 (>1830) elevation |
| AC1    | Aluminized-steel heat exchanger          |
| AC2    | 409 SST heat exchanger                   |
| AK1    | 115/1/60 voltage                         |
| AL1    | Open drip-proof motor                    |
| AL14   | Totally-enclosed motor                   |

### Field-Installed Options

| Option | Description                                                                           |
|--------|---------------------------------------------------------------------------------------|
| CC2    | Vertical vent terminal/combustion air kit                                             |
| CC6    | Horizontal vent terminal/combustion air kit                                           |
| CC18   | Universal vent terminal assembly, 2-inch diameter × 40 inches long                    |
| CC19   | Horizontal vent terminal assembly, 3-inch diameter × 20 inches long                   |
| CC20   | Universal vent terminal assembly, 3-inch diameter × 44 inches long                    |
| CC22   | Low profile horizontal vent terminal assembly, 2-inch diameter                        |
| CC23   | Low profile horizontal vent terminal assembly, 3-inch diameter                        |
| CC24   | Horizontal vent terminal assembly, 2-inch diameter × 16 inches long                   |
| CC25   | Universal vent terminal assembly, 2- or 3-inch diameter × 24 inches long              |
| CD1    | Vertical louvers, direct discharge air to provide wider throw pattern                 |
| CD2    | Downturn nozzle, 25- to 65-degree variable air deflection range                       |
| CD3    | Downturn nozzle, 50- to 90-degree variable air deflection range                       |
| CD4    | Downturn nozzle, 25- to 65-degree variable air deflection range with vertical louvers |
| CE1    | Manual shutoff valve, natural gas or propane                                          |
| CG1    | 208V–115V stepdown transformer                                                        |
| CG4    | 230V–115V or 460V–115V stepdown transformer                                           |
| CG5    | 575V–115V stepdown transformer                                                        |

| Option     | Description                                                                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CK8        | Adapts 3/8-inch hangers for two-point suspension from 1-inch threaded pipe                                                                                               |
| CK10       | Adapts 3/8-inch hangers for four-point suspension from 1-inch threaded pipe                                                                                              |
| CL1        | Single-stage thermostat                                                                                                                                                  |
| CL31, CL32 | Multiple unit control: option CL31 includes components for one control unit and one additional unit—option CL32 includes components for each additional non-control unit |
| CM1        | Locking cover for CL1 thermostat                                                                                                                                         |

## Technical Data

| Parameter                                                                                                                     | Unit of Measure            | Unit Size (MBTUh) |        |         |         |         |         |         |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|--------|---------|---------|---------|---------|---------|
|                                                                                                                               |                            | 55                | 85     | 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                |        |         | 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, natural gas**                                                                                                 | inch                       | 1/2               |        |         |         |         | 3/4     |         |
| Gas connection, propane**                                                                                                     |                            | 2                 |        |         |         |         | 4       |         |
| Vent connection diameter                                                                                                      |                            |                   |        |         |         |         |         |         |
| Combustion air inlet diameter                                                                                                 |                            |                   |        |         |         |         |         |         |
| Control, 24V                                                                                                                  | amp                        | 1.0               |        |         |         |         |         |         |
| Full load amps, 115V                                                                                                          |                            | 1.6               | 2.2    | 4.4     | 6.3     |         | 10.0    |         |
| Maximum overcurrent protection, 115V***                                                                                       |                            | 15.0              |        |         |         |         | 20.0    |         |
| Normal power consumption                                                                                                      | watt                       | 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    |
|                                                                                                                               | meter <sup>3</sup> /minute | 27.4              | 34.2   | 50.8    | 63.9    | 69.6    | 125.4   | 121.3   |
| Discharge air opening area                                                                                                    | feet <sup>2</sup>          | 1.38              | 1.86   | 2.24    | 2.56    |         | 4.79    |         |
|                                                                                                                               | meter <sup>2</sup>         | 0.13              | 0.17   | 0.21    | 0.20    |         | 0.50    |         |
| Output velocity                                                                                                               | FPM                        | 701               | 659    | 800     | 883     | 962     | 924     | 894     |
|                                                                                                                               | meter/minute               | 214               | 201    | 244     | 269     | 293     | 282     | 272     |
| Standard open fan motor size                                                                                                  | HP                         | 1/20              |        | 1/6     | 1/4     |         | 1/2     |         |
| Optional enclosed fan motor size                                                                                              |                            | 1/20              |        | 1/6     | 1/4     |         | 1/2     |         |
| Fan motor speed                                                                                                               | RPM                        | 1050              |        |         |         |         |         |         |
| Fan diameter                                                                                                                  | inch                       | 12                | 16     | 18      | 18      |         | 24      |         |
| Approximate condensate per hour                                                                                               | gallon                     | 1/2               |        |         | 1       |         | 2       |         |
|                                                                                                                               | liter                      | 1.5               |        |         | 3.8     |         | 7.6     |         |
| Sound level @ 15 feet                                                                                                         | dBa                        | 53                | 54     | 54      | 58      | 58      | 64      | 65      |
| *ETL 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. |                            |                   |        |         |         |         |         |         |

## Certification

These unit heaters are listed by Intertek for use in industrial and commercial installations in the United States and Canada. In addition, unit sizes 55, 85, and 110 are listed in the United States and Canada as utility heaters for use in non-living spaces that are attached to, adjacent to, or part of a structure that contains space for family living quarters.

## TECHNICAL SPECIFICATIONS—CONTINUED

### Heater Throw

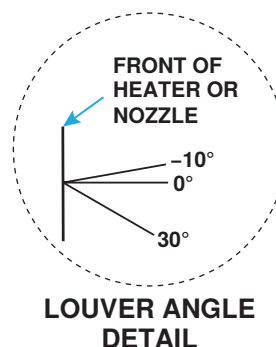
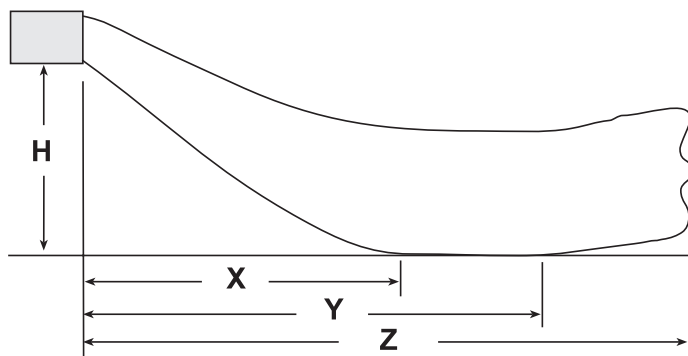
The graphic shows throw patterns and the table lists throw distances for heaters suspended at varying mounting heights.

**H** = the distance from the bottom of the heater to the floor

**X** = the distance from the heater to the start of floor coverage

**Y** = the distance from the heater to the end of floor coverage

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



| Dimension H*<br>(Feet (Meters)) | Discharge                   | Louver Angle*<br>and Dimension* | Unit Size (MBTUh) |           |           |           |           |           |            |
|---------------------------------|-----------------------------|---------------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|------------|
|                                 |                             |                                 | 55                | 85        | 110       | 130       | 180       | 260       | 310        |
|                                 |                             |                                 | Feet (Meters)     |           |           |           |           |           |            |
| 5 (1.5)                         | Standard horizontal louvers | Angle                           | 15°               | 15°       | 15°       | —         |           |           |            |
|                                 |                             | X                               | 13 (4.0)          | 11 (3.4)  | 12 (3.7)  |           |           |           |            |
|                                 |                             | Y                               | 17 (5.2)          | 15 (4.6)  | 17 (5.2)  |           |           |           |            |
|                                 |                             | Z                               | 37 (11)           | 44 (13.4) | 49 (14.9) |           |           |           |            |
|                                 | 30-degree downturn nozzle   | Angle                           | 15°               | 15°       | 15°       |           |           |           |            |
|                                 |                             | X                               | 2 (0.6)           | 1 (0.3)   | 2 (0.6)   |           |           |           |            |
|                                 |                             | Y                               | 19 (5.8)          | 21 (6.4)  | 31 (9.4)  |           |           |           |            |
|                                 |                             | Z                               | 21 (6.4)          | 30 (9.1)  | 34 (10.4) |           |           |           |            |
|                                 | 60-degree downturn nozzle   | Angle                           | −10°              | −10°      | −10°      |           |           |           |            |
|                                 |                             | X                               | 2 (0.6)           | 0 (0.0)   | 1 (0.3)   |           |           |           |            |
|                                 |                             | Y                               | 16 (4.9)          | 20 (6.1)  | 25 (7.6)  |           |           |           |            |
|                                 |                             | Z                               | 18 (5.5)          | 23 (7.0)  | 35 (10.7) |           |           |           |            |
| 8 (2.4)                         | Standard horizontal louvers | Angle                           | 27°               | 22°       | 22°       | 26°       | 20°       | 24°       | 20°        |
|                                 |                             | X                               | 11 (3.4)          | 14 (4.3)  | 13 (4.0)  | 13 (4.0)  | 16 (4.9)  | 15 (4.6)  | 17 (5.2)   |
|                                 |                             | Y                               | 16 (4.9)          | 17 (5.2)  | 21 (6.4)  | 24 (7.3)  | 30 (9.1)  | 28 (8.5)  | 31 (9.4)   |
|                                 |                             | Z                               | 35 (10.7)         | 42 (12.8) | 46 (14.0) | 73 (22.3) | 93 (28.3) | 94 (28.7) | 105 (32.0) |
|                                 | 30-degree downturn nozzle   | Angle                           | 15°               | 15°       | 15°       | 15°       | 15°       | 15°       | 15°        |
|                                 |                             | X                               | 4 (1.2)           | 3 (0.9)   | 3 (0.9)   | 1 (0.3)   | 0 (0.0)   | 4 (1.2)   | 2 (0.6)    |
|                                 |                             | Y                               | 19 (5.8)          | 24 (7.3)  | 34 (10.4) | 40 (12.2) | 32 (9.8)  | 44 (13.4) | 55 (16.8)  |
|                                 |                             | Z                               | 22 (6.7)          | 34 (10.4) | 38 (11.6) | 46 (14.0) | 41 (12.5) | 55 (16.8) | 56 (17.1)  |
|                                 | 60-degree downturn nozzle   | Angle                           | −10°              | −10°      | −10°      | −10°      | −10°      | −10°      | −10°       |
|                                 |                             | X                               | 3 (0.9)           | 1 (0.3)   | 2 (0.6)   | 1 (0.3)   | 0 (0.0)   | 1 (0.3)   | 0 (0.0)    |
|                                 |                             | Y                               | 17 (5.2)          | 21 (6.4)  | 25 (7.6)  | 33 (10.1) | 30 (9.1)  | 39 (11.9) | 39 (11.9)  |
|                                 |                             | Z                               | 22 (6.7)          | 26 (7.9)  | 35 (10.7) | 43 (13.1) | 36 (11.0) | 50 (15.2) | 47 (14.3)  |
| 10 (3.0)                        | Standard horizontal louvers | Angle                           | 32°               | 27°       | 27°       | 32°       | 25°       | 29°       | 25°        |
|                                 |                             | X                               | 13 (4.0)          | 13 (4.0)  | 14 (4.3)  | 14 (4.3)  | 17 (5.2)  | 16 (4.9)  | 18 (5.5)   |
|                                 |                             | Y                               | 17 (5.2)          | 17 (5.2)  | 17 (5.2)  | 24 (7.3)  | 31 (9.4)  | 28 (8.5)  | 32 (9.8)   |
|                                 |                             | Z                               | 33 (10.1)         | 38 (11.6) | 43 (13.1) | 69 (21.0) | 91 (27.7) | 89 (27.1) | 103 (31.4) |
| *See graphic above.             |                             |                                 |                   |           |           |           |           |           |            |

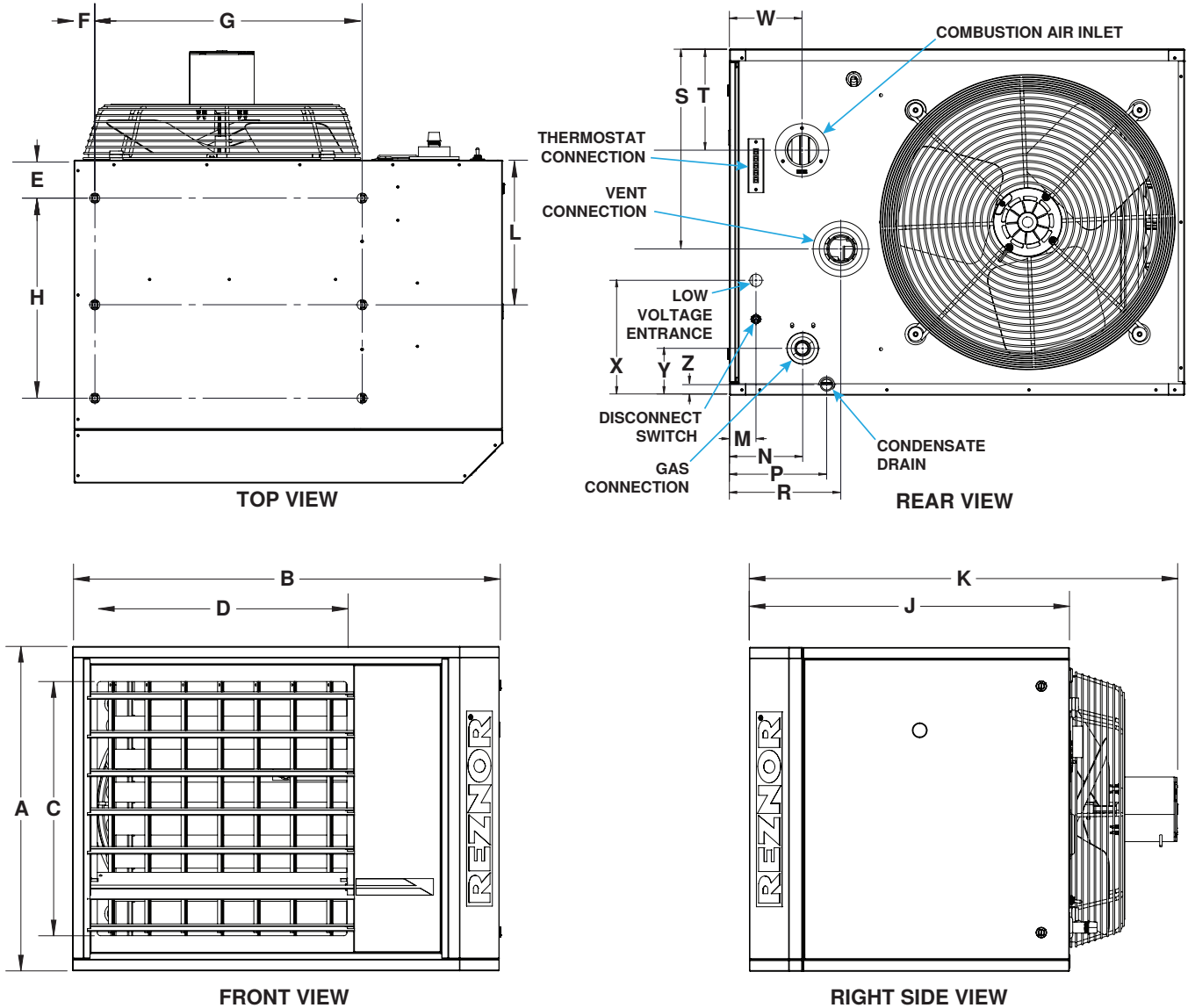
\*See graphic above.

| Dimension H*<br>(Feet (Meters)) | Discharge                         | Louver Angle*<br>and Dimension* | Unit Size (MBTUh) |           |           |           |           |           |           |
|---------------------------------|-----------------------------------|---------------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 |                                   |                                 | 55                | 85        | 110       | 130       | 180       | 260       | 310       |
|                                 |                                   |                                 | Feet (Meters)     |           |           |           |           |           |           |
| 10 (3.0)                        | 30-degree<br>downturn<br>nozzle   | Angle                           | 15°               | 15°       | 15°       | 15°       | 15°       | 30°       | 15°       |
|                                 |                                   | X                               | 5 (1.5)           | 6 (1.8)   | 5 (1.5)   | 2 (0.6)   | 3 (0.9)   | 0 (0.0)   | 4 (1.2)   |
|                                 |                                   | Y                               | 19 (5.8)          | 20 (6.1)  | 36 (11.0) | 40 (12.2) | 31 (9.4)  | 32 (9.8)  | 50 (15.2) |
|                                 |                                   | Z                               | 19 (5.8)          | 34 (10.4) | 39 (11.9) | 47 (14.3) | 42 (12.8) | 43 (13.1) | 54 (16.5) |
|                                 | 60-degree<br>downturn<br>nozzle   | Angle                           | -10°              | -10°      | -10°      | -10°      | -10°      | -10°      | -10°      |
|                                 |                                   | X                               | 5 (1.5)           | 4 (1.2)   | 2 (0.6)   | 1 (0.3)   | 1 (0.3)   | 2 (0.6)   | 1 (0.3)   |
|                                 |                                   | Y                               | 20 (6.1)          | 25 (7.6)  | 31 (9.4)  | 34 (10.4) | 29 (8.8)  | 40 (12.2) | 41 (12.5) |
|                                 |                                   | Z                               | 22 (6.7)          | 28 (8.5)  | 37 (11.3) | 46 (14.0) | 38 (11.6) | 50 (15.2) | 49 (14.9) |
| 12 (3.7)                        | Standard<br>horizontal<br>louvers | Angle                           | —                 | 32°       | 32°       | 39°       | 30°       | 34°       | 30°       |
|                                 |                                   | X                               | —                 | 16 (4.9)  | 14 (4.3)  | 14 (4.3)  | 18 (5.5)  | 17 (5.2)  | 19 (5.8)  |
|                                 |                                   | Y                               |                   | 19 (5.8)  | 17 (5.2)  | 24 (7.3)  | 31 (9.4)  | 28 (8.5)  | 32 (9.8)  |
|                                 |                                   | Z                               |                   | 35 (10.7) | 41 (12.5) | 64 (19.5) | 88 (26.8) | 85 (25.9) | 98 (29.9) |
|                                 | 30-degree<br>downturn<br>nozzle   | Angle                           | 30°               | 30°       | 30°       | 15°       | 15°       | 30°       | 30°       |
|                                 |                                   | X                               | 2 (0.6)           | 1 (0.3)   | 0 (0.0)   | 4 (1.2)   | 4 (1.2)   | 0 (0.0)   | 0 (0.0)   |
|                                 |                                   | Y                               | 12 (3.7)          | 21 (6.4)  | 21 (6.4)  | 39 (11.9) | 31 (9.4)  | 33 (10.1) | 32 (9.8)  |
|                                 |                                   | Z                               | 13 (4.0)          | 27 (8.2)  | 31 (9.4)  | 51 (15.5) | 42 (12.8) | 45 (13.7) | 52 (15.8) |
|                                 | 60-degree<br>downturn<br>nozzle   | Angle                           | -10°              | -10°      | -10°      | -10°      | -10°      | -10°      | -10°      |
|                                 |                                   | X                               | 5 (1.5)           | 6 (1.8)   | 4 (1.2)   | 2 (0.6)   | 2 (0.6)   | 4 (1.2)   | 3 (0.9)   |
|                                 |                                   | Y                               | 18 (5.5)          | 25 (7.6)  | 31 (9.4)  | 36 (11.0) | 29 (8.8)  | 38 (11.6) | 42 (12.8) |
|                                 |                                   | Z                               | 21 (6.4)          | 31 (9.4)  | 40 (12.2) | 52 (15.8) | 38 (11.6) | 54 (16.5) | 50 (15.2) |
| 14 (4.3)                        | Standard<br>horizontal<br>louvers | Angle                           | —                 | 39°       | 36°       | 45°       | 34°       | 40°       | 34°       |
|                                 |                                   | X                               | —                 | 14 (4.3)  | 14 (4.3)  | 14 (4.3)  | 19 (5.8)  | 17 (5.2)  | 20 (6.1)  |
|                                 |                                   | Y                               |                   | 17 (5.2)  | 18 (5.5)  | 22 (6.7)  | 30 (9.1)  | 27 (8.2)  | 32 (9.8)  |
|                                 |                                   | Z                               |                   | 30 (9.1)  | 41 (12.5) | 59 (18.0) | 84 (25.6) | 80 (24.4) | 95 (29.0) |
|                                 | 30-degree<br>downturn<br>nozzle   | Angle                           | —                 | 30°       | 30°       | 15°       | 15°       | 30°       | 30°       |
|                                 |                                   | X                               | —                 | 3 (0.9)   | 1 (0.3)   | 7 (2.1)   | 8 (2.4)   | 2 (0.6)   | 2 (0.6)   |
|                                 |                                   | Y                               |                   | 21 (6.4)  | 21 (6.4)  | 38 (11.6) | 31 (9.4)  | 32 (9.8)  | 31 (9.4)  |
|                                 |                                   | Z                               |                   | 26 (7.9)  | 30 (9.1)  | 51 (15.5) | 42 (12.8) | 47 (14.3) | 51 (15.5) |
|                                 | 60-degree<br>downturn<br>nozzle   | Angle                           | —                 | -10°      | -10°      | -10°      | -10°      | -10°      | -10°      |
|                                 |                                   | X                               | —                 | 11 (3.4)  | 5 (1.5)   | 4 (1.2)   | 4 (1.2)   | 6 (1.8)   | 4 (1.2)   |
|                                 |                                   | Y                               |                   | 21 (6.4)  | 29 (8.8)  | 36 (11.0) | 28 (8.5)  | 36 (11.0) | 45 (13.7) |
|                                 |                                   | Z                               |                   | 30 (9.1)  | 44 (13.4) | 52 (15.8) | 42 (12.8) | 52 (15.8) | 53 (16.2) |
| 16 (4.9)                        | Standard<br>horizontal<br>louvers | Angle                           | —                 |           |           | 51°       | 39°       | 45°       | 38°       |
|                                 |                                   | X                               | —                 |           |           | 13 (4.0)  | 19 (5.8)  | 17 (5.2)  | 21 (6.4)  |
|                                 |                                   | Y                               |                   |           |           | 20 (6.1)  | 29 (8.8)  | 25 (7.6)  | 31 (9.4)  |
|                                 |                                   | Z                               |                   |           |           | 53 (16.2) | 79 (24.1) | 74 (22.6) | 90 (27.4) |
|                                 | 30-degree<br>downturn<br>nozzle   | Angle                           | —                 | 30°       | 30°       | 15°       | 30°       | 30°       | 30°       |
|                                 |                                   | X                               | —                 | 4 (1.2)   | 3 (0.9)   | 7 (2.1)   | 1 (0.3)   | 4 (1.2)   | 4 (1.2)   |
|                                 |                                   | Y                               |                   | 21 (6.4)  | 20 (6.1)  | 34 (10.4) | 23 (7.0)  | 27 (8.2)  | 30 (9.1)  |
|                                 |                                   | Z                               |                   | 26 (7.9)  | 30 (9.1)  | 42 (12.8) | 27 (8.2)  | 46 (14.0) | 50 (15.2) |
|                                 | 60-degree<br>downturn<br>nozzle   | Angle                           | —                 | 15°       | -10°      | -10°      | -10°      | -10°      | -10°      |
|                                 |                                   | X                               | —                 | 1 (0.3)   | 9 (2.7)   | 6 (1.8)   | 6 (1.8)   | 9 (2.7)   | 6 (1.8)   |
|                                 |                                   | Y                               |                   | 10 (3.0)  | 22 (6.7)  | 36 (11.0) | 27 (8.2)  | 32 (9.8)  | 44 (13.4) |
|                                 |                                   | Z                               |                   | 3 (0.9)   | 40 (12.2) | 52 (15.8) | 42 (12.8) | 49 (14.9) | 52 (15.8) |
| 18 (5.5)                        | Standard<br>horizontal<br>louvers | Angle                           | —                 |           |           | 58°       | 44°       | 51°       | 43°       |
|                                 |                                   | X                               | —                 |           |           | 11 (3.4)  | 19 (5.8)  | 16 (4.9)  | 20 (6.1)  |
|                                 |                                   | Y                               |                   |           |           | 17 (5.2)  | 28 (8.5)  | 24 (7.3)  | 30 (9.1)  |
|                                 |                                   | Z                               |                   |           |           | 44 (13.4) | 74 (22.6) | 66 (20.1) | 85 (25.9) |
|                                 | 30-degree<br>downturn<br>nozzle   | Angle                           | —                 | 30°       |           | 30°       | 30°       | 30°       | 30°       |
|                                 |                                   | X                               | —                 | 4 (1.2)   |           | 6 (1.8)   | 2 (0.6)   | 6 (1.8)   | 6 (1.8)   |
|                                 |                                   | Y                               |                   | 14 (4.3)  |           | 26 (7.9)  | 22 (6.7)  | 45 (13.7) | 30 (9.1)  |
|                                 |                                   | Z                               |                   | 28 (8.5)  |           | 34 (10.4) | 26 (7.9)  | 45 (13.7) | 50 (15.2) |
|                                 | 60-degree<br>downturn<br>nozzle   | Angle                           | —                 | 15°       |           | -10°      | -10°      | -10°      | -10°      |
|                                 |                                   | X                               | —                 | 1 (0.3)   |           | 8 (2.4)   | 9 (2.7)   | 10 (3.0)  | 8 (2.4)   |
|                                 |                                   | Y                               |                   | 10 (3.0)  |           | 36 (11.0) | 23 (7.0)  | 47 (14.3) | 38 (11.6) |
|                                 |                                   | Z                               |                   | 11 (3.4)  |           | 52 (15.8) | 42 (12.8) | 47 (14.3) | 48 (14.6) |

\*See graphic above.

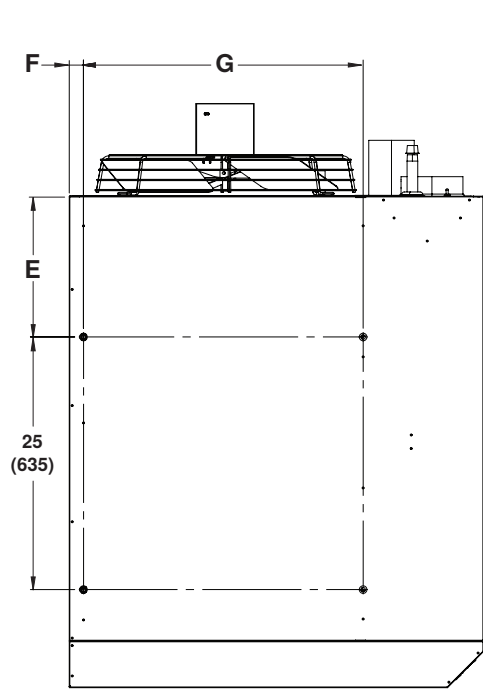
## TECHNICAL SPECIFICATIONS—CONTINUED

### Dimensions

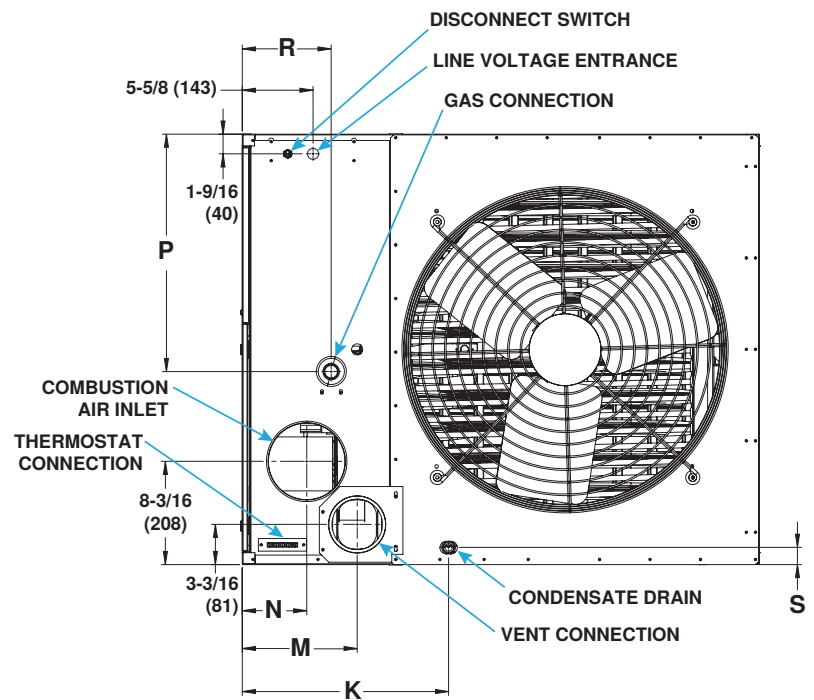


| Unit Size<br>(MBTUh) | Dimension (See Graphic Above) |                |              |              |                |             |              |
|----------------------|-------------------------------|----------------|--------------|--------------|----------------|-------------|--------------|
|                      | A                             | B              | C            | D            | E*             | F*          | G*           |
|                      | Inches (mm)                   |                |              |              |                |             |              |
| 55                   | 17-5/8 (448)                  | 28-1/4 (718)   | 12-1/2 (318) | 15-7/8 (403) | 2-27/32 (72)   | 1-9/16 (40) | 18-1/8 (460) |
| 85                   | 21 (533)                      | 30-1/4 (768)   | 16-7/8 (429) | 17-7/8 (454) |                |             | 20-1/8 (511) |
| 110                  | 24-1/2 (622)                  | 32-1/4 (819)   | 19-1/4 (489) | 18-7/8 (479) |                |             |              |
| H*                   |                               | J              | K            | L*           | M              | N           | P            |
| 55                   | 15 (381)                      | 24-1/4 (616)   | 31 (787)     | 12 (305)     | 2 (51)         | 3-3/16 (81) | 4-7/8 (124)  |
| 85                   |                               |                | 33 (838)     |              | 1-7/8 (48)     |             | 5-3/16 (132) |
| 110                  |                               |                |              | 10-7/8 (276) |                |             |              |
| R                    |                               | S              | T            | W            | X              | Y           | Z            |
| 55                   | 6 (152)                       | 7-1/4 (184)    | 3-1/4 (83)   | 3-3/16 (81)  | 6-1/8 (156)    | 2-1/4 (57)  | 3/4 (19)     |
| 85                   |                               | 10-11/16 (271) | 3-11/16 (94) |              | 10-11/16 (271) | 2-3/4 (70)  |              |
| 110                  |                               | 7-7/8 (200)    | 14-1/8 (359) |              | 7-7/8 (200)    | 5-1/8 (130) |              |

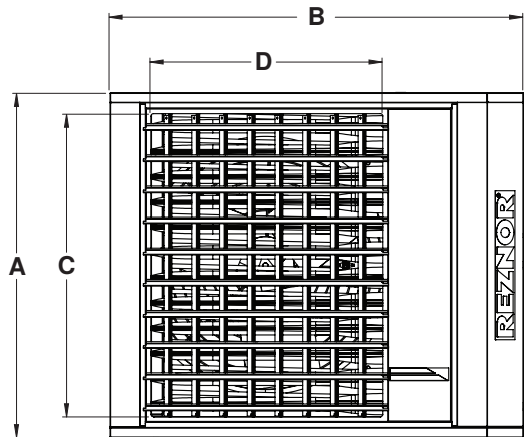
\*Heater suspension points (3/8-16 FEM).



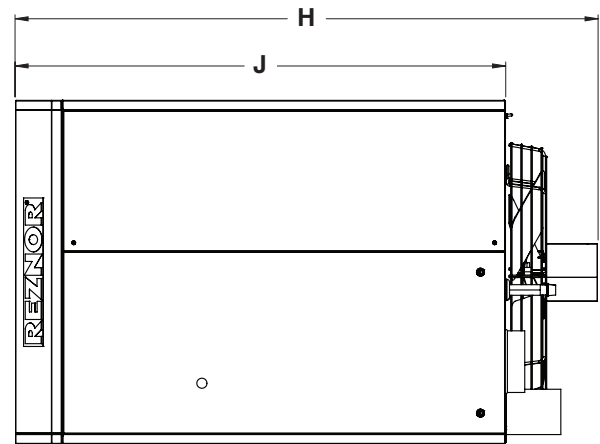
TOP VIEW



REAR VIEW



FRONT VIEW



RIGHT SIDE VIEW

| Unit Size | Dimension (See Graphic Above) |                |                 |                 |                |
|-----------|-------------------------------|----------------|-----------------|-----------------|----------------|
|           | A                             | B              | C               | D               | E*             |
|           | Inches (mm)                   |                |                 |                 |                |
| 130, 180  | 20-1/8 (511)                  | 39-3/16 (995)  | 16 (406)        | 23 (584)        | 11-31/32 (304) |
| 260, 310  | 34-1/8 (867)                  | 41 (1041)      | 30 (762)        |                 | 13-31/32 (355) |
| F*        |                               | G*             | H               | J               | K              |
| 130, 180  | 2-3/8 (60)                    | 25-11/16 (652) | 55-13/32 (1407) | 46-1/32 (1169)  | 15-19/32 (396) |
| 260, 310  | 1-13/32 (36)                  | 27-11/16 (703) | 58 (1473)       | 48-21/32 (1236) | 16-15/32 (418) |
| M         |                               | N              | P               | R               | S              |
| 130, 180  | 8-5/16 (211)                  | 4-5/16 (110)   | 5-1/16 (129)    | 6-9/32 (160)    | 1-3/4 (45)     |
| 260, 310  | 9-3/32 (231)                  | 5-3/32 (129)   | 18-13/16 (478)  | 7-1/32 (179)    | 1-3/8 (35)     |

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

## TECHNICAL SPECIFICATIONS—CONTINUED

### Weights

| Type     | Unit Size (MBTUh) |          |          |           |           |           |           |
|----------|-------------------|----------|----------|-----------|-----------|-----------|-----------|
|          | 55                | 85       | 110      | 130       | 180       | 260       | 310       |
|          | Pounds (kg)       |          |          |           |           |           |           |
| Unit     | 85 (39)           | 103 (47) | 123 (56) | 230 (104) | 245 (111) | 360 (163) | 395 (179) |
| Shipping | 120 (55)          | 148 (68) | 162 (74) | 255 (116) | 270 (123) | 385 (175) | 420 (191) |

### Clearances

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

| Heater Surface                                                                              | Minimum Clearance (Inches (mm))                                                                                 |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Top                                                                                         | 1 (25)                                                                                                          |
| Flue connector                                                                              | 0 (0)                                                                                                           |
| Access panel                                                                                | 18 (457)                                                                                                        |
| Non-access side                                                                             | 1 (25)                                                                                                          |
| Bottom*                                                                                     | 1 (25)                                                                                                          |
| Rear**                                                                                      | 18 (457)                                                                                                        |
| Front                                                                                       | Refer to values for variable X (distance from heater to start of floor coverage) in <b>Heater Throw</b> section |
| *Suspend the heater so that the bottom is a minimum of 5 feet (1.5 meters) above the floor. |                                                                                                                 |
| **Measure rear clearance from the fan motor.                                                |                                                                                                                 |

### Halogenated Hydrocarbons

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

## ⚠ CAUTION ⚠

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

### Installation Codes

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



## Gas Supply Pressure

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

## Gas Supply Piping

- All piping must be in accordance with requirements outlined in the *National Fuel Gas Code* (ANSI/Z223.1, latest edition) or the *Natural Gas and Propane Installation Code* (CSA-B149.1, latest edition).
- The heater is orificed for operation with natural gas having a heating value of 1,000 (±50) BTU per cubic foot or with propane gas having a heating value of 2,500 (±100) BTU per cubic foot. Sizing of gas supply lines depends on piping capacity and is based on cubic feet per hour based on a 0.3 IN WC pressure drop, a 0.6 specific gravity for natural gas at 1,000 BTU per cubic feet, and a 1.6 specific gravity for propane at 2,550 BTU per cubic feet. If the gas at the installation does not meet this specification, consult the factory for proper orificing.
- Variables for sizing gas supply lines are listed in the table below. When sizing supply lines, consider the possibility of future expansion and increased requirements (refer to the *National Fuel Gas Code* for additional information).

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

## Vent Connections

### ⚠ WARNING ⚠

**All separated-combustion units MUST BE equipped with both combustion air and exhaust piping to the outdoors.**

### ⚠ CAUTION ⚠

**Concentric horizontal and vertical vent/combustion air systems are the only venting/combustion air systems approved for these units.**

**NOTE: IMPORTANT: For unit sizes 55, 85, and 110, install the venting system in accordance with the venting system manufacturer's instructions. For unit sizes 130, 180, 260, and 310, install the venting system in accordance with the installation manual provided with the unit.**

## **⚠ DANGER ⚠**

### **FIRE OR EXPLOSION HAZARD**

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

### **WHAT TO DO IF YOU SMELL GAS**

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

**For more information on Reznor HVAC products:**

- **Contact your local Reznor representative at 1-800-695-1901**
- **Refer to the manuals and additional consumer materials found at [www.reznorhvac.com](http://www.reznorhvac.com)**

