

BUILT TO A HIGHER STANDARD[®]

American Standard[®]

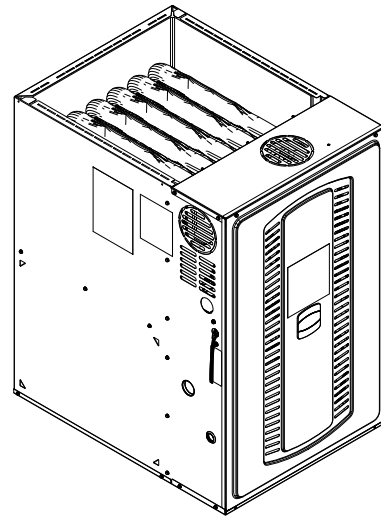
HEATING & AIR CONDITIONING

Product and Submittal Data

Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnace with High Efficiency Variable Speed Blower Motor

Upflow, Horizontal Right/Left
(For use with Natural Gas only.)

L8V1A040U3VSBA
L8V1A060U3VSBA
L8V1B080U4VSBA
L8V1C100U5VSBA



Notes:

- Graphics in this document are for representation only. Actual model may differ in appearance.
- This product complies with SJVAPCD 4905 and SCAQDMD 1111 with NO_x levels below 14 ng/J.

Introduction

Copyright

This document and the information in it are the property of Trane, and may not be used or reproduced in whole or in part without written permission. Trane reserves the right to revise this publication at any time, and to make changes to its content without obligation to notify any person of such revision or change.

Trademark

All trademarks referenced in this document are the trademarks of their respective owners.

Data Notes

This document supersedes and includes data from the documents listed below.

Table 1. Data notes

Literature Number	Title
12-1425-1*-EN	Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnaces with High Efficiency Variable Speed Blower Motor Product Data
L8V1A040U3-SUB-1*-EN	Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnace with High Efficiency Variable Speed Blower Motor 40,000 BTUH Submittal
L8V1A060U3-SUB-1*-EN	Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnace with High Efficiency Variable Speed Blower Motor 60,000 BTUH Submittal
L8V1B080U4-SUB-1*-EN	Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnace with High Efficiency Variable Speed Blower Motor 80,000 BTUH Submittal
L8V1C100U5-SUB-1*-EN	Upflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnace with High Efficiency Variable Speed Blower Motor 100,000 BTUH Submittal

Table of Contents

- General Features 4
- Features and Benefits..... 5
- Accessories 6
- Product Specifications 7
- Airflow Tables..... 8
- Wiring Diagrams 13
- Electrical Connections 15
 - Field Wiring 15
- Dimensional Data..... 17

General Features

Natural Gas Models

L8V1 models are certified for installation in natural gas applications only.

Safe Operation

Each component is vigorously tested to help ensure consistent, reliable performance.

Quick Heating

Durable, cycle tested, heavy gauge tubular stainless steel heat exchanger quickly transfers heat to provide warm conditioned air to the structure.

Integrated System Control

Includes a 7-segment display with self diagnostics for ease of service. Dry contacts for electronic air cleaners and humidifiers included on all models.

Energy Efficient Operation

Furnace is certified to leak 1% or less of nominal air conditioning CFM delivered when pressurized to 0.5-inch water column with all inlets and outlets sealed.

L8V1 models are certified by the SCAQMD and SJVAPC Districts to operate with NOx levels below 14 ng/J.

Air Delivery

The highly efficient, variable speed blower motor delivers consistent airflow and will switch from heating to cooling speeds on demand from the room thermostat.

Styling

Heavy gauge steel and wrap-around cabinet construction is used with baked-on enamel finish for strength and beauty. Every orientation has at least two venting options.

Features and General Operation

The L8V1 furnace utilizes a Variable speed combustion inducer for precise combustion control and quiet operation. In addition, the Silicon Nitride Hot Surface Ignition system eliminates the waste of a constant burning pilot. The integrated system control lights the main burners upon a demand for heat from the room thermostat.

Features and Benefits

80% AFUE on L8V1 Furnace Models

Lowers utility bills

Electrically Efficient

Efficient airflow design reduces electrical energy use

34-Inch Tall

Lighter, easier to move and fit into tight spaces like short basements or tight closets

Works great with larger, high-efficiency coils

3-Way Poise

4 SKU's – Upflow/Horizontal Left/Horizontal Right

Each model offers 3 poises to help increase installation flexibility

Airflow

At least 350 CFM/ton at 0.5-inch. H₂O external static pressure

Regulatory

All models are air tight; 1% or less air leakage as per ASHRAE 193

Dimensions

Widths are industry standard: 14.5 inch, 17.5 inch and 21 inch.

Depth is approximately 28-inch.

Integrated Furnace Control

Setup / Status / Diagnostics / Digital Display

No dip switches

Last six errors stored

Dry contact EAC and HUM connections

All multi-pin polarized terminals connections; no spade terminals

Low voltage labeled above and below

Tubular Stainless Steel Heat Exchanger

Ultra-Low NOx Operation

Models are certified to operate with NOx levels below 14 ng/J

Vortica™ II Blower Housing

Improved airflow efficiency

Durable, easy to clean

Single piece belly band/motor arm assembly

Blower deck has full-length rails for easy removal and replacement, regardless of poise

Accessories

Table 2. Accessories

Model Number	Description	Use with
BAYHANG	Horizontal Hanging Kit	All furnaces
BAYLIFTB ^(a)	Dual Return Kit (B size extension)	All B cabinet furnaces
BAYLIFTC ^(a)	Dual Return Kit (C size extension)	All C cabinet furnaces
BAYFLTR203	Horizontal Filter Kit	B cabinet furnace in Horizontal
BAYFLTR204	Horizontal Filter Kit	C cabinet furnace in Horizontal
BAYFLTR205	Horizontal Filter Kit	D cabinet furnace in Horizontal
BAYSF1165 ^(b) ^(a)	1 in. SlimFit Cabinet with MERV 4 filter	All Upflow furnaces
BAYSF1255 ^(b)	1 in. SlimFit Rack with MERV 4 filter	All furnaces when used in side return application, B-cabinet furnaces only when in bottom return application.
FLRSF1255	1 in. Filter Replacement (Qty 12)	BAYSF1255 ^(b)
BAYHALTMOD0008	High Altitude Module	L8V1A040U3VSB ^(b)
BAYHALTMOD0009	High Altitude Module	L8V1A060U3VSB ^(b)
BAYHALTMOD0010	High Altitude Module	L8V1B080U4VSB ^(b)
BAYHALTMOD0011	High Altitude Module	L8V1C100U5VSB ^(b)
BAYVENT800B	Masonry Chimney Vent Kit	All furnaces in Upflow orientation only
PIP02095	U Fitting for Gas Piping	All furnaces for right hand gas entry

^(a) Airflow greater than 1600 CFM, furnace will require return air openings and filters on: (1) both sides, (2) one side and the bottom, or (3) just on the bottom.

^(b) Latest revision.

Product Specifications

Table 3. Models L8V1A040U3VSBA, L8V1A060U3VSBA, L8V1B080U4VSBA and L8V1C100U5VSBA

Model	L8V1A040U3VSBA ^(a)	L8V1A060U3VSBA ^(a)	L8V1B080U4VSBA ^(a)	L8V1C100U5VSBA ^(a)
Type	Upflow / Horizontal	Upflow / Horizontal	Upflow / Horizontal	Upflow / Horizontal
Ratings ^(b)	—			
Input BTUH	40,000	60,000	80,000	100,000
Capacity BTUH (ICS) ^(c)	31,700	48,100	63,000	80,200
Temp. Rise (Min. – Max.) °F	30 – 60	30 – 60	30 – 60	30 – 60
AFUE – Rating	80	80	80	80
Return Air Temp. (Min. – Max.) °F	55°F – 80°F	55°F – 80°F	55°F – 80°F	55°F – 80°F
Blower Drive	DIRECT	DIRECT	DIRECT	DIRECT
Diameter – Width (in.)	11 x 8	11 X 8	11 x 8	11 x 10
No. Used	1	1	1	1
Speeds (No.) ^(d)	Variable	Variable	Variable	Variable
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	0.50	0.50	0.75	1.00
RPM	Variable	Variable	Variable	Variable
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	6.4	6.4	9.6	10
Combustion Fan – Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Drive – No. Speeds	Variable	Variable	Variable	Variable
Motor RPM	4700	4700	4700	4700
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	1.00	1.00	1.00	1.00
Inducer Orifice	3.15	3.15	3.15	3.15
Filter – Furnished?	No	No	No	No
Type recommended	High Velocity	High Velocity	High Velocity	High Velocity
High Vel. (No.–Size–Thk.)	1 – 14 x 25 – 1 in.	1 – 14 x 25 – 1 in.	1 – 16 x 25 – 1 in.	1 – 20 x 25 – 1 in.
Vent Pipe Diameter – Min (in.) ^(e)	4 Round	4 Round	4 Round	4 Round
Heat Exchanger – Type	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Gauge (Fired)	20	20	20	20
Orifices – Main	—			
Nat. Gas Qty. – Drill Size	1 – 3.2 mm	1 – #23	1 – #15	1 – #11
Gas Valve	Redundant – Two Stage	Redundant – Two Stage	Redundant – Two Stage	Redundant – Two Stage
Pilot Safety Device – Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
Burners				
Type	Premix–ULN	Premix–ULN	Premix–ULN	Premix–ULN
Quantity	1	1	1	1
Power Conn. – V/Ph/Hz ^(f)	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	9.2	9.2	13.2	13.7
Max. Overcurrent Protection (Amps)	15	15	15	15
Pipe Conn. Size (in.)	1/2	1/2	1/2	1/2
Dimensions	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (in.)	34 x 14.5 x 28.75	34 x 14.5 x 28.75	34 x 14.5 x 28.75	34 x 14.5 x 28.75
Crated (in.)	35.5 x 16.5 x 30.87	35.5 x 16.5 x 30.87	35.5 x 16.5 x 30.87	35.5 x 16.5 x 30.87
Weight	—			
Shipping (Lbs.)/Net (Lbs.)	100 / 92	110 / 102	123 / 115	146 / 134

^(a) Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.

^(b) For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.

^(c) Based on U.S. government standard tests.

^(d) Direct drive variable speed blower motor is an ECM constant airflow blower motor.

^(e) Refer to the Installer's Guide.

^(f) The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Airflow Tables

Table 4. Heating airflow performance – L8V1A040U3VS

L8V1A040U3VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure (iwc) with Filter						
Airflow Setting		External Static Pressure				
		0.1	0.3	0.5	0.7	0.9
550	CFM/Watts	594/20	614/66	633/112	653/158	672/204
	Temp. Rise	49	48	46	45	44
610 ^(a)	CFM/Watts	668/28	683/75	698/123	714/171	729/219
	Temp. Rise	44	43	42	41	40
630	CFM/Watts	704/30	715/79	725/128	735/176	746/225
	Temp. Rise	41	41	40	40	39
700	CFM/Watts	792/43	796/93	801/143	805/193	810/243
	Temp. Rise	37	37	37	36	36

^(a) Factory Setting

Table 5. Cooling airflow performance – L8V1A040U3VS

L8V1A040U3VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
Outdoor Tonnage - ODT	Airflow Setting (CFM/Ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
1.5	450	CFM / WATTS	687 / 58	682 / 99	677 / 143	673 / 190	668 / 239
	420	CFM / WATTS	642 / 51	638 / 90	635 / 133	632 / 178	628 / 226
	400	CFM / WATTS	612 / 46	609 / 84	607 / 126	604 / 170	602 / 217
	370	CFM / WATTS	566 / 40	566 / 76	565 / 116	564 / 159	563 / 205
	350	CFM / WATTS	536 / 36	536 / 71	536 / 110	536 / 152	536 / 198
	330	CFM / WATTS	506 / 33	507 / 67	508 / 105	509 / 146	510 / 190
	310	CFM / WATTS	476 / 29	478 / 62	480 / 99	482 / 140	484 / 182
	290	CFM / WATTS	446 / 26	449 / 58	452 / 94	455 / 135	458 / 178
2.0	450	CFM / WATTS	913 / 106	901 / 157	889 / 210	877 / 263	865 / 317
	420	CFM / WATTS	853 / 92	843 / 139	833 / 189	822 / 241	812 / 296
	400	CFM / WATTS	813 / 83	804 / 129	795 / 177	786 / 228	777 / 281
	370	CFM / WATTS	752 / 70	746 / 114	739 / 160	732 / 209	725 / 260
	350	CFM / WATTS	712 / 59	707 / 106	701 / 149	695 / 196	690 / 247
	330	CFM / WATTS	672 / 56	668 / 96	663 / 140	659 / 186	655 / 234
	310	CFM / WATTS	632 / 49	629 / 88	626 / 130	623 / 175	620 / 223
	290	CFM / WATTS	592 / 43	590 / 81	588 / 122	586 / 165	585 / 211
2.5	450	CFM / WATTS	1140 / 177	1120 / 236	1101 / 297	1081 / 359	1062 / 422
	420	CFM / WATTS	1064 / 151	1047 / 207	1030 / 265	1013 / 324	996 / 385
	400	CFM / WATTS	1014 / 135	998 / 189	983 / 245	968 / 300	952 / 362
	370	CFM / WATTS	938 / 114	925 / 164	913 / 217	900 / 272	887 / 329
	350	CFM / WATTS	888 / 100	877 / 149	866 / 201	854 / 254	843 / 309
	330	CFM / WATTS	838 / 88	828 / 135	818 / 185	809 / 236	799 / 290
	310	CFM / WATTS	788 / 77	780 / 122	771 / 170	763 / 220	755 / 272
	290	CFM / WATTS	737 / 67	731 / 110	724 / 156	718 / 204	712 / 255
3.0 ^(a)	450	CFM / WATTS	1366 / 273	1339 / 362	1312 / 413	1285 / 476	1259 / 553
	420	CFM / WATTS	1275 / 232	1251 / 295	1228 / 361	1204 / 428	1180 / 495
	400	CFM / WATTS	1215 / 207	1193 / 267	1171 / 331	1149 / 396	1127 / 461
	370	CFM / WATTS	1124 / 172	1105 / 230	1087 / 290	1068 / 351	1049 / 415
	350 ^(a)	CFM / WATTS	1064 / 151	1047 / 207	1030 / 265	1013 / 324	996 / 385
	330	CFM / WATTS	1004 / 132	989 / 185	974 / 242	959 / 298	944 / 357
	310	CFM / WATTS	943 / 115	930 / 166	917 / 219	904 / 275	891 / 331
	290	CFM / WATTS	883 / 99	872 / 148	861 / 199	850 / 252	838 / 306

^(a) Factory Setting

Table 6. Heating airflow performance – L8V1A060U3VS

L8V1A060U3VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure (iwc) with Filter						
Airflow Setting		External Static Pressure				
		0.1	0.3	0.5	0.7	0.9
830	CFM/Watts	856/50	849/101	843/153	836/204	829/255
	Temp. Rise	51	51	52	52	53

Table 6. Heating airflow performance – L8V1A060U3VS (continued)

L8V1A060U3VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure (iwc) with Filter						
960	CFM/Watts	993/76	981/131	969/186	957/240	946/295
	Temp. Rise	44	45	45	46	47
990 ^(a)	CFM/Watts	1014/81	1009/139	1005/196	1000/254	996/312
	Temp. Rise	43	43	44	44	44
1130	CFM/Watts	1162/120	1153/182	1143/244	1133/306	1123/368
	Temp. Rise	38	38	38	39	39

^(a) Factory Setting

Table 7. Cooling airflow performance – L8V1A060U3VS

L8V1A060U3VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
Outdoor Tonnage - ODT	Airflow Setting (CFM/Ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
1.5	450	CFM / WATTS	718 / 56	706 / 96	694 / 140	682 / 185	670 / 232
	420	CFM / WATTS	673 / 49	661 / 87	649 / 129	637 / 173	625 / 219
	400	CFM / WATTS	642 / 44	630 / 82	618 / 122	606 / 165	594 / 210
	370	CFM / WATTS	596 / 38	584 / 74	572 / 113	560 / 154	548 / 198
	350	CFM / WATTS	565 / 35	553 / 69	541 / 107	529 / 147	517 / 190
	330	CFM / WATTS	534 / 31	522 / 65	510 / 101	498 / 141	485 / 183
	310	CFM / WATTS	502 / 28	490 / 60	478 / 96	466 / 135	454 / 176
	290	CFM / WATTS	470 / 25	458 / 56	446 / 91	434 / 128	422 / 169
2.0	450	CFM / WATTS	938 / 103	926 / 153	914 / 204	902 / 258	890 / 313
	420	CFM / WATTS	881 / 88	868 / 136	856 / 185	844 / 237	832 / 289
	400	CFM / WATTS	842 / 80	830 / 125	818 / 173	806 / 223	794 / 274
	370	CFM / WATTS	783 / 67	771 / 111	759 / 156	747 / 204	735 / 253
	350	CFM / WATTS	743 / 61	731 / 102	719 / 146	707 / 192	695 / 240
	330	CFM / WATTS	703 / 53	691 / 93	679 / 136	667 / 181	655 / 228
	310	CFM / WATTS	663 / 47	651 / 86	638 / 127	626 / 170	614 / 216
	290	CFM / WATTS	622 / 41	610 / 78	598 / 118	586 / 160	574 / 205
2.5	450	CFM / WATTS	1146 / 172	1134 / 230	1122 / 291	1110 / 352	1098 / 416
	420	CFM / WATTS	1078 / 146	1066 / 202	1054 / 259	1042 / 318	1030 / 379
	400	CFM / WATTS	1032 / 131	1020 / 184	1008 / 240	996 / 297	984 / 356
	370	CFM / WATTS	962 / 110	950 / 160	938 / 213	926 / 267	914 / 323
	350	CFM / WATTS	914 / 97	902 / 145	890 / 196	878 / 249	866 / 303
	330	CFM / WATTS	866 / 85	854 / 132	842 / 180	830 / 231	818 / 284
	310	CFM / WATTS	817 / 74	805 / 119	793 / 166	781 / 215	769 / 265
	290	CFM / WATTS	768 / 65	756 / 107	744 / 152	732 / 199	720 / 249
3.0 ^(a)	450	CFM / WATTS	1342 / 266	1330 / 333	1318 / 402	1306 / 472	1294 / 543
	420	CFM / WATTS	1265 / 225	1253 / 289	1241 / 354	1229 / 421	1217 / 489
	400	CFM / WATTS	1213 / 200	1201 / 262	1188 / 325	1176 / 389	1164 / 455
	370	CFM / WATTS	1132 / 167	1120 / 224	1108 / 284	1096 / 345	1084 / 408
	350 ^(a)	CFM / WATTS	1078 / 146	1066 / 202	1054 / 259	1042 / 318	1030 / 379
	330	CFM / WATTS	1023 / 128	1011 / 181	999 / 236	986 / 293	974 / 351
	310	CFM / WATTS	966 / 111	954 / 162	942 / 214	930 / 269	918 / 325
	290	CFM / WATTS	909 / 96	897 / 144	885 / 195	873 / 247	861 / 301

^(a) Factory Setting

Airflow Tables

Table 8. Heating airflow performance – L8V1B080U4VS

L8V1B080U4VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure (iwc) with Filter						
Airflow Setting		External Static Pressure				
		0.1	0.3	0.5	0.7	0.9
1180	CFM/Watts	1253/123	1243/184	1233/244	1223/304	1214/365
	Temp. Rise	47	47	48	48	49
1250	CFM/Watts	1313/141	1298/203	1283/265	1268/328	1253/390
	Temp. Rise	45	45	46	46	47
1350 ^(a)	CFM/Watts	1437/183	1413/248	1389/313	1365/378	1341/443
	Temp. Rise	41	42	42	43	43
1400	CFM/Watts	1454/193	1441/262	1429/331	1416/400	1403/469
	Temp. Rise	41	41	41	41	42

^(a) Factory Setting

Table 9. Cooling airflow performance – L8V1B080U4VS

L8V1B080U4VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
Outdoor Tonnage - ODT	Airflow Setting (CFM/Ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
2.0	450	CFM / WATTS	911 / 90	905 / 140	893 / 191	881 / 241	878 / 292
	420	CFM / WATTS	853 / 77	849 / 125	833 / 172	823 / 221	816 / 269
	400	CFM / WATTS	814 / 69	811 / 115	795 / 161	781 / 208	774 / 255
	370	CFM / WATTS	757 / 58	755 / 102	738 / 145	722 / 190	714 / 235
	350	CFM / WATTS	719 / 52	719 / 94	700 / 136	683 / 179	671 / 223
	330	CFM / WATTS	682 / 46	681 / 86	662 / 127	644 / 169	631 / 212
	310	CFM / WATTS	645 / 41	645 / 79	625 / 118	603 / 159	588 / 201
	290	CFM / WATTS	608 / 36	609 / 72	587 / 110	565 / 150	548 / 191
2.5	450	CFM / WATTS	1130 / 152	1121 / 214	1113 / 274	1110 / 334	1117 / 393
	420	CFM / WATTS	1058 / 129	1049 / 187	1039 / 244	1034 / 301	1035 / 356
	400	CFM / WATTS	1008 / 115	1000 / 170	990 / 225	981 / 279	981 / 333
	370	CFM / WATTS	936 / 95	927 / 147	917 / 199	907 / 250	906 / 302
	350	CFM / WATTS	887 / 84	882 / 134	868 / 183	859 / 233	853 / 282
	330	CFM / WATTS	838 / 74	835 / 121	819 / 168	806 / 216	802 / 264
	310	CFM / WATTS	790 / 64	787 / 109	771 / 154	758 / 200	750 / 247
	290	CFM / WATTS	743 / 56	742 / 99	724 / 142	708 / 186	698 / 231
3.0	450	CFM / WATTS	1349 / 241	1340 / 313	1337 / 384	1339 / 453	1357 / 523
	420	CFM / WATTS	1261 / 202	1253 / 270	1246 / 336	1249 / 402	1260 / 467
	400	CFM / WATTS	1203 / 179	1195 / 244	1187 / 308	1186 / 370	1198 / 434
	370	CFM / WATTS	1116 / 147	1106 / 208	1097 / 268	1095 / 327	1101 / 386
	350	CFM / WATTS	1058 / 129	1049 / 187	1039 / 244	1034 / 301	1035 / 356
	330	CFM / WATTS	998 / 112	991 / 167	980 / 221	972 / 275	972 / 329
	310	CFM / WATTS	940 / 97	933 / 149	921 / 201	911 / 252	911 / 304
	290	CFM / WATTS	882 / 83	877 / 132	863 / 182	852 / 231	848 / 280
3.5	450	CFM / WATTS	1565 / 360	1559 / 442	1562 / 523	1575 / 604	1597 / 682
	420	CFM / WATTS	1465 / 300	1457 / 378	1455 / 454	1463 / 528	1484 / 603
	400	CFM / WATTS	1397 / 264	1388 / 339	1384 / 411	1392 / 484	1408 / 555
	370	CFM / WATTS	1295 / 216	1285 / 286	1280 / 354	1283 / 421	1296 / 488
	350	CFM / WATTS	1227 / 188	1219 / 254	1213 / 320	1210 / 383	1221 / 447
	330	CFM / WATTS	1159 / 162	1151 / 225	1142 / 287	1139 / 348	1148 / 409
	310	CFM / WATTS	1091 / 139	1083 / 199	1073 / 258	1068 / 315	1073 / 373
	290	CFM / WATTS	1023 / 119	1015 / 175	1004 / 230	998 / 286	1000 / 341
4.0 ^(a)	450	CFM / WATTS	1779 / 513	1779 / 607	1788 / 698	1807 / 788	1839 / 877
	420	CFM / WATTS	1665 / 427	1661 / 514	1666 / 600	1683 / 685	1712 / 769
	400	CFM / WATTS	1589 / 375	1584 / 459	1587 / 541	1600 / 622	1623 / 702
	370	CFM / WATTS	1474 / 305	1465 / 383	1466 / 460	1475 / 536	1495 / 611
	350 ^(a)	CFM / WATTS	1397 / 264	1388 / 339	1384 / 411	1392 / 484	1408 / 555
	330	CFM / WATTS	1319 / 227	1310 / 298	1304 / 367	1308 / 435	1323 / 503
	310	CFM / WATTS	1241 / 194	1232 / 261	1227 / 327	1226 / 391	1237 / 455
	290	CFM / WATTS	1164 / 164	1155 / 227	1147 / 289	1144 / 350	1153 / 411

^(a) Factory Setting

Table 10. Heating airflow performance – L8V1C100U5VS

L8V1C100U5VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure (iwc) with Filter						
Airflow Setting		External Static Pressure				
		0.1	0.3	0.5	0.7	0.9
1500 ^(a)	CFM/Watts	1608/231	1624/300	1640/370	1655/440	1671/509
	Temp. Rise	46	45	45	45	44
1600	CFM/Watts	1684/264	1700/342	1716/421	1731/500	1747/578
	Temp. Rise	44	43	43	43	42
1900	CFM/Watts	2014/434	2020/523	2026/613	2033/702	2039/791
	Temp. Rise	37	37	37	37	37
2000	CFM/Watts	2085/510	2085/605	2084/700	2083/796	2082/891
	Temp. Rise	36	36	36	36	36

^(a) Factory Setting

Table 11. Cooling airflow performance – L8V1C100U5VS

L8V1C100U5VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
Outdoor Tonnage - ODT	Airflow Setting (CFM/Ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
2.5	450	CFM / WATTS	1107 / 105	1105 / 152	1101 / 205	1094 / 261	1085 / 321
	420	CFM / WATTS	1033 / 88	1029 / 134	1023 / 184	1015 / 239	1004 / 297
	400	CFM / WATTS	983 / 78	978 / 122	971 / 172	961 / 225	950 / 282
	370	CFM / WATTS	909 / 65	901 / 107	892 / 155	880 / 206	866 / 262
	350	CFM / WATTS	860 / 57	850 / 98	838 / 144	824 / 195	808 / 250
	330	CFM / WATTS	810 / 50	797 / 90	783 / 135	767 / 185	750 / 238
	310	CFM / WATTS	760 / 44	744 / 82	728 / 126	710 / 175	691 / 228
	290	CFM / WATTS	710 / 38	691 / 75	671 / 118	651 / 167	631 / 220
3.0	450	CFM / WATTS	1328 / 167	1328 / 221	1327 / 280	1324 / 342	1318 / 407
	420	CFM / WATTS	1240 / 140	1239 / 191	1237 / 247	1233 / 307	1226 / 370
	400	CFM / WATTS	1180 / 123	1180 / 173	1177 / 227	1172 / 286	1164 / 347
	370	CFM / WATTS	1092 / 101	1090 / 148	1085 / 201	1079 / 257	1069 / 316
	350	CFM / WATTS	1033 / 88	1029 / 134	1023 / 184	1015 / 239	1004 / 297
	330	CFM / WATTS	973 / 76	968 / 120	961 / 170	951 / 223	938 / 279
	310	CFM / WATTS	914 / 66	907 / 108	897 / 156	885 / 208	871 / 263
	290	CFM / WATTS	855 / 56	844 / 97	832 / 143	818 / 194	803 / 248
3.5	450	CFM / WATTS	1550 / 253	1549 / 312	1548 / 377	1545 / 446	1540 / 517
	420	CFM / WATTS	1447 / 210	1446 / 267	1445 / 328	1442 / 394	1437 / 462
	400	CFM / WATTS	1378 / 184	1377 / 239	1377 / 299	1374 / 363	1368 / 429
	370	CFM / WATTS	1274 / 150	1274 / 202	1272 / 259	1269 / 320	1262 / 384
	350	CFM / WATTS	1205 / 130	1204 / 180	1202 / 235	1198 / 294	1190 / 356
	330	CFM / WATTS	1136 / 112	1135 / 160	1131 / 214	1126 / 271	1117 / 331
	310	CFM / WATTS	1067 / 95	1064 / 142	1060 / 194	1052 / 249	1042 / 307
	290	CFM / WATTS	998 / 81	994 / 126	987 / 176	978 / 229	966 / 286
4.0	450	CFM / WATTS	1773 / 364	1769 / 430	1765 / 501	1760 / 576	1754 / 653
	420	CFM / WATTS	1654 / 301	1652 / 364	1649 / 431	1646 / 503	1640 / 577
	400	CFM / WATTS	1575 / 264	1574 / 324	1572 / 390	1569 / 459	1564 / 530
	370	CFM / WATTS	1456 / 214	1456 / 271	1455 / 333	1452 / 399	1447 / 467
	350	CFM / WATTS	1378 / 184	1377 / 239	1377 / 299	1374 / 363	1368 / 429
	330	CFM / WATTS	1299 / 158	1299 / 210	1297 / 268	1294 / 330	1288 / 394
	310	CFM / WATTS	1220 / 134	1219 / 185	1217 / 240	1213 / 300	1206 / 362
	290	CFM / WATTS	1141 / 113	1140 / 161	1137 / 215	1131 / 272	1122 / 333
4.5	450	CFM / WATTS	1996 / 506	1988 / 578	1980 / 655	1971 / 736	1962 / 819
	420	CFM / WATTS	1862 / 417	1856 / 486	1851 / 559	1845 / 636	1837 / 715
	400	CFM / WATTS	1773 / 364	1769 / 430	1765 / 501	1760 / 576	1754 / 653
	370	CFM / WATTS	1639 / 294	1637 / 356	1635 / 423	1631 / 494	1626 / 568
	350	CFM / WATTS	1550 / 253	1549 / 312	1548 / 377	1545 / 446	1540 / 517
	330	CFM / WATTS	1461 / 216	1461 / 273	1460 / 335	1457 / 401	1452 / 470
	310	CFM / WATTS	1373 / 182	1373 / 237	1372 / 297	1369 / 361	1363 / 427
	290	CFM / WATTS	1284 / 153	1284 / 205	1282 / 263	1279 / 324	1272 / 388

Airflow Tables

Table 11. Cooling airflow performance – L8V1C100U5VS (continued)

L8V1C100U5VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
5.0 ^(a)	450	CFM / WATTS	2220 / 680	2206 / 759	2194 / 842	2181 / 929	2167 / 1018
	420	CFM / WATTS	2071 / 560	2061 / 635	2051 / 714	2041 / 796	2031 / 882
	400	CFM / WATTS	1971 / 488	1963 / 560	1956 / 636	1948 / 716	1939 / 799
	370	CFM / WATTS	1823 / 393	1817 / 461	1813 / 533	1807 / 608	1800 / 687
	350 ^(a)	CFM / WATTS	1723 / 337	1720 / 402	1717 / 471	1712 / 544	1707 / 620
	330	CFM / WATTS	1624 / 287	1622 / 349	1620 / 415	1617 / 486	1612 / 559
	310	CFM / WATTS	1526 / 242	1525 / 301	1523 / 365	1520 / 433	1515 / 503
	290	CFM / WATTS	1427 / 202	1427 / 258	1426 / 320	1423 / 385	1418 / 453

^(a) Factory Setting

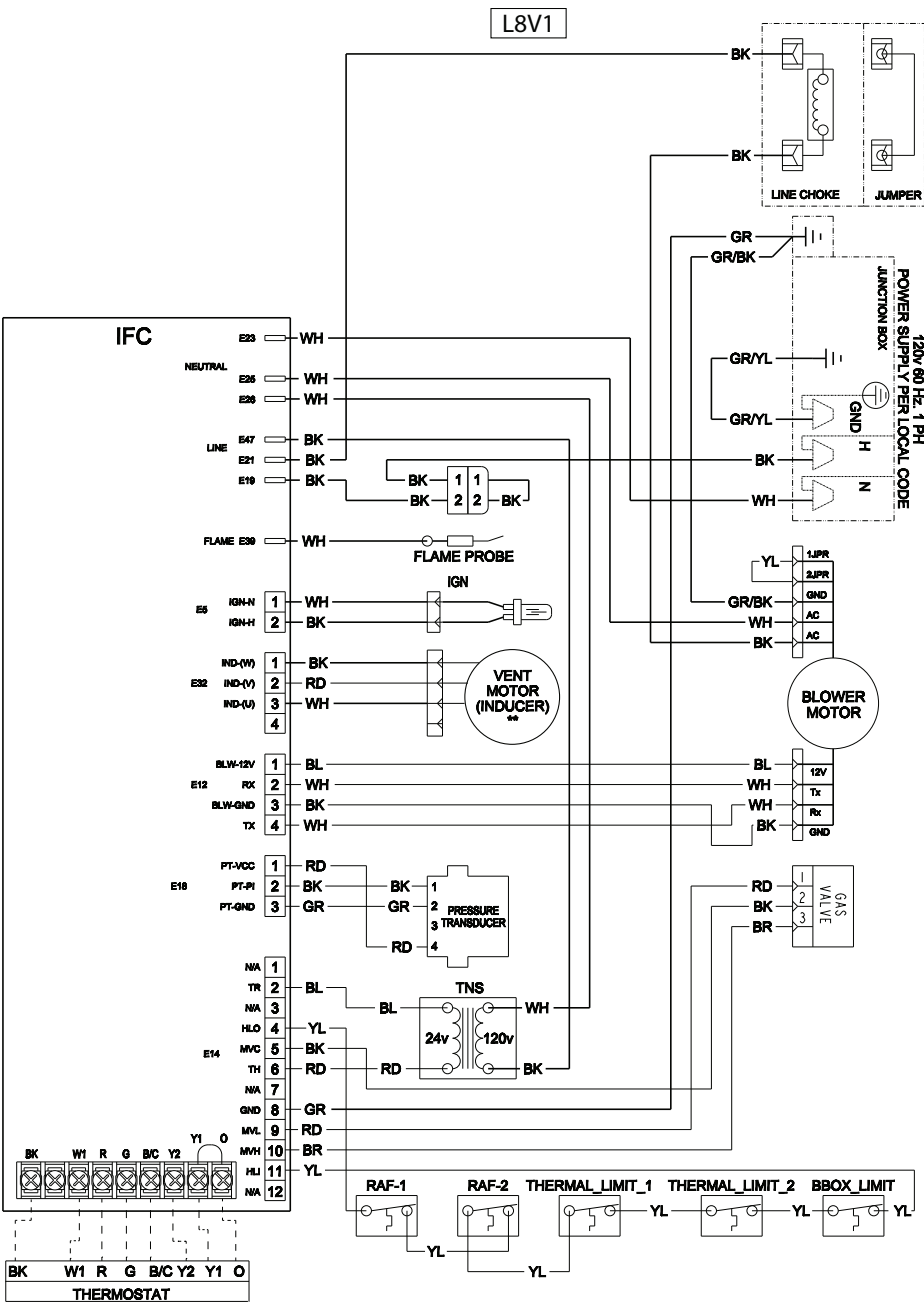
Figure 1. L8V1 – wiring diagram

Figure 1. L8V1 – wiring diagram



Wiring Diagrams

Figure 2. L8V1 – ladder diagram



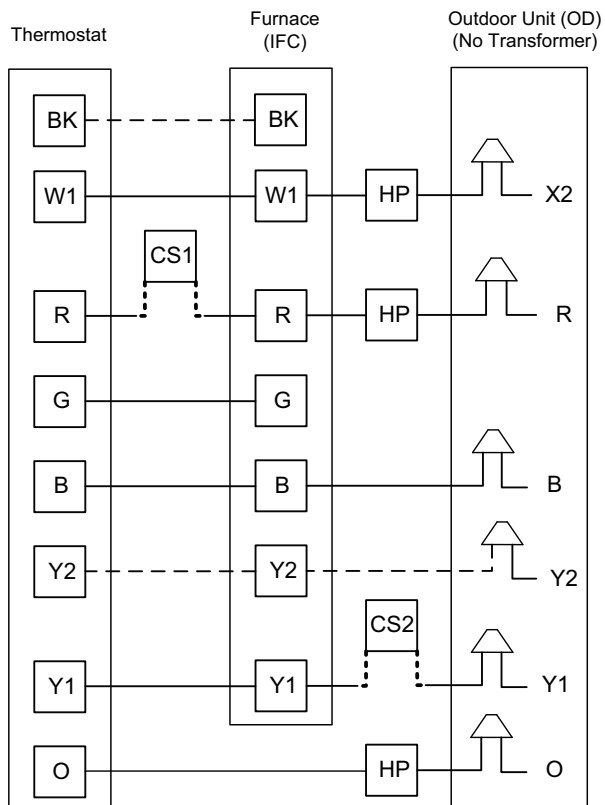
Electrical Connections

Make wiring connections to the unit as indicated on enclosed wiring diagram. As with all gas appliances using electrical power, this furnace shall be connected into a permanently live electric circuit. It is recommended that furnace be provided with a separate circuit protection device electric circuit. The furnace must be electrically grounded in accordance with local codes or in the absence of local codes with the National Electrical Code, ANSI/NFPA 70 , if an external electrical source is utilized. The integrated furnace control is polarity sensitive. The hot leg of the 120V power supply must be connected to the black power lead as indicated on the wiring diagram.

Refer to the Installation, Operation, and Maintenance literature and unit wiring diagram attached to furnace.

Field Wiring

Figure 3. Field wiring for L8V1 with one or two stage AC or heat pump



NOTES:

- 1) HP = Wiring used for Heat Pump System.
- 2) CS = wiring used for Condensate Switch (2 Options).
- 3) Y1 and/or Y2 must be connected from the thermostat to the IFC for proper airflow.
- 4) Remove Y1-O jumper for HP systems. O terminal must be connected as shown for gas heating operation during defrost.
- 5) A/TCONT824 thermostats do not require the use of X2.
- 6) For PWM (BK) enabled thermostats, cut the BK jumper on the IFC and connect wiring.

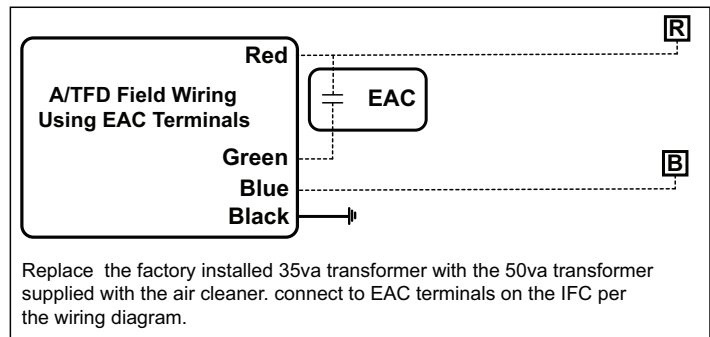


Figure 6. 14.5-inch, 17.5-inch, and 21-inch width cabinets





About American Standard Heating and Air Conditioning

American Standard has been creating comfortable and affordable living environments for more than a century. For more information, please visit www.americanstandardair.com.



The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.