

A972V

PRODUCT SPECIFICATIONS

TWO STAGE VARIABLE SPEED GAS FURNACE

FORM NO. A972V-100 (06/2023)



VENTING

- Vent materials for Canadian applications must comply with ULC 5636
- Certified for direct vent (2-pipe) and in-direct (1-pipe) applications.

INSTALLATION FEATURES

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

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
- AL29-4C Stainless steel secondary heat exchanger

CABINET DESIGN

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

AIR DELIVERY SYSTEM

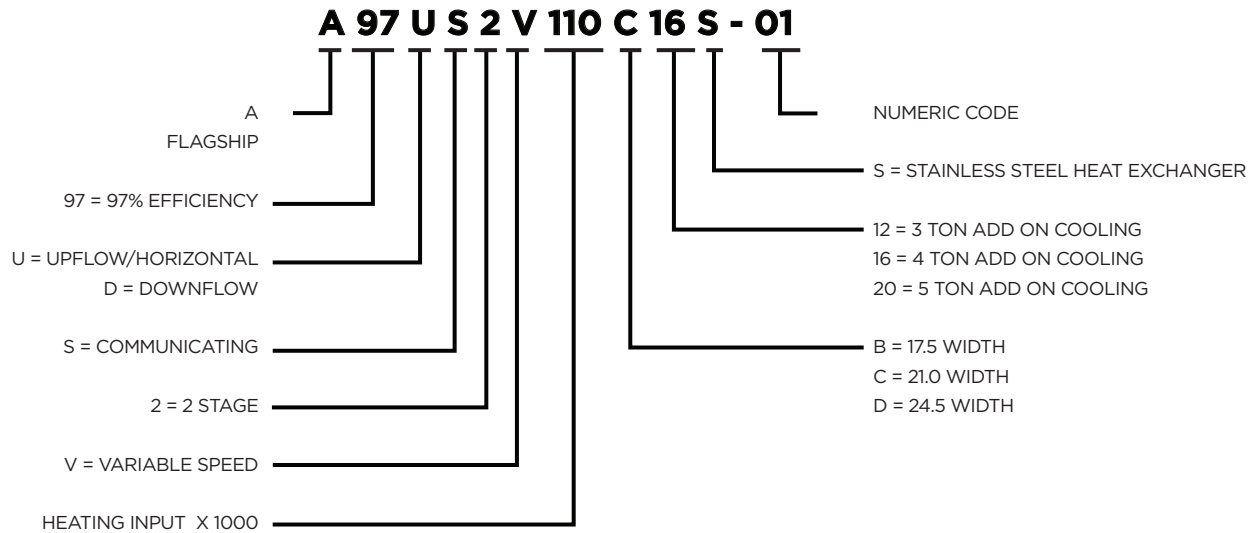
- ECM Variable speed blower motor
- Easily removable slide out blower design

CONTROLS

- Comfort Sync® communicating thermostat compatible
- Two stage gas valve
- Self diagnostics saves last 5 fault codes regardless of power interruption



MODEL NUMBER GUIDE



PHYSICAL AND ELECTRICAL DATA

	Model	1st Stage		2nd Stage		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.)
		Input (Btuh)	Output* (Btuh)	Input (Btuh)	Output* (Btuh)								
UPFLOW/HORIZONTAL	A97US2V045B12S	29,000	28,000	44,000	43,000	97.0	3	1/2	120-60-1	15	7.7	40	124
	A97US2V070B12S	43,000	42,000	66,000	64,000	97.0	3	1/2	120-60-1	15	7.7	40	133
	A97US2V090C12S	57,000	56,000	88,000	85,000	97.0	3	1/2	120-60-1	15	7.7	40	147
	A97US2V090C16S	57,000	56,000	88,000	86,000	97.0	4	1/2	120-60-1	15	10.1	40	154
	A97US2V090C20S	57,000	56,000	88,000	86,000	97.0	5	1/2	120-60-1	20	12.8	40	157
	A97US2V110C16S	72,000	70,000	110,000	106,000	97.0	4	1/2	120-60-1	15	10.1	40	161
	A97US2V110C20S	72,000	70,000	110,000	107,000	97.0	5	1/2	120-60-1	20	12.8	40	164
	A97US2V135D20S	86,000	84,000	132,000	127,000	97.0	5	1/2	120-60-1	20	12.8	40	179
DOWNFLOW	A97DS2V045B12S	29,000	28,000	44,000	43,000	97.0	3	1/2	120-60-1	15	7.7	40	126
	A97DS2V070B16S	43,000	42,000	66,000	64,000	97.0	4	1/2	120-60-1	15	10.1	40	140
	A97DS2V090C20S	57,000	56,000	88,000	86,000	97.0	5	1/2	120-60-1	20	12.8	40	159
	A97DS2V110C20S	72,000	70,000	110,000	108,000	97.0	5	1/2	120-60-1	20	12.8	40	167

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.

FILTER REQUIREMENT DATA

- The Airflow Descriptor is the two digits following the "B", "C", or "D" in the model number; e.g. "20" is the Airflow Descriptor.
- Areas shown for permanent filters are based on filters rated at 600 feet per minute face velocity.

Airflow Descriptor	Disposable Filters	Cleanable Filters
	Minimum Area (sq. in.)	Minimum Area (sq.in.)
12	576	288
16	768	384
20	960	480

BLOWER PERFORMANCE DATA - UPFLOW/HORIZONTAL

A97US2V045B12S Motor Size: 1/2 HP Blwr Size: 10 x 9		LOW FIRE HEATING - SCFM [TEMP RISE: 20 - 50 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		595	638	682	725	769	812	856	899	738	792	846	900	954	1008	1062	1116
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	605		743		853		963		880		1045		1210		1375	
	Default	550		675		775		875		800		950		1100		1250	
	-10%	495		608		698		788		720		855		990		1125	

A97US2V070B12S Motor Size: 1/2 HP Blwr Size: 10 x 9		LOW FIRE HEATING - SCFM [TEMP RISE: 25 - 55 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 50 - 80 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		718	770	823	875	928	980	1033	1085	800	858	917	975	1034	1092	1151	1209
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	605		743		853		963		880		1045		1210		1375	
	Default	550		675		775		875		800		950		1100		1250	
	-10%	495		608		698		788		720		855		990		1125	

A97US2V090C12S Motor Size: 1/2 HP Blwr Size: 10 x 9		LOW FIRE HEATING - SCFM [TEMP RISE: 30 - 60 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 60 - 90 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		800	858	917	975	1034	1092	1151	1209	861	924	987	1050	1113	1176	1239	1302
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	605		743		853		963		880		1045		1210		1375	
	Default	550		675		775		875		800		950		1100		1250	
	-10%	495		608		698		788		720		855		990		1125	

A97US2V090C16S Motor Size: 3/4 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 30 - 60 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 45 - 75 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		943	1012	1081	1150	1219	1288	1357	1426	1046	1122	1199	1275	1352	1428	1505	1581
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	770		935		1073		1238		1100		1320		1540		1760	
	Default	700		850		975		1125		1000		1200		1400		1600	
	-10%	630		765		878		1013		900		1080		1260		1440	

A97US2V090C20S Motor Size: 1 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 30 - 60 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 40 - 70 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		943	1012	1081	1150	1219	1288	1357	1426	1271	1364	1457	1550	1643	1736	1829	1922
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	935		1073		1238		1403		1320		1540		1760		2008	
	Default	850		975		1125		1275		1200		1400		1600		1825	
	-10%	765		878		1013		1148		1080		1260		1440		1643	

* @ .10" - .80" w.c.

BLOWER PERFORMANCE DATA - UPFLOW/HORIZONTAL

A97US2V110C16S Motor Size: 3/4 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 60 - 90 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		1005	1078	1152	1225	1299	1372	1446	1519	1066	1144	1222	1300	1378	1456	1534	1612
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	770		935		1073		1238		1100		1320		1540		1760	
	Default	700		850		975		1125		1000		1200		1400		1600	
	-10%	630		765		878		1013		900		1080		1260		1440	

A97US2V110C20S Motor Size: 1 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 45 - 75 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		1005	1078	1152	1225	1299	1372	1446	1519	1333	1430	1528	1625	1723	1820	1918	2015
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	935		1073		1238		1403		1320		1540		1760		2008	
	Default	850		975		1125		1275		1200		1400		1600		1825	
	-10%	765		878		1013		1148		1080		1260		1440		1643	

A97US2V135D20S Motor Size: 1 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 40 - 70 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 55 - 85 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		1128	1210	1293	1375	1458	1540	1623	1705	1374	1474	1575	1675	1776	1876	1977	2077
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low		Med Low		Med High		High		Low		Med Low		Med High		High	
	+10%	935		1073		1238		1403		1320		1540		1760		2008	
	Default	850		975		1125		1275		1200		1400		1600		1825	
	-10%	765		878		1013		1148		1080		1260		1440		1643	

* @ .10" - .80" w.c.

BLOWER PERFORMANCE DATA - DOWNFLOW

A97DS2V045B12S Motor Size: 1/2 HP Blwr Size: 10 x 9		LOW FIRE HEATING - SCFM [TEMP RISE: 20 - 50 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		595	638	682	725	769	812	856	899	738	792	846	900	954	1008	1062	1116
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low	Med Low		Med High		High		Low	Med Low		Med High		High			
	+10%	605	743		853		963		880	1045		1210		1375			
	Default	550	675		775		875		800	950		1100		1250			
-10%	495	608		698		788		720	855		990		1125				

A97DS2V070B16S Motor Size: 3/4 HP Blwr Size: 11 x 10		LOW FIRE HEATING - SCFM [TEMP RISE: 25 - 55 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		718	770	823	875	928	980	1033	1085	1046	1122	1199	1275	1352	1428	1505	1581
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low	Med Low		Med High		High		Low	Med Low		Med High		High			
	+10%	770	935		1073		1238		1100	1320		1540		1760			
	Default	700	850		975		1125		1000	1200		1400		1600			
-10%	630	765		878		1013		900	1080		1260		1440				

A97DS2V090C20S Motor Size: 1 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 30 - 60 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 40 - 70 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		943	1012	1081	1150	1219	1288	1357	1426	1271	1364	1457	1550	1643	1736	1829	1922
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low	Med Low		Med High		High		Low	Med Low		Med High		High			
	+10%	935	1073		1238		1403		1320	1540		1760		2008			
	Default	850	975		1125		1275		1200	1400		1600		1825			
-10%	765	878		1013		1148		1080	1260		1440		1643				

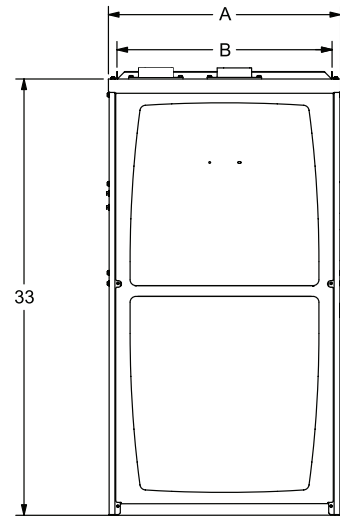
A97DS2V110C20S Motor Size: 1 HP Blwr Size: 11 x 11		LOW FIRE HEATING - SCFM [TEMP RISE: 35 - 65 F°]*								HIGH FIRE HEATING - SCFM [TEMP RISE: 45 - 75 F°]*							
	Adj.	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%	-18%	-12%	-6%	Default	+6%	+12%	+18%	+24%
		1005	1078	1152	1225	1299	1372	1446	1519	1333	1430	1528	1625	1723	1820	1918	2015
		FIRST STAGE COOLING - SCFM								SECOND STAGE COOLING - SCFM							
	Speed	Low	Med Low		Med High		High		Low	Med Low		Med High		High			
	+10%	935	1073		1238		1403		1320	1540		1760		2008			
	Default	850	975		1125		1275		1200	1400		1600		1825			
-10%	765	878		1013		1148		1080	1260		1440		1643				

* @ .10" - .80" w.c.

DIMENSIONS

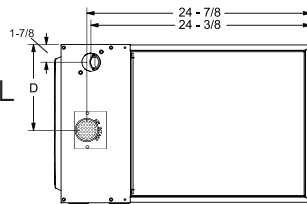
	Model	A	B	C	D
UPFLOW/HORIZONTAL	A97US2V045B12S	17-1/2	16-3/8	16	7-5/8
	A97US2V070B12S	17-1/2	16-3/8	16	7-5/8
	A97US2V090C12S	21	19-7/8	19-1/2	9-3/8
	A97US2V090C16S	21	19-7/8	19-1/2	9-3/8
	A97US2V090C20S	21	19-7/8	19-1/2	9-3/8
	A97US2V110C16S	21	19-7/8	19-1/2	9-3/8
	A97US2V110C20S	21	19-7/8	19-1/2	9-3/8
	A97US2V135D20S	24-1/2	23-3/8	23	11-1/8
DOWNFLOW	A97DS2V045B12S	17-1/2	16-3/8	16	15-1/2
	A97DS2V070B16S	17-1/2	16-3/8	16	15-1/2
	A97DS2V090C20S	21	19-7/8	19-1/2	19
	A97DS2V110C20S	21	19-7/8	19-1/2	19

FRONT VIEW



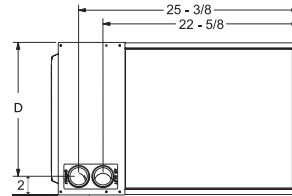
TOP VIEW

UPFLOW / HORIZONTAL

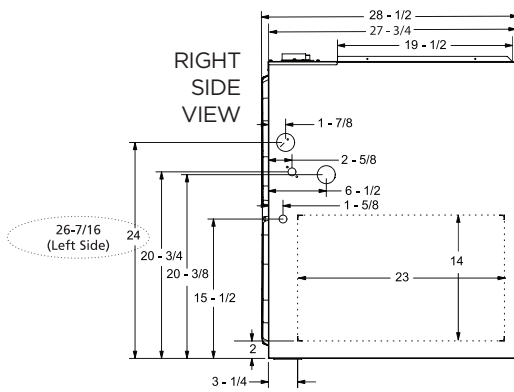


TOP VIEW

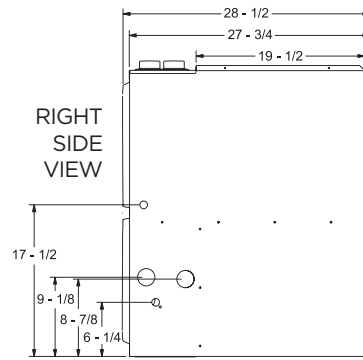
DOWNFLOW



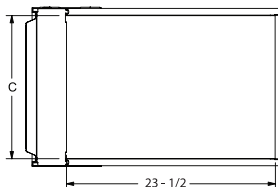
RIGHT SIDE VIEW



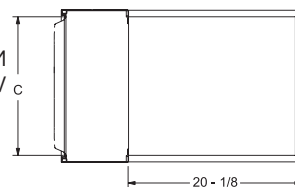
RIGHT SIDE VIEW



BOTTOM VIEW



BOTTOM VIEW



ACCESSORY LIST

Description	Catalog Number
Return Air Base	
Return Air Base 17.5 Inch	68W62
Return Air Base 21.0 Inch	68W63
Return Air Base 24.5 Inch	68W64
Natural to LP Kits	
2-Stage - 90	11K48
High Altitude (> 7500')	11K47
Downflow Specific Air Filters	
17.5"	51W07
21.0"	51W08
Downflow Combustible Flooring Base	
17.5" B Width	11M60
21.0" C Width	11M61
Night Service Kits	
Two-stage	89W53
Horizontal Suspension Kit	
80% & 90% Kit	51W10
Flush Mount Termination (90% Furnaces only)	
2" & 3.0" Vent - US Version	51W11
2" & 3.0" Vent - ULC S636 Compliant (Canada)	51W12
Concentric Vent Kit (90% Furnaces only)	
1-1/2" Vent Version (United States)	71M80
1-1/2" and 2" Vent Version (Canada)	44W92
2" Vent Version (United States)	69M29
3" Vent Version (United States)	60L46
3" Vent Version (Canada)	44W93
External Filter Rack Kits	
1 pack (16 x 25)	1.841018
10 pack (16 x 25)	1.841039
Comfort Sync® Controls	
Comfort Sync® A3 Thermostat	1.841226
Comfort Sync® Zoning Controller	1.851399
Comfort Sync® Zone Sensor	1.851422

Note: 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.