

# TECHNICAL GUIDE

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## GAS-FIRED RESIDENTIAL SINGLE STAGE MULTI-POSITION GAS FURNACES

### MODELS: TG8S

NATURAL GAS

60 - 130 MBH INPUT



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

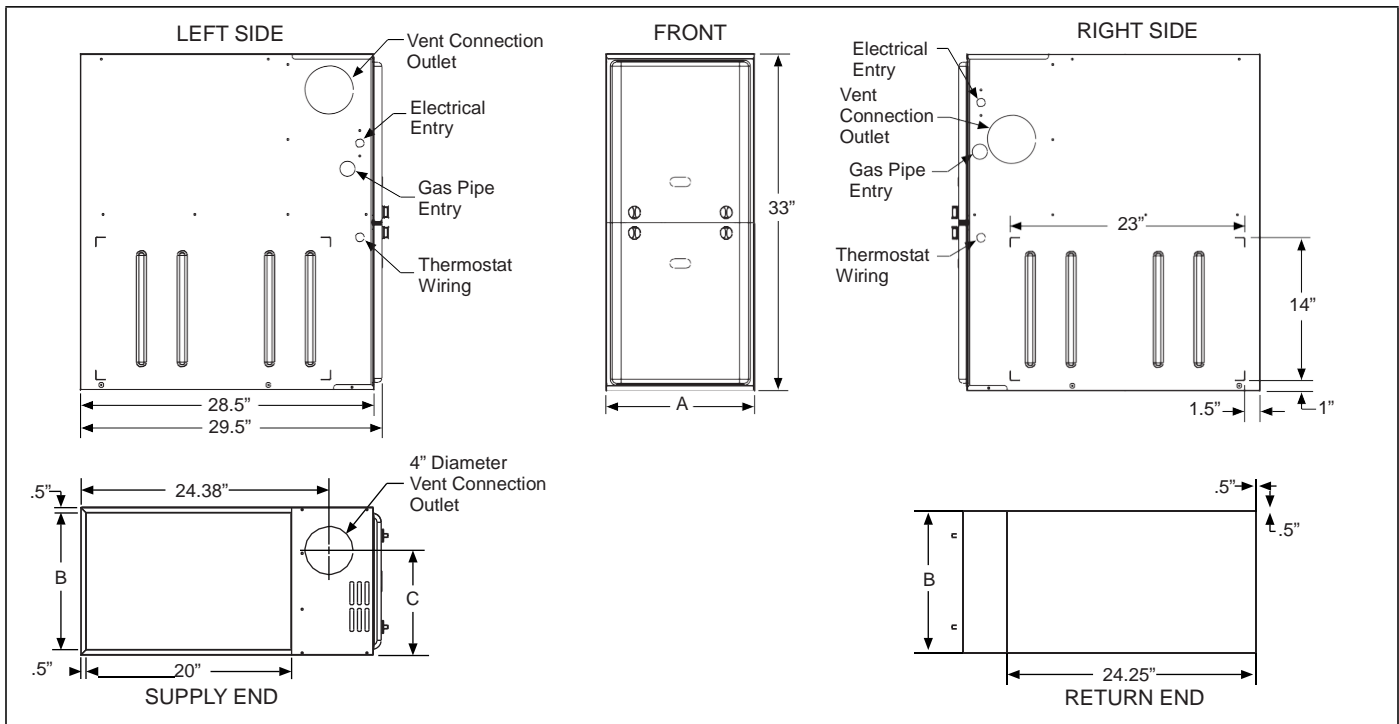
These compact units employ induced combustion, reliable hot surface ignition and high heat transfer aluminized tubular heat exchangers. The units are factory shipped for installation in upflow or horizontal applications and may be converted for downflow applications.

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.
- Single wire twinning or staging feature available.
- 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.
- 4 speed, direct drive PSC 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.
- 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.



**Cabinet and Duct Dimensions**

Models	Nominal CFM (m <sup>3</sup> /min)	Cabinet Size	Cabinet Dimensions (Inches)			Approximate Operating Weights
			A	B	C	Lbs
TG(8,L)S060A12MP11	1200	A	14 1/2	13 3/8	10.3	94
TG(8,L)S080C16MP11	1600	C	21	19 7/8	13.6	114
TG(8,L)S100C20MP11	2000	C	21	19 7/8	13.6	122
TG(8,L)S120C20MP11	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				
TG(8,L)S060A12MP11	60	48	80.0	30-60	160	1/3	4.8	11 x 8	10	7.0	14
TG(8,L)S080C16MP11	80	64	80.0	25-55	155	1/2	7.5	11 x 10	15	10.0	14
TG(8,L)S100C20MP11	100	80	80.0	25-55	155	1	14.5	11 x 11	20	17.0	12
TG(8,L)S120C20MP11	120	96	80.0	30-60	160	1	14.5	11 x 11	20	17.0	12

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” tables shown represents blower performance WITH-OUT 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
<p><i>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.</i></p>

## Recommended Filter Sizes

CFM	Cabinet Size	Side (in)	Bottom (in)
800	A	16 x 25	14 x 25
1000	A	16 x 25	14 x 25
1200	A	16 x 25	14 x 25
1200	B	16 x 25	16 x 25
1600	B	16 x 25	16 x 25
1600	C	16 x 25	20 x 25
2000	C	(2) 16 x 25	20 x 25
2200	C	(2) 16 x 25	20 x 25
2000	D	(2) 16 x 25	22 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 -

1SR0402 - 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 - For 14-1/2" cabinets,

1BR0517 - For 17-1/2" cabinets,

1BR0521 - For 21" cabinets

1BR0524 - For 24-1/2" cabinets

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

Models	Speed	Bottom 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
TG(8,L)S060A12MP11	High	1358	1341	1319	1303	1275	1238	1190	1130	1062	943
	Medium High	1097	1083	1075	1064	1042	1024	997	962	906	821
	Medium Low	935	928	920	899	872	840	809	771	731	659
	Low	800	779	763	736	711	687	657	622	584	529
TG(8,L)S080C16MP11	High	1881	1822	1783	1696	1602	1539	1465	1394	1267	1130
	Medium High	1553	1535	1492	1456	1408	1343	1279	1226	1113	1014
	Medium Low	1312	1286	1288	1260	1205	1143	1091	1029	966	841
	Low	1169	1166	1128	1098	1069	1032	987	909	835	747
TG(8,L)S100C20MP11	High	2893	2774	2687	2589	2478	2376	2255	2120	1978	1824
	Medium High	2272	2243	2204	2169	2086	2018	1940	1842	1743	1602
	Medium Low	1765	1752	1737	1718	1674	1619	1561	1493	1437	1312
	Low	1425	1380	1409	1378	1307	1274	1226	1180	1113	1025
TG(8,L)S120C20MP11	High	2701	2620	2533	2429	2338	2227	2112	1993	1861	1706
	Medium High	2125	2083	2046	1994	1955	1901	1857	1737	1621	1497
	Medium Low	1664	1664	1647	1619	1580	1555	1468	1392	1332	1226
	Low	1358	1339	1330	1318	1286	1235	1185	1141	1060	938

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

Models	Speed	Left Side 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
TG(8,L)S060A12MP11	High	1406	1401	1394	1379	1338	1304	1261	1202	1135	1040
	Medium High	1129	1126	1107	1094	1076	1047	1010	966	921	843
	Medium Low	970	947	933	916	890	863	827	789	741	668
	Low	834	809	797	768	740	710	677	634	586	534
TG(8,L)S080C16MP11	High	1825	1781	1746	1695	1641	1587	1521	1429	1330	1184
	Medium High	1516	1493	1482	1464	1442	1411	1343	1275	1192	1035
	Medium	1294	1297	1271	1238	1187	1120	1083	1028	979	851
	Low	1126	1115	1095	1049	1027	996	957	929	840	742
TG(8,L)S100C20MP11	High	2964	2886	2794	2707	2623	2522	2415	2281	2149	2012
	Medium High	2192	2178	2150	2109	2098	2007	1956	1888	1795	1671
	Medium Low	1699	1695	1706	1632	1612	1568	1519	1460	1392	1293
	Low	1361	1356	1337	1304	1267	1243	1191	1149	1077	994
TG(8,L)S120C20MP11	High	2828	2768	2699	2612	2524	2423	2308	2219	2118	1982
	Medium High	2085	2073	2042	2029	1967	1896	1893	1816	1717	1635
	Medium Low	1620	1631	1636	1593	1567	1557	1520	1476	1407	1263
	Low	1322	1311	1302	1271	1241	1201	1162	1101	1042	979

Airflow expressed in standard cubic feet per minute (CFM).

1. Return air is through side opposite motor (left side).
2. Motor voltage at 115 V.
3. Airflow through across motor side (right side) may be slightly less than the data shown above.