TECHNICAL GUIDE
GAS-FIRED RESIDENTIAL SINGLE STAGE MULTI-POSITION GAS FURNACES
STANDARD &Low NOx MODELS

MODELS: TG8S / TGLS

NATURAL GAS
40 - 130 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 for the most up-to-date technical information.

Additional efficiency rating information can be found at www.gamanet.org.

DESCRIPTION

These compact units employ induced combustion, reliable hot surface ignition and high heat transferaluminized 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.

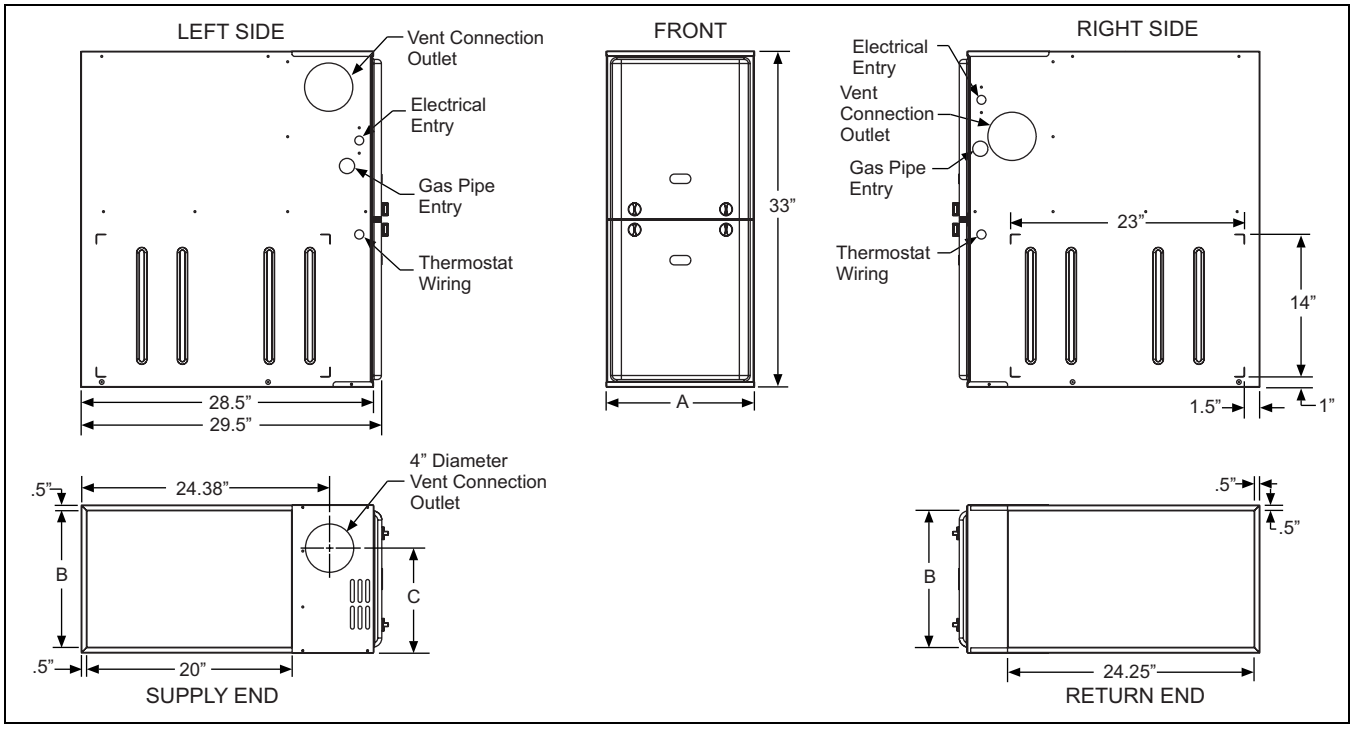
WARRANTY

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

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 convertable 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.
- 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.

FOR DISTRIBUTION USE ONLY - NOT TO BE USED AT POINT OF RETAIL SALE



Cabinet and Duct Dimensions

Models	Nominal CFM (m^3/min)	Cabinet Size	Cabinet Dimensions (Inches)			Approximate Operating Weights
			A	B	C	Lbs
TG(8,L)S040A08MP11	800	A	14 1/2	13 3/8	10.3	89
TG(8,L)S060A10MP11	1000	A	14 1/2	13 3/8	10.3	91
TG(8,L)S060A12MP11	1200	A	14 1/2	13 3/8	10.3	94
TG(8,L)S080B12MP11	1200	B	17 1/2	16 3/8	11.8	103
TG(8,L)S080C16MP11	1600	C	21	19 7/8	13.6	114
TG(8,L)S080C22MP11	2200	C	21	19 7/8	13.6	119
TG(8,L)S100B12MP11	1200	B	17 1/2	16 3/8	11.8	108
TG(8,L)S100C16MP11	1600	C	21	19 7/8	13.6	118
TG(8,L)S100C20MP11	2000	C	21	19 7/8	13.6	122
TG(8,L)S120C16MP11	1600	C	21	19 7/8	15.8	123
TG(8,L)S120C20MP11	2000	C	21	19 7/8	15.8	129
TG(8,L)S130D20MP11	2000	D	24 1/2	23 3/8	17.5	135

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)S040A08MP11	40	32	80.0	25-55	155	1/5	2.1	9 x 8	10	4.5	14
TG(8,L)S060A10MP11	60	48	80.0	25-55	155	1/3	3.8	9 x 8	10	6.0	14
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)S080B12MP11	80	64	80.0	35-65	165	1/3	4.8	11 x 8	10	7.5	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)S080C22MP11	80	64	80.0	25-55	155	1	14.5	11 x 11	20	16.0	12
TG(8,L)S100B12MP11	100	80	80.0	40-70	170	1/3	4.8	9 x 8	10	7.5	14
TG(8,L)S100C16MP11	100	80	80.0	35-65	165	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)S120C16MP11	120	96	80.0	40-70	170	1/2	7.5	11 x 10	15	10.0	14
TG(8,L)S120C20MP11	120	96	80.0	30-60	160	1	14.5	11 x 11	20	17.0	12
TG(8,L)S130D20MP11	130	104	80.0	35-65	165	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. Auxilary 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 on a 20x25 filter.

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

NOTES:

1. 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.
2. 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]

1. Special floor base or air conditioning coil 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.

ACCESSORIES

PROPANE (LP) CONVERSION KIT -

1NP0347 - All Models except 130,000 BTU input
1NP0501 - 130,000 BTU input only

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
1SF0101 - 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
1BR0524 or 1BR0624 - For 24-1/2” 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 in 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
1CB0524 - For 24-1/2” 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
1TK1024 - For 24-1/2” 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 8,000 feet it is not required that the pressure switch be changed. For altitudes above 8,000 feet, see kits below.

1PS3301
1PS3302

ROOM THERMOSTATS - A wide selection of compatible thermosets 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) - 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)S040A08MP11	High	966	923	874	804	717	566	386	121	NA	NA
	Medium High	813	782	743	687	605	464	280	118	NA	NA
	Medium Low	745	706	667	619	545	413	205	NA	NA	NA
	Low	684	655	614	565	489	342	171	NA	NA	NA
TG(8,L)S060A10MP11	High	1292	1230	1160	1088	1004	891	760	476	129	129
	Medium High	1203	1157	1105	1035	942	846	728	485	133	129
	Medium Low	1043	1010	962	905	823	705	491	305	124	123
	Low	869	845	811	772	708	579	438	178	145	125
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)S080B12MP11	High	1329	1307	1285	1247	1195	1143	1091	1027	927	806
	Medium High	994	1004	1008	984	970	941	893	839	773	669
	Medium Low	786	790	782	781	761	743	726	685	630	540
	Low	655	654	647	629	620	594	560	524	469	399
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)S080C22MP11	High	2811	2725	2638	2540	2448	2339	2224	2111	1974	1831
	Medium High	2234	2233	2147	2092	2042	1974	1907	1820	1705	1575
	Medium Low	1722	1716	1690	1681	1603	1553	1489	1426	1335	1241
	Low	1396	1375	1348	1325	1263	1200	1150	1120	1052	965
TG(8,L)S100B12MP11	High	1314	1318	1292	1265	1223	1177	1119	1051	971	890
	Medium High	1010	1004	1003	995	992	956	914	857	798	721
	Medium Low	812	805	796	786	777	754	727	685	626	560
	Low	661	659	644	623	614	605	568	532	482	399
TG(8,L)S100C16MP11	High	2069	2014	1956	1885	1820	1748	1668	1577	1468	1362
	Medium High	1662	1656	1639	1608	1586	1544	1491	1421	1338	1204
	Medium	1368	1371	1377	1376	1367	1334	1295	1250	1188	1104
	Low	1016	1014	1018	1030	1012	996	975	944	898	852
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)S120C16MP11	High	1752	1724	1702	1664	1600	1542	1454	1372	1264	1119
	Medium High	1469	1449	1453	1420	1382	1344	1269	1197	1118	1022
	Medium Low	1248	1235	1226	1207	1179	1133	1077	992	922	841
	Low	1076	1076	1046	1025	1002	968	927	869	784	707
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
TG(8,L)S130D20MP11	High	2823	2714	2613	2507	2399	2282	2170	2042	1908	1761
	Medium High	2242	2188	2154	2102	2045	1970	1887	1792	1673	1537
	Medium Low	1805	1791	1738	1725	1675	1623	1567	1487	1394	1256
	Low	1425	1427	1403	1335	1324	1280	1236	1176	1103	996

NOTES:

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

Blower Performance CFM - Any Position (without filter) - Left Side Return

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)S040A08MP11	High	994	971	942	899	829	725	419	120	NA	NA
	Medium High	824	804	777	739	675	489	350	361	NA	NA
	Medium Low	757	733	694	659	575	444	399	NA	NA	NA
	Low	707	684	641	604	495	397	282	NA	NA	NA
TG(8,L)S060A10MP11	High	1371	1323	1251	1169	1086	971	843	521	NA	NA
	Medium High	1249	1207	1158	1098	1018	921	669	503	NA	NA
	Medium Low	1059	1026	997	949	889	793	582	420	NA	NA
	Low	854	836	809	775	717	576	464	216	NA	NA
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)S080B12MP11	High	1274	1285	1255	1239	1207	1158	1111	1049	979	830
	Medium High	975	974	968	960	948	923	879	823	756	672
	Medium Low	777	771	772	762	752	734	695	651	604	529
	Low	647	634	623	610	602	588	552	506	457	381
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)S080C22MP11	High	2972	2863	2769	2671	2571	2465	2352	2227	2095	1950
	Medium High	2173	2146	2103	2082	2036	1966	1904	1827	1738	1621
	Medium Low	1670	1667	1647	1618	1585	1549	1492	1408	1350	1238
	Low	1371	1339	1317	1284	1259	1199	1147	1085	1024	928
TG(8,L)S100B12MP11	High	1258	1278	1283	1259	1240	1204	1149	1073	1015	897
	Medium High	986	995	1011	1003	962	935	913	861	808	738
	Medium Low	793	786	786	783	780	750	733	702	627	567
	Low	667	653	640	629	604	583	558	519	469	427
TG(8,L)S100C16MP11	High	2009	1994	1933	1893	1836	1763	1691	1606	1508	1389
	Medium High	1523	1506	1521	1490	1466	1435	1393	1326	1241	1119
	Medium Low	1230	1249	1245	1230	1218	1195	1161	1120	1039	949
	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)S120C16MP11	High	1789	1774	1738	1702	1665	1608	1514	1431	1343	1205
	Medium High	1451	1445	1431	1413	1394	1362	1312	1235	1149	1037
	Medium	1202	1210	1266	1252	1226	1191	1082	1028	950	852
	Low	1063	1050	1033	1010	1007	982	941	889	845	778
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
TG(8,L)S130D20MP11	High	2958	2862	2758	2662	2553	2447	2328	2203	2056	1893
	Medium High	2191	2182	2157	2092	2085	1997	1932	1844	1741	1608
	Medium Low	1737	1738	1713	1691	1675	1590	1531	1467	1389	1276
	Low	1404	1394	1380	1355	1327	1276	1220	1163	1095	1013

NOTES:

1. Airflow expressed in standard cubic feet per minute (CFM).
2. Return air is through side opposite motor (left side).
3. Motor voltage at 115 V.
4. Airflow through across motor side (right side) may be slightly less than the data shown above.

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