

# A961E

## PRODUCT SPECIFICATIONS

## SINGLE STAGE HIGH EFFICIENCY CONSTANT TORQUE GAS FURNACE

FORM NO. A961E-100 (07/2022)



### CONTROLS

- Single stage gas valve
- Durable silicon nitride ignitor
- Self diagnostics saves last 10 fault codes regardless of power interruption
- Control features electronic air cleaner and humidifier terminals

### VENTING

- Designed certified for direct (2-pipe) and non direct (1-pipe) applications
- Easily vented with PVC pipe

### INSTALLATION FEATURES

- Left or right utility connection
- Zero step horizontal conversion
- Removable floor base (upflow / horizontal units) for bottom return air
- Complies with California's South Coast Air Quality Management district Low NOx requirements

### 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

### BURNER

- Aluminized steel inshot burners for smooth ignition

### CABINET DESIGN

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

### AIR DELIVERY SYSTEM

- Multi-speed high efficiency (constant torque) blower motor
- Easily removable slide out blower design
- Enhanced cooling SEER ratings when applied with properly matched cooling equipment.

### WARRANTY

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

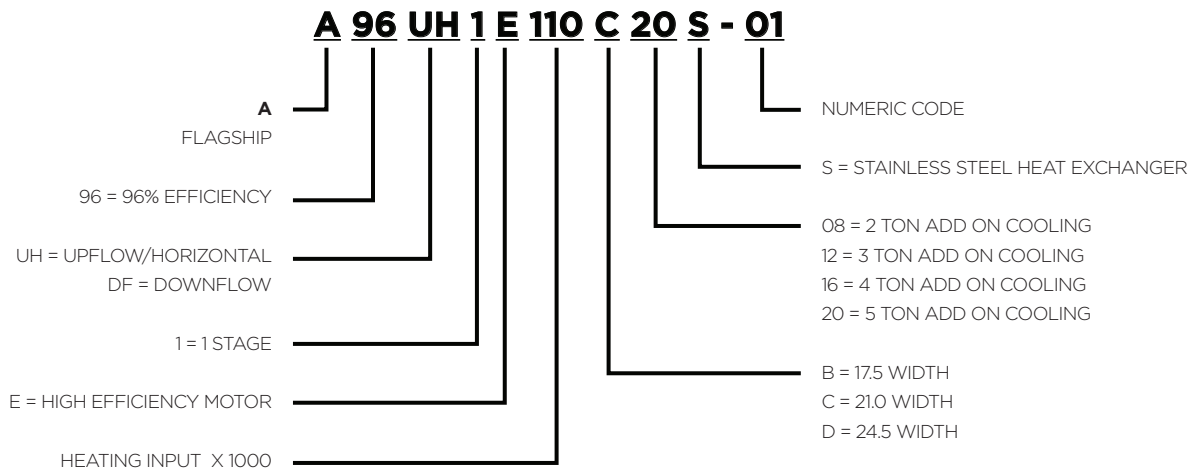
#### *California Only*

*This product is not certified to be sold or installed in the South Coast Air Quality Management District (SCAQMD). It does not meet the SCAQMD Rule 1111 NOx emission limit of 14 Ng/L.*

*This product is not certified to be sold or installed in the San Joaquin Valley Air Pollution Control District (SJVAPCD). It does not meet the SJVAPCD Rule 4905 NOx emission limit of 14 Ng/L.*



**MODEL NUMBER GUIDE**



**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 Full Load Amps	Trans (VA)	Approx Shipping Weight (lbs)
<b>Upflow / Horizontal</b>	A96UH1E030B12S	30,000	29,000	96%	2 Ton	1/2	120-60-1	15	6.8	40	120
	A96UH1E045B12S	44,000	42,800	96%	3 Ton	1/2	120-60-1	15	6.8	40	124
	A96UH1E070B12S	66,000	63,900	96%	3 Ton	1/2	120-60-1	15	6.8	40	129
	A96UH1E090C16S	88,000	85,600	96%	4 Ton	1/2	120-60-1	15	8.4	40	152
	A96UH1E110C20S	110,000	107,200	96%	5 Ton	1/2	120-60-1	15	10.9	40	164
	A96UH1E135D20S	132,000	127,000	96%	5 Ton	1/2	120-60-1	15	10.9	40	174
<b>Downflow</b>	A96DF1E045B12S	44,000	42,000	96%	3 Ton	1/2	120-60-1	15	6.8	40	126
	A96DF1E070B16S	66,000	64,000	96%	4 Ton	1/2	120-60-1	15	8.4	40	139
	A96DF1E090C16S	88,000	86,000	96%	4 Ton	1/2	120-60-1	15	8.4	40	154
	A96DF1E110C20S	110,000	108,000	96%	5 Ton	1/2	120-60-1	15	10.9	40	162

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

**BLOWER PERFORMANCE DATA UPFLOW / HORIZONTAL**

<b>A96UH1E030B12S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	25-55	1435	346	1170	191	1000	127	775	62	705	45
0.10		1400	351	1130	199	955	132	735	71	635	48
0.20		1360	358	1085	207	905	137	680	81	515	50
0.30		1325	370	1055	217	865	148	625	84	445	55
0.40		1300	382	1020	227	815	157	570	91	380	61
0.50		1265	387	990	231	785	161	515	95	310	66
0.60		1235	402	945	244	735	168	475	104	265	68
0.70		1200	411	910	253	710	175	425	107	215	72
0.80		1160	420	885	260	660	183	355	114	175	75

<b>A96UH1E045B12S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	35-65	1460	335	1285	235	1190	170	910	85	870	75
0.10		1430	350	1260	245	1155	185	885	95	830	85
0.20		1405	365	1235	255	1125	200	860	105	800	90
0.30		1375	370	1205	265	1090	210	825	115	755	95
0.40		1350	380	1175	275	1055	215	780	125	710	105
0.50		1315	385	1145	285	1020	230	735	130	665	115
0.60		1245	375	1110	295	980	240	685	140	620	125
0.70		N/A	N/A	1070	305	940	250	640	145	575	135
0.80		N/A	N/A	1020	310	905	260	600	155	530	140

<b>A96UH1E070B12S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	35-65	1445	315	1315	215	1215	165	930	85	925	75
0.10		1445	335	1275	230	1170	180	905	94	860	80
0.20		1415	345	1240	240	1125	190	870	101	800	85
0.30		1380	355	1205	250	1090	200	830	109	760	95
0.40		1345	370	1175	265	1055	210	790	117	710	105
0.50		1315	385	1150	280	1020	220	735	129	665	115
0.60		1275	390	1110	290	985	230	685	137	625	125
0.70		1210	395	1075	300	950	240	640	146	565	130
0.80		N/A	N/A	1030	305	915	250	595	148	535	135

**BLOWER PERFORMANCE DATA UPFLOW / HORIZONTAL**

A96UH1E090C16S PERFORMANCE (Less Filter)											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	50-80	1765	375	1535	250	1410	180	1315	155	1155	115
0.10		1735	390	1500	260	1365	200	1270	165	1130	125
0.20		1700	405	1465	275	1330	215	1230	175	1095	135
0.30		1660	425	1435	290	1295	225	1195	190	1055	145
0.40		1640	435	1400	300	1265	235	1165	200	1010	155
0.50		1615	450	1370	315	1230	250	1125	215	965	165
0.60		1575	465	1340	325	1190	265	1080	230	925	180
0.70		1530	470	1305	340	1150	280	1045	235	885	190
0.80		N/A	N/A		1260	345	1115	285	1000	245	845

A96UH1E110C20S PERFORMANCE (Less Filter)																					
External Static Pressure in. w.g.	Temp Rise	Air Volume / Watts at Different Blower Speeds																			
	Rise Range °F	Bottom Return Air, Side Return Air with Optional Return Air Base, Return Air from Both Sides or Return Air from Bottom and One Side.										Single Side Return Air – Air volumes in <b>bold</b> require field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.									
		High		Med-High		Medium		Med-Low		Low		High		Med-High		Medium		Med-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	45-75	2220	655	1975	440	1800	325	1665	390	1050	180	<b>2180</b>	<b>685</b>	<b>1910</b>	<b>460</b>	1750	345	1660	285	1430	195
0.10		2185	680	1925	460	1750	345	1625	285	1440	200	<b>2155</b>	<b>705</b>	<b>1885</b>	<b>480</b>	1720	360	1610	295	1415	205
0.20		2150	705	1880	480	1710	365	1590	300	1390	220	<b>2130</b>	<b>725</b>	<b>1855</b>	<b>495</b>	1685	380	1565	305	1380	220
0.30		2110	720	1850	495	1680	380	1560	320	1350	230	<b>2085</b>	<b>745</b>	<b>1825</b>	<b>510</b>	1655	390	1535	325	1335	230
0.40		2080	735	1810	520	1650	405	1515	330	1310	245	<b>2060</b>	<b>760</b>	1795	530	1625	405	1495	340	1295	245
0.50		2045	755	1785	530	1610	415	1470	350	1265	255	<b>2030</b>	<b>775</b>	1765	545	1585	425	1450	355	1255	265
0.60		2010	775	1740	545	1575	430	1440	370	1220	270	<b>1995</b>	<b>785</b>	1725	565	1550	435	1420	370	1205	275
0.70		1980	790	1705	565	1525	450	1400	375	1170	280	<b>1960</b>	<b>795</b>	1690	575	1505	455	1385	385	1165	290
0.80		1950	795	1670	580	1485	460	1360	390	1140	293	<b>1895</b>	<b>790</b>	1650	590	1465	470	1335	395	1120	295

A96UH1E135D20S PERFORMANCE (Less Filter)																					
External Static Pressure in. w.g.	Temp Rise	Air Volume / Watts at Different Blower Speeds																			
	Rise Range °F	Bottom Return Air, Side Return Air with Optional Return Air Base, Return Air from Both Sides or Return Air from Bottom and One Side.										Single Side Return Air – Air volumes in <b>bold</b> require field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.									
		High		Med-High		Medium		Med-Low		Low		High		Med-High		Medium		Med-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	45-75	2400	920	2205	709	2035	513	1800	363	1625	268	<b>2280</b>	<b>929</b>	<b>2100</b>	<b>703</b>	<b>1935</b>	<b>531</b>	1720	368	1550	269
0.10		2370	930	2170	718	1985	524	1760	375	1585	279	<b>2245</b>	<b>941</b>	<b>2075</b>	<b>720</b>	<b>1910</b>	<b>543</b>	1700	380	1530	280
0.20		2345	937	2150	723	1960	552	1725	385	1535	291	<b>2210</b>	<b>957</b>	<b>2050</b>	<b>745</b>	<b>1895</b>	<b>558</b>	1695	396	1500	295
0.30		2305	958	2120	744	1920	565	1690	404	1505	305	<b>2200</b>	<b>978</b>	<b>2030</b>	<b>757</b>	<b>1850</b>	<b>569</b>	1675	408	1475	308
0.40		2275	974	2070	763	1885	576	1665	419	1475	323	<b>2175</b>	<b>990</b>	<b>2015</b>	<b>774</b>	<b>1845</b>	<b>584</b>	1640	427	1450	326
0.50		2230	986	2055	779	1845	593	1620	433	1435	330	<b>2145</b>	<b>989</b>	<b>2010</b>	<b>783</b>	<b>1820</b>	<b>603</b>	1605	446	1410	332
0.60		2195	988	2030	796	1810	614	1590	451	1385	348	<b>2125</b>	<b>980</b>	<b>1990</b>	<b>809</b>	1785	618	1580	455	1375	351
0.70		2125	961	1985	806	1780	626	1545	468	1355	359	<b>2060</b>	<b>937</b>	<b>1960</b>	<b>819</b>	1765	635	1545	474	1340	366
0.80		2065	931	1965	822	1760	642	1500	479	1310	377	<b>1980</b>	<b>912</b>	<b>1925</b>	<b>825</b>	1730	646	1510	491	1295	379

**BLOWER PERFORMANCE DATA DOWNFLOW**

<b>A96DF1E045B12S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	30-60	1455	370	1275	255	1175	190	920	90	865	85
0.10		1425	375	1250	260	1145	200	885	100	830	90
0.20		1395	380	1225	265	1115	210	850	110	795	95
0.30		1365	385	1195	275	1085	220	815	115	750	105
0.40		1325	385	1170	290	1045	230	770	130	700	110
0.50		1245	370	1130	300	1010	240	720	135	660	120
0.60		1180	360	1095	305	970	245	675	140	605	125
0.70		1100	330	1045	310	935	255	615	150	560	130
0.80		980	295	1000	290	895	260	580	155	505	135

<b>A96DF1E070B16S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	35-65	1720	510	1545	355	1340	235	1240	190	1020	95
0.10		1700	530	1505	360	1310	245	1195	200	955	110
0.20		1675	545	1465	370	1275	255	1155	205	895	115
0.30		1640	555	1420	380	1230	270	1120	215	835	125
0.40		1600	565	1380	395	1180	280	1060	225	785	135
0.50		1560	570	1340	400	1140	290	1015	235	715	145
0.60		1500	565	1300	420	1095	305	965	245	640	150
0.70		1405	540	1255	430	1040	315	910	255	585	160
0.80		1325	515	1215	445	990	320	865	265	525	170

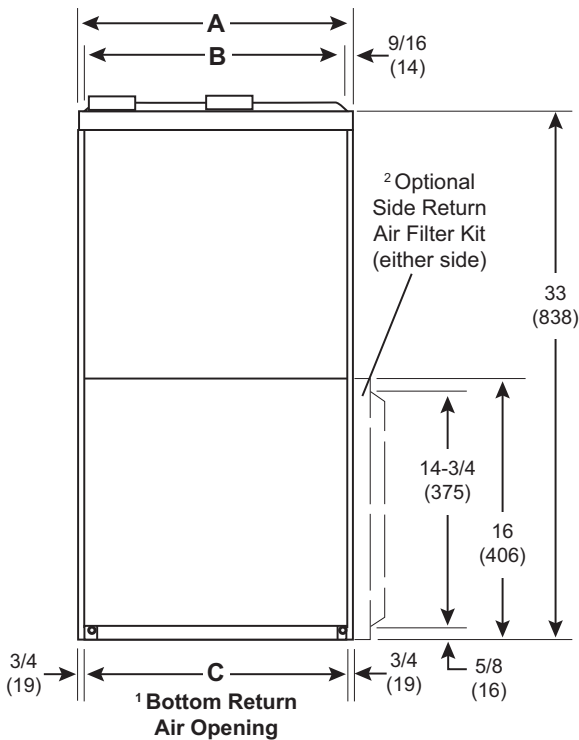
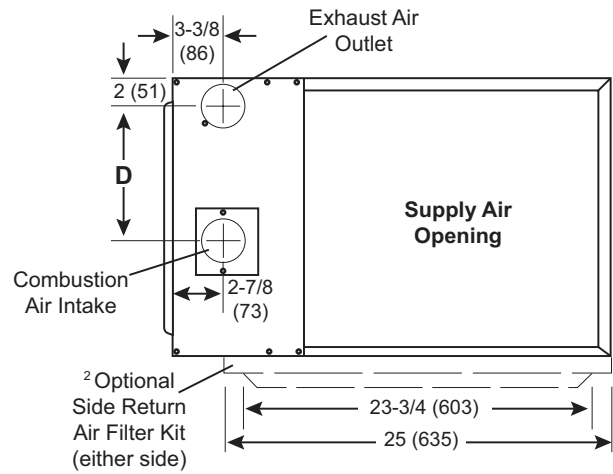
<b>A96DF1E090C16S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	50-80	1760	435	1555	280	1405	230	1315	175	1190	135
0.10		1730	445	1515	300	1375	240	1280	190	1150	145
0.20		1700	455	1475	315	1350	250	1245	205	1115	155
0.30		1670	465	1445	330	1310	265	1200	220	1070	165
0.40		1640	480	1410	340	1265	275	1160	230	1025	175
0.50		1590	485	1380	345	1225	285	1125	235	985	185
0.60		1530	465	1340	360	1195	295	1085	245	945	195
0.70		1445	450	1315	370	1150	305	1065	255	895	200
0.80		1350	420	1280	375	1115	315	1015	265	860	210

**BLOWER PERFORMANCE DATA DOWNFLOW**

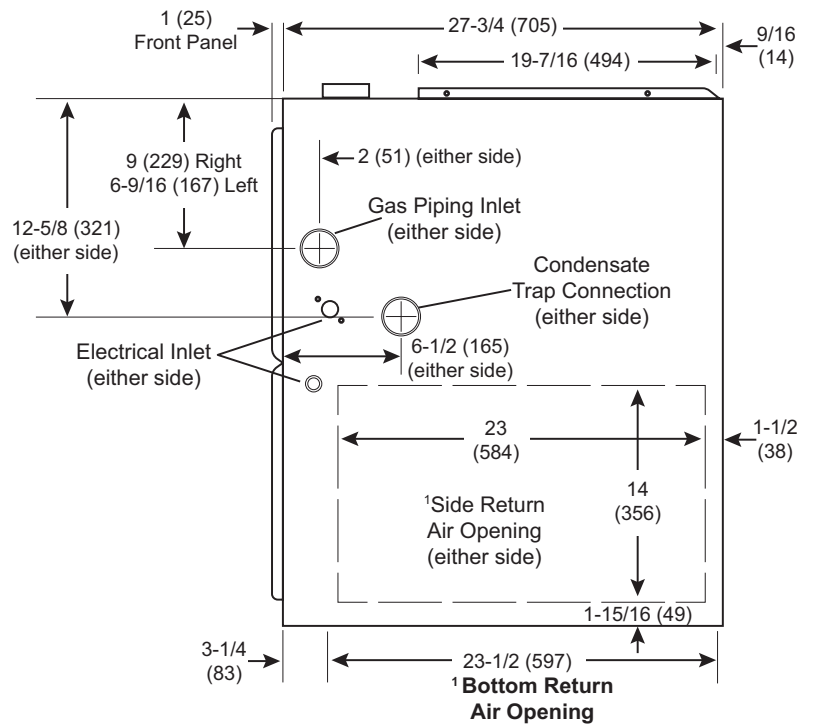
<b>A96DF1E110C20S PERFORMANCE (Less Filter)</b>											
External Static Pressure in. w.c.	Temp Rise	Air Volume / Watts at Various Blower Speeds									
	Rise Range °F	High		Medium-High		Medium		Medium-Low		Low	
		cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	40-70	2115	669	1895	466	1710	356	1605	285	1415	209
0.10		2090	686	1845	476	1670	368	1570	299	1380	217
0.20		2060	701	1790	487	1630	375	1520	315	1320	222
0.30		2020	711	1760	498	1590	393	1470	324	1280	236
0.40		1980	734	1715	511	1545	403	1420	342	1220	247
0.50		1935	740	1690	525	1500	418	1370	347	1170	264
0.60		1895	749	1625	536	1460	423	1335	358	1110	269
0.70		1830	738	1600	548	1410	438	1280	367	1080	286
0.80		1765	723	1550	564	1370	456	1240	387	1010	290

**DIMENSIONS (IN.)**

**Top View**



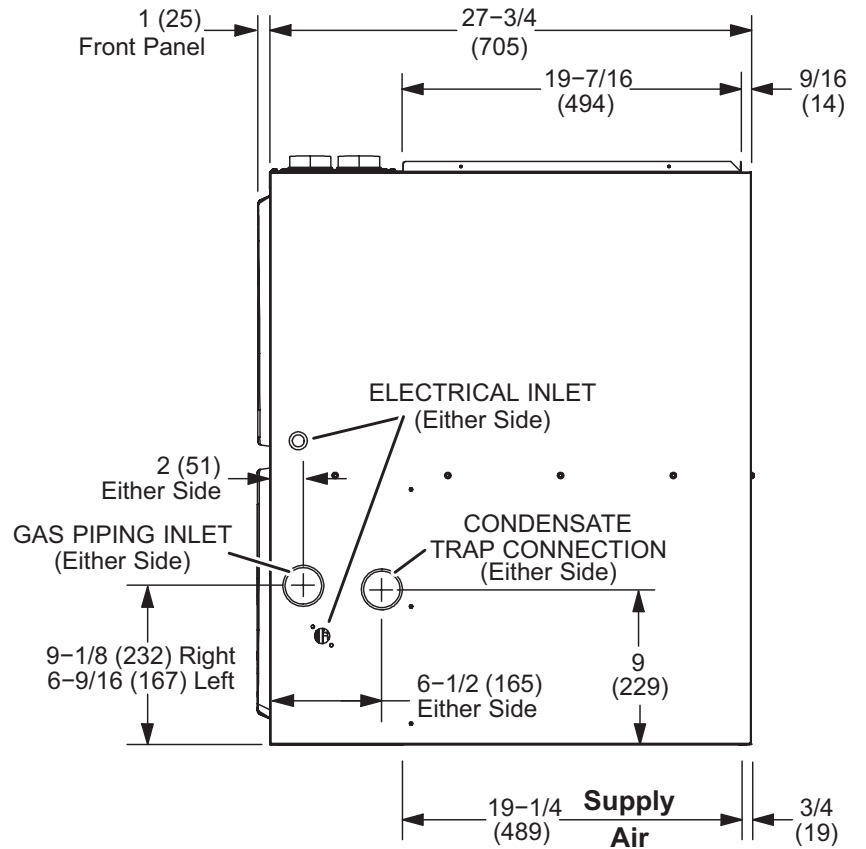
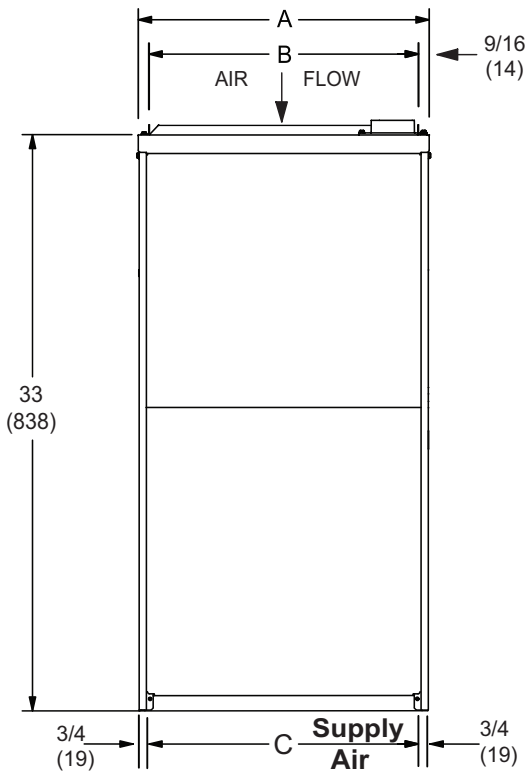
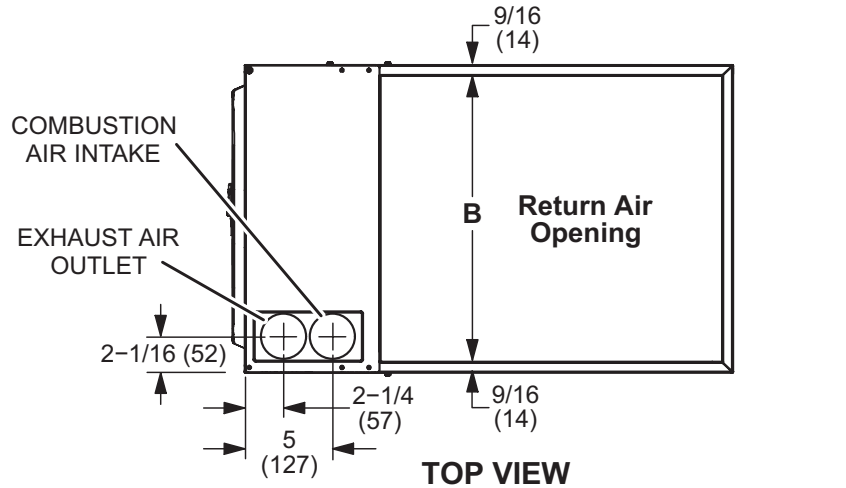
**Front View**



**Side View**

	Model	A	B	C	D
Upflow / Horizontal	A96UH1E030B12S	17-1/2	16-3/8	16	7-5/8
	A96UH1E045B12S	17-1/2	16-3/8	16	7-5/8
	A96UH1E070B12S	17-1/2	16-3/8	16	7-5/8
	A96UH1E090C16S	21	19-7/8	19-1/2	9-3/8
	A96UH1E110C20S	21	19-7/8	19-1/2	9-3/8
	A96UH1E135D20S	24-1/2	23-3/8	23	11-1/8

**DIMENSIONS (IN.)**



**FRONT VIEW**

**SIDE VIEW**

	Model	A	B	C
<b>Downflow</b>	A96DF1E045B12S	17-1/2	16-3/8	16
	A96DF1E070B16S	17-1/2	16-3/8	16
	A96DF1E090C16S	21	19-7/8	19-1/2
	A96DF1E110C20S	21	19-7/8	19-1/2



## ACCESSORY LIST

Catalog Number	Description
<b>External Filter Rack kits</b>	
1.841018	1 pack (16 x 25)
1.841039	10 pack (16 x 25)
<b>Natural to LP kits</b>	
11K50	1-Stage
11K45	High Altitude 1-Stage
17H62	30K BTUH
<b>High Altitude Pressure Switch Kits</b>	
11U66	4,501 - 7,500 ft [030, 045]
11U70	4,501 - 7,500 ft [070, 090, 110]
11U69	7,501 - 10,000 ft [030, 045]
11U68	7,501 - 10,000 ft [070]
11U64	7,501 - 10,000 ft [090, 110]
<b>Return Air Base</b>	
68W62	17.5" B Width
68W63	21.0" C Width
68W64	24.5" D Width
<b>Downflow Combustible Flooring Base</b>	
11M60	17.5" B Width
11M61	21.0" C Width
<b>Horizontal Suspension Kit</b>	
51W10	80% & 90% Kit
<b>Flush Mount Termination (90% Furnaces only) US Only</b>	
51W11	2" & 3" Vent Version
<b>Concentric Vent Kit (90% Furnaces only) US Only</b>	
71M80	1-1/2" Vent Version
69M29	2" Vent Version
60L46	3" Vent Version
<b>Concentric Vent Kit (90% Furnaces only) Canada Only</b>	
44W92	1-1/2" and 2" Vent Version
44W93	3" Vent Version
<b>Twinning Kit</b>	
16W72	Constant Torque Gas Furnace Twinning Kit

*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.