

# A802V

## 2-Stage Variable Speed Gas Furnace

### Product Specifications

Form No. A802V-100 (06/2013)



*Communicating Thermostat enabled*



#### WARRANTY

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



#### CONFIGURATIONS

- Upflow / Horizontal
- Downflow

#### HEAT EXCHANGER DESIGN

- Aluminized crimped no-weld clam shell 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
- Two stage gas valve
- Thermostat flexibility:
  - works with the Comfort Sync T-Stat or a conventional 24V T-Stat
- Self diagnostics saves last 5 fault codes regardless of power interruption

#### VENTING

- Rotatable draft inducer for venting flexibility

#### INSTALLATION FEATURES

- Left and right utility connections
- Removable floor base for bottom return air
- "L" designated models comply with California's South Coast Air Quality Management district Low NOx requirements
- Zero step horizontal conversion

Note: Not for sale in Canada

## Model Number Guide

Brand	AFUE	Config	Stages	Blower	BTUH Input	Cabinet Width	Nom. CFM x 100	Option Code	Major Revision
A	80	U S	2	V	110	C	20	L	- 1

A = Armstrong Air

80 = 80% Efficiency

U = Upflow/Horizontal  
D = Downflow

**S = Communicating Enabled**

2 = 2 Stage

V = Variable Speed

Heating Input x 1000

Numeric code

L = Low NOx

08 = 2 Ton add on cooling  
12 = 3 Ton add on cooling  
16 = 4 Ton add on cooling  
20 = 5 Ton add on cooling

A = 14.5" width  
B = 17.5" width  
C = 21.0" width  
D = 24.5" width

## Physical and Electrical Data

	Model	Input (Btuh)	Output* (Btuh)	AFUE (ICS)	Nominal Cooling Capacity	Gas Inlet (in.)	Volts/ Hz/ Phase	Max. Time Delay Breaker or Fuse	Nominal F.L.A.	Trans. (V.A.)	Approx. Shipping Weight (lbs.)
Upflow / Horizontal	A80US2V070A12	66,000	52,000	80.0%	3 tons	1/2	120-60-1	15	7.7	40	128
	A80US2V090B12	88,000	70,000	80.0%	3 tons	1/2	120-60-1	15	7.7	40	143
	A80US2V090B16	88,000	70,000	80.0%	4 tons	1/2	120-60-1	20	12.8	40	154
	A80US2V090C20	88,000	70,000	80.0%	5 tons	1/2	120-60-1	20	12.8	40	173
	A80US2V110C20	110,000	87,000	80.0%	5 tons	1/2	120-60-1	20	12.8	40	181
	A80US2V135D20	132,000	105,000	80.0%	5 tons	1/2	120-60-1	20	12.8	40	199
	A80US2V070A12L	66,000	52,000	80.0%	3 tons	1/2	120-60-1	15	7.7	40	128
	A80US2V090B16L	88,000	70,000	80.0%	4 tons	1/2	120-60-1	20	12.8	40	154
	A80US2V110C20L	110,000	87,000	80.0%	5 tons	1/2	120-60-1	20	12.8	40	181
Downflow	A80DS2V070A12	66,000	52,000	80.0%	3 tons	1/2	120-60-1	15	7.7	40	130
	A80DS2V090B16	88,000	69,000	80.0%	4 tons	1/2	120-60-1	20	12.8	40	153
	A80DS2V110C20	110,000	87,000	80.0%	5 tons	1/2	120-60-1	20	12.8	40	173

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

\* Outputs shown are High Fire, 100% rate, Low Fire is 67% of shown output.

### Blower Performance Data

Model	Motor Size (hp)	Blower Size	Heating						Cooling							
			Low Fire			High Fire			Cooling Stage	Speed Adjustment	CFM @ 0" - 0.8" w.c.					
			Rise Range F°	Speed Adjustment	CFM @ 0" - 0.5" w.c.	Rise Range F°	Speed Adjustment	CFM @ 0" - 0.5" w.c.			Low	Med Low	Med High	High (Default)		
A80US2V070A12(L)	1/2 HP	10 x 8	25-55	+24%		1073	40 -70	+24%		1178	1st Stage	+10%	748	801	864	970
				+18%		1021		+18%		1121		Default	680	728	785	882
				+12%		969		+12%		1064		-10%	612	655	707	974
				+12%		917		+12%		1007		Default	1007	1095	1210	1348
				Default		865		Default		950	2nd Stage	Default	915	995	1100	1225
				-6%		813		-6%		893		-10%	824	896	990	1103
				-12%		761		-12%		836		Default	915	995	1100	1225
				-18%		709		-18%		779		-10%	824	896	990	1103
A80US2V090B12	1/2 HP	10 x 9	25-55	+24%		1302	40 -70	+24%		1426	1st Stage	+10%	556	699	787	919
				+18%		1239		+18%		1357		Default	505	635	715	835
				+12%		1176		+12%		1288		-10%	455	572	644	752
				+12%		1113		+12%		1219		Default	930	1100	1210	1320
				Default		1050		Default		1150	2nd Stage	Default	845	1000	1100	1200
				-6%		987		-6%		1081		-10%	761	900	990	1080
				-12%		924		-12%		1012		Default	845	1000	1100	1200
				-18%		861		-18%		943		-10%	761	900	990	1080
A80US2V090B16(L)	1 HP	11-1/2 x 9	25-55	+24%		1353	40-70	+24%		1488	1st Stage	+10%	743	935	1073	1238
				+18%		1287		+18%		1416		Default	675	850	975	1125
				+12%		1222		+12%		1344		-10%	608	765	878	1013
				+12%		1156		+12%		1272		Default	1045	1320	1540	1760
				Default		1091		Default		1200	2nd Stage	Default	950	1200	1400	1600
				-6%		1026		-6%		1128		-10%	855	1080	1260	1440
				-12%		960		-12%		1056		Default	950	1200	1400	1600
				-18%		895		-18%		984		-10%	855	1080	1260	1440
A80US2V090C20	1 HP	11-1/2 x 10	25-55	+24%		1353	35-65	+24%		1488	1st Stage	+10%	897	1045	1177	1353
				+18%		1287		+18%		1416		Default	815	950	1070	1230
				+12%		1222		+12%		1344		-10%	734	855	963	1107
				+12%		1156		+12%		1272		Default	1276	1491	1683	1931
				Default		1091		Default		1200	2nd Stage	Default	1160	1355	1530	1755
				-6%		1026		-6%		1128		-10%	1044	1220	1377	1580
				-12%		960		-12%		1056		Default	1160	1355	1530	1755
				-18%		895		-18%		984		-10%	1044	1220	1377	1580
A80US2V110C20(L)	1 HP	11-1/2 x 10	25-55	+24%		1693	35-65	+24%		1860	1st Stage	+10%	1155	1210	1342	1419
				+18%		1611		+18%		1770		Default	1050	1100	1220	1290
				+12%		1529		+12%		1680		-10%	945	990	1098	1161
				+12%		1447		+12%		1590		Default	1650	1735	1914	2024
				Default		1365		Default		1500	2nd Stage	Default	1500	1575	1840	1840
				-6%		1283		-6%		1410		-10%	1350	1418	1566	1656
				-12%		1201		-12%		1320		Default	1500	1575	1840	1840
				-18%		1119		-18%		1230		-10%	1350	1418	1566	1656
A80US2V135D20	1 HP	11-1/2 x 11	25-55	+24%		1872	40-70	+24%		2058	1st Stage	+10%	1062	1139	1309	1419
				+18%		1782		+18%		1959		Default	965	1035	1190	1290
				+12%		1691		+12%		1859		-10%	869	932	1071	1161
				+12%		1601		+12%		1760		Default	1513	1623	1870	2024
				Default		1510		Default		1660	2nd Stage	Default	1375	1475	1700	1840
				-6%		1419		-6%		1560		-10%	1238	1328	1530	1656
				-12%		1329		-12%		1461		Default	1375	1475	1700	1840
				-18%		1238		-18%		1361		-10%	1238	1328	1530	1656

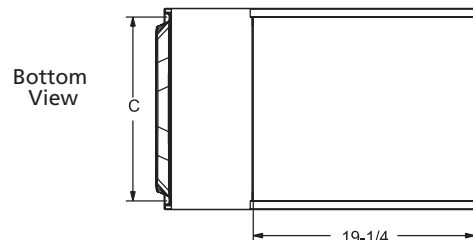
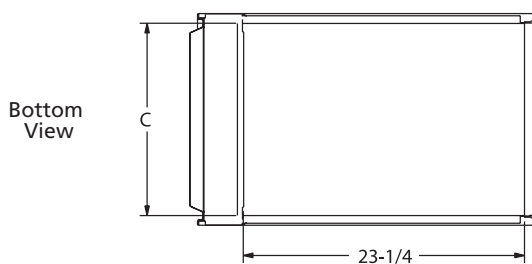
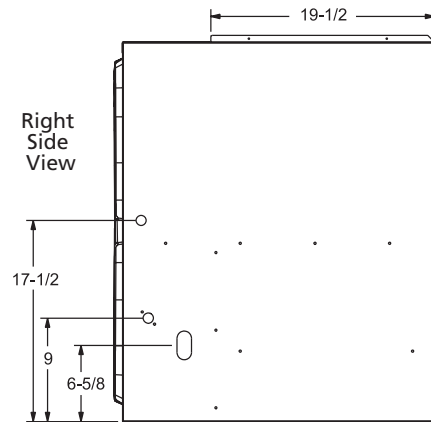
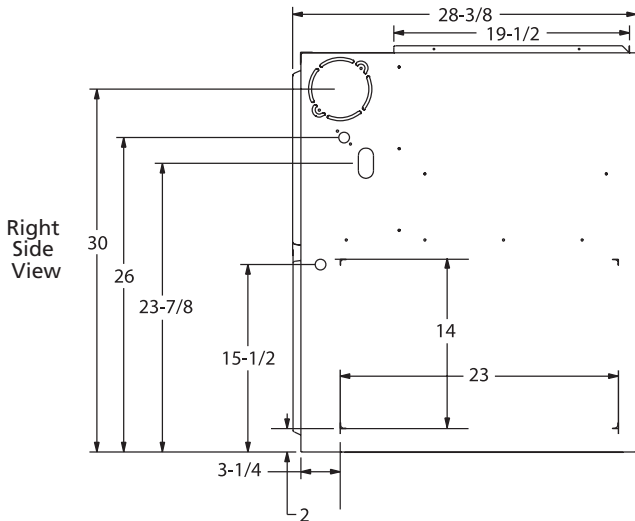
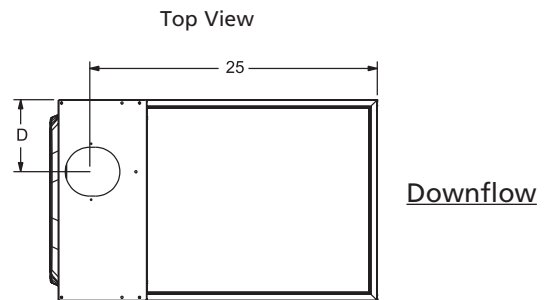
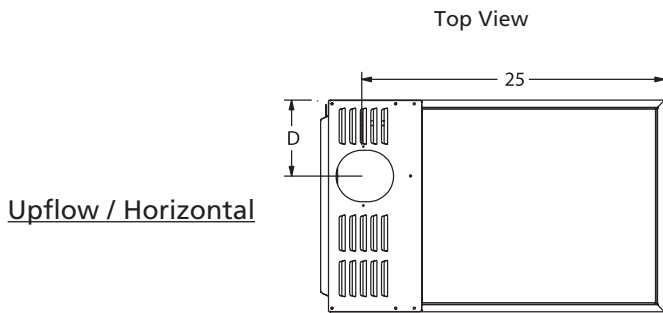
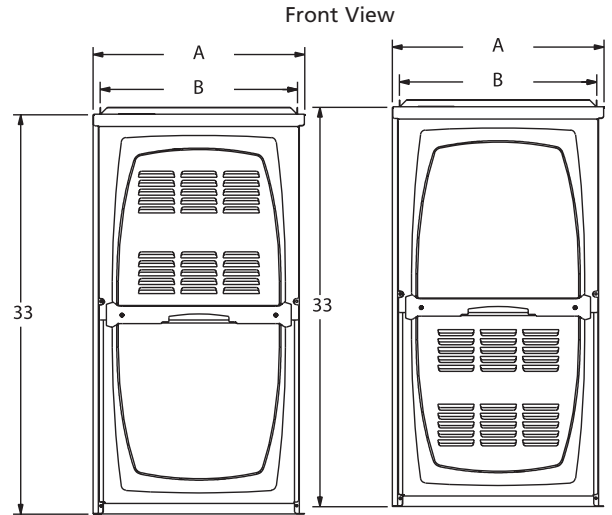
Upflow / Horizontal

### Blower Performance Data

	Model	Motor Size (hp)	Blower Size	Heating						Cooling						
				Low Fire			High Fire			Cooling Stage	Speed Adjustment	CFM @ 0" - 0.8" w.c.				
				Rise Range F°	Speed Adjustment	CFM @ 0" - 0.5" w.c.	Rise Range F°	Speed Adjustment	CFM @ 0" - 0.5" w.c.			Low	Med Low	Med High	High (Default)	
Downflow	A80DS2V070A12	1/2 HP	10 x 8	25-55	35-65	+24%	1042	+24%	1147	1st Stage	+10%	693	755	855	986	
						+18%	991	+18%	1092		Default	630	686	777	896	
						+12%	941	+12%	1036		-10%	567	617	699	806	
						+12%	980	+12%	981		+10%	990	1078	1221	1408	
						Default	840	Default	925	2nd Stage	Default	900	980	1110	1280	
						-6%	790	-6%	870		-10%	810	882	999	1152	
						-12%	739	-12%	814		+10%	770	935	1073	1238	
						-18%	689	-18%	759		Default	700	850	975	1125	
	A80DS2V090B16	1 HP	11-1/2 x 9	25-55	35-65	+24%	1353	+24%	1488	1st Stage	+10%	770	935	1073	1238	
						+18%	1287	+18%	1416		Default	700	850	975	1125	
						+12%	1222	+12%	1344		-10%	630	765	878	1013	
						+12%	1156	+12%	1272		+10%	1100	1320	1540	1760	
						Default	1091	Default	1200	2nd Stage	Default	1000	1200	1400	1600	
						-6%	1026	-6%	1128		-10%	900	1080	1260	1440	
						-12%	960	-12%	1056		+10%	985	1139	1293	1331	
						-18%	895	-18%	984		Default	895	1035	1175	1210	
	A80DS2V110C20	1 HP	11-1/2 x10	25-55	35-65	+24%	1581	+24%	1742	1st Stage	+10%	985	1139	1293	1331	
						+18%	1505	+18%	1658		Default	895	1035	1175	1210	
						+12%	1428	+12%	1574		-10%	806	932	1058	1089	
						+12%	1352	+12%	1489		+10%	1403	1625	1843	1898	
						Default	1275	Default	1405	2nd Stage	Default	1275	1475	1675	1725	
						-6%	1199	-6%	1321		-10%	1148	1328	1508	1553	
						-12%	1122	-12%	1236							
						-18%	1046	-18%	1152							

Dimensions (in.)

	Model	A	B	C	D
Upflow/Horizontal	A80US2V070A12(L)	14-1/2	13-3/8	13	4-3/4
	A80US2V090B12	17-1/2	16-3/8	16	6-1/4
	A80US2V090B16(L)	17-1/2	16-3/8	16	6-1/4
	A80US2V090C20	21	19-7/8	19-1/2	8
	A80US2V110C20(L)	21	19-7/8	19-1/2	8
	A80US2V135D20	24-1/2	23-3/8	23	11-1/8
Downflow	A80DS2V070A12	14-1/2	13-3/8	13	4-3/4
	A80DS2V090B16	17-1/2	16-3/8	16	6-1/4
	A80DS2V110C20	21	19-7/8	19-1/2	8



## 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	
77W08	Two-Stage
LP to Natural kits	
77W10	Two-Stage
Return Air Base	
68W61	Return Air Base 14.5 Inch, A Width
68W62	Return Air Base 17.5 Inch, B Width
68W63	Return Air Base 21.0 Inch, C Width
Night Service Kit	
89W54	Two-Stage
Horizontal Suspension Kit	
51W10	80% & 90% Kit
Combustible Floor Base	
11M59	14.5 Inch, A Width
11M60	17.5 Inch, B Width
11M61	21.0 Inch, C Width

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

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

