



Heating and Air Conditioning

## TECHNICAL GUIDE

### GAS-FIRED RESIDENTIAL SINGLE STAGE MULTI-POSITION GAS FURNACES STANDARD & Low NO<sub>x</sub> MODELS MODELS: TM8X / TMLX

NATURAL GAS  
60 - 120 MBH INPUT



ISO 9001  
Certified Quality  
Management System

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at [www.york.com](http://www.york.com)

Additional rating information can be found at [www.ahridirectory.org](http://www.ahridirectory.org)

#### WARRANTY

20-year limited warranty on the heat exchanger.  
10-year heat exchanger warranty on commercial applications.  
Standard 5-year limited Parts warranty.

**Extended 10-year limited parts warranty when product is registered online within 90 days of purchase for replacement or closing for new home construction.**

#### DESCRIPTION

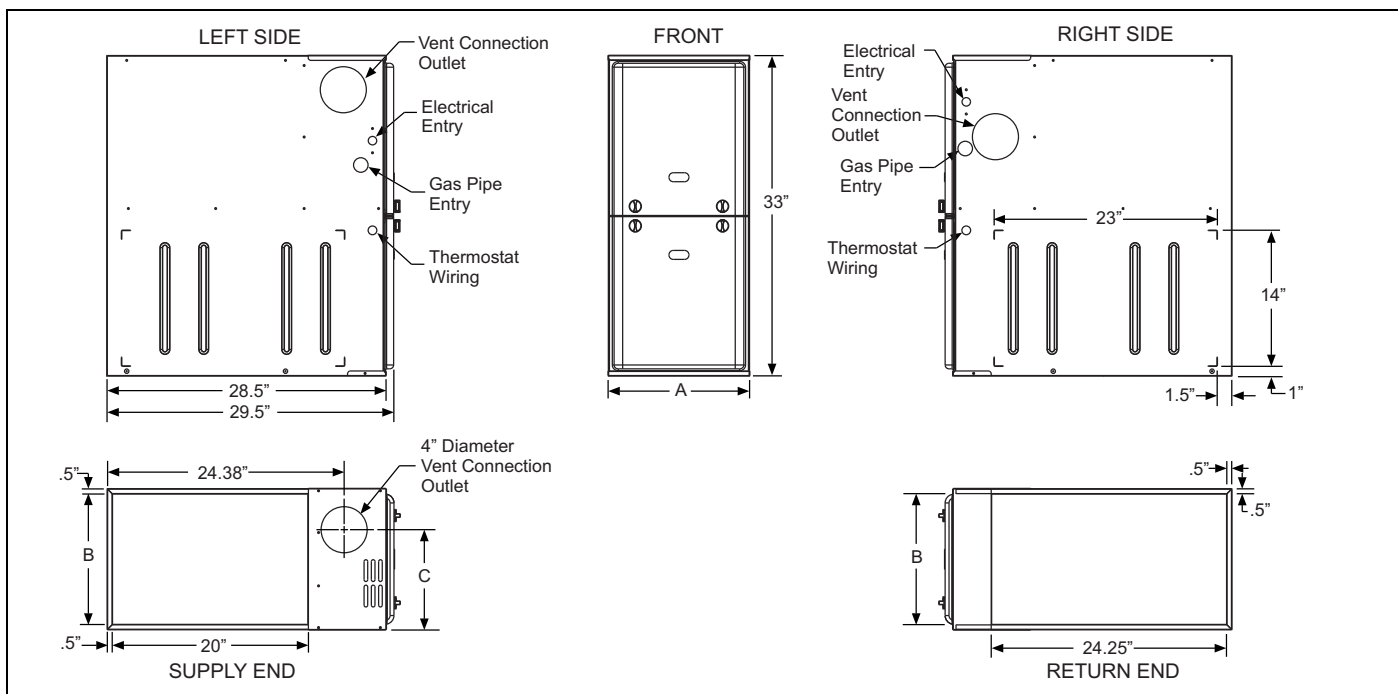
These compact units employ induced combustion, reliable hot surface ignition and high heat transfer aluminized tubular heat exchangers. The units are factory shipped for installation in upflow or horizontal applications and may be converted for downflow applications.

These furnaces are designed for residential installation in a basement, closet, alcove, attic, recreation room or garage and are also ideal for commercial applications. All units are factory assembled, wired and tested to assure safe dependable and economical installation and operation.

These units are Category I listed and may be common vented with another gas appliance as allowed by the National Fuel Gas Code.

#### FEATURES

- Easily applied in upflow, horizontal left or right, or downflow installation with minimal conversion necessary.
- Compact, easy to install, ideal height 33" tall cabinet.
- Blower-off delay for cooling SEER improvement.
- Easy access to controls to connect power/control wiring.
- Built-in, high level self diagnostics with fault code displays standard on integrated control module for reliable operation.
- Low unit amp requirement for easy replacement application.
- All models are convertible to use propane (LP) gas.
- Electronic Hot Surface Ignition saves fuel cost with increased dependability and reliability.
- 100% shut off main gas valve for extra safety.
- 5 speed direct drive, X13 style high efficiency DC motor.
- 24V, 40 VA control transformer and blower relay supplied for add-on cooling.
- Hi-tech tubular aluminized steel primary heat exchanger.
- Timed on, adjustable off blower capability for maximum comfort.
- Blower door safety switch.
- Solid removable bottom panel allows easy conversion.
- Low NO<sub>x</sub> models have been designed to meet specific code requirements.
- Airflow leakage less than 1% of total airflow at ductblaster conditions.
- No knockouts to deal with, making installation easier.
- Movable duct connector flanges for application flexibility.
- Quiet inducer operation.
- Inducer rotates for easy conversion of venting options.
- Fully supported blower assembly for easy access and removal of blower.
- External air filters used for maximum flexibility in meeting customers IAQ needs.
- Venting applications - may be installed as a common vent with other gas-fired appliances or use a masonry chimney.
- 1/4 turn knobs provided for easy door removal.
- High-efficiency blower motor for lower electrical power usage and improved A/C SEER ratings.
- Insulated blower compartment for thermal and acoustic performance.



**Cabinet and Duct Dimensions**

Models	Nominal CFM (m <sup>3</sup> /min)	Cabinet Size	Cabinet Dimensions (Inches)			Approximate Operating Weights
			A	B	C	Lbs
TM(8,L)X060A12MP11	1200	A	14 1/2	13 3/8	10.3	94
TM(8,L)X080B12MP11	1200	B	17 1/2	16 3/8	11.8	103
TM(8,L)X080C16MP11	1600	C	21	19 7/8	13.6	114
TM(8,L)X100C16MP11	1600	C	21	19 7/8	13.6	118
TM(8,L)X100C20MP11	2000	C	21	19 7/8	13.6	122
TM(8,L)X120C20MP11	2000	C	21	19 7/8	15.8	129

**Ratings & Physical / Electrical Data**

Models	Input	Output	AFUE	Air Temp. Rise	Max. Outlet Air Temp	Blower		Blower Size	Max Over-Current Protect	Total Unit Amps	Min. wire Size (awg) @ 75 ft one way
	MBH	MBH		°F	°F	HP	Amps				
TM(8,L)X060A12MP11	60	48	80.0	30-60	160	1/2	6.8	11 x 8	15	9.3	14
TM(8,L)X080B12MP11	80	64	80.0	35-65	165	1/2	6.8	11 x 8	15	9.3	14
TM(8,L)X080C16MP11	80	64	80.0	25-55	155	1/2	6.8	11 x 10	15	9.3	14
TM(8,L)X100C16MP11	100	80	80.0	35-65	165	1/2	6.8	11 x 10	15	9.3	14
TM(8,L)X100C20MP11	100	80	80.0	25-55	155	3/4	8.4	11 x 11	15	10.9	14
TM(8,L)X120C20MP11	120	96	80.0	35-65	165	3/4	8.4	11 x 11	15	10.9	14

Nominal external static pressure is 0.50" w.c. at furnace outlet ahead of cooling coils.  
 Annual Fuel Utilization Efficiency (AFUE) numbers are determined in accordance with DOE Test procedures.  
 Wire size and over current protection must comply with the National Electrical Code (NFPA-70-latest edition) and all local codes.

**HORIZONTAL SIDEWALL VENTING**

For applications where vertical venting is not possible, the only approved method of horizontal venting is the use of an auxiliary power vent. Auxiliary power venters must be approved by CSA, UL, or other recognized safety agencies. Follow all application and installation details provided by the manufacturer of the power vent.

**FILTER PERFORMANCE**

The airflow capacity data published in the "Blower Performance" table shown represents blower performance WITHOUT filters.

All applications of these furnaces require the use of field installed air filters. All filter media and mounting hardware or provisions must be field installed external to the furnace cabinet. DO NOT attempt to install any filters inside the furnace.

**NOTICE**

Single side return above 1800 CFM is approved as long as the filter velocity does not exceed filter manufacturer's recommendation and a transition is used to allow use on a 20x25 filter.

**Recommended Filter Sizes**

CFM	Cabinet Size	Side (in)	Bottom (in)
1200	A	16 x 25	14 x 25
1200	B	16 x 25	16 x 25
1600	C	16 x 25	20 x 25
2000	C	(2) 16 x 25	20 x 25

- Air velocity through throwaway type filters may not exceed 300 feet per minute (91.4 m/min). All velocities over this require the use of high velocity filters.
- Do not exceed 1800 CFM using a single side return and a 16x25 filter. For CFM greater than 1800, you may use two side returns or one side and the bottom or one return with a transition to allow use of a 20x25 filter.

**Unit Clearances to Combustibles (All dimensions in inches, and all surfaces identified with the unit in an upflow configuration)**

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>

- Special floor base or air conditioning coil required for use on combustible floor.
- 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.

**ACCESSORIES**

**Propane (LP) Conversion Kit** - This accessory conversion kit may be used to convert natural gas units for propane (LP) operation.

1NP0347 - All Models

**Side Return Filter Racks -**

1SR0200 - All Models

1SR0302 - All Models

**Bottom Return Filter Racks** - 1BR05xx series are galvanized steel filter racks. 1BR06xx are pre-painted steel filter racks to match the appearance of the furnace cabinet.

1BR0514 or 1BR0614 - For 14-1/2" cabinets

1BR0517 or 1BR0617 - For 17-1/2" cabinets

1BR0521 or 1BR0621 - For 21" cabinets

**Combustible Floor Base Kit** - For installation of these furnaces in downflow applications directly onto combustible flooring material. These kits are required to prevent potential overheating situations. These kits are also required in any applications where the furnace is installed in a downflow configuration without an evaporator coil, where the combustible floor base kit provides access for combustible airflow.

1CB0514 - For 14-1/2" cabinets

1CB0517 - For 17-1/2" cabinets

1CB0521 - For 21" cabinets

**EAC Transition Kits** - For installation of EAC accessories with these furnaces to provide easy transition of return airflow through the EAC to get the proper sealing and reduced airflow leakage.

1TK1001 - For all models using side return

1TK1014 - For 14-1/2" cabinets using bottom return

1TK1017 - For 17-1/2" cabinets using bottom return

1TK1021 - For 21" cabinets using bottom return

**Masonry Chimney Kits** - For installations where these furnaces are vented using existing or new lined masonry chimneys.

1CK0603

1CK0604

**High Altitude Pressure Switches** - For installation where the altitude is less than 5,000 feet it is not required that the pressure switch be changed. For altitudes above 5,000 feet, see kits below.

1PS3301 060, 080, 120

1PS3302 100

**Thermostats** - Compatible thermostat controls are available through accessory sourcing. For optimum performance and installation, refer to the UPGNET "Low Voltage Wiring Diagram" document to select and apply controls.

**Blower Performance CFM - Any Position (without filter)**

Models	Speed	Airflow Data (SCFM)									
		Ext. Static Pressure (in. H2O)									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
TM(8,L)X060A12MP11	High	1350	1320	1280	1240	1200	1150	1100	1070	1020	970
	Medium High	1180	1140	1100	1050	1010	970	920	860	810	780
	Medium	1010	960	910	860	800	760	720	640	620	560
	Medium Low	940	820	730	680	590	560	500	460	400	360
	Low	910	700	540	430	380	NA	NA	NA	NA	NA
TM(8,L)X080B12MP11	High	1460	1440	1410	1240	1210	1170	1130	1090	1050	1000
	Medium High	1190	1160	1130	1090	1050	1010	960	910	870	770
	Medium	1010	970	940	890	840	800	750	700	610	570
	Medium Low	980	860	770	730	660	620	490	460	400	360
	Low	910	800	590	430	400	NA	NA	NA	NA	NA
TM(8,L)X080C16MP11	High	1780	1730	1690	1650	1590	1540	1490	1440	1400	1340
	Medium High	1620	1570	1530	1480	1430	1390	1340	1280	1230	1100
	Medium	1440	1400	1350	1290	1250	1200	1140	1090	1030	930
	Medium Low	1250	1200	1140	1090	1030	970	910	850	720	680
	Low	1090	960	700	580	440	400	NA	NA	NA	NA
TM(8,L)X100C16MP11	High	1750	1700	1660	1610	1560	1510	1460	1420	1370	1310
	Medium High	1580	1540	1490	1440	1400	1350	1310	1260	1150	1110
	Medium	1420	1380	1330	1290	1230	1180	1130	1080	990	910
	Medium Low	1210	1170	1110	1060	1010	950	880	830	710	670
	Low	1020	890	660	560	420	390	NA	NA	NA	NA
TM(8,L)X100C20MP11	High	2190	2160	2110	2060	2020	1980	1930	1890	1810	1710
	Medium High	1830	1790	1740	1700	1650	1600	1520	1490	1430	1380
	Medium	1580	1530	1480	1430	1380	1330	1280	1230	1160	1060
	Medium Low	1410	1360	1310	1250	1190	1130	1070	1010	900	830
	Low	1150	1020	850	770	680	560	510	NA	NA	NA
TM(8,L)X120C20MP11	High	2210	2160	2120	2070	2030	1980	1950	1900	1840	1720
	Medium High	1830	1800	1750	1710	1650	1610	1560	1520	1410	1350
	Medium	1610	1560	1510	1470	1410	1360	1300	1250	1150	1060
	Medium Low	1400	1340	1290	1230	1160	1100	1040	980	910	830
	Low	1160	1020	850	770	680	620	510	NA	NA	NA

**NOTES:**

1. Airflow expressed in standard cubic feet per minute (CFM).
2. Motor voltage at 115 V.