

A97MV

PRODUCT SPECIFICATIONS

MODULATING VARIABLE SPEED GAS FURNACE

FORM NO. A97MV-100 (10/2018)



COMFORT SYNC™
COMMUNICATING THERMOSTAT ENABLED

CONTROLS

- Communicating control enabled
- Modulating gas valve
- Thermostat flexibility: works with the Comfort Sync T-Stat or a conventional 24V T-Stat
- Self diagnostics saves last 10 fault codes regardless of power interruption

VENTING

- Category 4 direct vent appliance (2 pipe only)

INSTALLATION FEATURES

- Left or right utility connections
- Zero step horizontal conversion
- Removable floor base for bottom return air

WARRANTY

10 year limited parts warranty / lifetime heat exchanger warranty available. See limited warranty document for details.

California Only

If installed in South Coast Air Quality Management District (SCAQMD) only: This furnace does not meet the SCAQMD Rule 1111 NOx emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: www.CleanAirFurnaceRebate.com.

If installed in San Joaquin Valley Air Pollution Control District (SJVAPCD) only: This furnace does not meet the SJVAPCD Rule 4905 NOx emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450.

CONFIGURATIONS

- Upflow / Horizontal
- Downflow

HEAT EXCHANGER DESIGN

- 409 stainless steel primary heat exchanger with crimped non-welded construction
- AL 29-4C stainless steel secondary heat exchanger

CABINET DESIGN

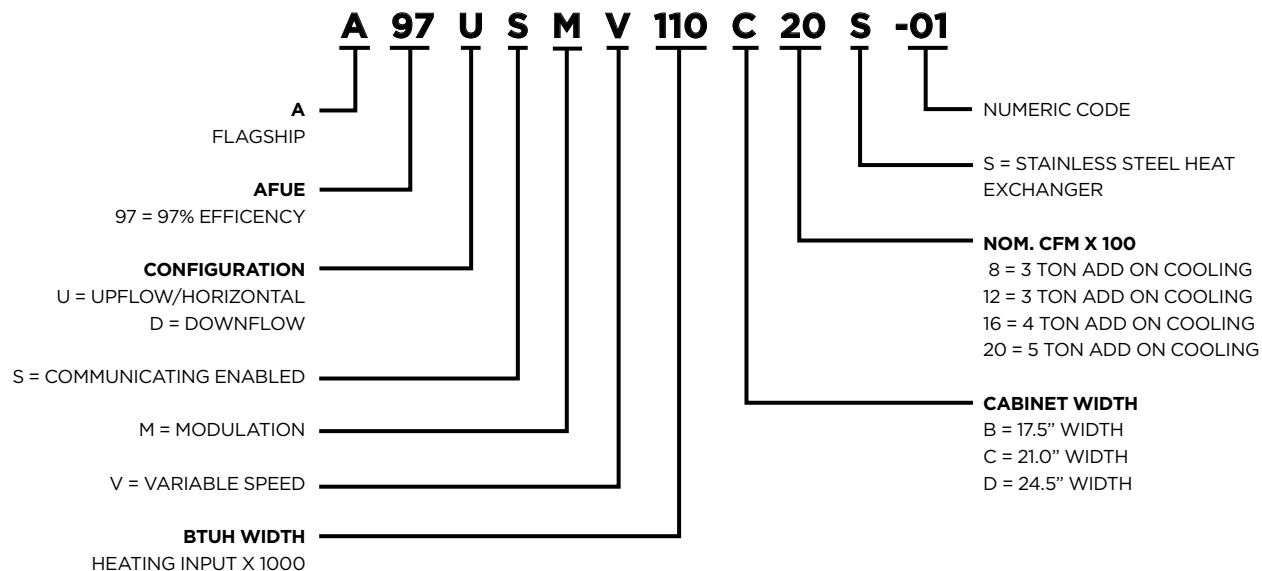
- Compact 33" height
- Standardized widths for easy coil fit

AIR DELIVERY SYSTEM

- ECM variable speed blower motor
- Easily removable slide out blower design



MODEL NUMBER GUIDE



PHYSICAL AND ELECTRICAL DATA

	Model	Input (Btuh)	Output * (Btuh)	AFUE (ICS)	Nominal* Cooling Capacity	Gas Inlet (in.)	Volts-Hertz-Phase	Max. Time Delay Breaker or Fuse	Nominal F.L.A.	Trans. (V.A.)	Approx. Shipping Weight (lbs.)
UPFLOW / HORIZONTAL	A97USMV070B12S	66,000	64,000	97.0%	3 Tons	1/2	120-60-1	15	7.7	40	138
	A97USMV090C12S	88,000	85,000	97.0%	3 Tons	1/2	120-60-1	15	7.7	40	155
	A97USMV090C16S	88,000	85,000	97.0%	4 Tons	1/2	120-60-1	15	10.1	40	165
	A97USMV090C20S	88,000	85,000	97.0%	5 Tons	1/2	120-60-1	20	12.8	40	165
	A97USMV110C20S	110,000	106,000	97.0%	5 Tons	1/2	120-60-1	20	12.8	40	175
	A97USMV135D20S	132,000	127,000	97.0%	5 Tons	1/2	120-60-1	20	12.8	40	190
DOWNFLOW	A97DSMV070B12S	66,000	64,000	97.0%	3 Tons	1/2	120-60-1	15	7.7	40	140
	A97DSMV090C16S	88,000	85,000	97.0%	4 Tons	1/2	120-60-1	15	10.1	40	165
	A97DSMV090C20S	88,000	85,000	97.0%	5 Tons	1/2	120-60-1	20	12.8	40	165
	A97DSMV110C20S	110,000	107,000	97.0%	5 Tons	1/2	120-60-1	20	12.8	40	174

Note: For vent length and clearances to combustibles, please reference installation instructions.

* At full capacity

BLOWER PERFORMANCE DATA: BOTTOM INLET

	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.5" w.c.				Cooling Stages	Speed Adjust-ment	Cooling CFM @ 0" - 0.8" w.c.			
					**	40% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A97USMV070B12S	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	538	833	1128	2nd Stage	+10%	862	1063	1218	1369
					+7.5%	496	772	1048		Default	810	962	1130	1269
					Default	453	710	967		-10%	707	841	1007	1140
				35 - 65 Min. Input	+10%	604	740	843	1st Stage	+10%	604	740	843	971
					-7.5%	419	657	895		Default	558	668	770	855
					-15%	385	604	822		-10%	504	603	683	793
	A97USMV090C12S	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	734	1014	1295	2nd Stage	+10%	879	1040	1212	1362
					+7.5%	697	953	1209		Default	803	946	1104	1246
					Default	660	891	1122		-10%	721	842	972	1117
				35 - 65 Min. Input	+10%	626	710	832	1st Stage	+10%	626	710	832	952
					-7.5%	616	828	1041		Default	569	672	764	862
					-15%	572	766	959		-10%	524	612	687	785
	A97USMV090C16S	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	835	1234	1633	2nd Stage	+10%	1168	1379	1583	1771
					+7.5%	776	1155	1534		Default	1079	1267	1444	1645
					Default	716	1075	1434		-10%	938	1148	1324	1469
				35 - 65 Min. Input	+10%	843	1007	1159	1st Stage	+10%	843	1007	1159	1315
					-7.5%	652	997	1342		Default	780	915	1047	1190
					-15%	589	919	1249		-10%	693	838	959	1070
	A97USMV090C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	665	1159	1653	2nd Stage	+10%	1385	1593	1818	2019
					+7.5%	618	1085	1553		Default	1226	1463	1647	1884
					Default	571	1012	1453		-10%	1063	1320	1504	1675
				35 - 65 Min. Input	+10%	933	1054	1274	1st Stage	+10%	933	1054	1274	1466
					-7.5%	507	917	1328		Default	836	978	1121	1336
					-15%	443	823	1203		-10%	740	868	1010	1152
	A97USMV110C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	861	1424	1988	2nd Stage	+10%	1312	1560	1744	1955
					+7.5%	825	1349	1874		Default	1219	1405	1569	1796
					Default	789	1274	1759		-10%	1075	1272	1428	1634
				35 - 65 Min. Input	+10%	937	1064	1247	1st Stage	+10%	937	1064	1247	1407
					-7.5%	731	1187	1644		Default	864	972	1146	1282
					-15%	673	1101	1528		-10%	790	888	1025	1167
	A97USMV135D20S	1 HP	11 x 11	55 - 85 Max. Input	+15%	1033	1534	2035	2nd Stage	+10%	1353	1567	1751	1994
					+7.5%	957	1426	1895		Default	1202	1448	1616	1828
					Default	881	1317	1754		-10%	1080	1290	1472	1668
				35 - 65 Min. Input	+10%	935	1074	1260	1st Stage	+10%	935	1074	1260	1450
					-7.5%	817	1235	1652		Default	834	983	1116	1306
					-15%	753	1152	1550		-10%	732	867	1023	1145

Note:

** See installation instructions for proper blower set up

BLOWER PERFORMANCE DATA: SIDE INLET

	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.5" w.c.				Cooling Stages	Speed Adjust-ment	Cooling CFM @ 0" - 0.8" w.c.			
					* *	40% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A97USMV070B12S	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	531	812	1093	2nd Stage	+10%	840	1054	1208	1357
					+7.5%	490	756	1022		Default	752	946	1130	1231
					Default	449	700	951		-10%	688	805	991	1114
				35 - 65 Min. Input	+10%	593	706	805	1st Stage	+10%	593	706	805	959
					-7.5%	413	635	857		Default	543	642	729	824
					-15%	378	571	763		-10%	503	584	665	720
	A97USMV090C12S	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	702	971	1240	2nd Stage	+10%	843	1017	1168	1300
					+7.5%	673	926	1178		Default	772	912	1054	1193
					Default	644	880	1116		-10%	698	799	946	1111
				35 - 65 Min. Input	+10%	610	707	797	1st Stage	+10%	610	707	797	921
					-7.5%	608	814	1020		Default	561	643	718	811
					-15%	571	747	923		-10%	526	605	667	729
	A97USMV090C16S	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	812	1204	1595	2nd Stage	+10%	1140	1341	1526	1728
					+7.5%	759	1127	1495		Default	1043	1235	1398	1566
					Default	706	1051	1395		-10%	913	1124	1279	1402
				35 - 65 Min. Input	+10%	823	1009	1135	1st Stage	+10%	823	1009	1135	1292
					-7.5%	608	814	1020		Default	758	882	1026	1151
					-15%	571	747	923		-10%	684	816	928	1068
	A97USMV090C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	684	1136	1588	2nd Stage	+10%	1335	1559	1719	1986
					+7.5%	623	1059	1496		Default	1173	1433	1568	1811
					Default	562	983	1403		-10%	1049	1283	1451	1603
				35 - 65 Min. Input	+10%	911	1043	1227	1st Stage	+10%	911	1043	1227	1434
					-7.5%	608	814	1020		Default	805	960	1087	1296
					-15%	571	747	923		-10%	700	840	991	1115
	A97USMV110C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	733	1194	1747	2nd Stage	+10%	1270	1519	1712	1899
					+7.5%	708	1139	1657		Default	1170	1363	1555	1774
					Default	683	1085	1566		-10%	1059	1218	1401	1581
				35 - 65 Min. Input	+10%	918	1053	1198	1st Stage	+10%	918	1053	1198	1366
					-7.5%	632	1007	1457		Default	820	964	1095	1231
					-15%	580	929	1348		-10%	722	852	987	1116
	A97USMV135D20S	1 HP	11 x 11	55 - 85 Max. Input	+15%	1010	1505	2001	2nd Stage	+10%	1337	1550	1720	1974
					+7.5%	923	1398	1873		Default	1194	1416	1608	1781
					Default	836	1290	1744		-10%	1076	1282	1437	1628
				35 - 65 Min. Input	+10%	938	1070	1236	1st Stage	+10%	938	1070	1236	1418
					-7.5%	775	1208	1641		Default	837	985	1114	1296
					-15%	715	1126	1537		-10%	736	870	1010	1139

BLOWER PERFORMANCE DATA: SIDE INLET WITH RETURN AIR BASE

	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.5" w.c.				Cooling Stages	Speed Adjust-ment	Cooling CFM @ 0" - 0.8" w.c.			
					**	40% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A97USMV070B12S	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	519	805	1091	2nd Stage	+10%	857	1049	1206	1354
					+7.5%	480	751	1021		Default	791	946	1093	1255
					Default	441	696	951		-10%	722	845	987	1131
				35 - 65 Min. Input	+10%	596	717	816	1st Stage	+10%	596	717	816	950
					-7.5%	408	643	877		Default	521	657	755	840
					-15%	375	589	803		-10%	494	597	672	747
	A97USMV090C12S	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	721	988	1254	2nd Stage	+10%	852	999	1166	1305
					+7.5%	679	923	1167		Default	776	907	1050	1206
					Default	637	858	1079		-10%	712	802	947	1074
				35 - 65 Min. Input	+10%	605	715	812	1st Stage	+10%	605	715	812	934
					-7.5%	606	806	1006		Default	571	662	735	820
					-15%	576	754	933		-10%	530	602	673	725

Note:

** See installation instructions for proper blower set up

BLOWER PERFORMANCE DATA: SIDE INLET WITH RETURN AIR BASE

	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.5" w.c.				Cooling Stages	Speed Adjust-ment	Cooling CFM @ 0" - 0.8" w.c.			
					**	40% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A97USMV090C16S	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	828	1213	1597	2nd Stage	+10%	1162	1360	1533	1742
					+7.5%	766	1132	1499		Default	1064	1240	1400	1594
					Default	703	1052	1401		-10%	928	1133	1298	1441
				35 - 65 Min. Input	-7.5%	650	986	1323	1st Stage	+10%	844	955	1124	1280
					-15%	596	921	1245		Default	775	910	1011	1173
										-10%	695	816	932	1045
	A97USMV090C20S	1 HP	11 x 11	60 - 90 Max. Input	+15%	686	1138	1589	2nd Stage	+10%	1329	1560	1740	1982
					+7.5%	626	1060	1494		Default	1177	1414	1586	1807
					Default	566	983	1399		-10%	1044	1261	1432	1619
				35 - 65 Min. Input	+10%	913	1037	1415	1st Stage	+10%	827	953	1088	1278
					-7.5%	502	895	1288		Default	741	855	995	1117
					-15%	437	806	1176		-10%	741	855	995	1117
	A97USMV110C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	893	1419	1945	2nd Stage	+10%	1268	1487	1726	1913
					+7.5%	814	1329	1843		Default	1158	1369	1568	1764
					Default	736	1238	1741		-10%	1030	1224	1393	1575
				35 - 65 Min. Input	+10%	918	1022	1371	1st Stage	+10%	839	955	1084	1235
					-7.5%	680	1139	1599		Default	760	865	984	1109
					-15%	623	1040	1457		-10%	760	865	984	1109
	A97USMV135D20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	992	1487	1983	2nd Stage	+10%	1303	1536	1687	1975
					+7.5%	907	1382	1858		Default	1164	1380	1584	1762
					Default	822	1277	1732		-10%	1065	1252	1404	1604
				35 - 65 Min. Input	+10%	918	1061	1382	1st Stage	+10%	829	960	1091	1265
					-7.5%	761	1188	1615		Default	739	858	991	1116
					-15%	700	1099	1497		-10%	739	858	991	1116

BLOWER PERFORMANCE DATA: RETURN INLET

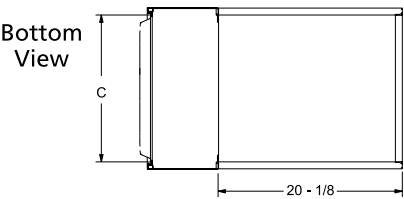
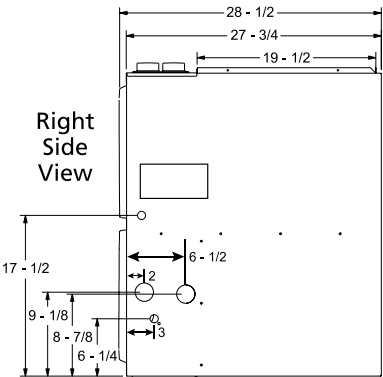
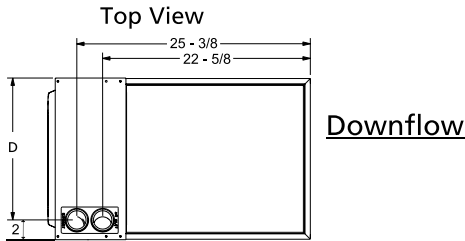
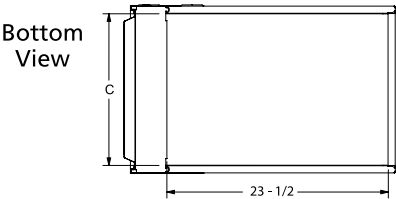
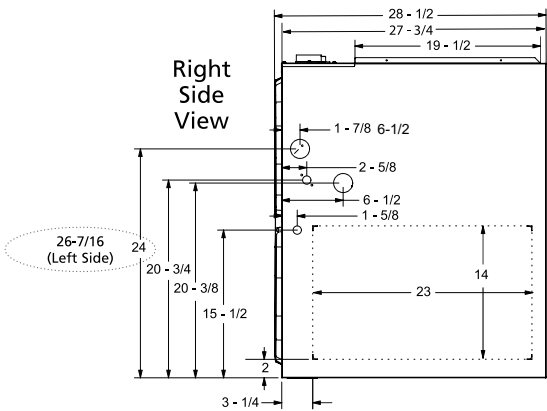
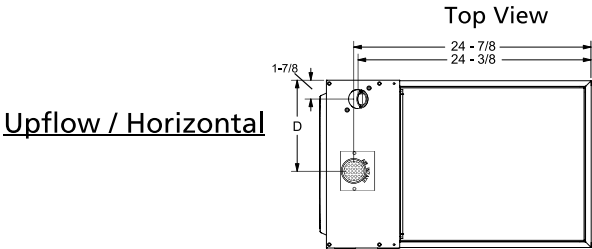
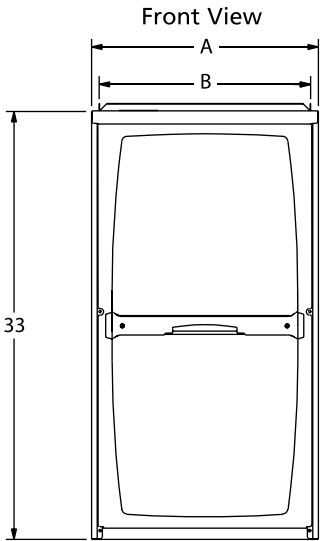
	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.5" w.c.				Cooling Stages	Speed Adjust-ment	Cooling CFM @ 0" - 0.8" w.c.			
					**	40% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
DOWNFLOW	A97DSMV070B12S	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	543	830	1118	2nd Stage	+10%	910	1075	1232	1366
					+7.5%	516	778	1041		Default	846	963	1126	1267
					Default	489	726	963		-10%	759	889	986	1154
				35 - 65 Min. Input	+10%	625	788	998	1st Stage	+10%	625	788	890	998
					-7.5%	467	687	908		Default	573	711	830	894
					-15%	444	649	853		-10%	520	619	714	822
	A97DSMV090C16S	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	756	1033	1309	2nd Stage	+10%	924	1083	1218	1386
					+7.5%	713	971	1230		Default	835	1000	1136	1259
					Default	669	910	1150		-10%	751	890	1028	1145
				35 - 65 Min. Input	+10%	610	771	1035	1st Stage	+10%	610	771	902	1035
					-7.5%	599	845	1091		Default	549	690	808	923
					-15%	530	781	1032		-10%	466	623	721	812
	A97DSMV090C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	728	1176	1625	2nd Stage	+10%	1337	1601	1752	1982
					+7.5%	673	1092	1512		Default	1225	1449	1629	1830
					Default	618	1009	1399		-10%	1119	1269	1448	1664
				35 - 65 Min. Input	+10%	956	1114	1265	1st Stage	+10%	956	1114	1265	1449
					-7.5%	570	931	1292		Default	855	1004	1148	1286
					-15%	522	853	1184		-10%	753	888	1063	1172
	A97DSMV110C20S	1 HP	11 x 11	50 - 80 Max. Input	+15%	906	1475	2045	2nd Stage	+10%	1337	1583	1792	2011
					+7.5%	835	1380	1926		Default	1222	1440	1629	1867
					Default	764	1285	1807		-10%	1098	1273	1473	1678
				35 - 65 Min. Input	+10%	922	1093	1442	1st Stage	+10%	922	1093	1264	1442
					-7.5%	707	1193	1679		Default	830	965	1129	1289
					-15%	650	1101	1551		-10%	738	860	1034	1156

Note:

** See installation instructions for proper blower set up

DIMENSIONS (IN.)

	Model	A	B	C	D
UPFLOW/HORIZONTAL	A97USMV070B12S	17-1/2	16-3/8	16	7-5/8
	A97USMV090C12S	21	19-7/8	19-1/2	9-3/8
	A97USMV090C16S	21	19-7/8	19-1/2	9-3/8
	A97USMV090C20S	21	19-7/8	19-1/2	9-3/8
	A97USMV110C20S	21	19-7/8	19-1/2	9-3/8
	A97USMV135D20S	24-1/2	23-3/8	23	11-1/8
DOWNFLOW	A97DSMV070B12S	17-1/2	16-3/8	16	15-1/2
	A97DSMV090C16S	21	19-7/8	19-1/2	19
	A97DSMV090C20S	21	19-7/8	19-1/2	19
	A97DSMV110C20S	21	19-7/8	19-1/2	19



ACCESSORY LIST

CATALOG NUMBER	DESCRIPTION
EXTERNAL FILTER RACK KITS	
1.841018	1 pack (16 x 25)
1.841039	10 pack (16 x 25)
NATURAL TO LP KITS	
68W77	Modulating 97% (includes gas valve)
68W77	High Altitude > 7500 ft.
RETURN AIR BASE	
68W62	17.5" B Width
68W63	21.0" C Width
68W64	24.5" D Width
DOWNFLOW COMBUSTIBLE FLOORING BASE	
11M60	17.5" B Width
11M61	21.0" C Width
NIGHT SERVICE KITS	
89W52	Modulating
HORIZONTAL SUSPENSION KIT	
51W10	80% & 90% Kit
FLUSH MOUNT TERMINATION (90% FURNACES ONLY) US ONLY	
51W11	2" & 3" Vent Version
CONCENTRIC VENT KIT (90% FURNACES ONLY) US ONLY	
71M80	1-1/2" Vent Version
69M29	2" Vent Version
60L46	3" Vent Version

For vent length and clearances to combustibles, please reference installation instructions.



1-800-448-5872

All specifications and illustrations subject to change without notice and without incurring obligations.