

Notes:

- If the furnace is equipped with NOx screens and is to be used with LP (propane) gas, remove the screens before start-up.
  - Install the drip leg in the gas line.
  - The furnace controls require correct polarity on the power supply and an adequate ground.
  - Connect Y and G to the control board for cooling operation.
  - Use external filters for all configurations.
  - Electrical or gas entry is available on both casing sides.
  - For downflow application, the vent blower must be rotated 90° left or right as shown.
- Measure the supply air static pressure after the furnace before the indoor coil. Record this positive number. Measure the return air static pressure after the filter. Record this negative number. Treat the negative number as a positive number, and add it to the recorded supply static pressure reading. This sum is the total system external static pressure.
  - The inlet gas pressure must be 7 in. W.C. for natural gas and 11 in. W.C. for propane. The nominal manifold gas pressure is 3.5 in. W.C. for natural gas and 10 in. W.C. for propane at maximum input.

Model	Airflow CFM (bottom return without filters)				
	0.5 in. ESP (nominal)				
	Red wire (Low)	Yellow wire (Medium low)	Gray wire (Medium)	Blue wire (Medium high)	Black wire (High)
Z8ES040A12S(L)MPS1	775	900	1000	1100	1275
Z8ES060A12S(L)MPS1	675	750	850	975	1225
Z8ES080B12S(L)MPS1	750	900	1000	1175	1300
Z8ES080C16S(L)MPS1	950	1100	1225	1475	1575
Z8ES080C20S(L)MPS1	875	1225	1450	1600	1800
Z8ES100B12S(L)MPS1	725	850	1075	1250	1400
Z8ES100C16S(L)MPS1	925	1075	1325	1550	1750
Z8ES100C20S(L)MPS1	1025	1275	1475	1650	1825
Z8ES120C16S(L)MPS1	1000	1325	1550	1700	1925
Z8ES120C20S(L)MPS1	950	1225	1450	1600	1775
Z8ES130D20S(L)MPS1	1075	1425	1600	1775	1925

**Note:** Not all blower speeds are suitable for heating operation. Consult the *Installation Manual* for correct heating speed selection.

Model	Recommended fuse or circuit breaker (A)	Input rate (Btu/h)	Total unit (A)	Air temperature rise range (°F)	Time For 1 ft³ natural gas (1030 Btu/ft³) seconds on (rate)	Gas pipe connection, NPT (in.)
Z8ES040A12S(L)MPS1	15	40,000	8.2	20–50	92	1/2
Z8ES060A12S(L)MPS1	15	60,000	8.2	30–60	62	1/2
Z8ES080B12S(L)MPS1	15	80,000	8.7	35–65	46	1/2
Z8ES080C16S(L)MPS1	15	80,000	8.8	30–60	46	1/2
Z8ES080C20S(L)MPS1	20	80,000	13.8	25–55	46	1/2
Z8ES100B12S(L)MPS1	15	100,000	8.7	40–70	37	1/2
Z8ES100C16S(L)MPS1	15	100,000	11.1	40–70	37	1/2
Z8ES100C20S(L)MPS1	20	100,000	13.8	25–55	37	1/2
Z8ES120C16S(L)MPS1	15	120,000	11.1	40–70	31	1/2
Z8ES120C20S(L)MPS1	20	120,000	13.7	35–65	31	1/2
Z8ES130D20S(L)MPS1	20	130,000	13.7	35–65	28	1/2

Led indicator

Indication	Condition
Slow green flash	Normal operation in standby mode
Slow amber flash	Normal operation with call for heat
Any red flash	Fault condition

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# Quick Reference Guide

## Non-condensing Standard ECM Single-Stage Multi-position/Low NOx Residential Gas Furnaces (33 in. tall) - Models: Z8ES

This document does not replace the Installation Manual, which you must refer to for detailed information.

Supply air end: 24.38 in. width, 20 in. depth, 0.5 in. height. 4 in. diameter vent connection outlet.

Return air end: 24.25 in. width, 0.5 in. height.

Left side: 28.5 in. and 29.5 in. widths.

Right side: 23 in. width, 14 in. height, 1.5 in. and 1 in. depths.

Front: 33 in. height, A width.

Indoor coil: Flanges can be folded up for coil cabinet or plenum attachment.

Electrical entry, Vent connection outlet, Gas pipe entry, Thermostat wiring.

Follow all national, local codes and standards in addition to this document. The installation must comply with regulations of the serving gas supplier, local building, heating, plumbing, and other codes. In absence of local codes, the installation must comply with the national codes and all authorities having jurisdiction.

Dimensions:	Cabinet size	A (in.)	B (in.)
	All A cabinet furnaces	14 1/2	13 3/8
	All B cabinet furnaces	17 1/2	16 3/8
	All C cabinet furnaces	21	19 7/8
	All D cabinet furnaces	24 1/2	23 3/8

Clearances

Application	Top	Front	Rear	Left side	Right side	Flue	Floor/ bottom	Closet	Alcove	Attic	Line contact
Upflow	1	6	0	0	3	6	Combustible	Yes	Yes	Yes	No
Upflow B-vent	1	3	0	0	0	1	Combustible	Yes	Yes	Yes	No
Downflow	1	6	0	0	3	6	1 <sup>1</sup>	Yes	Yes	Yes	No
Downflow B-vent	1	3	0	0	0	1	1 <sup>1</sup>	Yes	Yes	Yes	No
Horizontal	1	6	0	0	3	6	Combustible	No	Yes	Yes	Yes <sup>2</sup>
Horizontal B-vent	1	3	0	0	0	1	Combustible	No	Yes	Yes	Yes <sup>2</sup>

1. Special floor base or indoor coil is required for use on combustible floor.  
2. Line contact only permitted between lines formed by the intersection of the rear panel and side panel (top in horizontal position) of the furnace jacket and building joists, studs, or framing.

**MOST COMMON INSTALLATION CONFIGURATIONS (MORE OPTIONS AVAILABLE WITH INDUCER ROTATION, WHICH IS COVERED IN THE INSTALLATION MANUAL)**

Furnace is multi-position and may be installed in any of the configurations shown.

Inducer blower may be rotated 90° either way to vent through casing side, as shown below.

These are Category I units and the vent system must be installed in accordance with latest edition of the National Fuel Gas Code, Z223.1/NFPA 54, or in Canada, CSA B149.1.

