A98MVK
PRODUCT SPECIFICATIONS

MODULATING
VARIABLE SPEED GAS FURNACE

FORM NO. A98MVK-100 (10/2026)



COMFORT SYNC™
COMMUNICATING THERMOSTAT ENABLED

CONFIGURATIONS

- Upflow / Horizontal

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

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

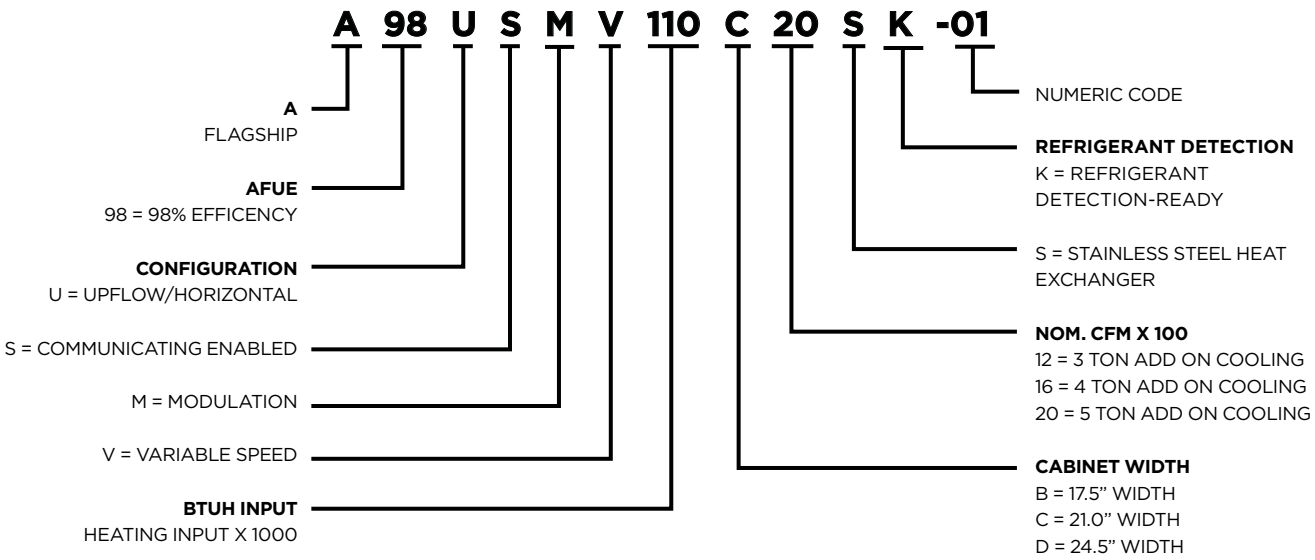
WARRANTY

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).

ENERGY STAR
DESIGN CERTIFIED
AHRI CERTIFIED™ www.ahridirectory.org
PFAS

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%	900	1070	1235	1405
					+7.5%	450	772	1048		Default	810	970	1125	1265
					Default	410	710	967		-10%	720	875	1015	1145
				35 - 65 Min. Input					1st Stage	+10%	610	745	865	995
					-7.5%	380	657	895		Default	560	675	785	890
					-15%	349	604	822		-10%	510	615	700	795
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	687	1014	1295	2nd Stage	+10%	875	1040	1185	1365
					+7.5%	654	953	1209		Default	800	940	1090	1220
					Default	621	891	1122		-10%	715	850	980	1105
				35 - 65 Min. Input					1st Stage	+10%	640	750	835	950
					-7.5%	581	828	1041		Default	600	695	775	855
					-15%	540	766	959		-10%	540	640	710	785
	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	769	1234	1633	2nd Stage	+10%	1125	1375	1565	1785
					+7.5%	713	1155	1534		Default	1030	1235	1445	1615
					Default	656	1075	1434		-10%	950	1115	1305	1480
				35 - 65 Min. Input					1st Stage	+10%	815	975	1095	1270
					-7.5%	595	997	1342		Default	745	885	1005	1145
					-15%	534	919	1249		-10%	675	810	910	1040
	A98USMV090C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	583	1159	1653	2nd Stage	+10%	1590	1820	2025	2270
					+7.5%	540	1085	1553		Default	1425	1635	1855	2035
					Default	497	1012	1453		-10%	1290	1470	1655	1855
				35 - 65 Min. Input					1st Stage	+10%	1105	1280	1400	1590
					-7.5%	439	917	1328		Default	1015	1165	1285	1425
					-15%	380	823	1203		-10%	920	1055	1165	1295
	A98USMV110C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	767	1424	1988	2nd Stage	+10%	1490	1705	1915	2130
					+7.5%	738	1349	1874		Default	1340	1540	1750	1925
					Default	708	1274	1759		-10%	1220	1390	1570	1750
				35 - 65 Min. Input					1st Stage	+10%	1050	1200	1305	1485
					-7.5%	655	1187	1644		Default	960	1100	1205	1335
					-15%	602	1101	1528		-10%	860	995	1100	1220
	A98USMV135D20SK	1 HP	11 x 11	55 - 85 Max. Input	+15%	949	1534	2035	2nd Stage	+10%	1565	1790	2000	2250
					+7.5%	879	1426	1895		Default	1415	1615	1825	2010
					Default	808	1317	1754		-10%	1265	1460	1640	1825
				35 - 65 Min. Input					1st Stage	+10%	1080	1240	1380	1570
					-7.5%	748	1235	1652		Default	995	1130	1250	1415
					-15%	687	1152	1550		-10%	900	1025	1130	1255

*** 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	1050	1205	1355
					+7.5%	446	756	1022		Default	750	945	1130	1230
				35 - 65 Min. Input	Default	407	700	951		-10%	685	805	990	1110
									1st Stage	+10%	590	705	805	959
					-7.5%	377	635	857		Default	540	640	725	820
					-15%	346	571	763		-10%	500	580	665	720
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	657	971	1240	2nd Stage	+10%	840	1015	1165	1300
					+7.5%	631	926	1178		Default	770	910	1050	1190
				35 - 65 Min. Input	Default	605	880	1116		-10%	695	795	945	1110
									1st Stage	+10%	610	705	795	920
					-7.5%	574	814	1020		Default	560	640	715	810
					-15%	542	747	923		-10%	525	605	665	725
	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	747	1204	1595	2nd Stage	+10%	1140	1340	1525	1725
					+7.5%	698	1127	1495		Default	1040	1235	1395	1565
				35 - 65 Min. Input	Default	649	1051	1395		-10%	910	1120	1275	1400
									1st Stage	+10%	820	1005	1135	1290
					-7.5%	589	814	1020		Default	755	880	1025	1150
					-15%	528	747	923		-10%	680	815	925	1065
	A98USMV090C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	609	1136	1588	2nd Stage	+10%	1555	1715	1920	2135
					+7.5%	551	1059	1496		Default	1430	1565	1790	1980
				35 - 65 Min. Input	Default	492	983	1403		-10%	1280	1450	1580	1790
									1st Stage	+10%	1040	1225	1380	1550
					-7.5%	436	814	1020		Default	960	1085	1225	1415
					-15%	380	747	923		-10%	840	990	1085	1250
	A98USMV110C20SK	1 HP	11 x 11	50 - 80 Max. Input	+15%	733	1194	1931	2nd Stage	+10%	1515	1710	1870	2065
					+7.5%	708	1139	1829		Default	1360	1555	1755	1890
				35 - 65 Min. Input	Default	683	1085	1727		-10%	1215	1400	1555	1755
									1st Stage	+10%	1050	1195	1315	1495
					-7.5%	632	1007	1608		Default	960	1095	1220	1355
					-15%	580	929	1488		-10%	850	985	1095	1220
	A98USMV135D20SK	1 HP	11 x 11	55 - 85 Max. Input	+15%	927	1505	2001	2nd Stage	+10%	1550	1720	1925	2005
					+7.5%	844	1398	1873		Default	1415	1605	1755	1970
				35 - 65 Min. Input	Default	760	1290	1744		-10%	1280	1435	1610	1755
									1st Stage	+10%	1070	1235	1385	1535
					-7.5%	703	1208	1641		Default	985	1110	1245	1395
					-15%	646	1126	1537		-10%	870	1010	1110	1260

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%	855	1045	1205	1350
					+7.5%	435	751	1021		Default	790	945	1090	1255
				35 - 65 Min. Input	Default	399	696	951		-10%	720	845	985	1130
									1st Stage	+10%	595	715	815	950
					-7.5%	369	643	877		Default	520	655	755	840
					-15%	339	589	803		-10%	490	595	670	745
	A98USMV090C12SK	1/2 HP	10 x 9	60 - 90 Max. Input	+15%	677	988	1254	2nd Stage	+10%	850	995	1165	1305
					+7.5%	639	923	1167		Default	775	905	1050	1205
				35 - 65 Min. Input	Default	600	858	1079		-10%	710	800	945	1070
									1st Stage	+10%	605	715	810	930
					-7.5%	573	806	1006		Default	570	660	735	820
					-15%	546	754	933		-10%	530	600	670	725

*** See installation instructions for proper blower setup*

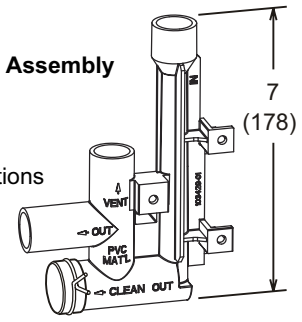
BLOWER PERFORMANCE DATA: SIDE INLET WITH RETURN AIR BASE

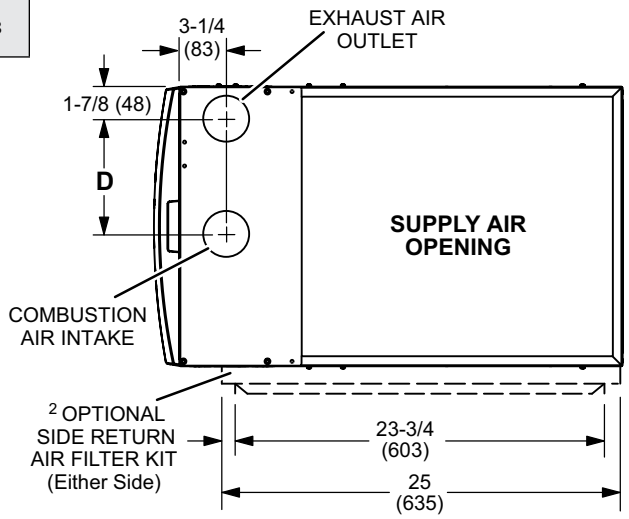
	Model	Motor Size (hp)	Blower Size	Temp Rise F°	Heating CFM @ 0" - 0.8" w.c.				Cooling Stages	Speed Adjustment	Cooling CFM @ 0" - 0.8" w.c.			
					* *	35% Input	70% Input	100% Input			Low	Medium Low	Medium High	High Default
UPFLOW / HORIZONTAL	A98USMV090C16SK	3/4 HP	11 x 11	50 - 80 Max. Input	+15%	764	1213	1597	2nd Stage	+10%	1160	1360	1530	1740
					+7.5%	705	1132	1499		Default	1060	1240	1400	1590
					Default	645	1052	1401		-10%	925	1130	1295	1440
				35 - 65 Min. Input					1st Stage	+10%	840	955	1120	1280
					-7.5%	594	986	1323		Default	775	910	1010	1170
					-15%	542	921	1245		-10%	695	815	930	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					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					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					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.)

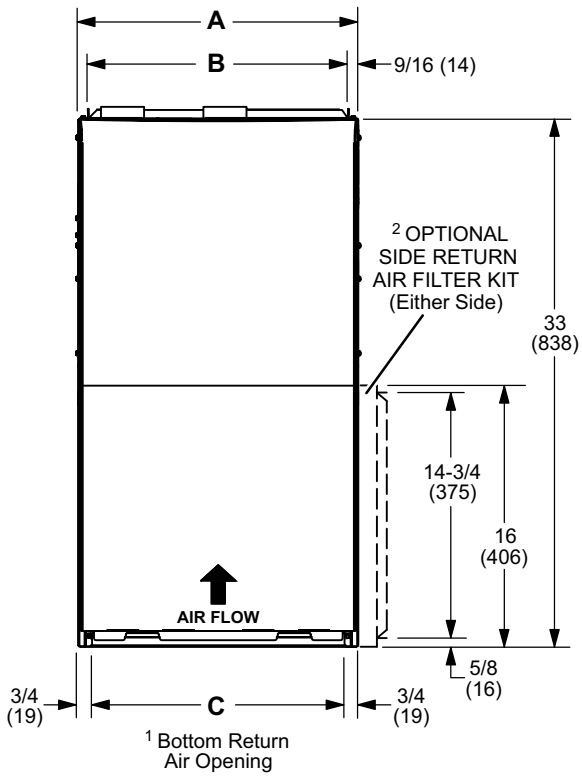
	Model	A	B	C	D
UPFLOW/HORIZONTAL	A98USMV070B12SK	17-1/2	16-3/8	16	7-5/8
	A98USMV090C12SK	21	19-7/8	19-1/2	9-3/8
	A98USMV090C16SK	21	19-7/8	19-1/2	9-3/8
	A98USMV090C20SK	21	19-7/8	19-1/2	9-3/8
	A98USMV110C20SK	21	19-7/8	19-1/2	9-3/8
	A98USMV135D20SK	24-1/2	23-3/8	23	11-1/8

Flue Condensate Trap Assembly
Furnished for external field installation on either side of unit. (See installation instructions for additional information.)

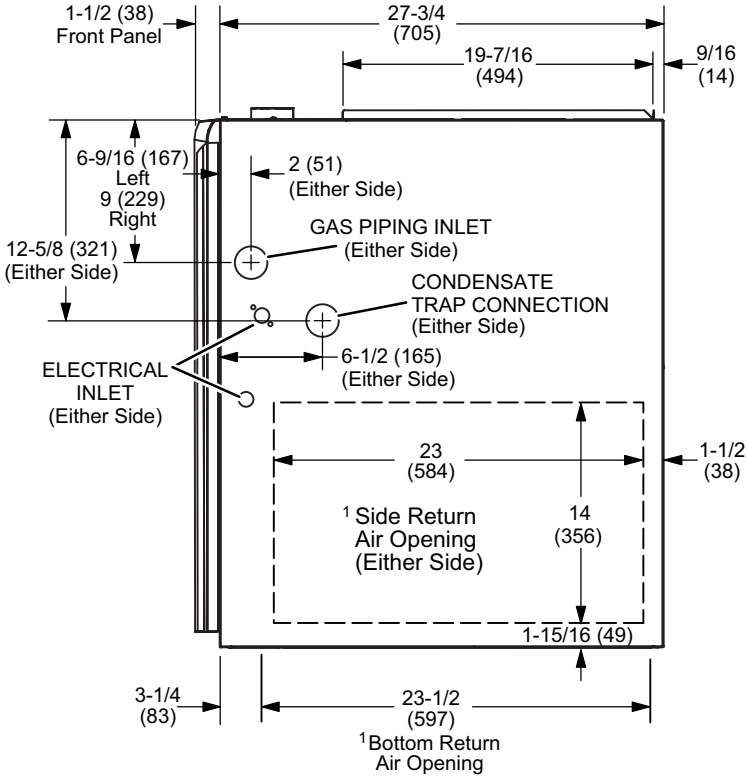




TOP VIEW



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

ALLIED™ Air Enterprises

1-800-448-5872

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

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