

A98MVK

PRODUCT SPECIFICATIONS

MODULATING VARIABLE SPEED GAS FURNACE

FORM NO. A98MVK-100 (07/2025)



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). 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).

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

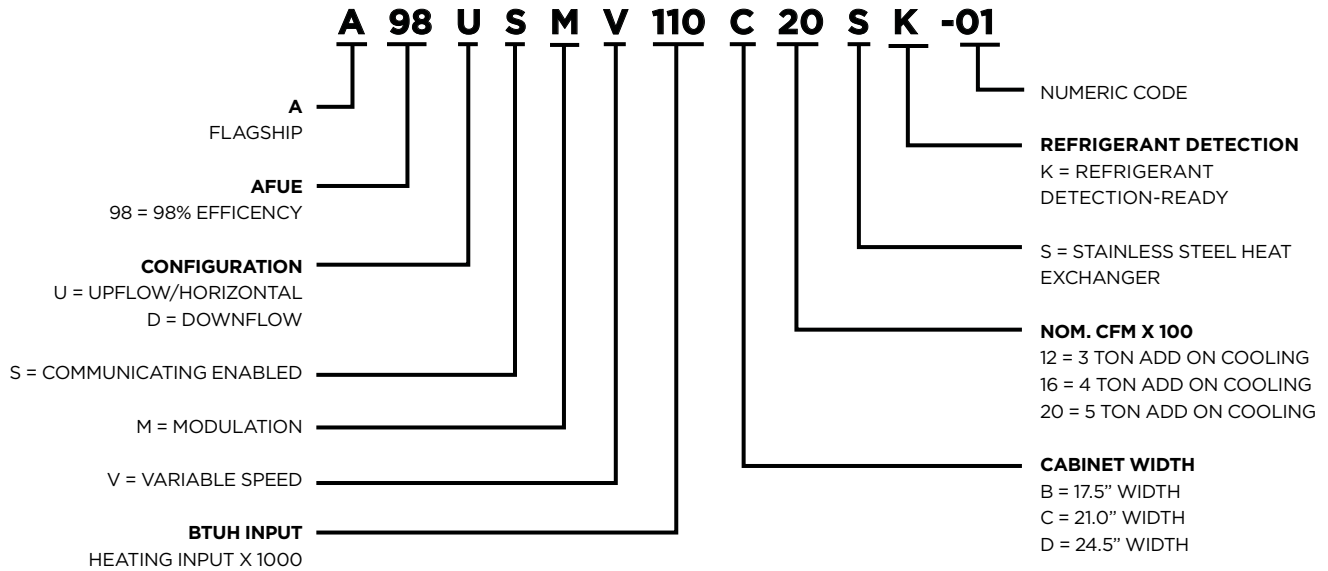
- Compact 33" height
- Standardized widths for easy coil fit

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	A98USMV070B12SK	66,000	64,000	98.0%	3 Tons	1/2	120-60-1	15	7.7	40	132
	A98USMV090C12SK	88,000	85,000	98.0%	3 Tons	1/2	120-60-1	15	7.7	40	146
	A98USMV090C16SK	88,000	85,000	98.0%	4 Tons	1/2	120-60-1	15	10.1	40	153
	A98USMV090C20SK	88,000	85,000	98.0%	5 Tons	1/2	120-60-1	20	12.8	40	156
	A98USMV110C20SK	110,000	106,000	98.0%	5 Tons	1/2	120-60-1	20	12.8	40	164
	A98USMV135D20SK	132,000	127,000	98.0%	5 Tons	1/2	120-60-1	20	12.8	40	179

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" - 0.8" w.c.				Cooling Stages	Speed Adjustment	Cooling CFM @ 0" - 0.8" w.c.			
					**	35% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A98USMV070B12SK	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	489	833	1128	2nd Stage	+10%	862	1063	1218	1369
					+7.5%	450	772	1048		Default	810	962	1130	1269
					Default	410	710	967		-10%	707	841	1007	1140
				35 - 65 Min. Input	+10%	604	740	843	1st Stage	+10%	604	740	843	971
					-7.5%	380	657	895		Default	558	668	770	855
					-15%	349	604	822		-10%	504	603	683	793
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	687	1014	1295	2nd Stage	+10%	879	1040	1212	1362
					+7.5%	654	953	1209		Default	803	946	1104	1246
					Default	621	891	1122		-10%	721	842	972	1117
				35 - 65 Min. Input	+10%	626	710	832	1st Stage	+10%	626	710	832	952
					-7.5%	581	828	1041		Default	569	672	764	862
					-15%	540	766	959		-10%	524	612	687	785
	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	769	1234	1633	2nd Stage	+10%	1168	1379	1583	1771
					+7.5%	713	1155	1534		Default	1079	1267	1444	1645
					Default	656	1075	1434		-10%	938	1148	1324	1469
				35 - 65 Min. Input	+10%	843	1007	1159	1st Stage	+10%	843	1007	1159	1315
					-7.5%	595	997	1342		Default	780	915	1047	1190
					-15%	534	919	1249		-10%	693	838	959	1070
	A98USMV090C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	583	1159	1653	2nd Stage	+10%	1385	1593	1818	2019
					+7.5%	540	1085	1553		Default	1226	1463	1647	1884
					Default	497	1012	1453		-10%	1063	1320	1504	1675
				35 - 65 Min. Input	+10%	933	1054	1274	1st Stage	+10%	933	1054	1274	1466
					-7.5%	439	917	1328		Default	836	978	1121	1336
					-15%	380	823	1203		-10%	740	868	1010	1152
	A98USMV110C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	767	1424	1988	2nd Stage	+10%	1312	1560	1744	1955
					+7.5%	738	1349	1874		Default	1219	1405	1569	1796
					Default	708	1274	1759		-10%	1075	1272	1428	1634
				35 - 65 Min. Input	+10%	937	1064	1247	1st Stage	+10%	937	1064	1247	1407
					-7.5%	655	1187	1644		Default	864	972	1146	1282
					-15%	602	1101	1528		-10%	790	888	1025	1167
	A98USMV135D20SK	1 HP	11 x 11	55 - 85 Max. Input	+15%	949	1534	2035	2nd Stage	+10%	1353	1567	1751	1994
					+7.5%	879	1426	1895		Default	1202	1448	1616	1828
					Default	808	1317	1754		-10%	1080	1290	1472	1668
				35 - 65 Min. Input	+10%	935	1074	1260	1st Stage	+10%	935	1074	1260	1450
					-7.5%	748	1235	1652		Default	834	983	1116	1306
					-15%	687	1152	1550		-10%	732	867	1023	1145

** See installation instructions for proper blower setup

BLOWER PERFORMANCE DATA: SIDE INLET

	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.8" w.c.				Cooling Stages	Speed Adjustment	Cooling CFM @ 0" - 0.8" w.c.			
					**	35% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A98USMV070B12SK	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	484	812	1093	2nd Stage	+10%	840	1054	1208	1357
					+7.5%	446	756	1022		Default	752	946	1130	1231
					Default	407	700	951		-10%	688	805	991	1114
				35 - 65 Min. Input	+10%	593	706	805	1st Stage	+10%	593	706	805	959
					-7.5%	377	635	857		Default	543	642	729	824
					-15%	346	571	763		-10%	503	584	665	720
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	657	971	1240	2nd Stage	+10%	843	1017	1168	1300
					+7.5%	631	926	1178		Default	772	912	1054	1193
					Default	605	880	1116		-10%	698	799	946	1111
				35 - 65 Min. Input	+10%	610	707	797	1st Stage	+10%	610	707	797	921
					-7.5%	574	814	1020		Default	561	643	718	811
					-15%	542	747	923		-10%	526	605	667	729
	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	747	1204	1595	2nd Stage	+10%	1140	1341	1526	1728
					+7.5%	698	1127	1495		Default	1043	1235	1398	1566
					Default	649	1051	1395		-10%	913	1124	1279	1402
				35 - 65 Min. Input	+10%	823	1009	1135	1st Stage	+10%	823	1009	1135	1292
					-7.5%	589	814	1020		Default	758	882	1026	1151
					-15%	528	747	923		-10%	684	816	928	1068
	A98USMV090C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	609	1136	1588	2nd Stage	+10%	1335	1559	1719	1986
					+7.5%	551	1059	1496		Default	1173	1433	1568	1811
					Default	492	983	1403		-10%	1049	1283	1451	1603
				35 - 65 Min. Input	+10%	911	1043	1227	1st Stage	+10%	911	1043	1227	1434
					-7.5%	436	814	1020		Default	805	960	1087	1296
					-15%	380	747	923		-10%	700	840	991	1115
	A98USMV110C20SK	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
	A98USMV135D20SK	1 HP	11 x 11	55 - 85 Max. Input	+15%	927	1505	2001	2nd Stage	+10%	1337	1550	1720	1974
					+7.5%	844	1398	1873		Default	1194	1416	1608	1781
					Default	760	1290	1744		-10%	1076	1282	1437	1628
				35 - 65 Min. Input	+10%	938	1070	1236	1st Stage	+10%	938	1070	1236	1418
					-7.5%	703	1208	1641		Default	837	985	1114	1296
					-15%	646	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" - 0.8" w.c.				Cooling Stages	Speed Adjustment	Cooling CFM @ 0" - 0.8" w.c.			
					**	35% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A98USMV070B12SK	1/2 HP	10 x 9	50 - 80 Max. Input	+15%	471	805	1091	2nd Stage	+10%	857	1049	1206	1354
					+7.5%	435	751	1021		Default	791	946	1093	1255
					Default	399	696	951		-10%	722	845	987	1131
				35 - 65 Min. Input	+10%	596	717	816	1st Stage	+10%	596	717	816	950
					-7.5%	369	643	877		Default	521	657	755	840
					-15%	339	589	803		-10%	494	597	672	747
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	677	988	1254	2nd Stage	+10%	852	999	1166	1305
					+7.5%	639	923	1167		Default	776	907	1050	1206
					Default	600	858	1079		-10%	712	802	947	1074
				35 - 65 Min. Input	+10%	605	715	812	1st Stage	+10%	605	715	812	934
					-7.5%	573	806	1006		Default	571	662	735	820
					-15%	546	754	933		-10%	530	602	673	725

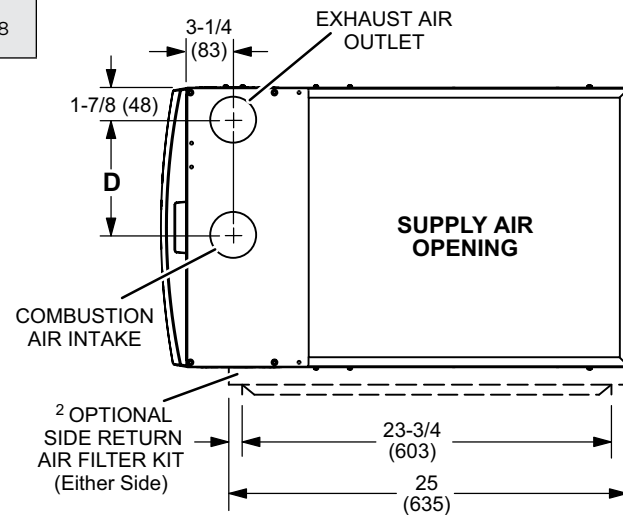
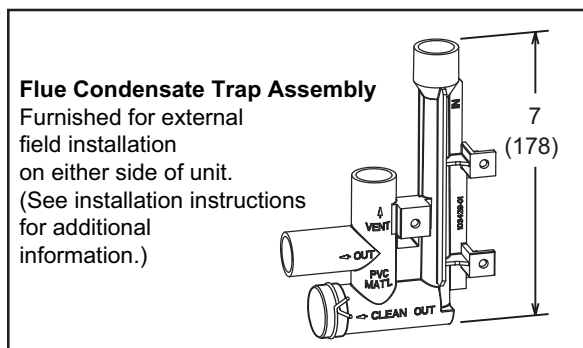
** See installation instructions for proper blower setup

BLOWER PERFORMANCE DATA: SIDE INLET WITH RETURN AIR BASE

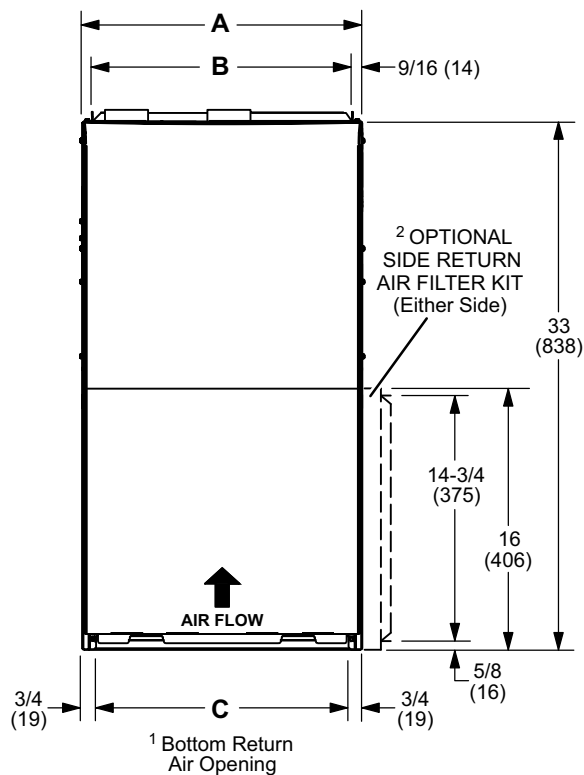
	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.8" w.c.				Cooling Stages	Speed Adjustment	Cooling CFM @ 0" - 0.8" w.c.			
					* *	35% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	764	1213	1597	2nd Stage	+10%	1162	1360	1533	1742
					+7.5%	705	1132	1499		Default	1064	1240	1400	1594
					Default	645	1052	1401		-10%	928	1133	1298	1441
				35 - 65 Min. Input	+10%				1st Stage	+10%	844	955	1124	1280
					-7.5%	594	986	1323		Default	775	910	1011	1173
					-15%	542	921	1245		-10%	695	816	932	1045
	A98USMV090C20SK	1 HP	11 x 11	60 - 90 Max. Input	+15%	611	1138	1589	2nd Stage	+10%	1329	1560	1740	1982
					+7.5%	554	1060	1494		Default	1177	1414	1586	1807
					Default	497	983	1399		-10%	1044	1261	1432	1619
				35 - 65 Min. Input	+10%				1st Stage	+10%	913	1037	1230	1415
					-7.5%	436	895	1288		Default	827	953	1088	1278
					-15%	375	806	1176		-10%	741	855	995	1117
	A98USMV110C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	805	1419	1945	2nd Stage	+10%	1268	1487	1726	1913
					+7.5%	729	1329	1843		Default	1158	1369	1568	1764
					Default	652	1238	1741		-10%	1030	1224	1393	1575
				35 - 65 Min. Input	+10%				1st Stage	+10%	918	1022	1205	1371
					-7.5%	603	1139	1599		Default	839	955	1084	1235
					-15%	554	1040	1457		-10%	760	865	984	1109
	A98USMV135D20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	909	1487	1983	2nd Stage	+10%	1303	1536	1687	1975
					+7.5%	828	1382	1858		Default	1164	1380	1584	1762
					Default	746	1277	1732		-10%	1065	1252	1404	1604
				35 - 65 Min. Input	+10%				1st Stage	+10%	918	1061	1214	1382
					-7.5%	690	1188	1615		Default	829	960	1091	1265
					-15%	634	1099	1497		-10%	739	858	991	1116

DIMENSIONS (IN.)

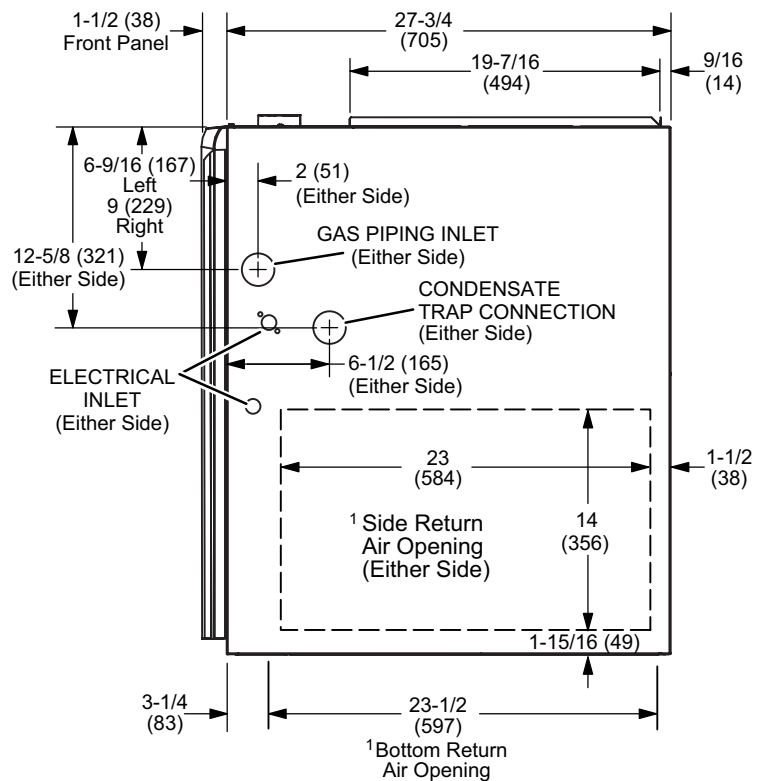
	Model	A	B	C	D
UPFLOW/HORIZONTAL	A98USMV070B12SK	17-1/2	16-3/8	16	7-5/8
	A98USMV090C12SK	21	19-7/8	19-1/2	9-3/8
	A98USMV090C16SK	21	19-7/8	19-1/2	9-3/8
	A98USMV090C20SK	21	19-7/8	19-1/2	9-3/8
	A98USMV110C20SK	21	19-7/8	19-1/2	9-3/8
	A98USMV135D20SK	24-1/2	23-3/8	23	11-1/8



TOP VIEW



FRONT VIEW



SIDE VIEW

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 97/98% (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
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
Comfort Sync® Controls	
1.841226	Comfort Sync® A3 Thermostat
1.851399	Comfort Sync® Zoning Controller
1.851422	Comfort Sync® Zone Sensor
Transformer (75VA)	
Recommended when furnace is used with zoning or defrost thermostats and other 24V accessories requiring a higher VA rating	27J32
Circuit breaker (furnished) is wired in series	
Replaces the standard 40VA transformer	

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

REFRIGERANT DETECTION SYSTEM (RDS) COMPONENTS

Description	Order No.
Refrigerant Detection System (RDS) Coil Sensor Kit	27V53



1-800-448-5872

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