



Product and Submittal Data

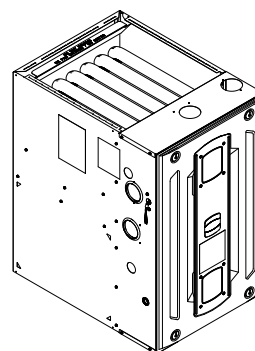
Upflow/Horizontal Left/Right, Dedicated Downflow Two Stage Condensing Gas Fired Furnace

Upflow, Convertible to Horizontal Right or Horizontal Left

S9V2B040U3VSBB
S9V2B060U4VSBB
S9V2B080U4VSBB
S9V2C080U5VSBB
S9V2C100U5VSBB
S9V2D120U5VSBB

Downflow Only

S9V2B040D3VSBB
S9V2B060D3VSBB
S9V2B080D4VSBB
S9V2C100D4VSBB
S9V2D120D5VSBB



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



Introduction

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Revision History

Updates to the Accessories section.



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General Features

Natural Gas Models

Central Heating furnace designs are certified by the Intertek/ETL for both natural and propane gas. Limit setting and rating data were established and approved under standard rating conditions using American National Standards Institute standards.

Safe Operation

The Integrated Furnace 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 propane with propane conversion kit.

Integrated Furnace 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 0.5-inch 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 furnace control lights the main burners upon a demand for heat from the room thermostat. Complete front service access.

1. Low energy power venter
2. 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

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

5 SKU's — Downflow

Added application flexibility and reduction in specification errors

Airflow

At least 400 CFM/ton at 0.5-inch water column 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-inch high open vestibule

Variable Speed Draft Inducer Motor

Increased efficiency

Dimensions

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

Depth remains approximately 28-inch

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 multi-pin polarized terminals connections; no spade terminals

Low voltage labeled above and below

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 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

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-inch pipe can be used up to 100K.



Accessories

Table 1. Accessories

Model Number	Description	Use with
BACS9V2CA22-MUAA	Conversion Kit to add P2 Link Communication	All Furnaces
MAYBFERCOLKITA	Heat Shield Kit for B-sidith 4GXCB or 4MCXB Coils	B width 4GXCB or 4MCXB Coils when installed with Upflow Furnace in all orientations.
MAYCFERCOLKITA	Heat Shield Kit for C-sidith 4GXCC or 4MCXC Coils	C width 4GXCC or 4MCXC Coils when installed with Upflow Furnace in all orientations.
MAYDFERCOLKITA	Heat Shield Kit for D-sidith 4GXCD or 4MCXD Coils	D width 4GXCD or 4MCXD Coils when installed with Upflow Furnace in all orientations.
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 (Canada - CPVC)	All Furnaces
BAYLIFTB(a)	Dual Return Kit (B size extension)	B Cabinet Upflow Furnaces
BAYLIFTC(a)	Dual Return Kit (C size extension)	C Cabinet Upflow Furnaces
BAYLIFTD(a)	Dual Return Kit (D size extension)	D Cabinet Upflow Furnaces
BAYBASE205	Downflow Subbase	All Downflow Furnaces
BAYFLTR203	Horizontal Filter Kit	B Cabinet Furnaces in Downflow/Horizontal
BAYFLTR204	Horizontal Filter Kit	C Cabinet Furnaces in Downflow/Horizontal
BAYFLTR205	Horizontal Filter Kit	D Cabinet Furnaces in Downflow Horizontal
BAYFLTR206	Filter Access Door Kit (Downflow only)	All Downflow Furnaces
BAYSF1165 ^(a) (b)	1" SlimFit Cabinet with MERV 4 Filter	All Upflow Furnaces
BAYSF1255 ^(b)	1" SlimFit Rack with MERV 4 Filter	All Furnaces ^(c)
FLRSF1255	1" Filter Replacement (Qty 12)	BAYSF1255 ^(b)
BAYLPSS400 ^(b)	Propane Conversion Kit with Stainless Steel Burners	All Furnaces
BAYBURNERSS	All Stainless Steel Natural Gas Burners - Set of Six	All Upflow Furnaces - Special Case
BAYMFGH200B	Manufactured/Mobile Housing Kit	All Furnaces
BAYHALT255	High Altitude Pressure Switch Kit	S9V2B060D3VSB & Later
BAYHALT256	High Altitude Pressure Switch Kit	S9V2B040U3VSBB & Later S9V2B040D3VSBB & Later
BAYHALT257	High Altitude Pressure Switch Kit	S9V2B080D4VSBB & Later
BAYHALT258	High Altitude Pressure Switch Kit	S9V2B080U4VSBB & Later S9V2C100U5VSBB & Later S9V2D120U5VSBB & Later S9V2D120D5VSBB & Later
BAYHALT259	High Altitude Pressure Switch Kit	S9V2B060U4VSBB & Later S9V2C080U5VSBB & Later S9V2C100D5VSBB & Later
BAYCNDTRAP2A	Inline Condensate Trap Kit used with Special Venting on 2" Vent Pipe	All Furnaces
BAYCNDTRAP3A	Inline Condensate Trap Kit used with Special Venting on 3" Vent Pipe	All Furnaces

^(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.

^(c) Designed to fit all S-Series furnaces with or without transition when used in side return. Fits B width cabinet without a transition in upflow/downflow application.



Product Specification

Table 2. Models S9V2B040U3VSBB, S9V2B060U4VSBB, S9V2B080U4VSBB, S9V2C080U5VSBB, S9V2C100U5VSBB, and S9V2D120U5VSBB

Model	S9V2B040 U3VSBB ^(a) , ^(b)	S9V2B060 U4VSBB ^(a) , ^(b)	S9V2B080 U4VSBB ^(a) , ^(b)	S9V2C080 U5VSBB ^(a) , ^(b)	S9V2C100 U5VSBB ^(a) , ^(b)	S9V2D120 U5VSBB ^(a) , ^(b)
Type	Upflow / Horizontal					
Ratings ^(c)						
1st Stage Input BTUH	26,000	39,000	52,000	52,000	65,000	78,000
1st Stage Capacity BTUH (ICS)	25,700	38,450	51,050	51,300	64,200	77,050
2nd Stage Input BTUH	40,000	60,000	80,000	80,000	100,000	120,000
2nd Stage Capacity BTUH (ICS) ^(d)	39,350	57,700	76,700	77,450	97,150	116,250
1st Stage Temp. Rise (Min. - Max.) °F	25 - 55	25 - 55	30 - 60	30 - 60	25 - 55	35 - 65
2nd Stage Temp. Rise (Min. - Max.) °F	30 - 60	35 - 65	35 - 65	30 - 60	35 - 65	40 - 70
AFUE (%)	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	9.6		10		
Combustion Fan - Type	Variable Speed					
Drive - No. Speeds	Direct - Variable					
HP and Max Motor RPM	1/50 - 5000					
Volts/Ph/Hz	33 - 110 / 3 / 60 - 180					
FLA	0.77					
Inducer Orifice	0.61	0.79	0.96	0.88	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.)	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					

Table 2. Models S9V2B040U3VSBB, S9V2B060U4VSBB, S9V2B080U4VSBB, S9V2C080U5VSBB, S9V2C100U5VSBB, and S9V2D120U5VSBB (continued)

Model	S9V2B040 U3VSBB ^(a) , ^(b)	S9V2B060 U4VSBB ^(a) , ^(b)	S9V2B080 U4VSBB ^(a) , ^(b)	S9V2C080 U5VSBB ^(a) , ^(b)	S9V2C100 U5VSBB ^(a) , ^(b)	S9V2D120 U5VSBB ^(a) , ^(b)
Ampacity (Amps)	8.9	12.9		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	130/122	135/127	149/139	154/144	167/156

^(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 this document.

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

Table 3. Models S9V2B040D3VSBB, S9V2B060D3VSBB, S9V2B080D4VSBB, S9V2C100D5VSBB, and S9V2D120D5VSBB

Model	S9V2B040 D3VSBB ^(a) , ^(b)	S9V2B060 D3VSBB ^(a) , ^(b)	S9V2B080 D4VSBB ^(a) , ^(b)	S9V2C100 D5VSBB ^(a) , ^(b)	S9V2D120 D5VSBB ^(a) , ^(b)
Type	Downflow				
Ratings ^(c)					
1st Stage Input BTUH	26,000	39,000	52,000	65,000	78,000
1st Stage Capacity BTUH (ICS)	25,050	38,500	51,150	64,000	75,660
2nd Stage Input BTUH	40,000	60,000	80,000	100,000	120,000
2nd Stage Capacity BTUH (ICS) ^(d)	38,800	58,200	76,900	97,350	116,400
1st Stage Temp. Rise (Min. - Max.) °F	25- 55		30 - 60		
2nd Stage Temp. Rise (Min. - Max.) °F	30 - 60	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	1/2		3/4	1	
R.P.M.	Variable				
Volts / Ph / Hz	120 / 1 / 60				
FLA	6.4		9.6	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)	3 Round				
Inlet Air Dia - Min. (in.) ^(e)	3 Round				



Product Specification

Table 3. Models S9V2B040D3VSBB, S9V2B060D3VSBB, S9V2B080D4VSBB, S9V2C100D5VSBB, and S9V2D120D5VSBB (continued)

Model	S9V2B040 D3VSBB ^{(a), (b)}	S9V2B060 D3VSBB ^{(a), (b)}	S9V2B080 D4VSBB ^{(a), (b)}	S9V2C100 D5VSBB ^{(a), (b)}	S9V2D120 D5VSBB ^{(a), (b)}
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				
Ampacity (Amps)	8.9		12.9	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	135/127	154/144	167/156

^(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 this document.

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



Airflow Tables

Table 4. Heating airflow performance - model S9V2B040U3VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
650	1st Stage	468	CFM / Watts	468 / 27	452 / 58	437 / 90	421 / 121	406 / 152
			Temp. Rise	49	51	54	56	58
	2nd Stage	650	CFM / Watts	633 / 48	636 / 92	639 / 135	643 / 179	646 / 223
			Temp. Rise	57	57	57	56	56
830	1st Stage	598	CFM / Watts	552 / 41	600 / 76	647 / 112	694 / 147	741 / 183
			Temp. Rise	43	39	36	32	28
	2nd Stage	830	CFM / Watts	760 / 82	786 / 132	813 / 182	840 / 232	866 / 282
			Temp. Rise	48	46	45	43	41
880 ^(a)	1st Stage	634	CFM / Watts	583 / 48	635 / 83	687 / 118	739 / 153	791 / 189
			Temp. Rise	39	36	33	30	27
	2nd Stage	880	CFM / Watts	792 / 94	817 / 142	842 / 189	867 / 237	892 / 284
			Temp. Rise	44	44	43	43	42
1200	1st Stage	864	CFM / Watts	753 / 86	785 / 129	818 / 171	850 / 213	882 / 256
			Temp. Rise	30	29	28	27	26
	2nd Stage	1200	CFM / Watts	1022 / 191	1044 / 250	1065 / 309	1087 / 368	1109 / 427
			Temp. Rise	34	33	33	32	32

^(a) Factory Setting

Table 5. Heating airflow performance - model S9V2B040D3VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
650	1st Stage	468	CFM / Watts	495 / 27	488 / 58	481 / 89	473 / 120	466 / 152
			Temp. Rise	47	48	49	49	50
	2nd Stage	650	CFM / Watts	661 / 42	659 / 83	658 / 124	657 / 166	655 / 207
			Temp. Rise	54	54	54	55	55
820 ^(a)	1st Stage	590	CFM / Watts	593 / 39	601 / 76	609 / 114	616 / 152	624 / 189
			Temp. Rise	40	39	39	38	37
	2nd Stage	820	CFM / Watts	813 / 71	817 / 118	820 / 165	824 / 212	828 / 260
			Temp. Rise	44	44	44	44	44
950	1st Stage	684	CFM / Watts	657 / 53	684 / 92	712 / 131	740 / 170	768 / 209
			Temp. Rise	36	35	33	32	30
	2nd Stage	950	CFM / Watts	911 / 103	917 / 152	923 / 202	929 / 252	935 / 301
			Temp. Rise	39	39	39	39	39
1250	1st Stage	900	CFM / Watts	832 / 94	867 / 139	902 / 184	936 / 229	971 / 275
			Temp. Rise	28	27	26	25	24
	2nd Stage	1250	CFM / Watts	1122 / 206	1130 / 260	1138 / 313	1146 / 367	1154 / 421
			Temp. Rise	32	32	32	32	31

^(a) Factory Setting



Airflow Tables

Table 6. Cooling airflow performance - models S9V2B040U3VS and S9V2B040D3VS

S9V2B040U3VS and S9V2B040D3VS Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)						
Outdoor Tonnage - (Tons)	Airflow Setting - (CFM/Ton)	External Static Pressure (In. W. C.)				
		0.1	0.3	0.5	0.7	0.9
1.5	450	675 / 47	675 / 81	675 / 121	675 / 166	675 / 215
	420	630 / 40	630 / 72	630 / 111	630 / 154	630 / 202
	400	600 / 36	600 / 67	600 / 105	600 / 147	600 / 193
	370	555 / 30	555 / 60	555 / 96	555 / 136	555 / 181
	350	525 / 27	525 / 56	525 / 90	525 / 130	525 / 174
	330	495 / 24	495 / 51	495 / 85	495 / 124	495 / 167
	310	465 / 21	465 / 48	465 / 80	465 / 118	465 / 161
2.0	290	435 / 19	435 / 44	435 / 76	435 / 113	435 / 155
	450	900 / 94	900 / 137	900 / 186	900 / 240	900 / 298
	420	840 / 79	840 / 120	840 / 166	840 / 218	840 / 273
	400	800 / 70	800 / 109	800 / 154	800 / 204	800 / 258
	370	740 / 58	740 / 95	740 / 138	740 / 185	740 / 236
	350	700 / 51	700 / 86	700 / 127	700 / 173	700 / 223
	330	660 / 44	660 / 78	660 / 118	660 / 162	660 / 211
2.5	310	620 / 38	620 / 71	620 / 109	620 / 152	620 / 199
	290	580 / 33	580 / 64	580 / 101	580 / 142	580 / 188
	450	1125 / 167	1125 / 219	1125 / 278	1125 / 341	1125 / 408
	420	1050 / 139	1050 / 188	1050 / 244	1050 / 304	1050 / 368
	400	1000 / 123	1000 / 170	1000 / 223	1000 / 281	1000 / 343
	370	925 / 100	925 / 145	925 / 195	925 / 250	925 / 308
	350	875 / 87	875 / 129	875 / 178	875 / 230	875 / 287
3.0 ^(a)	330	825 / 121	825 / 160	825 / 205	825 / 254	825 / 308
	310	775 / 101	775 / 139	775 / 182	775 / 229	775 / 281
	290	725 / 88	725 / 123	725 / 164	725 / 210	725 / 260
	450	1350 / 272	1350 / 334	1350 / 402	1298 / 440	1198 / 450
	420	1260 / 226	1260 / 284	1260 / 348	1260 / 417	1198 / 450
	400	1200 / 198	1200 / 254	1200 / 315	1200 / 381	1198 / 450
	370	1110 / 161	1110 / 213	1110 / 271	1110 / 333	1110 / 399
	350 ^(a)	1050 / 139	1050 / 188	1050 / 244	1050 / 304	1050 / 368
	330	990 / 119	990 / 166	990 / 219	990 / 277	990 / 338
	310	930 / 102	930 / 146	930 / 197	930 / 252	930 / 311
	290	870 / 86	870 / 128	870 / 176	870 / 229	870 / 285

^(a) Factory Setting

Table 7. Heating airflow performance - model S9V2B060D3VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
900	1st Stage	711	CFM / Watts	635 / 48	648 / 86	661 / 123	674 / 161	687 / 198
			Temp. Rise	54	53	52	50	49
	2nd Stage	900	CFM / Watts	836 / 79	840 / 125	844 / 172	847 / 219	851 / 266
			Temp. Rise	64	63	63	62	62
1030 ^(a)	1st Stage	814	CFM / Watts	731 / 65	740 / 105	748 / 145	756 / 185	764 / 225
			Temp. Rise	47	47	46	46	46
	2nd Stage	1030	CFM / Watts	951 / 112	955 / 162	958 / 213	962 / 263	966 / 314
			Temp. Rise	56	56	55	55	55
1130	1st Stage	893	CFM / Watts	817 / 81	820 / 122	822 / 164	825 / 205	828 / 247
			Temp. Rise	42	42	41	41	41
	2nd Stage	1130	CFM / Watts	1051 / 145	1052 / 197	1053 / 248	1054 / 300	1056 / 352
			Temp. Rise	50	50	50	50	50
1350	1st Stage	1067	CFM / Watts	968 / 126	962 / 170	956 / 214	949 / 258	943 / 302
			Temp. Rise	35	36	36	36	36
	2nd Stage	1350	CFM / Watts	1250 / 235	1238 / 291	1225 / 346	1212 / 402	1199 / 457
			Temp. Rise	42	43	43	44	44

^(a) Factory Setting

Table 8. Cooling airflow performance - model S9V2B060D3VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
1.5	450	663 / 47	673 / 83	666 / 119	641 / 155	596 / 192
	420	621 / 41	630 / 75	621 / 109	595 / 144	549 / 180
	400	582 / 36	580 / 67	566 / 99	528 / 130	507 / 170
	370	549 / 32	556 / 63	546 / 95	517 / 128	469 / 162
	350	521 / 29	527 / 59	516 / 90	486 / 122	437 / 156
	330	492 / 26	497 / 55	486 / 85	455 / 117	405 / 150
	310	463 / 23	468 / 51	455 / 81	423 / 112	372 / 145
2.0	290	435 / 21	438 / 48	424 / 77	391 / 107	339 / 141
	450	878 / 90	893 / 135	890 / 179	869 / 223	829 / 266
	420	821 / 76	834 / 119	830 / 161	808 / 202	767 / 244
	400	770 / 66	778 / 105	770 / 144	742 / 182	725 / 230
	370	725 / 57	737 / 96	731 / 134	707 / 172	664 / 211
	350	687 / 51	698 / 88	691 / 124	666 / 161	622 / 199
	330	649 / 45	659 / 80	651 / 115	625 / 151	580 / 188
2.5	310	611 / 39	620 / 73	611 / 107	584 / 142	538 / 177
	290	573 / 34	581 / 67	571 / 99	543 / 133	496 / 168
	450	1097 / 159	1114 / 212	1114 / 265	1097 / 317	1061 / 368
	420	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
	400	976 / 117	989 / 166	990 / 214	970 / 261	932 / 308
	370	902 / 97	917 / 142	915 / 187	894 / 232	855 / 276
	350	854 / 84	868 / 128	865 / 171	843 / 214	803 / 257
3.0 ^(a)	330	806 / 73	819 / 115	815 / 157	793 / 198	752 / 239
	310	759 / 63	771 / 103	766 / 143	742 / 182	700 / 222
	290	711 / 55	722 / 93	716 / 130	692 / 168	648 / 206
	450	1319 / 260	1340 / 321	1343 / 382	1328 / 441	1295 / 501
	420	1229 / 215	1249 / 274	1251 / 331	1235 / 387	1201 / 443
	400	1170 / 189	1189 / 245	1190 / 300	1173 / 354	1139 / 408
	370	1082 / 154	1100 / 206	1099 / 258	1081 / 309	1046 / 360
	350 ^(a)	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
	330	965 / 114	981 / 163	979 / 210	960 / 257	922 / 304
	310	907 / 98	922 / 144	919 / 189	899 / 234	860 / 278
	290	850 / 83	863 / 127	860 / 170	838 / 212	798 / 255

^(a) Factory Setting

Table 9. Heating airflow performance - model S9V2B060U4VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
990	1st Stage	782	CFM / Watts	741 / 74	741 / 112	742 / 151	742 / 189	742 / 228
			Temp. Rise	47	48	48	48	48
	2nd Stage	990	CFM / Watts	975 / 126	978 / 174	982 / 223	986 / 272	989 / 321
			Temp. Rise	55	55	55	55	55
1090	1st Stage	861	CFM / Watts	810 / 90	811 / 132	812 / 175	813 / 217	814 / 259
			Temp. Rise	44	43	43	43	43
	2nd Stage	1090	CFM / Watts	1063 / 157	1070 / 210	1078 / 263	1086 / 317	1093 / 370
			Temp. Rise	51	51	50	50	49
1160 ^(a)	1st Stage	916	CFM / Watts	860 / 105	860 / 148	859 / 192	859 / 236	859 / 280
			Temp. Rise	41	41	41	41	41
	2nd Stage	1160	CFM / Watts	1120 / 182	1133 / 240	1146 / 299	1159 / 357	1172 / 415
			Temp. Rise	48	48	47	47	46
1300	1st Stage	1027	CFM / Watts	963 / 141	957 / 183	951 / 226	945 / 268	939 / 310
			Temp. Rise	37	37	37	37	37
	2nd Stage	1300	CFM / Watts	1260 / 254	1266 / 312	1272 / 369	1279 / 427	1285 / 484
			Temp. Rise	43	43	43	42	42

^(a) Factory Setting



Airflow Tables

Table 10. Cooling airflow performance - model S9V2B060U4VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
2.0	450	878 / 90	893 / 135	890 / 179	869 / 223	829 / 266
	420	821 / 76	834 / 119	830 / 161	808 / 202	767 / 244
	400	770 / 66	778 / 105	770 / 144	742 / 182	725 / 230
	370	725 / 57	737 / 96	731 / 134	707 / 172	664 / 211
	350	687 / 51	698 / 88	691 / 124	666 / 161	622 / 199
	330	649 / 45	659 / 80	651 / 115	625 / 151	580 / 188
	310	611 / 39	620 / 73	611 / 107	584 / 142	538 / 177
2.5	290	573 / 34	581 / 67	571 / 99	543 / 133	496 / 168
	450	1097 / 159	1114 / 212	1114 / 265	1097 / 317	1061 / 368
	420	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
	400	976 / 117	989 / 166	990 / 214	970 / 261	932 / 308
	370	902 / 97	917 / 142	915 / 187	894 / 232	855 / 276
	350	854 / 84	868 / 128	865 / 171	843 / 214	803 / 257
	330	806 / 73	819 / 115	815 / 157	793 / 198	752 / 239
3.0	310	759 / 63	771 / 103	766 / 143	742 / 182	700 / 222
	290	711 / 55	722 / 93	716 / 130	692 / 168	648 / 206
	450	1319 / 260	1340 / 321	1343 / 382	1328 / 441	1295 / 501
	420	1229 / 215	1249 / 274	1251 / 331	1235 / 387	1201 / 443
	400	1170 / 189	1189 / 245	1190 / 300	1173 / 354	1139 / 408
	370	1082 / 154	1100 / 206	1099 / 258	1081 / 309	1046 / 360
	350	1023 / 133	1040 / 184	1039 / 233	1020 / 282	984 / 331
4.0 ^(a)	330	965 / 114	981 / 163	979 / 210	960 / 257	922 / 304
	310	907 / 98	922 / 144	919 / 189	899 / 234	860 / 278
	290	850 / 83	863 / 127	860 / 170	838 / 212	798 / 255
	450	1779 / 585	1806 / 661	1814 / 737	1805 / 812	1778 / 886
	420	1654 / 480	1679 / 552	1686 / 624	1676 / 695	1647 / 765
	400	1572 / 418	1596 / 488	1602 / 557	1590 / 625	1561 / 693
	370	1450 / 335	1472 / 401	1477 / 466	1464 / 530	1433 / 594
4.0 ^(a)	350 ^(a)	1369 / 287	1391 / 350	1394 / 413	1380 / 474	1348 / 535
	330	1289 / 244	1310 / 305	1312 / 364	1297 / 423	1264 / 481
	310	1210 / 206	1229 / 264	1231 / 320	1214 / 376	1180 / 431
	290	1131 / 172	1149 / 227	1150 / 281	1132 / 334	1097 / 386

^(a) Factory Setting

Table 11. Heating airflow performance - model S9V2B080U4VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1200	1st Stage	864	CFM / Watts	859 / 87	848 / 124	837 / 162	826 / 200	816 / 237
			Temp. Rise	53	54	55	57	58
	2nd Stage	1200	CFM / Watts	1211 / 196	1206 / 248	1201 / 300	1196 / 352	1191 / 404
			Temp. Rise	60	60	60	60	60
1260	1st Stage	907	CFM / Watts	906 / 97	892 / 135	879 / 173	865 / 212	851 / 250
			Temp. Rise	51	52	52	53	54
	2nd Stage	1260	CFM / Watts	1258 / 215	1260 / 270	1263 / 325	1265 / 381	1267 / 436
			Temp. Rise	57	57	57	57	56
1330 ^(a)	1st Stage	958	CFM / Watts	957 / 112	930 / 152	903 / 193	876 / 234	849 / 275
			Temp. Rise	48	49	50	51	52
	2nd Stage	1330	CFM / Watts	1306 / 260	1303 / 312	1299 / 364	1295 / 416	1291 / 468
			Temp. Rise	55	55	55	55	55
1460	1st Stage	1051	CFM / Watts	1041 / 140	1015 / 182	988 / 224	962 / 267	935 / 309
			Temp. Rise	45	45	46	47	47
	2nd Stage	1460	CFM / Watts	1430 / 334	1411 / 389	1392 / 445	1373 / 501	1354 / 556
			Temp. Rise	50	50	51	52	53

^(a) Factory Setting

Table 12. Heating airflow performance - model S9V2B080D4VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1200	1st Stage	864	CFM / Watts	780 / 94	776 / 134	772 / 175	768 / 216	763 / 257
			Temp. Rise	60	60	60	60	60
	2nd Stage	1200	CFM / Watts	1111 / 203	1103 / 260	1095 / 316	1088 / 373	1080 / 429
			Temp. Rise	66	65	65	65	65
1260	1st Stage	907	CFM / Watts	806 / 101	810 / 151	814 / 201	818 / 251	822 / 301
			Temp. Rise	57	57	57	57	57
	2nd Stage	1260	CFM / Watts	1192 / 232	1200 / 296	1208 / 360	1217 / 424	1225 / 488
			Temp. Rise	59	59	58	58	58
1330 ^(a)	1st Stage	958	CFM / Watts	861 / 117	861 / 168	861 / 219	861 / 270	861 / 321
			Temp. Rise	53	53	53	53	53
	2nd Stage	1330	CFM / Watts	1217 / 273	1216 / 334	1216 / 395	1215 / 457	1214 / 518
			Temp. Rise	58	58	58	58	58
1480	1st Stage	1066	CFM / Watts	977 / 127	962 / 178	948 / 230	934 / 281	920 / 332
			Temp. Rise	47	48	49	50	51
	2nd Stage	1480	CFM / Watts	1342 / 329	1327 / 388	1313 / 448	1298 / 507	1284 / 567
			Temp. Rise	53	54	54	55	56

^(a) Factory Setting

Table 13. Cooling airflow performance - models S9V2B080U4VS and S9V2B080D4VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
2.0	450	892 / 91	899 / 136	893 / 180	872 / 222	838 / 265
	420	834 / 77	841 / 120	834 / 161	813 / 202	777 / 243
	400	785 / 67	785 / 106	781 / 146	754 / 183	737 / 229
	370	738 / 58	744 / 97	736 / 134	714 / 172	677 / 210
	350	700 / 52	705 / 89	697 / 125	675 / 161	638 / 198
	330	662 / 46	666 / 81	658 / 116	635 / 151	598 / 187
	310	624 / 40	627 / 74	619 / 107	596 / 142	558 / 177
	290	585 / 35	588 / 67	580 / 100	557 / 133	518 / 168
2.5	450	1108 / 159	1120 / 213	1116 / 265	1098 / 315	1065 / 365
	420	1035 / 133	1046 / 184	1041 / 233	1022 / 281	989 / 328
	400	988 / 118	997 / 167	992 / 214	972 / 260	938 / 306
	370	916 / 97	924 / 143	918 / 188	897 / 231	863 / 275
	350	868 / 85	875 / 129	868 / 172	848 / 213	813 / 255
	330	820 / 74	826 / 116	819 / 157	798 / 197	762 / 237
	310	772 / 64	778 / 104	770 / 143	749 / 182	712 / 221
	290	724 / 56	729 / 94	721 / 131	699 / 168	663 / 205
3.0	450	1326 / 257	1341 / 320	1341 / 380	1325 / 439	1296 / 497
	420	1239 / 214	1252 / 273	1250 / 330	1234 / 385	1203 / 440
	400	1181 / 188	1193 / 245	1191 / 299	1173 / 353	1142 / 405
	370	1094 / 153	1105 / 207	1101 / 258	1083 / 308	1050 / 358
	350	1036 / 133	1046 / 184	1041 / 233	1022 / 281	989 / 329
	330	978 / 115	987 / 164	982 / 210	962 / 256	928 / 302
	310	920 / 99	929 / 145	923 / 189	902 / 233	868 / 277
	290	863 / 84	870 / 128	863 / 170	843 / 212	807 / 253
4.0 ^(a)	450	1769 / 570	1791 / 648	1797 / 725	1789 / 799	1766 / 873
	420	1650 / 469	1670 / 544	1675 / 616	1664 / 686	1639 / 756
	400	1571 / 410	1590 / 481	1593 / 550	1582 / 618	1555 / 685
	370	1453 / 330	1470 / 397	1472 / 462	1458 / 526	1430 / 588
	350 ^(a)	1375 / 284	1391 / 348	1391 / 410	1376 / 471	1347 / 530
	330	1297 / 242	1312 / 303	1311 / 363	1295 / 420	1265 / 477
	310	1219 / 205	1233 / 263	1230 / 319	1214 / 374	1183 / 428
	290	1142 / 172	1154 / 227	1151 / 280	1133 / 332	1101 / 384

^(a) Factory Setting



Airflow Tables

Table 14. Heating airflow performance - model S9V2C080U5VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1190	1st Stage	857	CFM / Watts	800 / 78	803 / 118	806 / 157	810 / 197	813 / 237
			Temp. Rise	58	59	59	59	59
	2nd Stage	1190	CFM / Watts	1102 / 153	1116 / 213	1130 / 272	1144 / 332	1158 / 392
			Temp. Rise	65	65	64	63	62
1450 ^(a)	1st Stage	1044	CFM / Watts	939 / 114	944 / 160	950 / 207	955 / 254	961 / 301
			Temp. Rise	50	50	50	50	50
	2nd Stage	1450	CFM / Watts	443 / 258	905 / 333	1368 / 407	1830 / 482	2293 / 557
			Temp. Rise	54	54	53	52	51
1590	1st Stage	1145	CFM / Watts	1018 / 139	1020 / 190	1021 / 240	1022 / 291	1023 / 341
			Temp. Rise	46	46	46	46	47
	2nd Stage	1590	CFM / Watts	1461 / 334	1478 / 416	1495 / 498	1513 / 580	1530 / 662
			Temp. Rise	49	49	48	48	47
1700	1st Stage	1224	CFM / Watts	1083 / 164	1086 / 217	1089 / 271	1093 / 324	1096 / 378
			Temp. Rise	43	43	43	43	43
	2nd Stage	1700	CFM / Watts	1558 / 404	1571 / 496	1584 / 587	1597 / 678	1610 / 770
			Temp. Rise	46	46	45	45	45

^(a) Factory Setting

Table 15. Cooling airflow performance - model S9V2C080U5VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
3.0	450	1335 / 182	1347 / 241	1356 / 303	1362 / 366	1366 / 431
	420	1246 / 152	1259 / 208	1267 / 266	1273 / 326	1277 / 387
	400	1188 / 134	1200 / 188	1208 / 243	1214 / 301	1217 / 360
	370	1100 / 110	1111 / 160	1118 / 212	1123 / 266	1125 / 322
	350	1041 / 96	1052 / 143	1058 / 193	1061 / 245	1063 / 299
	330	983 / 83	993 / 128	997 / 176	999 / 225	1000 / 277
	310	925 / 72	933 / 114	936 / 159	937 / 207	936 / 257
	290	867 / 61	873 / 101	874 / 144	873 / 190	871 / 239
3.5	450	1557 / 273	1568 / 342	1576 / 413	1581 / 486	1585 / 559
	420	1453 / 228	1465 / 292	1473 / 359	1480 / 427	1483 / 496
	400	1384 / 200	1396 / 262	1405 / 325	1411 / 391	1415 / 457
	370	1281 / 163	1293 / 221	1302 / 280	1308 / 341	1312 / 404
	350	1212 / 142	1224 / 196	1233 / 253	1239 / 311	1242 / 371
	330	1144 / 122	1155 / 173	1163 / 227	1168 / 283	1171 / 341
	310	1076 / 104	1086 / 153	1093 / 204	1097 / 257	1099 / 312
	290	1007 / 88	1017 / 134	1023 / 183	1025 / 233	1026 / 286
4.0	450	1782 / 392	1789 / 471	1794 / 551	1797 / 632	1798 / 715
	420	1662 / 325	1671 / 399	1678 / 474	1682 / 550	1685 / 628
	400	1582 / 285	1592 / 355	1600 / 427	1606 / 500	1609 / 575
	370	1463 / 232	1474 / 297	1483 / 364	1489 / 432	1493 / 502
	350	1384 / 200	1396 / 262	1405 / 325	1411 / 391	1415 / 457
	330	1305 / 172	1317 / 230	1327 / 290	1333 / 352	1337 / 416
	310	1227 / 146	1239 / 201	1248 / 258	1254 / 317	1257 / 378
	290	1149 / 123	1160 / 175	1168 / 229	1173 / 285	1176 / 343
5.0 ^(a)	450	2235 / 726	2233 / 824	2230 / 923	2224 / 1023	2216 / 1125
	420	2084 / 599	2085 / 690	2084 / 783	2082 / 877	2078 / 973
	400	1983 / 524	1986 / 611	1988 / 699	1988 / 789	1985 / 880
	370	1832 / 423	1838 / 503	1843 / 586	1845 / 669	1845 / 754
	350 ^(a)	1732 / 363	1740 / 440	1746 / 518	1749 / 597	1751 / 678
	330	1632 / 310	1641 / 382	1649 / 456	1654 / 531	1656 / 608
	310	1533 / 262	1543 / 330	1551 / 400	1557 / 471	1561 / 544
	290	1434 / 219	1445 / 283	1454 / 349	1460 / 416	1464 / 485

^(a) Factory Setting

Table 16. Heating airflow performance - model S9V2C100U5VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1450	1st Stage	1146	CFM / Watts	1183 / 141	1172 / 197	1161 / 253	1150 / 310	1138 / 366
			Temp. Rise	50	50	51	51	52
	2nd Stage	1450	CFM / Watts	1513 / 260	1507 / 329	1502 / 398	1497 / 468	1491 / 537
			Temp. Rise	60	60	60	60	61
1620	1st Stage	1280	CFM / Watts	1300 / 185	1297 / 245	1294 / 306	1290 / 366	1287 / 426
			Temp. Rise	45	45	45	46	46
	2nd Stage	1620	CFM / Watts	1656 / 339	1651 / 416	1646 / 494	1642 / 571	1637 / 648
			Temp. Rise	55	55	55	55	55
1720	1st Stage	1359	CFM / Watts	1425 / 214	1404 / 276	1384 / 338	1364 / 400	1343 / 462
			Temp. Rise	41	42	42	43	43
	2nd Stage	1720	CFM / Watts	1781 / 398	1771 / 477	1762 / 556	1752 / 635	1743 / 715
			Temp. Rise	51	51	51	52	52
1830 ^(a)	1st Stage	1446	CFM / Watts	1454 / 257	1452 / 321	1450 / 386	1449 / 451	1447 / 515
			Temp. Rise	40	40	40	41	41
	2nd Stage	1830	CFM / Watts	1842 / 481	1832 / 562	1822 / 644	1812 / 726	1803 / 807
			Temp. Rise	49	49	49	50	50

^(a) Factory Setting

Table 17. Heating airflow performance - model S9V2C100D5VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1520	1st Stage	1094	CFM / Watts	1093 / 126	1092 / 183	1090 / 240	1089 / 296	1088 / 353
			Temp. Rise	53	53	53	52	52
	2nd Stage	1520	CFM / Watts	1484 / 296	1477 / 370	1469 / 444	1461 / 518	1453 / 592
			Temp. Rise	60	60	61	61	61
1800	1st Stage	1296	CFM / Watts	1234 / 186	1238 / 243	1242 / 299	1247 / 356	1251 / 413
			Temp. Rise	47	47	47	47	47
	2nd Stage	1800	CFM / Watts	1693 / 449	1688 / 533	1684 / 618	1679 / 702	1674 / 786
			Temp. Rise	53	53	53	53	53
1870 ^(a)	1st Stage	1346	CFM / Watts	1279 / 214	1268 / 268	1256 / 321	1245 / 375	1234 / 428
			Temp. Rise	45	45	46	46	47
	2nd Stage	1870	CFM / Watts	1768 / 505	1772 / 591	1775 / 678	1778 / 765	1781 / 852
			Temp. Rise	51	50	50	50	50
2100	1st Stage	1512	CFM / Watts	1453 / 277	1429 / 344	1405 / 411	1381 / 478	1358 / 545
			Temp. Rise	40	40	41	41	42
	2nd Stage	2100	CFM / Watts	1969 / 723	1956 / 789	1944 / 854	1931 / 920	1918 / 986
			Temp. Rise	45	45	46	46	46

^(a) Factory Setting

Table 18. Cooling airflow performance - models S9V2C100U5VS and S9V2C100D5VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
3.0	450	1378 / 178	1376 / 234	1374 / 292	1372 / 352	1368 / 413
	420	1289 / 149	1286 / 201	1284 / 256	1282 / 312	1277 / 371
	400	1228 / 131	1225 / 181	1223 / 234	1221 / 288	1217 / 345
	370	1138 / 108	1134 / 154	1132 / 203	1130 / 255	1125 / 309
	350	1077 / 94	1073 / 138	1071 / 185	1068 / 235	1064 / 287
	330	1016 / 81	1011 / 123	1009 / 168	1006 / 216	1002 / 266
	310	955 / 70	950 / 110	947 / 153	944 / 199	940 / 248
	290	894 / 59	888 / 97	885 / 138	882 / 183	877 / 231
3.5	450	1601 / 269	1599 / 334	1597 / 401	1594 / 469	1590 / 539
	420	1498 / 224	1496 / 284	1494 / 347	1491 / 411	1487 / 477
	400	1428 / 196	1426 / 254	1424 / 314	1422 / 376	1417 / 439
	370	1324 / 160	1321 / 214	1319 / 270	1317 / 327	1313 / 387
	350	1253 / 138	1251 / 190	1249 / 243	1246 / 298	1242 / 355
	330	1183 / 119	1180 / 167	1178 / 218	1175 / 271	1171 / 326
	310	1112 / 102	1109 / 147	1107 / 196	1104 / 246	1100 / 299
	290	1041 / 86	1037 / 129	1035 / 175	1032 / 223	1028 / 275



Airflow Tables

Table 18. Cooling airflow performance - models S9V2C100U5VS and S9V2C100D5VS (continued)

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
4.0	450	1820 / 388	1819 / 462	1816 / 538	1812 / 615	1807 / 693
	420	1704 / 321	1702 / 390	1700 / 461	1697 / 533	1692 / 607
	400	1626 / 281	1624 / 347	1622 / 415	1619 / 484	1614 / 554
	370	1507 / 228	1505 / 289	1504 / 352	1501 / 417	1497 / 482
	350	1428 / 196	1426 / 254	1424 / 314	1422 / 376	1417 / 439
	330	1348 / 168	1346 / 223	1344 / 280	1342 / 338	1338 / 399
	310	1268 / 143	1266 / 195	1264 / 248	1261 / 304	1257 / 362
5.0 ^(a)	290	1188 / 120	1185 / 169	1183 / 220	1180 / 273	1176 / 328
	450	2249 / 722	2246 / 815	2241 / 909	2236 / 1004	2228 / 1101
	420	2108 / 595	2105 / 681	2101 / 770	2096 / 859	2090 / 949
	400	2013 / 519	2010 / 602	2007 / 685	2003 / 771	1997 / 857
	370	1869 / 418	1867 / 494	1864 / 572	1860 / 651	1855 / 731
	350 ^(a)	1772 / 359	1770 / 431	1768 / 505	1764 / 580	1759 / 656
	330	1675 / 305	1673 / 374	1671 / 443	1667 / 514	1663 / 587
	310	1576 / 258	1575 / 322	1573 / 388	1570 / 455	1565 / 523
	290	1478 / 216	1476 / 276	1474 / 337	1471 / 401	1467 / 466

^(a) Factory Setting

Table 19. Heating airflow performance - model S9V2D120U5VS

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

^(a) Factory Setting

Table 20. Heating airflow performance - model S9V2D120D5VS

Furnace Heating Airflow (CFM), Power (Watts), and Temp. Rise (°F) vs. External Static Pressure with Filter (iwc)								
Airflow Setting	Heating Stage	Target Airflow		External Static Pressure (In. W. C.)				
				0.1	0.3	0.5	0.7	0.9
1750	1st Stage	1260	CFM / Watts	1194 / 139	1195 / 191	1196 / 243	1197 / 295	1198 / 347
			Temp. Rise	59	59	59	59	59
	2nd Stage	1750	CFM / Watts	1716 / 318	1715 / 396	1714 / 473	1714 / 551	1713 / 628
			Temp. Rise	63	63	63	63	63
1850	1st Stage	1332	CFM / Watts	1271 / 160	1280 / 214	1289 / 268	1298 / 322	1307 / 376
			Temp. Rise	56	55	55	54	54
	2nd Stage	1850	CFM / Watts	1814 / 374	1818 / 453	1823 / 533	1827 / 612	1831 / 691
			Temp. Rise	59	59	59	59	59
1950	1st Stage	1404	CFM / Watts	1329 / 183	1331 / 238	1332 / 293	1334 / 348	1335 / 404
			Temp. Rise	53	53	53	53	54
	2nd Stage	1950	CFM / Watts	1917 / 434	1904 / 514	1891 / 595	1877 / 676	1864 / 756
			Temp. Rise	56	57	57	57	58
2250 ^(a)	1st Stage	1620	CFM / Watts	1515 / 258	1560 / 330	1605 / 403	1649 / 476	1694 / 549
			Temp. Rise	46	45	45	44	43
	2nd Stage	2250	CFM / Watts	2130 / 628	2140 / 725	2151 / 822	2162 / 919	2172 / 1016
			Temp. Rise	51	50	50	50	49

^(a) Factory Setting

Table 21. Cooling airflow performance - models S9V2D120U5VS and S9V2D120D5VS

Outdoor Tonnage (Tons)	Airflow Setting (CFM/Ton)	External Static Pressure (In. W. C.) vs. CFM/WATTS				
		0.1	0.3	0.5	0.7	0.9
3.0	450	1336 / 163	1346 / 221	1354 / 281	1360 / 341	1363 / 402
	420	1248 / 137	1258 / 191	1265 / 247	1271 / 304	1274 / 361
	400	1189 / 121	1199 / 173	1206 / 227	1211 / 281	1214 / 336
	370	1102 / 100	1110 / 148	1116 / 198	1121 / 249	1123 / 301
	350	1043 / 87	1051 / 133	1057 / 181	1060 / 230	1062 / 279
	330	985 / 76	991 / 119	996 / 165	999 / 211	1000 / 259
	310	927 / 65	932 / 107	936 / 150	937 / 195	938 / 241
	290	869 / 56	872 / 95	874 / 136	875 / 179	875 / 223
3.5	450	1559 / 244	1567 / 312	1574 / 381	1579 / 450	1583 / 519
	420	1455 / 204	1464 / 267	1472 / 331	1477 / 396	1481 / 462
	400	1386 / 179	1395 / 240	1403 / 301	1409 / 363	1413 / 426
	370	1282 / 147	1292 / 203	1300 / 260	1305 / 318	1309 / 376
	350	1214 / 127	1223 / 181	1231 / 235	1236 / 290	1239 / 346
	330	1145 / 110	1154 / 160	1161 / 212	1166 / 265	1169 / 318
	310	1077 / 94	1085 / 142	1092 / 191	1096 / 241	1098 / 292
	290	1009 / 80	1016 / 125	1021 / 171	1025 / 219	1026 / 267
4.0	450	1783 / 350	1789 / 427	1793 / 505	1796 / 584	1798 / 663
	420	1663 / 290	1671 / 362	1677 / 436	1681 / 509	1683 / 583
	400	1584 / 255	1592 / 324	1599 / 393	1603 / 464	1607 / 534
	370	1465 / 207	1474 / 271	1481 / 336	1487 / 401	1491 / 467
	350	1386 / 179	1395 / 240	1403 / 301	1409 / 363	1413 / 426
	330	1307 / 154	1317 / 211	1324 / 269	1330 / 328	1334 / 388
	310	1228 / 131	1238 / 185	1246 / 240	1251 / 296	1254 / 352
	290	1150 / 111	1159 / 162	1166 / 214	1171 / 266	1174 / 320
5.0 ^(a)	450	2238 / 646	2235 / 742	2230 / 840	2226 / 938	2220 / 1036
	420	2086 / 533	2086 / 623	2085 / 714	2083 / 806	2080 / 897
	400	1985 / 466	1987 / 552	1988 / 639	1988 / 726	1986 / 813
	370	1834 / 377	1838 / 456	1842 / 536	1844 / 617	1845 / 698
	350 ^(a)	1733 / 324	1740 / 399	1745 / 475	1748 / 552	1750 / 628
	330	1633 / 277	1641 / 347	1647 / 419	1652 / 492	1655 / 564
	310	1534 / 234	1543 / 301	1550 / 369	1555 / 437	1558 / 505
	290	1435 / 196	1444 / 259	1452 / 322	1458 / 387	1461 / 451

^(a) Factory Setting



Maximum Vent Length Table

Table 22. Maximum vent length

Model	2-inch or 2.5-inch Pipe	3-inch or 4-inch Pipe
Altitude 0-2,000 FT.		
S9V2B040, S9V2B060	200	200
S9V2B080, S9V2C080	100	200
S9V2C100	50	200
S9V2D120	(a)	200
Altitude 2,001- 5400 FT		
S9V2B040, S9V2B060	200	200
S9V2B080, S9V2C080	80	120
S9V2C100	50	150
S9V2D120	(a)	200
Altitude 5,401-7,800 FT		
S9V2B040, S9V2B060	100	150
S9V2B080, S9V2C080	50	70
S9V2C100	(a)	100
S9V2D120	(a)	100
Altitude 7,801-10,100 FT		
S9V2B040, S9V2B060	50	90
S9V2B080, S9V2C080	(a)	50
S9V2C100	(a)	50
S9V2D120	(a)	50

Notes:

1. Installation Instructions must be followed for installation of the venting system.
2. Maximum Total Equivalent Length In Feet for Vent or Inlet Air, not combined total.
3. 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 5. Refer to the venting system manufacturer's installation instruction for appropriate venting diameters and equivalent lengths.
4. Minimum vent length for all models: 15ft equivalent.
5. 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 6 below for exception). The inlet pipe can be of a larger diameter, but never smaller than the vent pipe.
6. 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).
7. One short radius 90° elbow is equivalent to 10ft of 4-inch pipe, 10ft of 3-inch pipe, or 8ft of 2-inch pipe. One long radius elbow is equivalent to 6ft of 4-inch pipe, 7ft of 3-inch pipe, or 5ft of 2-inch pipe. Two 45° elbows equal one 90° long elbow. One mitered elbow is equivalent to 12ft of 3-inch pipe or 12ft of 2-inch pipe.
8. 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.
9. For Canadian applications, venting systems must meet ULC-S636 requirements.
10. 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).

(a) Not allowed.

Wiring Diagrams

Figure 1. S9V2-VS wiring diagram

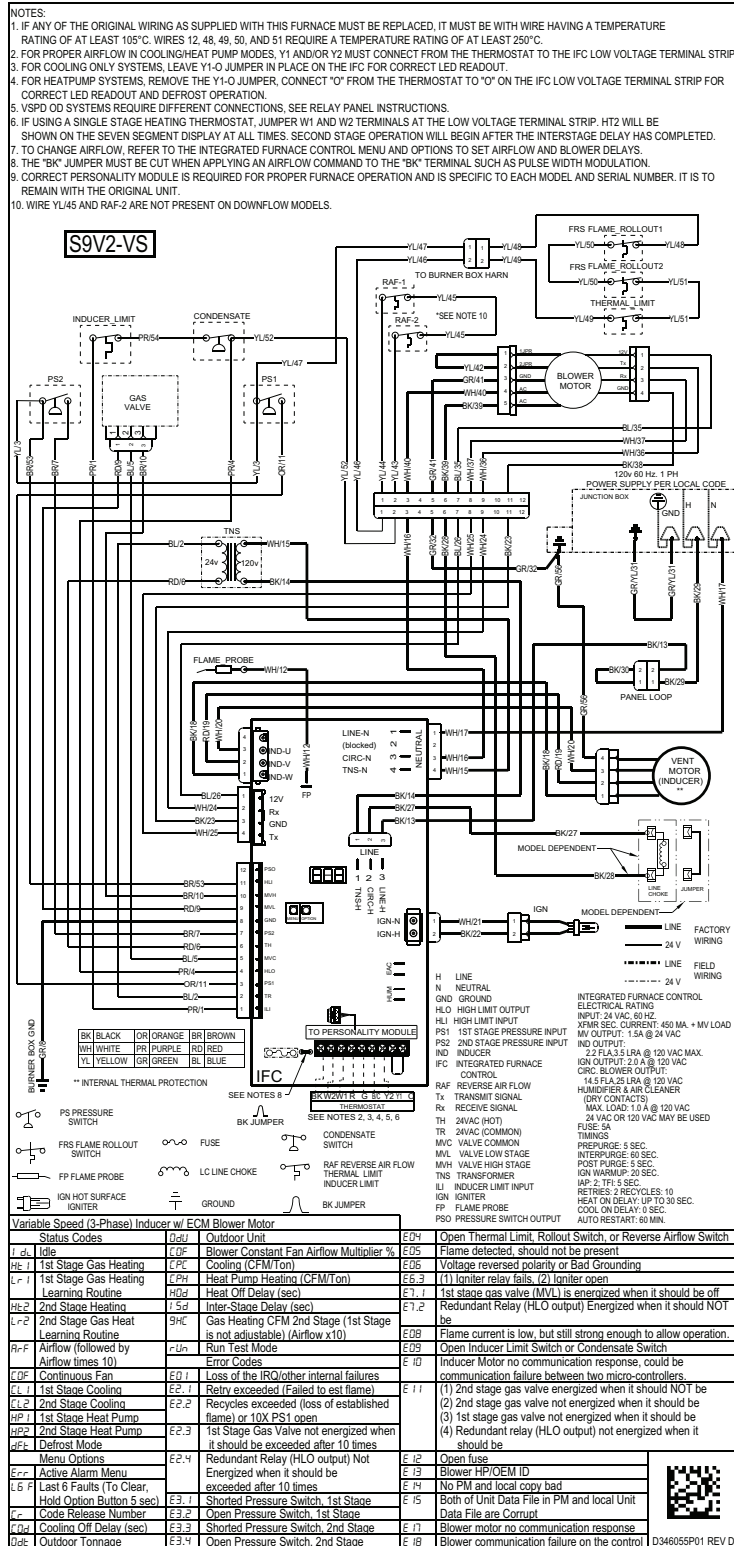
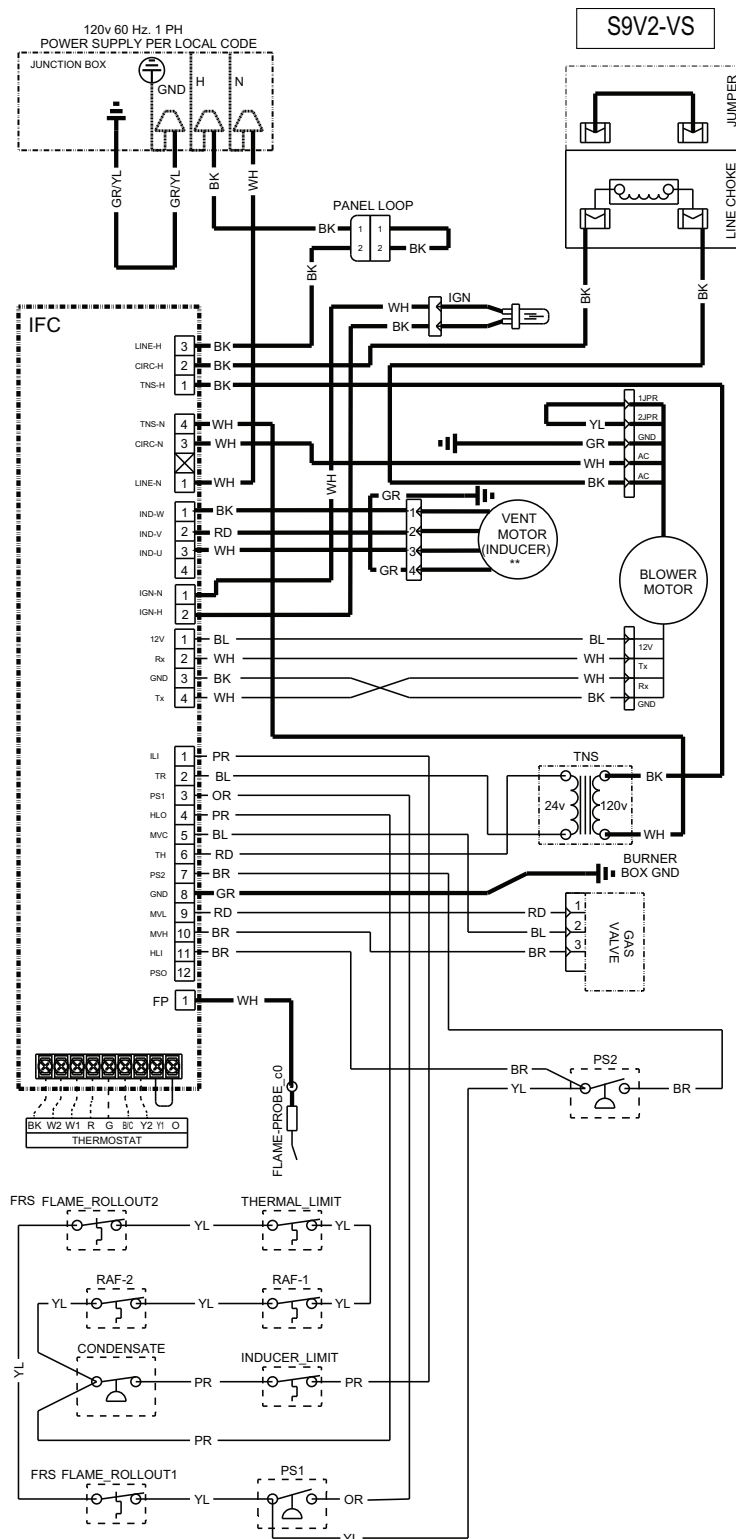


Figure 2. S9V2-VS - ladder diagram





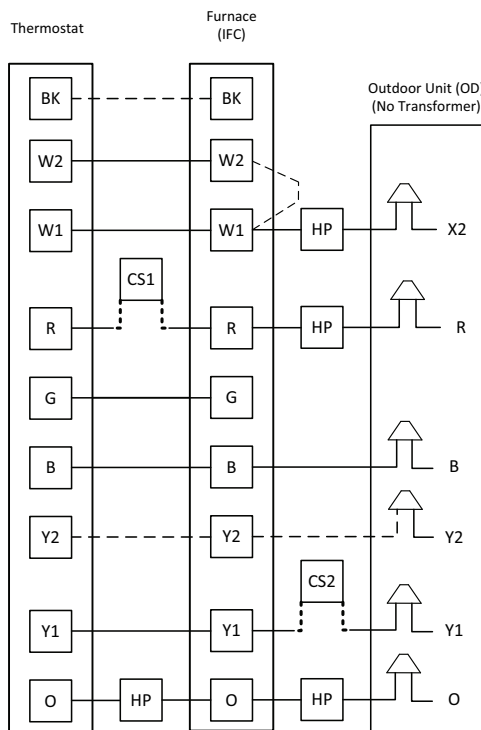
Electrical Connections

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 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.

See the “Wiring Diagrams,” p. 21 and unit wiring diagram attached to furnace.

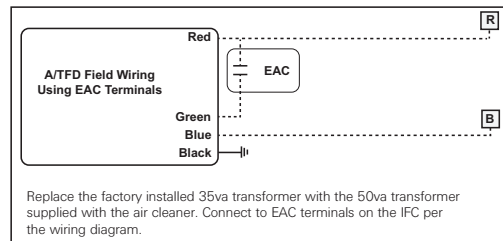
Field Wiring

Figure 3. Field wiring diagram for S9V2-VS with one or two stage AC or heat pump



NOTES:

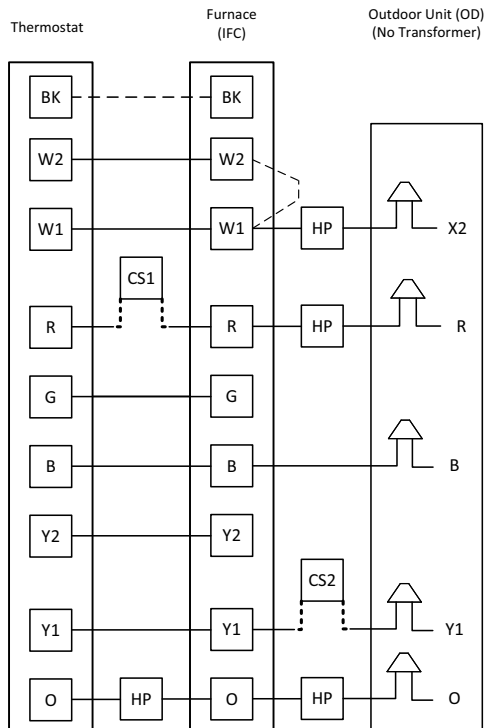
- 1) HP = Wiring used for Heat Pump System.
- 2) CS = wiring used for Condensate Switch (2 Options).
- 3) Y1 and/or Y2 must be connected from the thermostat to the IFC for proper airflow.
- 4) Remove Y1-O jumper for HP systems. O terminal must be connected as shown for gas heating operation during defrost.
- 5) If the thermostat does not have a W2, or there are not enough conductors, jumper W1 to W2 at the IFC.
- 6) A/TCONT824 thermostats do not require the use of X2.
- 7) For PWM (BK) enabled thermostats, cut the BK jumper on the IFC and connect wiring.





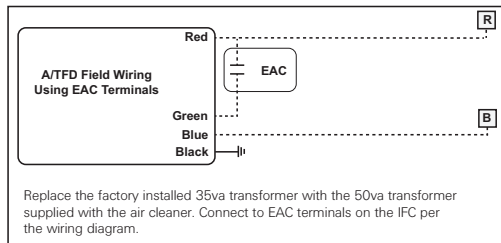
Electrical Connections

Figure 4. Field wiring diagram for S9V2-VS with single stage AC or heat pump with 2 stage airflow



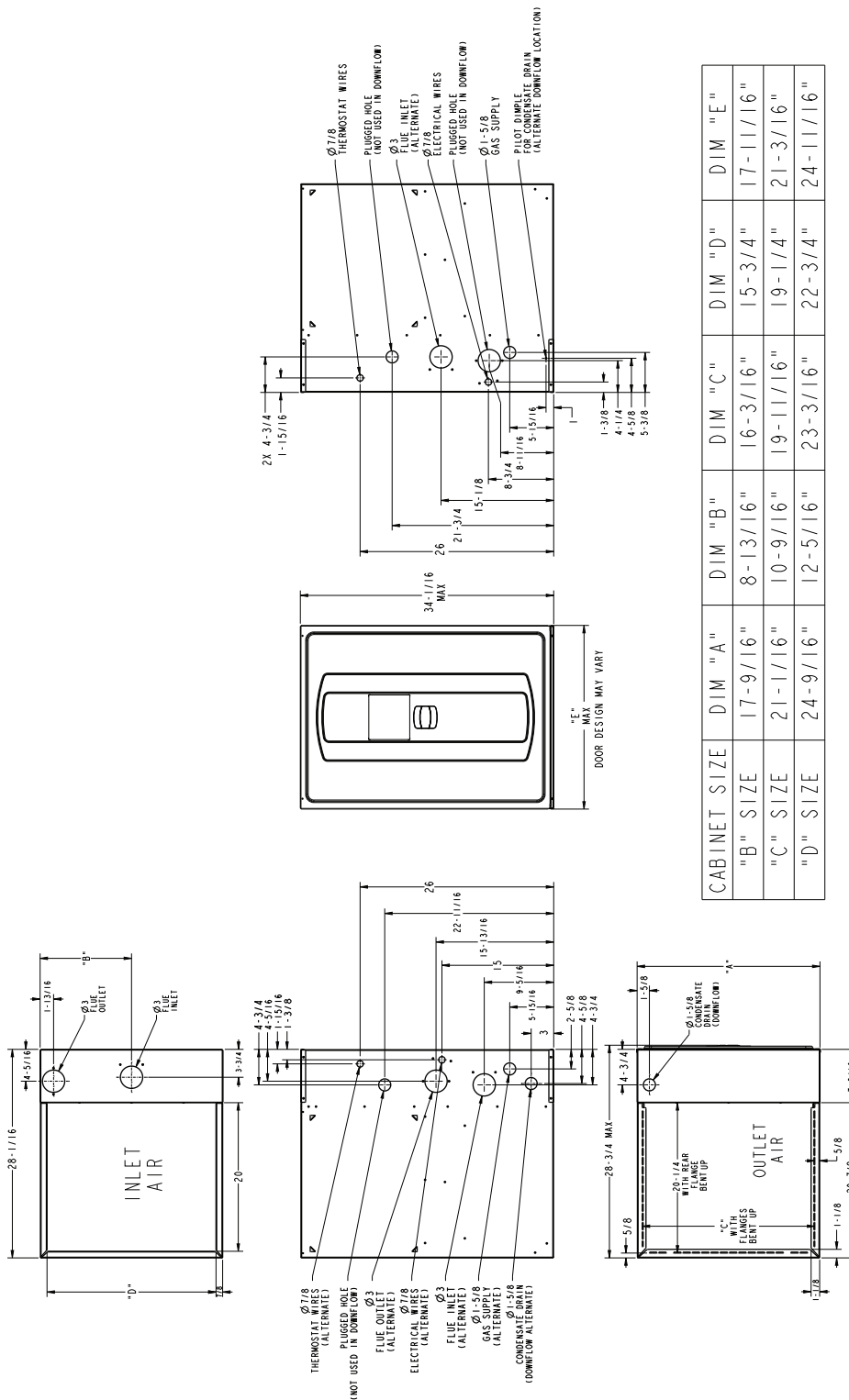
NOTES:

- 1) HP = Wiring used for Heat Pump System.
- 2) CS = wiring used for Condensate Switch (2 Options).
- 3) Y1 and Y2 must be connected from the thermostat to the IFC for proper airflow.
- 4) Thermostat must be setup for 2 stage OD.
- 5) IFC Must be setup for 2 stage OD using the Menu/Option Buttons.
- 6) Remove Y1-O jumper for HP systems. O terminal must be connected as shown for gas heating operation during defrost.
- 7) If the thermostat does not have a W2, or there are not enough conductors, jumper W1 to W2 at the IFC.
- 8) A/TCONT824 thermostats do not require the use of X2.
- 9) For PWM (BK) enabled thermostats, cut the BK jumper on the IFC and connect wiring.



Dimensional Data

Figure 5. Downflow cabinets — 17.5-inch, 21-inch, and 24.5-inch



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"

[illegible]

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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