



Heating and Air Conditioning

TECHNICAL GUIDE

GAS-FIRED RESIDENTIAL SINGLE STAGE MULTI-POSITION GAS FURNACES

STANDARD & Low NOx MODELS

MODELS: TM8X / TMLX

NATURAL GAS

60 - 120 MBH INPUT



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

Visit us on the web at www.york.com

Additional rating information can be found at 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

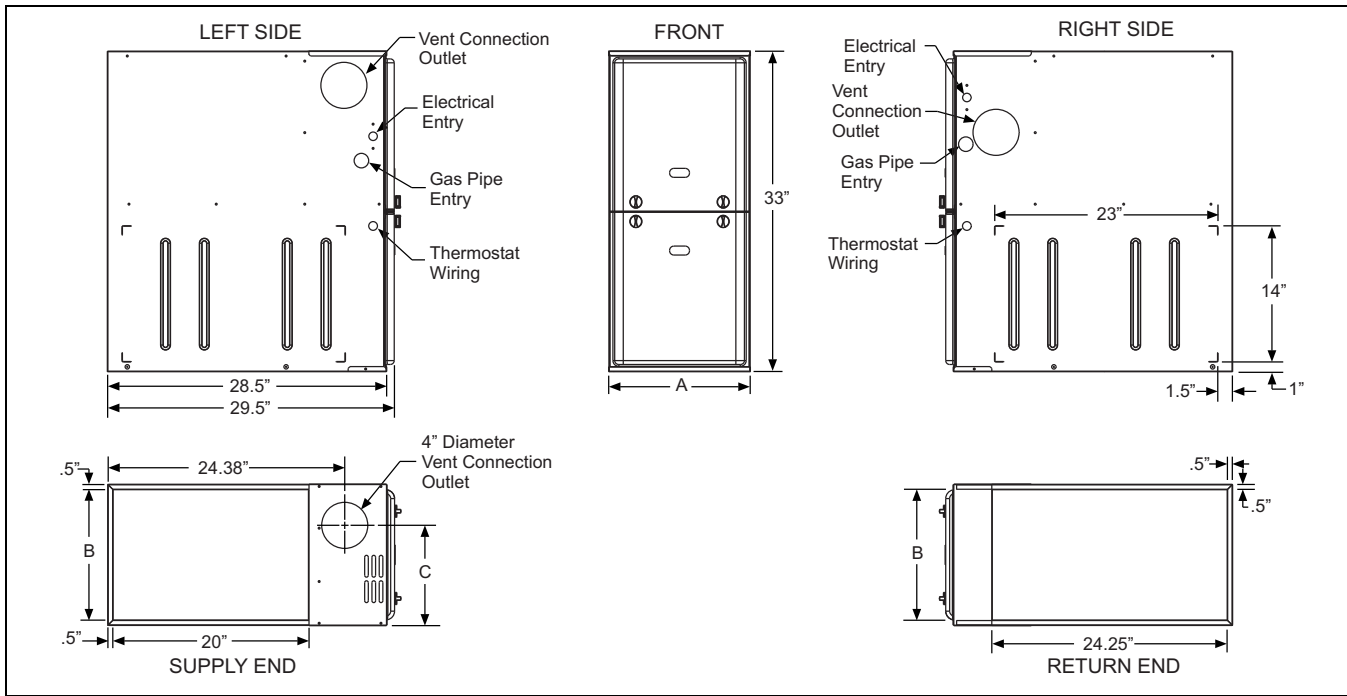
These compact units employ induced combustion, reliable hot surface ignition and high heat transfer aluminized tubular heat exchangers. The units are factory shipped for installation in upflow or horizontal applications and may be converted for downflow applications.

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 NOx 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 ³ /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 listed above 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.

NOTE: 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 of 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 |

NOTES:

- 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 ¹ | Yes | Yes | Yes | No |
| Downflow B-Vent | 1 | 3 | 0 | 0 | 0 | 1 | 1 ¹ | Yes | Yes | Yes | No |
| Horizontal | 1 | 6 | 0 | 0 | 3 | 6 | Combustible | No | Yes | Yes | Yes ² |
| Horizontal B-Vent | 1 | 3 | 0 | 0 | 0 | 1 | Combustible | No | Yes | Yes | Yes ² |

- 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 -

1NP0347 - All Models

This accessory conversion kit may be used to convert natural gas units for propane (LP) operation.

SIDE RETURN FILTER RACKS -

1SR0200 - All Models

1SR0302 - All Models

BOTTOM RETURN FILTER RACKS -

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

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

1BR0521 or 1BR0621 - For 21" cabinets

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

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 -

1CK0603

1CK0604

For installations where these furnaces are vented using existing or new lined masonry chimneys.

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

1PS3302

ROOM THERMOSTATS - A wide selection of compatible thermostats are available to provide optimum performance and features for any installation.

1H/1C, manual change-over electronic non-programmable thermostat.

1H/1C, auto/manual changeover, electronic programmable, deluxe 7-day, thermostat.

1H/1C, auto/manual changeover, electronic programmable.

* For the most current accessory information, refer to the price book or consult factory.

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.