



Product Data

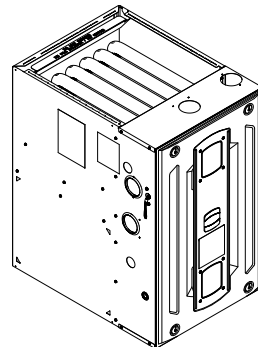
Upflow/Horizontal Left/Right, Dedicated Downflow Two Stage Condensing Gas Fired Furnace

Upflow, Convertible to
Horizontal Right or
Horizontal Left

S9V2B040U3VSAE
S9V2B060U3VSAC/D
S9V2B080U4VSAC/D
S9V2C100U4VSAC/D
S9V2D120U5VSAC/D

Downflow Only

S9V2B080D4VSAC/D
S9V2C100D4VSAC/D



Note: Graphics in this document are for representation only. Actual model may differ in appearance.



General Features

NATURAL GAS MODELS

Central Heating furnace designs are certified by the American Gas Association for both natural and L.P. gas. Limit setting and rating data were established and approved under standard rating conditions using American National Standards Institute standards.

SAFE OPERATION

The Integrated System Control is a solid state device which continuously monitors for presence of flame when the system is in the heating mode of operation. Dual solenoid combination gas valve and regulator provide additional safety.

QUICK HEATING

Durable, cycle tested, heavy gauge **tubular stainless steel primary heat exchanger** quickly transfers heat to provide warm conditioned air to the structure. **Low energy power vent blower**, to increase efficiency and provide a positive discharge of gas fumes to the outside.

BURNERS

Multiport Inshot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas** with LP conversion kit.

INTEGRATED SYSTEM CONTROL

Exclusively designed operational program provides total control of furnace limit sensors, blowers, gas valve, flame control and includes self diagnostics for ease of service. Also contains dry contacts for EAC and HUM.

ENERGY EFFICIENT OPERATION

Furnace is certified by the manufacturer to leak 1% or less of nominal air conditioning CFM delivered when pressurized to .5" water column with all inlets, outlets, and drains sealed.

AIR DELIVERY

The variable speed blower motor has sufficient airflow for most heating and cooling requirements and will switch from heating to cooling speeds on demand from room thermostat.

SECONDARY HEAT EXCHANGER

The S-Series furnace has a special type 29-4C™ stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost.

STYLING

Heavy gauge steel and "wrap-around" cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. Every orientation has at least two venting options. There are no knockouts on cabinet.

FEATURES AND GENERAL OPERATION

The S-Series furnace utilizes a Silicon Nitride Hot Surface Ignition system, which 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. Complete front service access.

- a. Low energy power venter
- b. Vent proving pressure switches.



Features and Benefits

97.0% AFUE ACROSS ALL MODELS

Meets utility rebates

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

No knockouts

3-WAY MULTI-POISE / DEDICATED DOWNFLOW

5 SKU's — Upflow / Horizontal Left / Horizontal Right

2 SKU's — Downflow

Added application flexibility and reduction in specification errors

AIRFLOW

At least 400 CFM/ton at 0.5 in. H₂O external static pressure; setup airflow options down to 290 CFM/ton

REGULATORY

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

Open vestibule design provides a full 34" high open vestibule

VARIABLE SPEED DRAFT INDUCER MOTOR

Increased efficiency

DIMENSIONS

Widths are industry standard: 17.5", 21", and 24.5"

Depth remains approximately 28"

Cabinet will be compatible with industry standard coils, as well as, other accessories

INTEGRATED FURNACE CONTROL

Setup / Status / Diagnostics / Digital Display

No dip switches

Last six errors stored

Dry contact EAC and HUM connections

All Molex connections; no spade terminals

Low voltage labeled above and below

Rain shield over IFC keeps condensate off the control

TUBULAR STAINLESS STEEL PRIMARY HEAT EXCHANGER

29-4C STAINLESS STEEL SECONDARY HEAT EXCHANGER

Stainless steel is a more durable, corrosive-resistant material than aluminumized steel

Integrated rail system for easy access if required

Reduces or eliminates need for baffles



Features and Benefits

VORTICA II BLOWER, DESIGNED EXCLUSIVELY FOR THE S-SERIES FURNACE

Improved airflow efficiency

Durable, easy to clean, two piece housing

Single piece belly band/ motor arm assembly

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

THREE-WAY MULTI-POISE (UPFLOW, HORIZONTAL LEFT AND RIGHT) PLUS DEDICATED DOWNFLOW

Easier to specify

Shipped ready to install (no kits required)

Every model has at least two venting options

When in horizontal, trap extends only about 2"

Barbed fitting on trap at hose connection and on cabinet transition for hose has barbed fitting and clamps at both ends for leak resistance.

Vent table improvements including longer vent lengths; 2" pipe can be used up to 100K



Accessories

Table 1. Accessories

Model Number	Description	Use with
BAYHANG	Horizontal Hanging Kit	All Upflow Furnaces
BAYVENT200B	Sidewall Vent Termination Kit	All Furnaces
BAYVENTCN200B	Sidewall Vent Termination Kit (Canada – CPVC)	All Furnaces
BAYAIR30AVENTA	Concentric Vent Kit	All Furnaces
BAYAIR30CNVENT	Concentric Vent Kit (Canada – CPVC)	All Furnaces
BAYREDUCE	Reducing Coupling (CPVC)	All Furnaces
BAYLIFTB	Dual Return Kit (B size extension)	B Cabinet Upflow Furnaces
BAYLIFTC	Dual Return Kit (C size extension)	C Cabinet Upflow Furnaces
BAYLIFTD	Dual Return Kit (D size extension)	D Cabinet Upflow Furnaces
BAYBASE205	Downflow Subbase	All Downflow Furnaces
BAYFLTR206	Filter Access Door Kit (Downflow only)	All Downflow Furnaces
BAYSF1165AA ^(a)	1" SlimFit Box with MERV 4 Filter	All Upflow Furnaces
BAYLPSS400*	Propane Conversion Kit with Stainless Steel Burners	All Furnaces
BAYMFGH200B	Manufactured/Mobile Housing Kit	All Furnaces
BAYHALT250	High Altitude Pressure Switch Kit	S9V2B040U3VSAE
BAYHALT251	High Altitude Pressure Switch Kit	S9V2B060U3VSAC/D
BAYHALT252	High Altitude Pressure Switch Kit	S9V2B080U4VSAC/D, S9V2B080D4VSAC/D, S9V2C100D4VSAC/D
BAYHALT253	High Altitude Pressure Switch Kit	S9V2C100U4VSAC/D
BAYHALT254	High Altitude Pressure Switch Kit	S9V2D120U5VSAC/D
BAYCNDTRAP2	Inline Condensate Trap Kit used with Special Venting on 2" Vent Pipe	All Furnaces
BAYCNDTRAP3	Inline Condensate Trap Kit used with Special Venting on 3" Vent Pipe	All Furnaces

^(a) Airflow greater than 1600 CFM requires dual returns



Product Specification

Model	S9V2B040U3 VSAE (a), (b)	S9V2B060U3 VSAC/D (a), (b)	S9V2B080U4 VSAC/D (a), (b)	S9V2C100U4 VSAC/D (a), (b)	S9V2D120U5 VSAC/D (a), (b)
Type	Upflow / Horizontal				
RATINGS (c)					
1st Stage Input BTUH	26,000	39,000	52,000	65,000	78,000
1st Stage Capacity BTUH (ICS)	25,700	38,450	51,050	64,200	77,050
2nd Stage Input BTUH	40,000	60,000	80,000	100,000	120,000
2nd Stage Capacity BTUH (ICS) (d)	39,350	57,700	76,700	97,150	116,250
1st Stage Temp. Rise (Min. - Max.) °F	25 - 55	25 - 55	30 - 60	25 - 55	35 - 65
2nd Stage Temp. Rise (Min. - Max.) °F	30 - 60	35 - 65	35 - 65	35 - 65	40 - 70
AFUE (%) (d)	97.0				
Return Air Temp. (Min. - Max.) °F	45°F - 80°F				
BLOWER DRIVE	DIRECT				
Diameter - Width (in.)	11 X 8			11 X 10	
No. Used	1				
Speeds (No.)	Variable				
CFM vs. in. w.g.	See Fan Performance Table				
Motor HP	1/2		3/4		1
R.P.M.	Variable				
Volts / Ph / Hz	120 / 1 / 60				
FLA	6.4	5.7 / 6.4	8 / 9.6		10.5 / 10
COMBUSTION FAN - Type	Variable Speed				
Drive - No. Speeds	Direct - Variable				
Motor RPM	1/50 - 5000				
Volts/Ph/Hz	33 - 110 / 3 / 60 - 180				
FLA	0.77				
Inducer Orifice	0.61	0.79	0.96	1.05	1.19
FILTER - Furnished?	No				
Type Recommended	High Velocity				
Hi Vel. (No.-Size-Thk.)	1 - 16 X 25 - 1 in.			1 - 20 X 25 - 1 in.	1 - 24 X 25 - 1 in.
VENT OUTLET DIA - MIN. (in.) (e)	2 Round				3 Round
INLET AIR DIA - MIN. (in.) (e)	2 Round				3 Round
HEAT EXCHANGER - Type					
Fired	409 Stainless Steel				
Unfired	29-4C Stainless Steel				
Gauge (Fired)	20				
ORIFICES - Main					
Nat. Gas (Qty. - Drill Size)	2 - 45	3 - 45	4 - 45	5 - 45	6 - 45
Propane Gas (Qty. - Drill Size)	2 - 56	3 - 56	4 - 56	5 - 56	6 - 56
GAS VALVE	Redundant - Two Stage				
PILOT SAFETY DEVICE - TYPE	120 V SiNi Igniter				
BURNERS - TYPE - QTY	Inshot - 2	Inshot - 3	Inshot - 4	Inshot - 5	Inshot - 6
POWER CONN. - V/Ph/HZ (f)	120 / 1 / 60				



Product Specification

Model	S9V2B040U3 VSAE (a), (b)	S9V2B060U3 VSAC/D (a), (b)	S9V2B080U4 VSAC/D (a), (b)	S9V2C100U4 VSAC/D (a), (b)	S9V2D120U5 VSAC/D (a), (b)
Ampacity (Amps)	8.9	8.1 / 8.9	10.9 / 12.9		14.1 / 13.4
Max. Overcurrent Protection (Amps)	15				
PIPE CONN. SIZE (IN.)	1/2				
DIMENSIONS	H x W x D				
Uncrated (in.)	34 x 17-1/2 x 28-3/4			34 x 21 x 28-3/4	34 x 24-1/2 x 28-3/4
Crated (in.)	35-1/2 x 19-1/2 x 30-7/8			35-1/2 x 23 x 30-7/8	35-1/2 x 26-1/2 x 30-7/8
WEIGHT					
Shipping (Lbs.)/Net (Lbs.)	122/114	127/119	132/124	154/144	167/156

Model	S9V2B080D4VSAC/D (a), (b)	S9V2C100D4VSAC/D (a), (b)
Type	Downflow	
RATINGS (c)		
1st Stage Input BTUH	52,000	65,000
1st Stage Capacity BTUH (ICS)	51,150	64,300
2nd Stage Input BTUH	80,000	100,000
2nd Stage Capacity BTUH (ICS) (d)	76,900	97,071
1st Stage Temp. Rise (Min. - Max.) °F	30 - 60	
2nd Stage Temp. Rise (Min. - Max.) °F	35 - 65	
AFUE (%) (d)	97.0	
Return Air Temp. (Min. - Max.) °F	45°F - 80°F	
BLOWER DRIVE	DIRECT	
Diameter - Width (in.)	11 X 8	11 X 10
No. Used	1	
Speeds (No.)	Variable	
CFM vs. in. w.g.	See Fan Performance Table	
Motor HP	3/4	
R.P.M.	Variable	
Volts / Ph / Hz	120 / 1 / 60	
FLA	8 / 9.6	
COMBUSTION FAN - Type	Variable Speed	
Drive - No. Speeds	Direct - Variable	
Motor RPM	1/50 - 5000	
Volts/Ph/Hz	33 - 110 / 3 / 60 - 180	
FLA	0.77	
Inducer Orifice	0.96	1.05
FILTER - Furnished?	No	
Type Recommended	High Velocity	
Hi Vel. (No.-Size-Thk.)	1 - 16 X 25 - 1 in.	1 - 20 X 25 - 1 in.
VENT OUTLET DIA - MIN. (in.) (e)	2 Round	
INLET AIR DIA - MIN. (in.) (e)	2 Round	
HEAT EXCHANGER - Type		
Fired	409 Stainless Steel	
Unfired	29-4C Stainless Steel	



Product Specification

Model	S9V2B080D4VSAC/D ^{(a), (b)}	S9V2C100D4VSAC/D ^{(a), (b)}
Gauge (Fired)	20	
ORIFICES - Main		
Nat. Gas (Qty. - Drill Size)	4 - 45	5 - 45
Propane Gas (Qty. - Drill Size)	4 - 56	5 - 56
GAS VALVE	Redundant - Two Stage	
PILOT SAFETY DEVICE - TYPE	120 V SiNi Igniter	
BURNERS - TYPE - QTY	Inshot - 4	Inshot - 5
POWER CONN. - V/Ph/HZ ^(f)	120 / 1 / 60	
Ampacity (Amps)	10.9 / 12.9	
Max. Overcurrent Protection (Amps)	15	
PIPE CONN. SIZE (IN.)	1/2	
DIMENSIONS	H x W x D	
Uncrated (in.)	34 x 17-1/2 x 28-3/4	34 x 21 x 28-3/4
Crated (in.)	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 23 x 30-7/8
WEIGHT		
Shipping (Lbs.)/Net (Lbs.)	132/124	154/144

^(a) Meets Energy Star

^(b) Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3 - latest edition.

^(c) 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. For Canadian applications, above input ratings (BTUH) are up to 4,500 feet, derate 4% per 1,000 feet for elevations above 4,500 feet above sea level.

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

^(e) Refer to Vent Length Table in the Installation, Operation, and Maintenance.

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



Heating and Cooling Airflow Tables

Table 2. S9V2B040U3VSAE Heating Airflow

S9V2B040U3VSAE Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 25,700 2nd Stage Capacity = 39,350				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	468	CFM	468	452	437	421	406
			Temp. Rise	49	51	54	56	58
			Watts	27	58	90	121	152
	Medium Low	598	CFM	552	600	647	694	741
			Temp. Rise	43	39	36	32	28
			Watts	41	76	112	147	183
	Medium (a)	634	CFM	583	635	687	739	791
			Temp. Rise	39	36	33	30	27
			Watts	48	83	118	153	189
	High	864	CFM	753	786	818	850	883
			Temp. Rise	30	29	28	27	26
			Watts	87	129	171	214	256
Heating 2nd Stage	Low	650	CFM	633	636	639	643	646
			Temp. Rise	57	57	57	56	56
			Watts	48	92	135	179	223
	Medium Low	830	CFM	760	786	813	840	866
			Temp. Rise	48	46	45	43	41
			Watts	82	132	182	232	282
	Medium (a)	880	CFM	792	817	842	867	892
			Temp. Rise	44	44	43	43	42
			Watts	94	142	189	237	284
	High	1200	CFM	1023	1044	1066	1088	1109
			Temp. Rise	34	34	33	33	32
			Watts	192	251	310	369	428

Table 3. S9V2B040U3VSAE Cooling Airflow

S9V2B040U3VSAE Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	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	675 / 47	675 / 81	675 / 121	675 / 166	675 / 215
	420	CFM / WATTS	630 / 40	630 / 72	630 / 111	630 / 154	630 / 202
	400	CFM / WATTS	600 / 36	600 / 67	600 / 105	600 / 147	600 / 193
	370	CFM / WATTS	555 / 30	555 / 60	555 / 96	555 / 136	555 / 181
	350	CFM / WATTS	525 / 27	525 / 56	525 / 90	525 / 130	525 / 174
	330	CFM / WATTS	495 / 24	495 / 51	495 / 85	495 / 124	495 / 167
	310	CFM / WATTS	465 / 21	465 / 48	465 / 80	465 / 118	465 / 161
	290	CFM / WATTS	435 / 19	435 / 44	435 / 76	435 / 113	435 / 155
2.0	450	CFM / WATTS	900 / 94	900 / 137	900 / 186	900 / 240	900 / 298
	420	CFM / WATTS	840 / 79	840 / 120	840 / 166	840 / 218	840 / 273
	400	CFM / WATTS	800 / 70	800 / 109	800 / 154	800 / 204	800 / 258
	370	CFM / WATTS	740 / 58	740 / 95	740 / 138	740 / 185	740 / 236
	350	CFM / WATTS	700 / 51	700 / 86	700 / 127	700 / 173	700 / 223
	330	CFM / WATTS	660 / 44	660 / 78	660 / 118	660 / 162	660 / 211
	310	CFM / WATTS	620 / 38	620 / 71	620 / 109	620 / 152	620 / 199
	290	CFM / WATTS	580 / 33	580 / 64	580 / 101	580 / 142	580 / 188
2.5	450	CFM / WATTS	1125 / 167	1125 / 219	1125 / 278	1125 / 341	1125 / 408
	420	CFM / WATTS	1050 / 139	1050 / 188	1050 / 244	1050 / 304	1050 / 368
	400	CFM / WATTS	1000 / 123	1000 / 170	1000 / 223	1000 / 281	1000 / 343
	370	CFM / WATTS	925 / 100	925 / 145	925 / 195	925 / 250	925 / 308
	350	CFM / WATTS	875 / 87	875 / 129	875 / 178	875 / 230	875 / 287
	330	CFM / WATTS	825 / 121	825 / 160	825 / 205	825 / 254	825 / 308
	310	CFM / WATTS	775 / 101	775 / 139	775 / 182	775 / 229	775 / 281
	290	CFM / WATTS	725 / 88	725 / 123	725 / 164	725 / 210	725 / 260



Heating and Cooling Airflow Tables

Table 3. S9V2B040U3VSAE Cooling Airflow (continued)

S9V2B040U3VSAE Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
3.0 (a)	450	CFM / WATTS	1350 / 272	1350 / 334	1350 / 402	1298 / 440	1198 / 450
	420	CFM / WATTS	1260 / 226	1260 / 284	1260 / 348	1260 / 417	1198 / 450
	400	CFM / WATTS	1200 / 198	1200 / 254	1200 / 315	1200 / 381	1198 / 450
	370	CFM / WATTS	1110 / 161	1110 / 213	1110 / 271	1110 / 333	1110 / 399
	350 (a)	CFM / WATTS	1050 / 139	1050 / 188	1050 / 244	1050 / 304	1050 / 368
	330	CFM / WATTS	990 / 119	990 / 166	990 / 219	990 / 277	990 / 338
	310	CFM / WATTS	930 / 102	930 / 146	930 / 197	930 / 252	930 / 311
	290	CFM / WATTS	870 / 86	870 / 128	870 / 176	870 / 229	870 / 285

Table 4. S9V2B060U3VSAC/D Heating Airflow

S9V2B060U3VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
			1st Stage Capacity = 38,450 2nd Stage Capacity = 57,700					
Heating	Airflow Setting	Target Airflow	External Static Pressure					
			0.1	0.3	0.5	0.7	0.9	
Heating 1st Stage	Low	632	CFM	660	658	656	654	652
			Temp. Rise	53	53	53	53	54
			Watts	48	85	121	157	193
	Medium Low (a)	814	CFM	860	856	852	848	844
			Temp. Rise	41	41	42	42	43
			Watts	91	128	164	200	236
	Medium	893	CFM	900	899	898	897	896
			Temp. Rise	39	39	39	39	39
			Watts	110	147	183	219	255
	High	1027	CFM	1068	1061	1054	1047	1041
			Temp. Rise	33	33	33	33	33
			Watts	165	202	239	276	313
Heating 2nd Stage	Low	800	CFM	851	843	835	826	818
			Temp. Rise	64	64	64	64	64
			Watts	81	127	172	218	264
	Medium Low (a)	1030	CFM	1092	1075	1057	1039	1022
			Temp. Rise	49	50	50	51	52
			Watts	157	209	262	314	366
	Medium	1130	CFM	1132	1128	1124	1119	1115
			Temp. Rise	47	47	48	48	48
			Watts	201	255	308	362	416
	High	1300	CFM	1280	1281	1282	1283	1283
			Temp. Rise	42	42	42	42	42
			Watts	319	365	410	456	502

Table 5. S9V2B060U3VSAC/D Cooling Airflow

S9V2B060U3VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	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	663 / 47	673 / 83	666 / 119	641 / 155	596 / 192
	420	CFM / WATTS	621 / 41	630 / 75	621 / 109	595 / 144	549 / 180
	400	CFM / WATTS	582 / 36	580 / 67	566 / 99	528 / 130	507 / 170
	370	CFM / WATTS	549 / 32	556 / 63	546 / 95	517 / 128	469 / 162
	350	CFM / WATTS	521 / 29	527 / 59	516 / 90	486 / 122	437 / 156
	330	CFM / WATTS	492 / 26	497 / 55	486 / 85	455 / 117	405 / 150
	310	CFM / WATTS	463 / 23	468 / 51	455 / 81	423 / 112	372 / 145
	290	CFM / WATTS	435 / 21	438 / 48	424 / 77	391 / 107	339 / 141
2.0	450	CFM / WATTS	878 / 90	893 / 135	890 / 179	869 / 223	829 / 266
	420	CFM / WATTS	821 / 76	834 / 119	830 / 161	808 / 202	767 / 244
	400	CFM / WATTS	770 / 66	778 / 105	770 / 144	742 / 182	725 / 230
	370	CFM / WATTS	725 / 57	737 / 96	731 / 134	707 / 172	664 / 211
	350	CFM / WATTS	687 / 51	698 / 88	691 / 124	666 / 161	622 / 199
	330	CFM / WATTS	649 / 45	659 / 80	651 / 115	625 / 151	580 / 188
	310	CFM / WATTS	611 / 39	620 / 73	611 / 107	584 / 142	538 / 177
	290	CFM / WATTS	573 / 34	581 / 67	571 / 99	543 / 133	496 / 168

Heating and Cooling Airflow Tables

Table 5. S9V2B060U3VSAC/D Cooling Airflow (continued)

S9V2B060U3VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	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	1097 / 159	1114 / 212	1114 / 265	1097 / 317	1061 / 368
	420	CFM / WATTS	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
	400	CFM / WATTS	976 / 117	989 / 166	990 / 214	970 / 261	932 / 308
	370	CFM / WATTS	902 / 97	917 / 142	915 / 187	894 / 232	855 / 276
	350	CFM / WATTS	854 / 84	868 / 128	865 / 171	843 / 214	803 / 257
	330	CFM / WATTS	806 / 73	819 / 115	815 / 157	793 / 198	752 / 239
	310	CFM / WATTS	759 / 63	771 / 103	766 / 143	742 / 182	700 / 222
	290	CFM / WATTS	711 / 55	722 / 93	716 / 130	692 / 168	648 / 206
3.0 ^(a)	450	CFM / WATTS	1319 / 260	1340 / 321	1343 / 382	1328 / 441	1295 / 501
	420	CFM / WATTS	1229 / 215	1249 / 274	1251 / 331	1235 / 387	1201 / 443
	400	CFM / WATTS	1170 / 189	1189 / 245	1190 / 300	1173 / 354	1139 / 408
	370	CFM / WATTS	1082 / 154	1100 / 206	1099 / 258	1081 / 309	1046 / 360
	350 ^(a)	CFM / WATTS	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
	330	CFM / WATTS	965 / 114	981 / 163	979 / 210	960 / 257	922 / 304
	310	CFM / WATTS	907 / 98	922 / 144	919 / 189	899 / 234	860 / 278
	290	CFM / WATTS	850 / 83	863 / 127	860 / 170	838 / 212	798 / 255

Table 6. S9V2B080U4VSAC/D Heating Airflow

S9V2B080U4VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
			1st Stage Capacity = 51,050 2nd Stage Capacity = 76,700					
Heating	Airflow Setting	Target Airflow	External Static Pressure					
			0.1	0.3	0.5	0.7	0.9	
Heating 1st Stage	Low	864	CFM	860	849	838	827	816
			Temp. Rise	54	55	56	57	58
			Watts	87	125	163	200	238
	Medium Low ^(a)	907	CFM	907	893	879	865	852
			Temp. Rise	51	52	53	54	54
			Watts	97	135	174	212	251
	Medium	958	CFM	957	930	903	876	849
			Temp. Rise	49	50	51	52	53
			Watts	112	153	194	234	275
	High	1051	CFM	1042	1015	989	962	936
			Temp. Rise	45	46	47	47	48
			Watts	140	182	225	267	310
Heating 2nd Stage	Low	1200	CFM	1211	1206	1201	1197	1192
			Temp. Rise	60	60	60	60	60
			Watts	196	248	300	352	404
	Medium Low ^(a)	1260	CFM	1258	1261	1263	1265	1268
			Temp. Rise	58	57	57	57	57
			Watts	215	271	326	381	436
	Medium	1330	CFM	1307	1303	1299	1296	1292
			Temp. Rise	55	55	55	55	55
			Watts	260	312	364	416	468
	High	1460	CFM	1431	1412	1393	1374	1355
			Temp. Rise	50	51	52	52	53
			Watts	334	390	445	501	557



Heating and Cooling Airflow Tables

Table 7. S9V2B080D4VSAC/D Heating Airflow

S9V2B080D4VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 51,150 2nd Stage Capacity = 76,900				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	864	CFM	780	776	772	768	764
			Temp. Rise	60	60	61	61	61
			Watts	94	135	176	216	257
	Medium Low	907	CFM	807	811	814	818	822
			Temp. Rise	57	57	58	58	58
			Watts	101	151	201	252	302
	Medium (a)	958	CFM	862	862	862	861	861
			Temp. Rise	54	54	54	54	54
			Watts	117	168	219	271	322
	High	1066	CFM	977	963	949	934	920
			Temp. Rise	48	49	50	51	52
			Watts	128	179	230	281	332
Heating 2nd Stage	Low	1200	CFM	1111	1104	1096	1088	1081
			Temp. Rise	66	66	66	66	66
			Watts	204	260	317	373	429
	Medium Low	1260	CFM	1193	1201	1209	1217	1225
			Temp. Rise	59	59	59	59	59
			Watts	232	296	360	424	488
	Medium (a)	1330	CFM	1217	1217	1216	1215	1215
			Temp. Rise	58	58	58	58	59
			Watts	273	335	396	457	518
	High	1480	CFM	1342	1328	1313	1299	1284
			Temp. Rise	53	54	55	56	56
			Watts	329	389	448	508	567

Table 8. S9V2B080U4VSAC/D / S9V2B080D4VSAC/D Cooling Airflow

S9V2B080U4VSAC/D / S9V2B080D4VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	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	892 / 91	899 / 136	893 / 180	872 / 222	838 / 265
	420	CFM / WATTS	834 / 77	841 / 120	834 / 161	813 / 202	777 / 243
	400	CFM / WATTS	785 / 67	785 / 106	781 / 146	754 / 183	737 / 229
	370	CFM / WATTS	738 / 58	744 / 97	736 / 134	714 / 172	677 / 210
	350	CFM / WATTS	700 / 52	705 / 89	697 / 125	675 / 161	638 / 198
	330	CFM / WATTS	662 / 46	666 / 81	658 / 116	635 / 151	598 / 187
	310	CFM / WATTS	624 / 40	627 / 74	619 / 107	596 / 142	558 / 177
	290	CFM / WATTS	585 / 35	588 / 67	580 / 100	557 / 133	518 / 168
2.5	450	CFM / WATTS	1108 / 159	1120 / 213	1116 / 265	1098 / 315	1065 / 365
	420	CFM / WATTS	1035 / 133	1046 / 184	1041 / 233	1022 / 281	989 / 328
	400	CFM / WATTS	988 / 118	997 / 167	992 / 214	972 / 260	938 / 306
	370	CFM / WATTS	916 / 97	924 / 143	918 / 188	897 / 231	863 / 275
	350	CFM / WATTS	868 / 85	875 / 129	868 / 172	848 / 213	813 / 255
	330	CFM / WATTS	820 / 74	826 / 116	819 / 157	798 / 197	762 / 237
	310	CFM / WATTS	772 / 64	778 / 104	770 / 143	749 / 182	712 / 221
	290	CFM / WATTS	724 / 56	729 / 94	721 / 131	699 / 168	663 / 205
3.0	450	CFM / WATTS	1326 / 257	1341 / 320	1341 / 380	1325 / 439	1296 / 497
	420	CFM / WATTS	1239 / 214	1252 / 273	1250 / 330	1234 / 385	1203 / 440
	400	CFM / WATTS	1181 / 188	1193 / 245	1191 / 299	1173 / 353	1142 / 405
	370	CFM / WATTS	1094 / 153	1105 / 207	1101 / 258	1083 / 308	1050 / 358
	350	CFM / WATTS	1036 / 133	1046 / 184	1041 / 233	1022 / 281	989 / 329
	330	CFM / WATTS	978 / 115	987 / 164	982 / 210	962 / 256	928 / 302
	310	CFM / WATTS	920 / 99	929 / 145	923 / 189	902 / 233	868 / 277
	290	CFM / WATTS	863 / 84	870 / 128	863 / 170	843 / 212	807 / 253

Heating and Cooling Airflow Tables

Table 8. S9V2B080U4VSAC/D / S9V2B080D4VSAC/D Cooling Airflow (continued)

S9V2B080U4VSAC/D / S9V2B080D4VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
4.0 (a)	450	CFM / WATTS	1769 / 570	1791 / 648	1797 / 725	1789 / 799	1766 / 873
	420	CFM / WATTS	1650 / 469	1670 / 544	1675 / 616	1664 / 686	1639 / 756
	400	CFM / WATTS	1571 / 410	1590 / 481	1593 / 550	1582 / 618	1555 / 685
	370	CFM / WATTS	1453 / 330	1470 / 397	1472 / 462	1458 / 526	1430 / 588
	350 (a)	CFM / WATTS	1375 / 284	1391 / 348	1391 / 410	1376 / 471	1347 / 530
	330	CFM / WATTS	1297 / 242	1312 / 303	1311 / 363	1295 / 420	1265 / 477
	310	CFM / WATTS	1219 / 205	1233 / 263	1230 / 319	1214 / 374	1183 / 428
	290	CFM / WATTS	1142 / 172	1154 / 227	1151 / 280	1133 / 332	1101 / 384

Table 9. S9V2C100U4VSAC/D Heating Airflow

S9V2C100U4VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 64,200 2nd Stage Capacity = 97,150				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1146	CFM	1132	1120	1108	1097	1085
			Temp. Rise	52	52	52	52	53
			Watts	139	192	246	299	352
	Medium Low	1280	CFM	1265	1251	1237	1223	1209
			Temp. Rise	46	47	47	48	48
			Watts	187	239	291	343	395
	Medium	1359	CFM	1291	1269	1248	1226	1205
			Temp. Rise	45	46	46	47	47
			Watts	211	272	332	393	454
	High (a)	1446	CFM	1401	1404	1408	1412	1415
			Temp. Rise	41	41	41	41	41
			Watts	255	311	367	423	479
Heating 2nd Stage	Low	1450	CFM	1421	1416	1412	1408	1404
			Temp. Rise	63	63	63	63	63
			Watts	272	336	401	466	531
	Medium Low	1620	CFM	1620	1611	1602	1593	1584
			Temp. Rise	55	55	55	56	56
			Watts	354	424	493	562	631
	Medium	1720	CFM	1646	1643	1640	1638	1635
			Temp. Rise	53	54	54	54	54
			Watts	408	484	559	635	711
	High (a)	1830	CFM	1805	1787	1768	1749	1731
			Temp. Rise	49	50	50	51	51
			Watts	525	579	633	687	741



Heating and Cooling Airflow Tables

Table 10. S9V2C100D4VSAC/D Heating Airflow

S9V2C100D4VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 64,300 2nd Stage Capacity = 97,071				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1080	CFM	1068	1048	1029	1009	989
			Temp. Rise	55	57	60	63	66
			Watts	101	151	201	251	301
	Medium Low	1166	CFM	1158	1113	1068	1023	978
			Temp. Rise	51	53	55	57	59
			Watts	115	172	229	285	342
	Medium (a)	1318	CFM	1326	1272	1218	1164	1111
			Temp. Rise	46	48	50	51	53
			Watts	153	206	259	312	365
	High	1361	CFM	1312	1270	1229	1188	1147
			Temp. Rise	46	47	47	48	49
			Watts	166	221	276	331	387
Heating 2nd Stage	Low	1500	CFM	1514	1478	1441	1404	1367
			Temp. Rise	58	60	61	63	64
			Watts	223	297	370	443	516
	Medium Low	1620	CFM	1620	1588	1556	1523	1491
			Temp. Rise	55	56	57	58	59
			Watts	276	345	415	484	553
	Medium (a)	1830	CFM	1768	1746	1724	1702	1620
			Temp. Rise	50	51	52	53	53
			Watts	372	446	520	594	668
	High	1890	CFM	1810	1783	1756	1729	1702
			Temp. Rise	49	50	51	52	52
			Watts	405	476	548	677	695

Table 11. S9V2C100U4VSAC/D / S9V2C100D4VSAC/D Cooling Airflow

S9V2C100U4VSAC/D / S9V2C100D4VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	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	1153 / 111	1149 / 159	1147 / 208	1145 / 260	1141 / 314
	420	CFM / WATTS	1077 / 94	1073 / 138	1071 / 185	1068 / 235	1064 / 287
	400	CFM / WATTS	1061 / 90	1057 / 134	1054 / 180	1044 / 227	1021 / 273
	370	CFM / WATTS	950 / 69	945 / 109	942 / 151	939 / 197	935 / 246
	350	CFM / WATTS	899 / 60	893 / 98	890 / 140	887 / 184	882 / 232
	330	CFM / WATTS	848 / 53	841 / 89	838 / 129	835 / 172	830 / 219
	310	CFM / WATTS	796 / 46	789 / 80	786 / 119	782 / 161	777 / 208
	290	CFM / WATTS	745 / 39	737 / 72	733 / 110	729 / 151	724 / 198
3.0	450	CFM / WATTS	1378 / 178	1376 / 234	1374 / 292	1372 / 352	1368 / 413
	420	CFM / WATTS	1289 / 149	1286 / 201	1284 / 256	1282 / 312	1277 / 371
	400	CFM / WATTS	1228 / 131	1225 / 181	1223 / 234	1221 / 288	1217 / 345
	370	CFM / WATTS	1138 / 108	1134 / 154	1132 / 203	1130 / 255	1125 / 309
	350	CFM / WATTS	1077 / 94	1073 / 138	1071 / 185	1068 / 235	1064 / 287
	330	CFM / WATTS	1016 / 81	1011 / 123	1009 / 168	1006 / 216	1002 / 266
	310	CFM / WATTS	955 / 70	950 / 110	947 / 153	944 / 199	940 / 248
	290	CFM / WATTS	894 / 59	888 / 97	885 / 138	882 / 183	877 / 231
3.5	450	CFM / WATTS	1601 / 269	1599 / 334	1597 / 401	1594 / 469	1590 / 539
	420	CFM / WATTS	1498 / 224	1496 / 284	1494 / 347	1491 / 411	1487 / 477
	400	CFM / WATTS	1428 / 196	1426 / 254	1424 / 314	1422 / 376	1417 / 439
	370	CFM / WATTS	1324 / 160	1321 / 214	1319 / 270	1317 / 327	1313 / 387
	350	CFM / WATTS	1253 / 138	1251 / 190	1249 / 243	1246 / 298	1242 / 355
	330	CFM / WATTS	1183 / 119	1180 / 167	1178 / 218	1175 / 271	1171 / 326
	310	CFM / WATTS	1112 / 102	1109 / 147	1107 / 196	1104 / 246	1100 / 299
	290	CFM / WATTS	1041 / 86	1037 / 129	1035 / 175	1032 / 223	1028 / 275

Heating and Cooling Airflow Tables

Table 11. S9V2C100U4VSAC/D / S9V2C100D4VSAC/D Cooling Airflow (continued)

S9V2C100U4VSAC/D / S9V2C100D4VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
4.0 (a)	450	CFM / WATTS	1820 / 388	1819 / 462	1816 / 538	1812 / 615	1807 / 693
	420	CFM / WATTS	1704 / 321	1702 / 390	1700 / 461	1697 / 533	1692 / 607
	400	CFM / WATTS	1626 / 281	1624 / 347	1622 / 415	1619 / 484	1614 / 554
	370	CFM / WATTS	1507 / 228	1505 / 289	1504 / 352	1501 / 417	1497 / 482
	350 (a)	CFM / WATTS	1428 / 196	1426 / 254	1424 / 314	1422 / 376	1417 / 439
	330	CFM / WATTS	1348 / 168	1346 / 223	1344 / 280	1342 / 338	1338 / 399
	310	CFM / WATTS	1268 / 143	1266 / 195	1264 / 248	1261 / 304	1257 / 362
	290	CFM / WATTS	1188 / 120	1185 / 169	1183 / 220	1180 / 273	1176 / 328

Table 12. S9V2D120U5VSAC/D Heating Airflow

S9V2D120U5VSAC/D Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 77,050 2nd Stage Capacity = 116,250				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1123	CFM	1138	1158	1178	1198	1218
			Temp. Rise	61	60	59	58	57
			Watts	115	176	236	297	358
	Medium Low	1332	CFM	1371	1383	1394	1406	1417
			Temp. Rise	51	50	50	49	49
			Watts	182	251	320	389	457
	Medium (a)	1404	CFM	1440	1450	1461	1471	1482
			Temp. Rise	48	48	48	47	47
			Watts	208	283	357	431	505
	High	1620	CFM	1669	1674	1680	1685	1691
			Temp. Rise	42	42	41	41	41
			Watts	315	388	460	533	605
Heating 2nd Stage	Low	1560	CFM	1654	1637	1621	1604	1587
			Temp. Rise	65	66	67	67	68
			Watts	291	360	430	499	568
	Medium Low	1850	CFM	1980	1951	1922	1893	1864
			Temp. Rise	55	56	57	58	58
			Watts	456	539	621	704	787
	Medium (a)	1950	CFM	2075	2037	1999	1961	1923
			Temp. Rise	52	53	54	55	56
			Watts	527	611	696	781	865
	High	2250	CFM	2280	2197	2114	2032	1949
			Temp. Rise	48	50	52	54	56
			Watts	795	819	842	865	888

Table 13. S9V2D120U5VSAC/D Cooling Airflow

S9V2D120U5VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
3.0	450	CFM / WATTS	1336 / 163	1346 / 221	1354 / 281	1360 / 341	1363 / 402
	420	CFM / WATTS	1248 / 137	1258 / 191	1265 / 247	1271 / 304	1274 / 361
	400	CFM / WATTS	1189 / 121	1199 / 173	1206 / 227	1211 / 281	1214 / 336
	370	CFM / WATTS	1102 / 100	1110 / 148	1116 / 198	1121 / 249	1123 / 301
	350	CFM / WATTS	1043 / 87	1051 / 133	1057 / 181	1060 / 230	1062 / 279
	330	CFM / WATTS	985 / 76	991 / 119	996 / 165	999 / 211	1000 / 259
	310	CFM / WATTS	927 / 65	932 / 107	936 / 150	937 / 195	938 / 241
	290	CFM / WATTS	869 / 56	872 / 95	874 / 136	875 / 179	875 / 223
3.5	450	CFM / WATTS	1559 / 244	1567 / 312	1574 / 381	1579 / 450	1583 / 519
	420	CFM / WATTS	1455 / 204	1464 / 267	1472 / 331	1477 / 396	1481 / 462
	400	CFM / WATTS	1386 / 179	1395 / 240	1403 / 301	1409 / 363	1413 / 426
	370	CFM / WATTS	1282 / 147	1292 / 203	1300 / 260	1305 / 318	1309 / 376
	350	CFM / WATTS	1214 / 127	1223 / 181	1231 / 235	1236 / 290	1239 / 346
	330	CFM / WATTS	1145 / 110	1154 / 160	1161 / 212	1166 / 265	1169 / 318
	310	CFM / WATTS	1077 / 94	1085 / 142	1092 / 191	1096 / 241	1098 / 292
	290	CFM / WATTS	1009 / 80	1016 / 125	1021 / 171	1025 / 219	1026 / 267



Heating and Cooling Airflow Tables

Table 13. S9V2D120U5VSAC/D Cooling Airflow (continued)

S9V2D120U5VSAC/D Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
4.0	450	CFM / WATTS	1783 / 350	1789 / 427	1793 / 505	1796 / 584	1798 / 663
	420	CFM / WATTS	1663 / 290	1671 / 362	1677 / 436	1681 / 509	1683 / 583
	400	CFM / WATTS	1584 / 255	1592 / 324	1599 / 393	1603 / 464	1607 / 534
	370	CFM / WATTS	1465 / 207	1474 / 271	1481 / 336	1487 / 401	1491 / 467
	350	CFM / WATTS	1386 / 179	1395 / 240	1403 / 301	1409 / 363	1413 / 426
	330	CFM / WATTS	1307 / 154	1317 / 211	1324 / 269	1330 / 328	1334 / 388
	310	CFM / WATTS	1228 / 131	1238 / 185	1246 / 240	1251 / 296	1254 / 352
	290	CFM / WATTS	1150 / 111	1159 / 162	1166 / 214	1171 / 266	1174 / 320
5.0 ^(a)	450	CFM / WATTS	2238 / 646	2235 / 742	2230 / 840	2226 / 938	2220 / 1036
	420	CFM / WATTS	2086 / 533	2086 / 623	2085 / 714	2083 / 806	2080 / 897
	400	CFM / WATTS	1985 / 466	1987 / 552	1988 / 639	1988 / 726	1986 / 813
	370	CFM / WATTS	1834 / 377	1838 / 456	1842 / 536	1844 / 617	1845 / 698
	350 ^(a)	CFM / WATTS	1733 / 324	1740 / 399	1745 / 475	1748 / 552	1750 / 628
	330	CFM / WATTS	1633 / 277	1641 / 347	1647 / 419	1652 / 492	1655 / 564
	310	CFM / WATTS	1534 / 234	1543 / 301	1550 / 369	1555 / 437	1558 / 505
	290	CFM / WATTS	1435 / 196	1444 / 259	1452 / 322	1458 / 387	1461 / 451

^(a) Factory Setting.



Maximum Vent Length Table

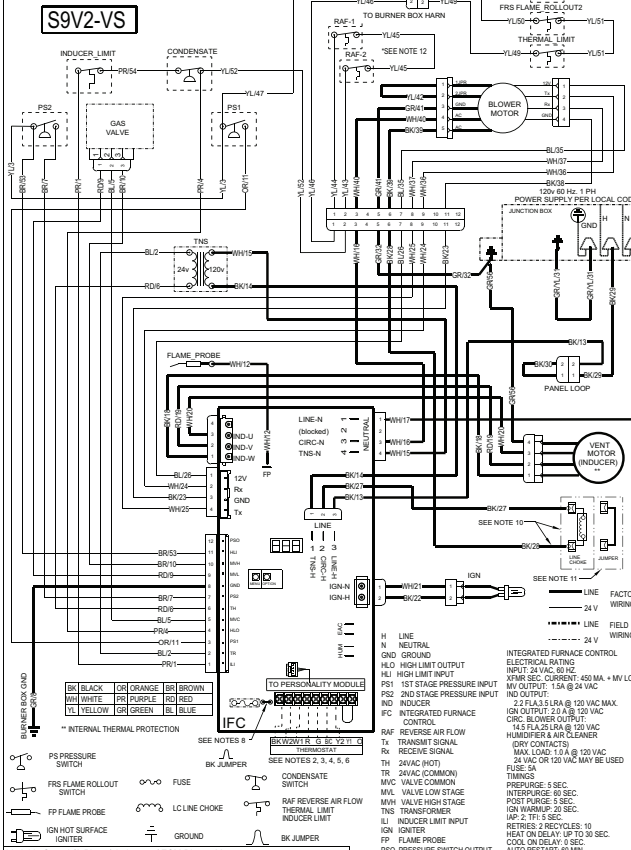
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	2 inch or 2.5 inch Pipe	3 inch or 4 inch Pipe
Altitude 0–2,000 Feet		
S9V2B040U3VS, S9V2B060U3VS	200	200
S9V2B080U4VS, S9V2B080D4VS	100	200
S9V2C100U4VS, S9V2C100D4VS	50	200
S9V2D120U5VS	Note 1	200
Altitude 2,001–5,400 Feet		
S9V2B040U3VS, S9V2B060U3VS	200	200
S9V2B080U4VS, S9V2B080D4VS	80	120
S9V2C100U4VS, S9V2C100D4VS	50	150
S9V2D120U5VS	Note 1	200
Altitude 5,401–7,800 Feet		
S9V2B040U3VS, S9V2B060U3VS	100	150
S9V2B080U4VS, S9V2B080D4VS	50	70
S9V2C100U4VS, S9V2C100D4VS	Note 1	100
S9V2D120U5VS	Note 1	100
Altitude 7,801–10,100 Feet		
S9V2B040U3VS, S9V2B060U3VS	50	90
S9V2B080U4VS, S9V2B080D4VS	Note 1	50
S9V2C100U4VS, S9V2C100D4VS	Note 1	50
S9V2D120U5VS	Note 1	50

Notes:

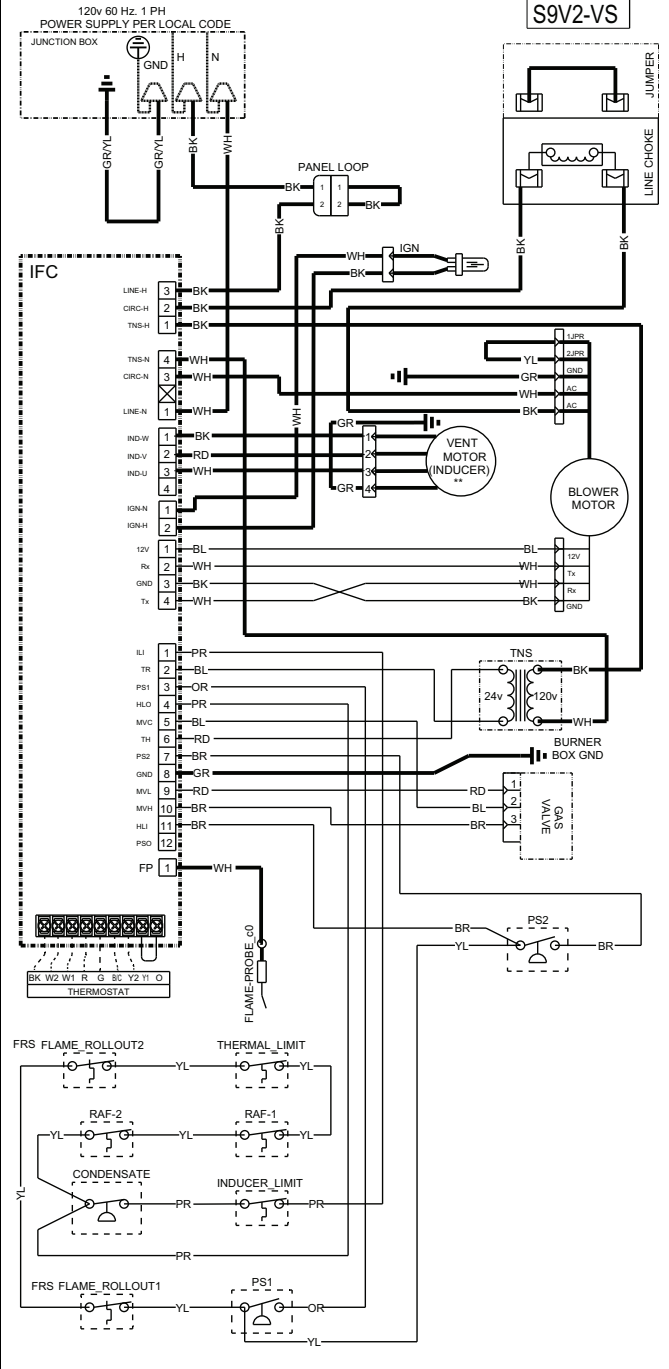
- Not allowed
- For PolyPro® by Duravent, Z-DENS by Novaflex Group, InnoFlue® by Centrotherm, ECCO™ polypropylene venting system, and Polyflue™ manufactured modular venting systems that are in the approved vent pipe material table, fitting equivalent vent lengths may be different from what is shown in Note 6. Refer to the venting system manufacturer's installation instruction for appropriate venting diameters and equivalent lengths.
- Minimum vent length for all models: 15' equivalent.
- DO NOT MIX PIPE DIAMETERS IN THE SAME LENGTH OF PIPE OUTSIDE THE FURNACE CABINET (Except adapters at the top of the furnace). If different inlet and vent pipe sizes are used, the vent pipe must adhere to the maximum length limit shown in the table above (See note 7 below for exception). The inlet pipe can be of a larger diameter, but never smaller than the vent pipe.
- MAXIMUM PIPE LENGTHS MUST NOT BE EXCEEDED! THE LENGTH SHOWN IS NOT A COMBINED TOTAL, IT IS THE MAXIMUM LENGTH OF EACH (Vent or Inlet air pipes).
- One SHORT radius 90° elbow is equivalent to 10' of 4" pipe, 10' of 3" pipe, or 8' of 2" pipe. One LONG radius elbow is equivalent to 6' of 4" pipe, 7' of 3" pipe, or 5' of 2" pipe. Two 45° elbows equal one 90° LONG elbow. One MITERED elbow is equivalent to 12' of 3" pipe or 12' of 2" pipe.
- The termination tee or bend must be included in the total number of elbows. If the BAYAIR30AVENTA or BAYAIR30CNVENT termination kit is used, the equivalent length of pipe is 5 feet. For BAYVENT200B and BAYVENTCN200B the equivalent length is 0 feet.
- For Canadian applications, venting systems must meet ULC-S636 requirements.
- The INLET AIR of one pipe systems require the installation of a minimum of one 90° elbow (to prevent dust and debris from falling straight into the furnace).

S9V2-VS Wiring Diagram

- NOTES:**
- IF ANY OF THE ORIGINAL WIRING AS SUPPLIED WITH THIS FURNACE MUST BE REPLACED, IT MUST BE WITH WIRE HAVING A TEMPERATURE RATING OF AT LEAST 105°C. WIRES 12, 48, 49, 50, AND 51 REQUIRE A TEMPERATURE RATING OF AT LEAST 250°C.
 - FOR PROPER AIRFLOW IN COOLING/HEAT PUMP MODES, Y1 AND Y2 MUST CONNECT FROM THE THERMOSTAT TO THE IFC LOW VOLTAGE TERMINAL STRIP.
 - FOR COOLING ONLY SYSTEMS, LEAVE Y1-O JUMPER IN PLACE ON THE IFC FOR CORRECT LED READOUT.
 - FOR HEATPUMP SYSTEMS, REMOVE THE Y1-O JUMPER, CONNECT "O" FROM THE THERMOSTAT TO "O" ON THE IFC LOW VOLTAGE TERMINAL STRIP FOR CORRECT LED READOUT.
 - VSPD OD SYSTEMS REQUIRE DIFFERENT CONNECTIONS. SEE RELAY PANEL INSTRUCTIONS.
 - IF USING A SINGLE STAGE HEATING THERMOSTAT, JUMPER W1 AND W2 TERMINALS AT THE LOW VOLTAGE TERMINAL STRIP. HTZ WILL BE SHOWN ON THE SEVEN SEGMENT DISPLAY AT ALL TIMES. SECOND STAGE OPERATION WILL BEGIN AFTER THE INTERSTAGE DELAY HAS COMPLETED.
 - AIRFLOW TABLES ARE LOCATED IN THE SERVICE FACTS. TO CHANGE AIRFLOW, REFER TO THE INTEGRATED FURNACE CONTROL MENU AND OPTIONS TO SET AIRFLOW AND BLOWER DELAYS.
 - THE "BK" JUMPER MUST BE CUT WHEN APPLYING AN AIRFLOW COMMAND TO THE "BK" TERMINAL SUCH AS PULSE WIDTH MODULATION.
 - CORRECT PERSONALITY MODULE IS REQUIRED FOR PROPER FURNACE OPERATION AND IS SPECIFIC TO EACH MODEL AND SERIAL NUMBER. IT IS TO REMAIN WITH THE ORIGINAL UNIT.
 - LINE CHOKE AND WIRE BK28 ONLY USED ON MODELS WITH 1 HP MOTORS.
 - SOME MODELS WITH 3/4 HP MOTORS MAY USE JUMPER BETWEEN WIRES BK27 AND BK28.
 - WIRE YL45 AND RAF-2 ARE NOT PRESENT ON DOWNFLOW MODELS.



Variable Speed (3-Phase) Inducor w/ ECM Blower Motor	Status Codes	Outdoor Unit	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch
IL	IL	IL	IL
HE 1	CP	CP	CP
L 1	CPH	CPH	CPH
HE 2	HOD	HOD	HOD
L 2	ISD	ISD	ISD
R-F	Run Test Mode	Run Test Mode	Run Test Mode
CP	Continuous Fan	Continuous Fan	Continuous Fan
CL 1	Relay exceeded (Failed to est flame)	Relay exceeded (Failed to est flame)	Relay exceeded (Failed to est flame)
CL 2	Recycles exceeded (loss of established flame) or 10X PSI open	Recycles exceeded (loss of established flame) or 10X PSI open	Recycles exceeded (loss of established flame) or 10X PSI open
HP 1	1st Stage Heat Pump	1st Stage Heat Pump	1st Stage Heat Pump
HP 2	2nd Stage Heat Pump	2nd Stage Heat Pump	2nd Stage Heat Pump
DF	Defrost Mode	Defrost Mode	Defrost Mode
EA	Active Alarm Menu	Active Alarm Menu	Active Alarm Menu
LF 1	Last 6 Faults (To Clear, Hold Option Button 5 sec)	Last 6 Faults (To Clear, Hold Option Button 5 sec)	Last 6 Faults (To Clear, Hold Option Button 5 sec)
CR	Code Release Number	Code Release Number	Code Release Number
LD	Cooling Off Delay (sec)	Cooling Off Delay (sec)	Cooling Off Delay (sec)
OT	Outdoor Tonnage	Outdoor Tonnage	Outdoor Tonnage
ED 4	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch
ED 5	Flame detected, should not be present	Flame detected, should not be present	Flame detected, should not be present
ED 6	Voltage reversed polarity or Bad Grounding	Voltage reversed polarity or Bad Grounding	Voltage reversed polarity or Bad Grounding
ED 7	1st Igniter relay fails, (2) Igniter open	1st Igniter relay fails, (2) Igniter open	1st Igniter relay fails, (2) Igniter open
ED 7.1	1st stage gas valve (IMV) is energized when it should be off	1st stage gas valve (IMV) is energized when it should be off	1st stage gas valve (IMV) is energized when it should be off
ED 7.2	Redundant Relay (HLO output) Energized when it should NOT be	Redundant Relay (HLO output) Energized when it should NOT be	Redundant Relay (HLO output) Energized when it should NOT be
ED 8	Flame current is low, but still strong enough to allow operation.	Flame current is low, but still strong enough to allow operation.	Flame current is low, but still strong enough to allow operation.
ED 9	Open Inducer Limit Switch or Condensate Switch	Open Inducer Limit Switch or Condensate Switch	Open Inducer Limit Switch or Condensate Switch
ED 10	Inducer Motor no communication response, could be communication failure between two micro-controllers.	Inducer Motor no communication response, could be communication failure between two micro-controllers.	Inducer Motor no communication response, could be communication failure between two micro-controllers.
ED 11	(1) 2nd stage gas valve energized when it should NOT be (2) 2nd stage gas valve not energized when it should be (3) 1st stage gas valve not energized when it should be (4) Redundant relay (HLO output) not energized when it should be	(1) 2nd stage gas valve energized when it should NOT be (2) 2nd stage gas valve not energized when it should be (3) 1st stage gas valve not energized when it should be (4) Redundant relay (HLO output) not energized when it should be	(1) 2nd stage gas valve energized when it should NOT be (2) 2nd stage gas valve not energized when it should be (3) 1st stage gas valve not energized when it should be (4) Redundant relay (HLO output) not energized when it should be
ED 12	Open fuse	Open fuse	Open fuse
ED 13	Blower HPIOEM ID	Blower HPIOEM ID	Blower HPIOEM ID
ED 14	No PM and local copy bad	No PM and local copy bad	No PM and local copy bad
ED 15	Both of Unit Data File in PM and local Unit Data File are Corrupt	Both of Unit Data File in PM and local Unit Data File are Corrupt	Both of Unit Data File in PM and local Unit Data File are Corrupt
ED 17	Blower motor no communication response	Blower motor no communication response	Blower motor no communication response
ED 18	Blower communication failure on the control	Blower communication failure on the control	Blower communication failure on the control

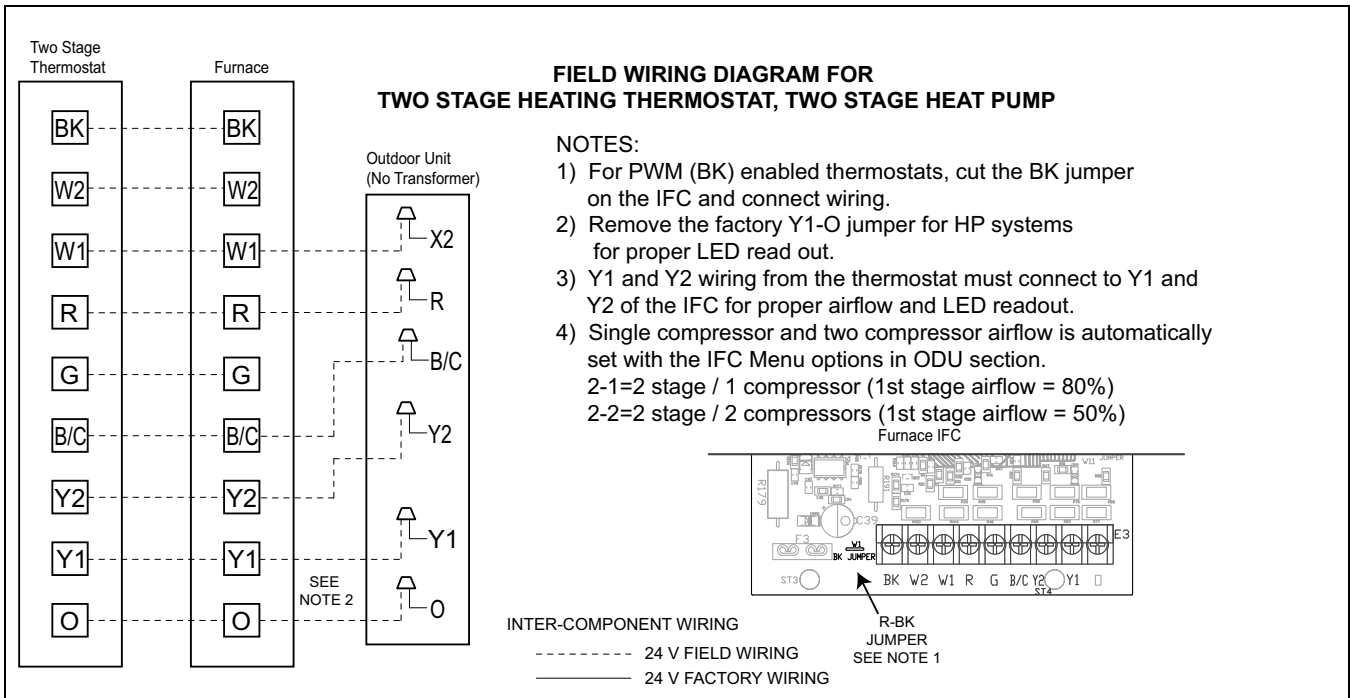
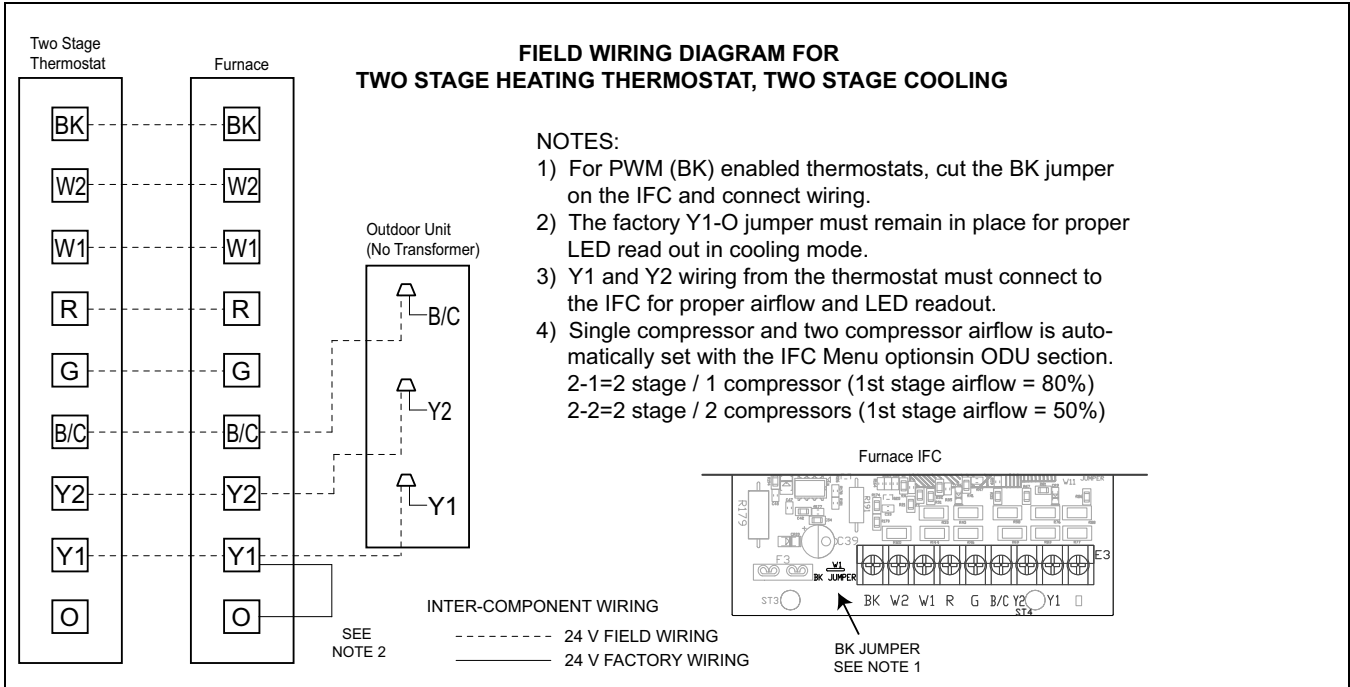




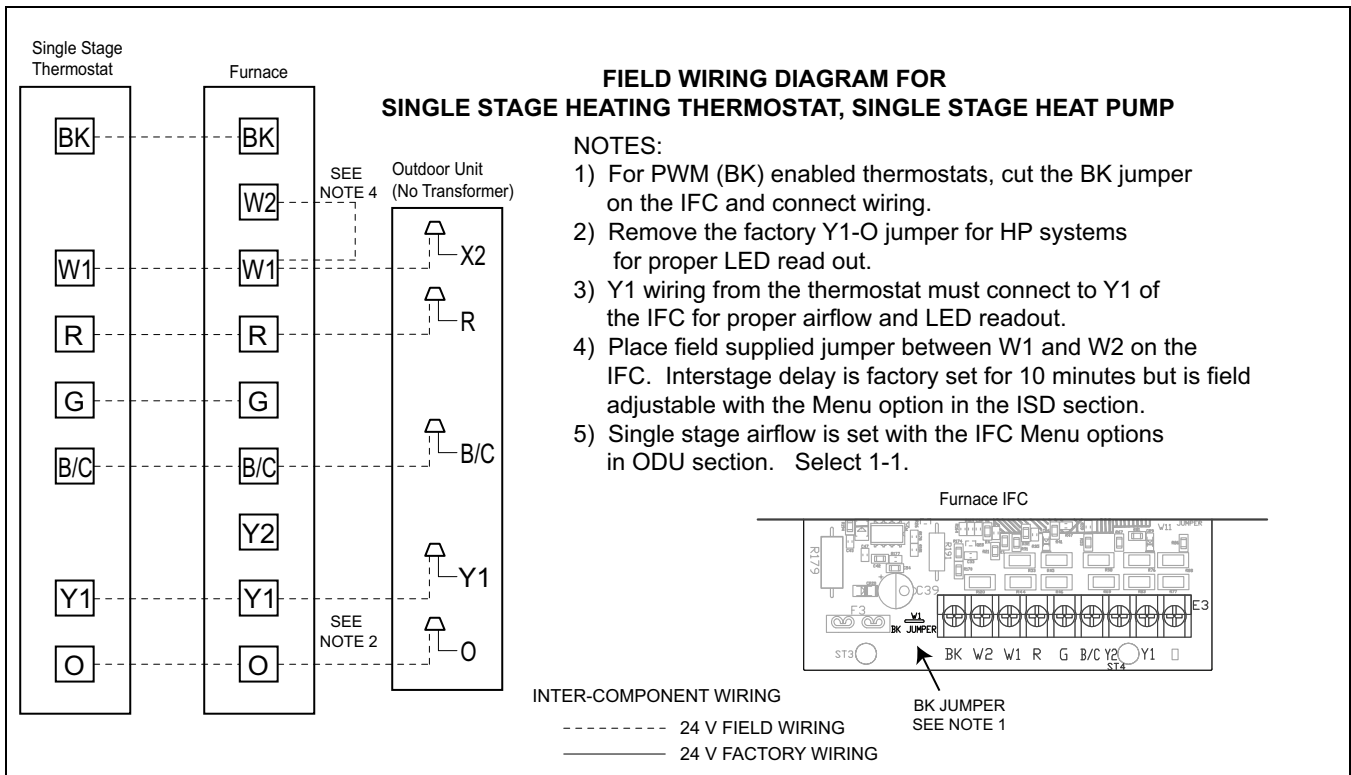
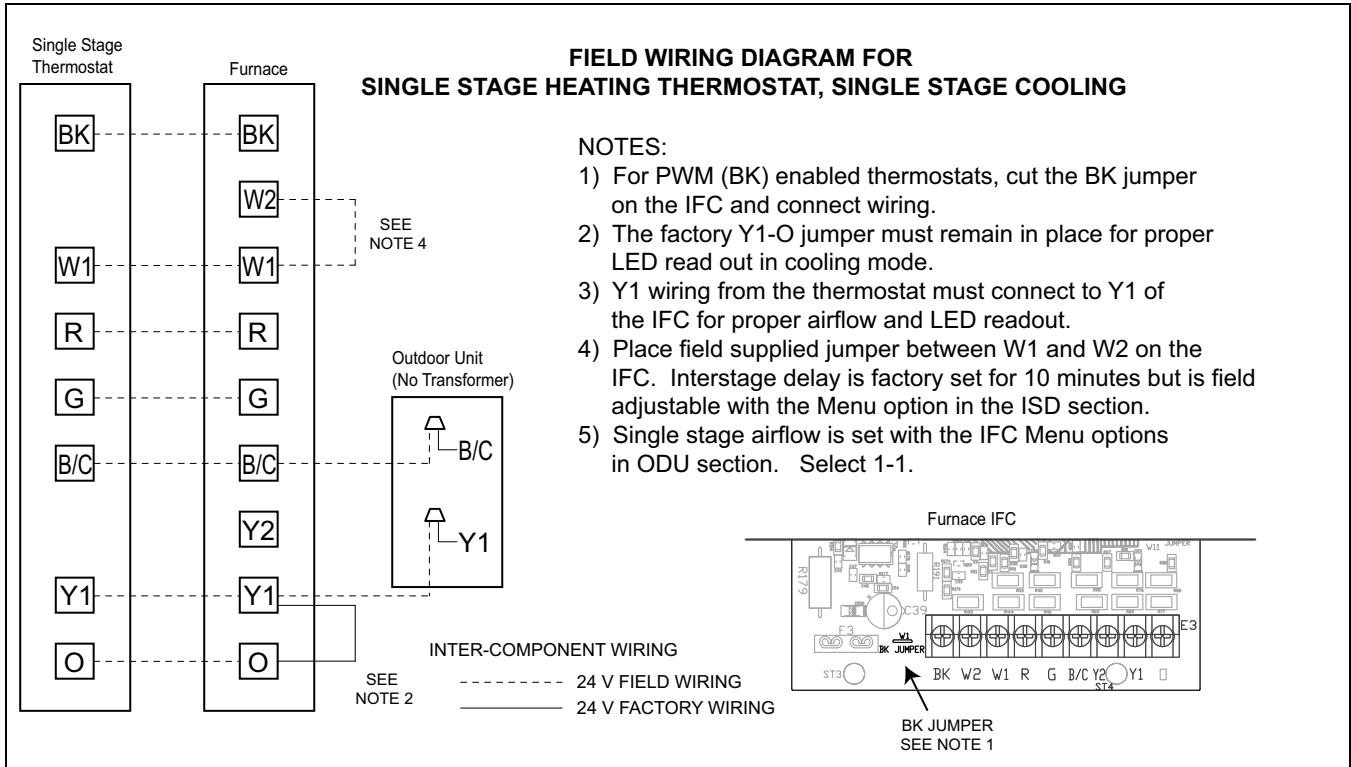
Electrical Connections

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 or CSA C22.1 Electrical Code, 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 Wiring Diagram section in this document and unit wiring diagram attached to furnace.

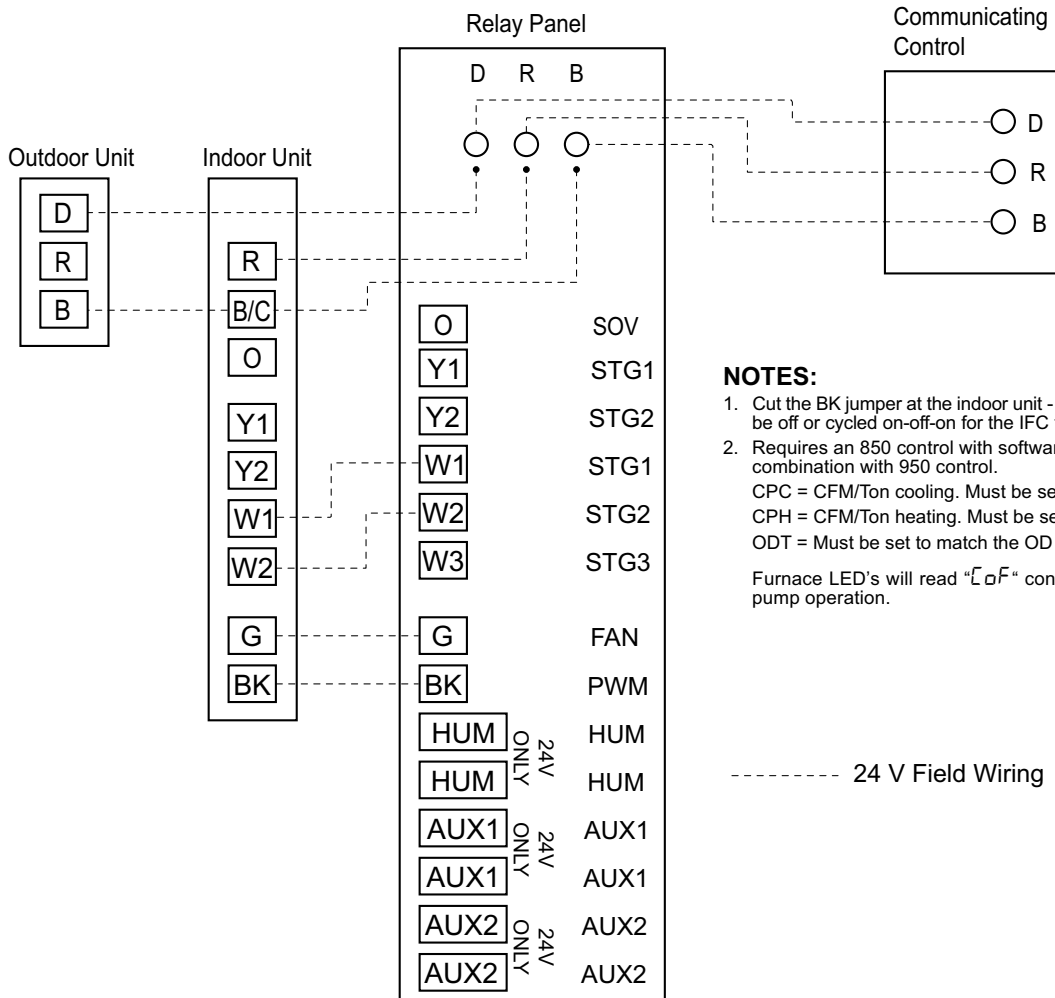
Field Wiring



Electrical Connections



COMMUNICATING CONTROLS WITH NON-COMMUNICATING S9V2 FURNACE AND COMMUNICATING VS COOLING/HP



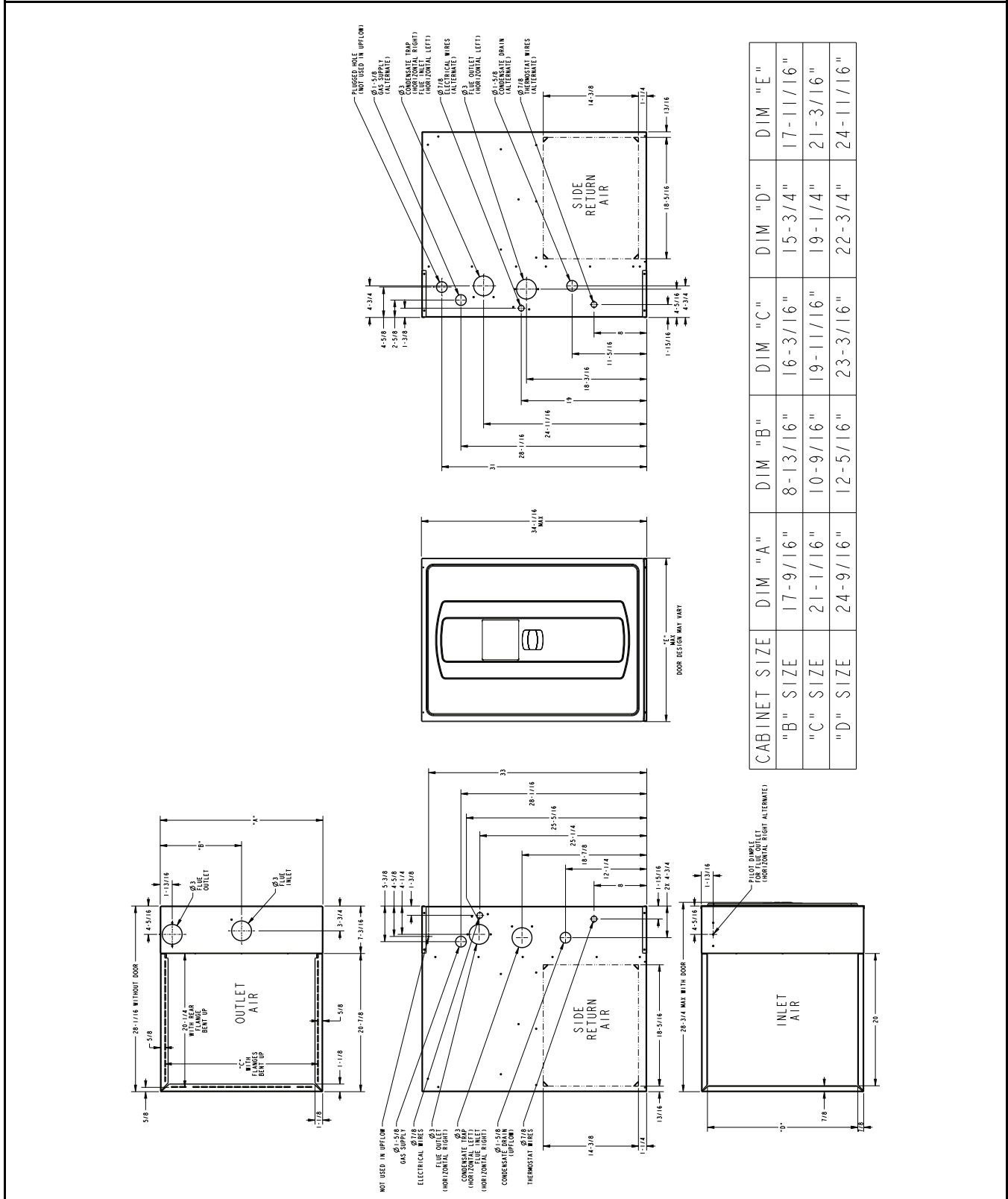
NOTES:

1. Cut the BK jumper at the indoor unit - After cutting the jumper, power must be off or cycled on-off-on for the IFC to work properly.
 2. Requires an 850 control with software version 3.0+ or 1050. Not a valid combination with 950 control.
 CPC = CFM/Ton cooling. Must be set to 400.
 CPH = CFM/Ton heating. Must be set to 400.
 ODT = Must be set to match the OD tonnage.
- Furnace LED's will read "LF" continuous fan during cooling and heat pump operation.

----- 24 V Field Wiring

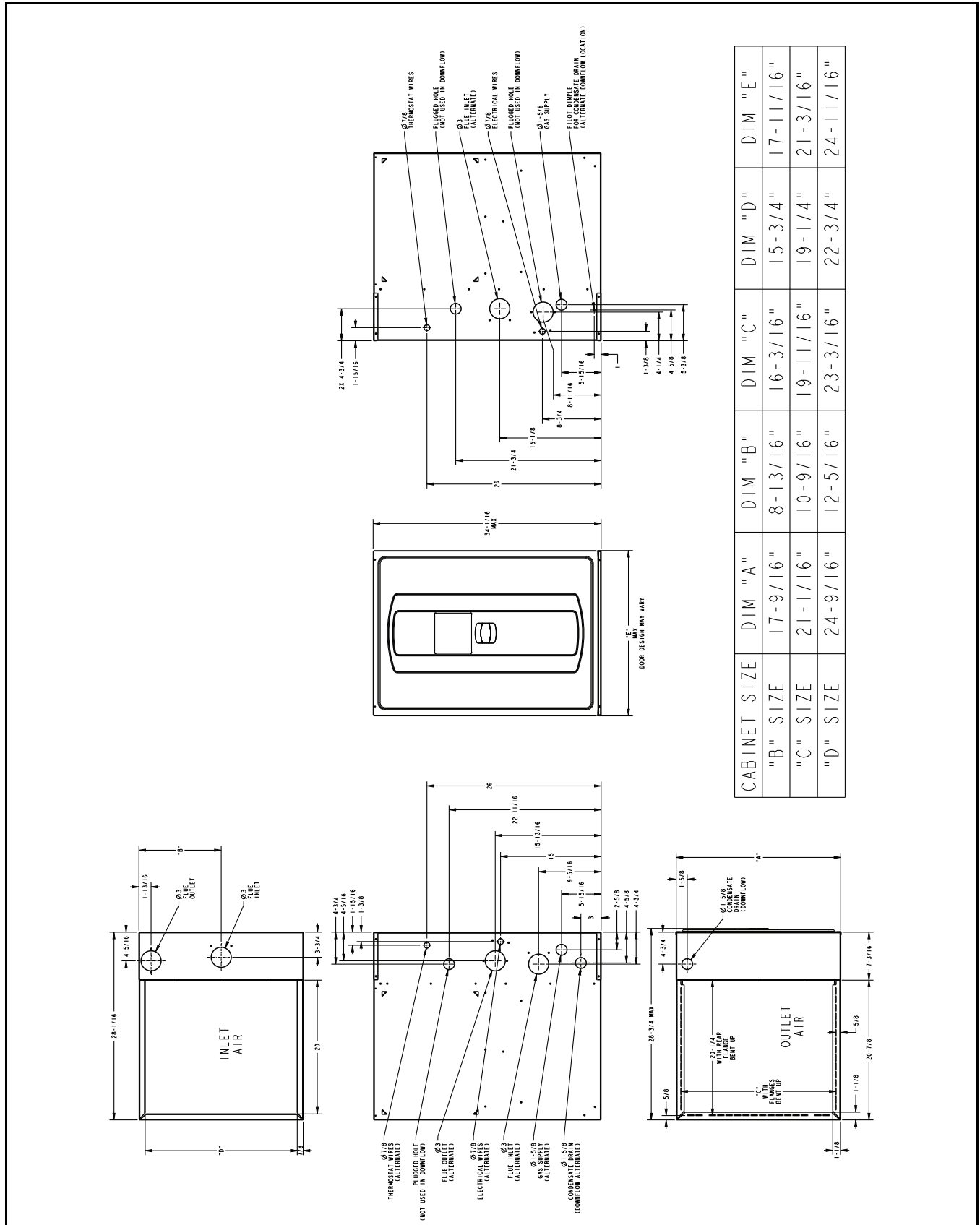
Outline Drawings

Table 14. 17.5", 21" and 24.5" Upflow Cabinets



CABINET SIZE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
"B" SIZE	17-9/16"	8-13/16"	16-3/16"	15-3/4"	17-11/16"
"C" SIZE	21-1/16"	10-9/16"	19-11/16"	19-1/4"	21-3/16"
"D" SIZE	24-9/16"	12-5/16"	23-3/16"	22-3/4"	24-11/16"

Table 15. 17.5" and 21" Downflow Cabinets



CABINET SIZE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
"B" SIZE	17-9/16"	8-13/16"	16-3/16"	15-3/4"	17-11/16"
"C" SIZE	21-1/16"	10-9/16"	19-11/16"	19-1/4"	21-3/16"
"D" SIZE	24-9/16"	12-5/16"	23-3/16"	22-3/4"	24-11/16"



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