

BG961E



Specifications Sheet

SINGLE STAGE CONSTANT TORQUE MOTOR

FORM NO. BG961E-100 (04/2018)



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
- Design certified for direct and non-direct vent applications
- 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

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 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

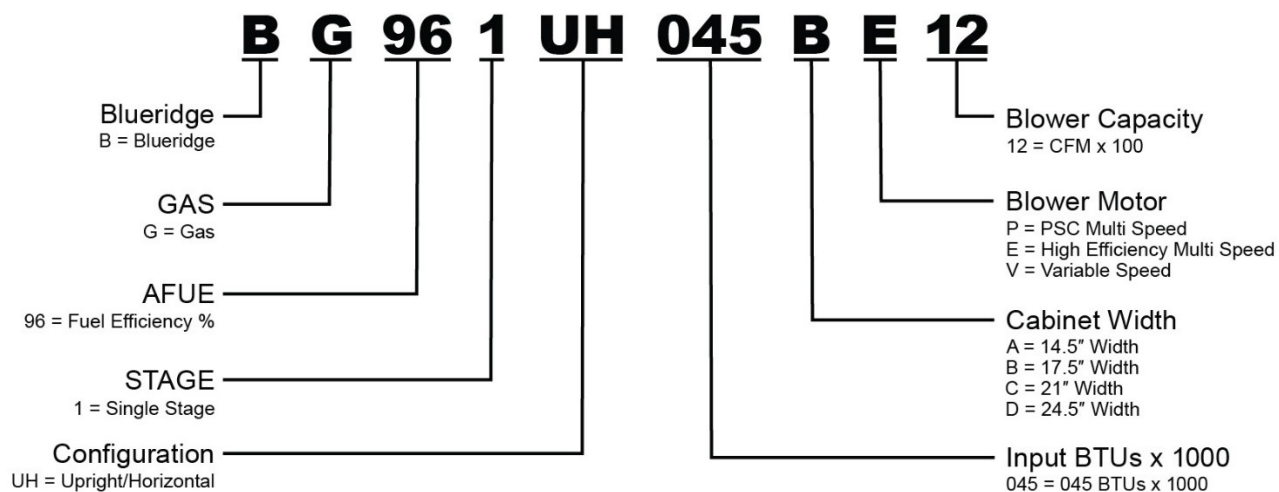
AIR DELIVERY SYSTEM

- 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.

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



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)
Upflow/Horizontal	BG961UH030BE08	30,000	28,000	96%	2 Ton	1/2	120-60-1	15	6.8	40	129
	BG961UH045BE12	44,000	42,000	96%	3 Ton	1/2	120-60-1	15	6.8	40	129
	BG961UH070BE12	66,000	63,000	96%	3 Ton	1/2	120-60-1	15	6.8	40	134
	BG961UH090CE16	88,000	85,000	96%	4 Ton	1/2	120-60-1	15	8.4	40	158
	BG961UH110CE20	110000	106000	96%	5 Ton	1/2	120-60-1	15	10.9	40	170

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

BLOWER PERFORMANCE DATA UPFLOW HORIZONTAL

BG961UH030BE08 PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1125	160	1015	125	935	105	830	65	905	70
0.10	1070	165	980	130	885	110	775	70	700	60
0.20	1035	175	950	140	845	115	715	75	560	50
0.30	1000	185	915	150	810	125	670	85	495	55
0.40	965	195	875	160	770	135	625	95	435	60
0.50	925	205	835	170	730	140	580	100	365	65
0.60	890	215	800	180	685	150	530	105	325	70
0.70	855	225	770	190	635	155	485	110	270	75
0.80	820	230	720	195	600	165	430	115	230	80

BG961UH045BE12 PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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

BG961UH070BE12 PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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

BG961UH090CE16 PERFORMANCE (Less Filter)										
External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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	195

BG961UH110CE20 PERFORMANCE (Less Filter)																				
External Static Pressure in. w.g.	Air Volume / Watts at Different Blower Speeds																			
	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 bold 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	2220	655	1975	440	1800	325	1665	390	1050	180	2180	685	1910	460	1750	345	1660	285	1430	195
0.10	2185	680	1925	460	1750	345	1625	285	1440	200	2155	705	1885	480	1720	360	1610	295	1415	205
0.20	2150	705	1880	480	1710	365	1590	300	1390	220	2130	725	1855	495	1685	380	1565	305	1380	220
0.30	2110	720	1850	495	1680	380	1560	320	1350	230	2085	745	1825	510	1655	390	1535	325	1335	230
0.40	2080	735	1810	520	1650	405	1515	330	1310	245	2060	760	1795	530	1625	405	1495	340	1295	245
0.50	2045	755	1785	530	1610	415	1470	350	1265	255	2030	775	1765	545	1585	425	1450	355	1255	265
0.60	2010	775	1740	545	1575	430	1440	370	1220	270	1995	785	1725	565	1550	435	1420	370	1205	275
0.70	1980	790	1705	565	1525	450	1400	375	1170	280	1960	795	1690	575	1505	455	1385	385	1165	290
0.80	1950	795	1670	580	1485	460	1360	390	1140	293	1895	790	1650	590	1465	470	1335	395	1120	295

BLOWER PERFORMANCE DATA DOWNFLOW**BG961DF045BE12 PERFORMANCE (Less Filter)**

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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	N/A	N/A	1045	310	935	255	615	150	560	130
0.80	N/A	N/A	1000	290	895	260	580	155	505	135

BG961DF070BE16 PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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	N/A	N/A	1255	430	1040	315	910	255	585	160
0.80	N/A	N/A	1215	445	990	320	865	265	525	170

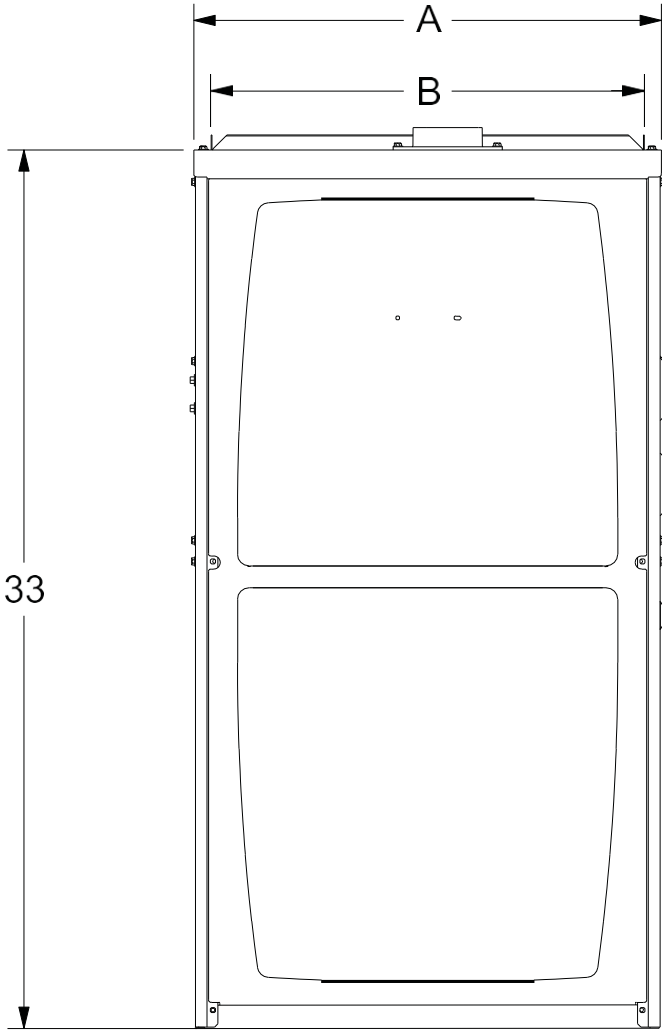
BG961DF090CE16 PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	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	N/A	N/A	1315	370	1150	305	1065	255	895	200
0.80	N/A	N/A	1280	375	1115	315	1015	265	860	210

DIMENSIONS (IN.)

Upflow / Horizontal	Model	A	B	C	D
	BG961UH030BE08	17-1/2	16-3/8	16	7-5/8
	BG961UH045BE12	17-1/2	16-3/8	16	7-5/8
	BG961UH070BE12	17-1/2	16-3/8	16	7-5/8
	BG961UH090CE16	21	19-7/8	19-1/2	9-3/8
	BG961UH110CE20	21	19-7/8	19-1/2	9-3/8

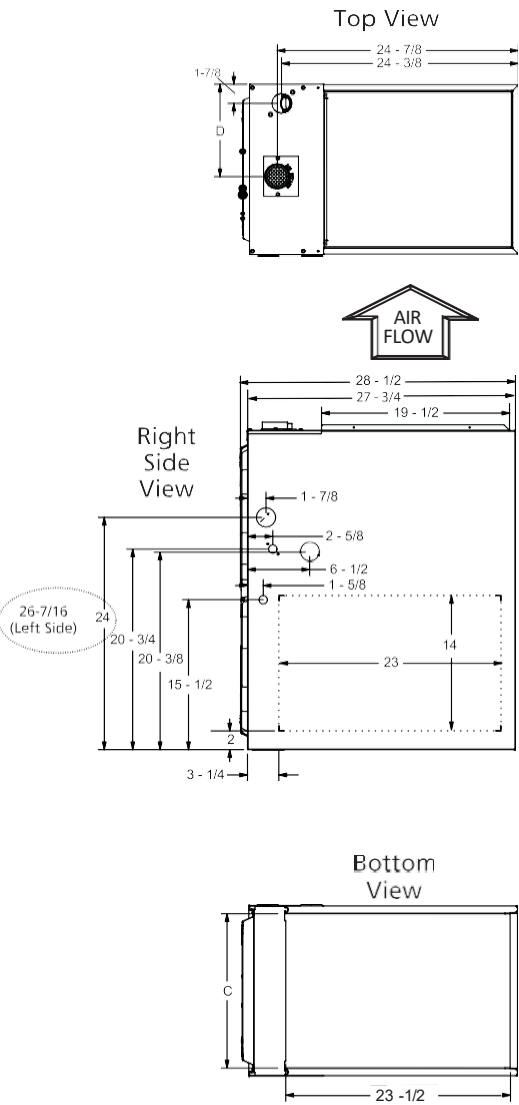
FRONT VIEW



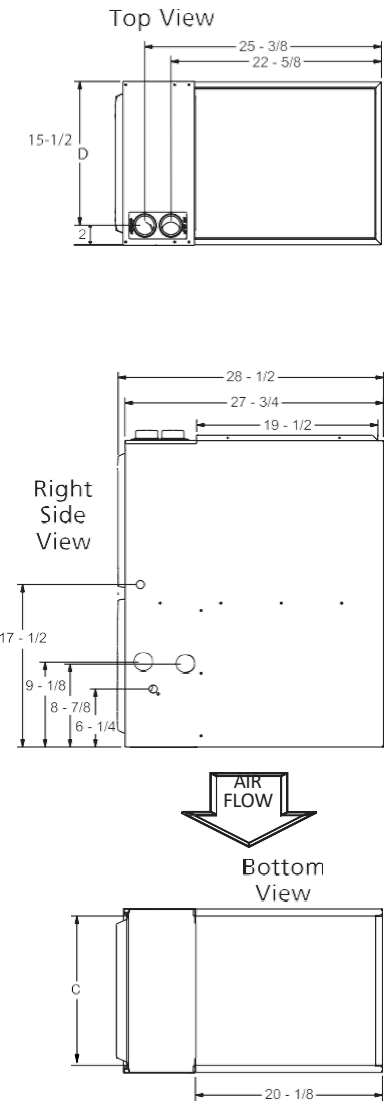
DIMENSIONS (IN.)

w / Horizontal ○	Model	A	B	C	D
	BG961UH030BE08	17-1/2	16-3/8	16	7-5/8
	BG961UH045BE12	17-1/2	16-3/8	16	7-5/8
	BG961UH070BE12	17-1/2	16-3/8	16	7-5/8
	BG961UH090CE16	21	19-7/8	19-1/2	9-3/8
	BG961UH110CE20	21	19-7/8	19-1/2	9-3/8

Uptflow / Horizontal



Downflow



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	
11K50	1-Stage
11K45	High Altitude 1-Stage
13X57	30K BTUH
RETURN AIR BASE	
68W62	17.5" B Width
68W63	21.0" C Width
68W64	24.5" D Width
DOWNFLOW COMBUSTIBLE FLOORING BASE	
11M60	17.5" B Width
11M61	21.0" C Width
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
CONCENTRIC VENT KIT (90% FURNACES ONLY) CANADA	
44W92	1-1/2" and 2" Vent Version
44W93	3" Vent Version
Twinning kit	
16W72	Constant Torque Gas Furnace Twinning Kit

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



1-800-865-5931

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