



Product Data

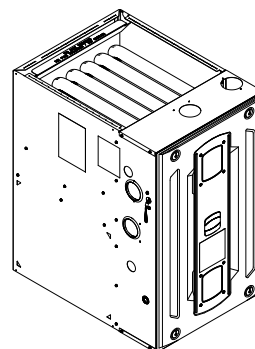
Upflow/Horizontal Left/Right, Dedicated Downflow Two Stage Condensing Gas Fired Furnace

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.*

⚠ WARNING

FIRE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

This Warning applies to installations with a flammable refrigeration system. The furnace must be powered except for service. The furnace shall be installed and connected according to installation instructions and wiring diagrams that are provided with the evaporator coil.

⚠ CAUTION

COIL REQUIREMENT!

Failure to follow this Caution could result in property damage or personal injury. *GXC* and *MXC* coils installed on upflow furnaces in vertical, horizontal left, or horizontal right orientations without a factory installed metal drain pan shield must use a MAY*FERCOLKITAA kit. Coils installed on upflow furnaces must have drain pans that are suitable for 400° F (205°C) or have a metal drain pan shield. Downflow furnaces do not require a metal drain pan shield or the use of the MAY*FERCOLKITAA kit. See Installer's Guide for more information.



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.

- 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

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" 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 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" 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
BAYFLTR203	Horizontal Filter Kit	B Cabinet Modular Blowers in Downflow/ Horizontal
BAYFLTR204	Horizontal Filter Kit	C Cabinet Modular Blowers in Downflow/ Horizontal
BAYFLTR205	Horizontal Filter Kit	D Cabinet Modular Blowers in Downflow/ Horizontal
BAYFLTR206	Filter Access Door Kit (Downflow only)	All Downflow Furnaces
BAYSF1165 ^(a)	1" SlimFit Box with MERV 4 Filter	All Upflow Furnaces
BAYSF1255*	2" SlimFit Filter Box with MERV 4 Filter	All furnaces when used in side return application. B-Cabinet Furnaces only when in bottom return application.
BAYLPSS400*	Propane Conversion Kit with Stainless Steel Burners	All Furnaces
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 S9V2C120U5VSBB & Later S9V2C120D5VSBB & Later
BAYHALT259	High Altitude Pressure Switch Kit	S9V2B060U4VSBB & Later S9V2C080U5VSBB & Later S9V2C100D5VSBB & Later
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
FLRSF1255	1" Filter replacement (Qty 12)	BAYSF1255*

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



Product Specification

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 (%) (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	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.) (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

Product Specification

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)
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	130/122	135/127	149/139	154/144	167/156

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				
HEAT EXCHANGER – Type					
Fired	409 Stainless Steel				



Product Specification

Model	S9V2B040 D3VSBB (a), (b)	S9V2B060 D3VSBB(a), (b)	S9V2B080 D4VSBB(a), (b)	S9V2C100 D5VSBB(a), (b)	S9V2D120 D5VSBB(a), (b)
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	
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.)	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 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. S9V2B040U3VS Heating Airflow

S9V2B040U3VS 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. S9V2B040D3VS Heating Airflow

S9V2B040D3VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 25,050 2nd Stage Capacity = 38,800				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	468	CFM	495	488	481	473	466
			Temp. Rise	47	48	49	49	50
			Watts	27	58	89	120	152
	Medium Low(a)	590	CFM	593	601	609	616	624
			Temp. Rise	40	39	39	38	37
			Watts	39	76	114	152	189
	Medium	684	CFM	657	684	712	740	768
			Temp. Rise	36	35	33	32	30
			Watts	53	92	131	170	209
	High	900	CFM	832	867	902	936	971
			Temp. Rise	28	27	26	25	24
			Watts	94	139	184	229	275
Heating 2nd Stage	Low	650	CFM	661	659	658	657	655
			Temp. Rise	54	54	54	55	55
			Watts	42	83	124	166	207
	Medium Low(a)	820	CFM	813	817	820	824	828
			Temp. Rise	44	44	44	44	44
			Watts	71	118	165	212	260
	Medium	950	CFM	911	917	923	929	935
			Temp. Rise	39	39	39	39	39
			Watts	103	152	202	252	301
	High	1250	CFM	1122	1130	1138	1146	1154
			Temp. Rise	32	32	32	32	31
			Watts	206	260	313	367	421



Heating and Cooling Airflow Tables

Table 4. S9V2B040U3VS and S9V2B040D3VS Cooling Airflow

S9V2B040U3VS and S9V2B040D3VS 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
2.0	290	CFM / WATTS	435 / 19	435 / 44	435 / 76	435 / 113	435 / 155
	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
2.5	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
	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
3.0 (a)	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
	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 5. S9V2B060D3VS Heating Airflow

S9V2B060D3VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 38,500 2nd Stage Capacity = 58,200				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	711	CFM	636	649	662	675	688
			Temp. Rise	55	53	52	51	50
			Watts	49	86	124	161	199
	Medium Low ^(a)	814	CFM	732	740	748	756	764
			Temp. Rise	47	47	47	46	46
			Watts	65	105	146	186	226
	Medium	893	CFM	817	820	823	826	828
			Temp. Rise	42	42	42	42	42
			Watts	82	123	164	206	247
	High	1067	CFM	969	962	956	950	944
			Temp. Rise	36	36	36	37	37
			Watts	126	170	214	258	302
Heating 2nd Stage	Low	900	CFM	836	840	844	848	852
			Temp. Rise	64	64	63	63	62
			Watts	79	126	173	219	266
	Medium Low ^(a)	1030	CFM	951	955	959	963	967
			Temp. Rise	56	56	56	55	55
			Watts	112	163	213	264	314
	Medium	1130	CFM	1051	1052	1054	1055	1056
			Temp. Rise	51	51	51	51	51
			Watts	145	197	249	301	352
	High	1350	CFM	1251	1238	1225	1212	1199
			Temp. Rise	43	43	44	44	45
			Watts	236	291	347	402	458

Heating and Cooling Airflow Tables

Table 6. S9V2B060D3VS Cooling Airflow

S9V2B060D3VS 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
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 7. S9V2B060U4VS Heating Airflow

S9V2B060U4VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)							
			1st Stage Capacity = 38,300 2nd Stage Capacity = 57,900				
Heating	Airflow Setting	Target Airflow	External Static Pressure				
			0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	782	CFM	741	741	742	742
			Temp. Rise	47	48	48	48
			Watts	74	112	151	228
	Medium Low	861	CFM	810	811	812	813
			Temp. Rise	44	43	43	43
			Watts	90	132	175	259
	Medium ^(a)	916	CFM	860	860	859	859
			Temp. Rise	41	41	41	41
			Watts	105	148	192	280
	High	1027	CFM	963	957	951	945
			Temp. Rise	37	37	37	37
			Watts	141	183	226	310
Heating 2nd Stage	Low	990	CFM	975	978	982	986
			Temp. Rise	55	55	55	55
			Watts	126	174	223	321
	Medium Low	1090	CFM	1063	1070	1078	1086
			Temp. Rise	51	51	50	49
			Watts	157	210	263	370
	Medium ^(a)	1160	CFM	1120	1133	1146	1159
			Temp. Rise	48	48	47	46
			Watts	182	240	299	415
	High	1300	CFM	1260	1266	1272	1279
			Temp. Rise	43	43	42	42
			Watts	254	312	369	484



Heating and Cooling Airflow Tables

Table 8. S9V2B060U4VS Cooling Airflow

S9V2B060U4VS 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	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
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	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	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
4.0 ^(a)	450	CFM / WATTS	1779 / 585	1806 / 661	1814 / 737	1805 / 812	1778 / 886
	420	CFM / WATTS	1654 / 480	1679 / 552	1686 / 624	1676 / 695	1647 / 765
	400	CFM / WATTS	1572 / 418	1596 / 488	1602 / 557	1590 / 625	1561 / 693
	370	CFM / WATTS	1450 / 335	1472 / 401	1477 / 466	1464 / 530	1433 / 594
	350 ^(a)	CFM / WATTS	1369 / 287	1391 / 350	1394 / 413	1380 / 474	1348 / 535
	330	CFM / WATTS	1289 / 244	1310 / 305	1312 / 364	1297 / 423	1264 / 481
	310	CFM / WATTS	1210 / 206	1229 / 264	1231 / 320	1214 / 376	1180 / 431
	290	CFM / WATTS	1131 / 172	1149 / 227	1150 / 281	1132 / 334	1097 / 386

Table 9. S9V2B080U4VS Heating Airflow

S9V2B080U4VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 51,300 2nd Stage Capacity = 77,450				
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	907	CFM	907	893	879	865	852
			Temp. Rise	51	52	53	54	54
			Watts	97	135	174	212	251
	Medium ^(a)	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	1260	CFM	1258	1261	1263	1265	1268
			Temp. Rise	58	57	57	57	57
			Watts	215	271	326	381	436
	Medium ^(a)	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 10. S9V2B080D4VS Heating Airflow

S9V2B080D4VS 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 11. S9V2B080U4VS and S9V2B080D4VS Cooling Airflow

S9V2B080U4VS and S9V2B080D4VS 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
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



Heating and Cooling Airflow Tables

Table 12. S9V2C080U5VS Heating Airflow

S9V2C080U5VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 51,300 2nd Stage Capacity = 77,450				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	857	CFM	800	803	806	810	813
			Temp. Rise	58	59	59	59	59
			Watts	78	118	157	197	237
	Medium Low	1044	CFM	939	944	950	955	961
			Temp. Rise	50	50	50	50	50
			Watts	114	160	207	254	301
	Medium (a)	1145	CFM	1018	1020	1021	1022	1023
			Temp. Rise	46	46	46	46	47
			Watts	139	190	240	291	341
	High	1124	CFM	1083	1086	1089	1093	1096
			Temp. Rise	43	43	43	43	43
			Watts	164	217	271	324	378
Heating 2nd Stage	Low	1190	CFM	1102	1116	1130	1144	1158
			Temp. Rise	65	65	64	63	62
			Watts	153	213	272	332	392
	Medium Low	1450	CFM	443	905	1368	1830	2293
			Temp. Rise	54	54	53	52	51
			Watts	258	333	407	482	557
	Medium (a)	1590	CFM	1461	1478	1495	1513	1530
			Temp. Rise	49	49	48	48	47
			Watts	334	416	498	580	662
	High	1700	CFM	1558	1571	1584	1597	1610
			Temp. Rise	46	46	45	45	45
			Watts	404	496	587	678	770

Table 13. S9V2C080U5VS Cooling Airflow

S9V2C080U5VS 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	1335 / 182	1347 / 241	1356 / 303	1362 / 366	1366 / 431
	420	CFM / WATTS	1246 / 152	1259 / 208	1267 / 266	1273 / 326	1277 / 387
	400	CFM / WATTS	1188 / 134	1200 / 188	1208 / 243	1214 / 301	1217 / 360
	370	CFM / WATTS	1100 / 110	1111 / 160	1118 / 212	1123 / 266	1125 / 322
	350	CFM / WATTS	1041 / 96	1052 / 143	1058 / 193	1061 / 245	1063 / 299
	330	CFM / WATTS	983 / 83	993 / 128	997 / 176	999 / 225	1000 / 277
	310	CFM / WATTS	925 / 72	933 / 114	936 / 159	937 / 207	936 / 257
	290	CFM / WATTS	867 / 61	873 / 101	874 / 144	873 / 190	871 / 239
3.5	450	CFM / WATTS	1557 / 273	1568 / 342	1576 / 413	1581 / 486	1585 / 559
	420	CFM / WATTS	1453 / 228	1465 / 292	1473 / 359	1480 / 427	1483 / 496
	400	CFM / WATTS	1384 / 200	1396 / 262	1405 / 325	1411 / 391	1415 / 457
	370	CFM / WATTS	1281 / 163	1293 / 221	1302 / 280	1308 / 341	1312 / 404
	350	CFM / WATTS	1212 / 142	1224 / 196	1233 / 253	1239 / 311	1242 / 371
	330	CFM / WATTS	1144 / 122	1155 / 173	1163 / 227	1168 / 283	1171 / 341
	310	CFM / WATTS	1076 / 104	1086 / 153	1093 / 204	1097 / 257	1099 / 312
	290	CFM / WATTS	1007 / 88	1017 / 134	1023 / 183	1025 / 233	1026 / 286
4.0	450	CFM / WATTS	1782 / 392	1789 / 471	1794 / 551	1797 / 632	1798 / 715
	420	CFM / WATTS	1662 / 325	1671 / 399	1678 / 474	1682 / 550	1685 / 628
	400	CFM / WATTS	1582 / 285	1592 / 355	1600 / 427	1606 / 500	1609 / 575
	370	CFM / WATTS	1463 / 232	1474 / 297	1483 / 364	1489 / 432	1493 / 502
	350	CFM / WATTS	1384 / 200	1396 / 262	1405 / 325	1411 / 391	1415 / 457
	330	CFM / WATTS	1305 / 172	1317 / 230	1327 / 290	1333 / 352	1337 / 416
	310	CFM / WATTS	1227 / 146	1239 / 201	1248 / 258	1254 / 317	1257 / 378
	290	CFM / WATTS	1149 / 123	1160 / 175	1168 / 229	1173 / 285	1176 / 343
5.0 (a)	450	CFM / WATTS	2235 / 726	2233 / 824	2230 / 923	2224 / 1023	2216 / 1125
	420	CFM / WATTS	2084 / 599	2085 / 690	2084 / 783	2082 / 877	2078 / 973
	400	CFM / WATTS	1983 / 524	1986 / 611	1988 / 699	1988 / 789	1985 / 880
	370	CFM / WATTS	1832 / 423	1838 / 503	1843 / 586	1845 / 669	1845 / 754
	350 (a)	CFM / WATTS	1732 / 363	1740 / 440	1746 / 518	1749 / 597	1751 / 678
	330	CFM / WATTS	1632 / 310	1641 / 382	1649 / 456	1654 / 531	1656 / 608
	310	CFM / WATTS	1533 / 262	1543 / 330	1551 / 400	1557 / 471	1561 / 544
	290	CFM / WATTS	1434 / 219	1445 / 283	1454 / 349	1460 / 416	1464 / 485

Heating and Cooling Airflow Tables

Table 14. S9V2C100U5VS Heating Airflow

S9V2C100U5VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 63,800 2nd Stage Capacity = 97,650				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1146	CFM	1183	1172	1161	1150	1138
			Temp. Rise	50	50	51	51	52
			Watts	141	197	253	310	366
	Medium Low	1280	CFM	1300	1297	1294	1290	1287
			Temp. Rise	45	45	45	46	46
			Watts	185	245	306	366	426
	Medium	1359	CFM	1425	1404	1384	1364	1343
			Temp. Rise	41	42	42	43	43
			Watts	214	276	338	400	462
	High (a)	1446	CFM	1454	1452	1450	1449	1447
			Temp. Rise	40	40	40	41	41
			Watts	257	321	386	451	515
Heating 2nd Stage	Low	1450	CFM	1513	1507	1502	1497	1491
			Temp. Rise	60	60	60	60	61
			Watts	260	329	398	468	537
	Medium Low	1620	CFM	1656	1651	1646	1642	1637
			Temp. Rise	55	55	55	55	55
			Watts	339	416	494	571	648
	Medium	1720	CFM	1781	1771	1762	1752	1743
			Temp. Rise	51	51	51	52	52
			Watts	398	477	556	635	715
	High (a)	1830	CFM	1842	1832	1822	1812	1803
			Temp. Rise	49	49	49	50	50
			Watts	481	562	644	726	807

Table 15. S9V2C100D5VS Heating Airflow

S9V2C100D5VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 64,000 2nd Stage Capacity = 97,350				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1094	CFM	1093	1092	1090	1089	1088
			Temp. Rise	53	53	53	52	52
			Watts	126	183	240	296	353
	Medium Low	1296	CFM	1234	1238	1242	1247	1251
			Temp. Rise	47	47	47	47	47
			Watts	186	243	299	356	413
	Medium (a)	1346	CFM	1279	1268	1256	1245	1234
			Temp. Rise	45	45	46	46	47
			Watts	214	268	321	375	428
	High	1512	CFM	1453	1429	1405	1381	1358
			Temp. Rise	40	40	41	41	42
			Watts	277	344	411	478	545
Heating 2nd Stage	Low	1520	CFM	1484	1477	1469	1461	1453
			Temp. Rise	60	60	61	61	61
			Watts	296	370	444	518	592
	Medium Low	1800	CFM	1693	1688	1684	1679	1674
			Temp. Rise	53	53	53	53	53
			Watts	449	533	618	702	786
	Medium (a)	1870	CFM	1768	1772	1775	1778	1781
			Temp. Rise	51	50	50	50	50
			Watts	505	591	678	765	852
	High	2100	CFM	1969	1956	1944	1931	1918
			Temp. Rise	45	45	46	46	46
			Watts	723	789	854	920	986



Heating and Cooling Airflow Tables

Table 16. S9V2C100U5VS and S9V2C100D5VS Cooling Airflow

S9V2C100U5VS and S9V2C100D5VS 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	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
4.0	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	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
5.0 (a)	450	CFM / WATTS	2249 / 722	2246 / 815	2241 / 909	2236 / 1004	2228 / 1101
	420	CFM / WATTS	2108 / 595	2105 / 681	2101 / 770	2096 / 859	2090 / 949
	400	CFM / WATTS	2013 / 519	2010 / 602	2007 / 685	2003 / 771	1997 / 857
	370	CFM / WATTS	1869 / 418	1867 / 494	1864 / 572	1860 / 651	1855 / 731
	350 (a)	CFM / WATTS	1772 / 359	1770 / 431	1768 / 505	1764 / 580	1759 / 656
	330	CFM / WATTS	1675 / 305	1673 / 374	1671 / 443	1667 / 514	1663 / 587
	310	CFM / WATTS	1576 / 258	1575 / 322	1573 / 388	1570 / 455	1565 / 523
	290	CFM / WATTS	1478 / 216	1476 / 276	1474 / 337	1471 / 401	1467 / 466

Table 17. S9V2D120U5VS Heating Airflow

S9V2D120U5VS 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

Heating and Cooling Airflow Tables

Table 18. S9V2D120D5VS Heating Airflow

S9V2D120D5VS Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 75,660 2nd Stage Capacity = 116,400 External Static Pressure				
Heating	Airflow Setting	Target Airflow		0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1260	CFM	1194	1195	1196	1197	1198
			Temp. Rise	59	59	59	59	59
			Watts	139	191	243	295	347
	Medium Low	1332	CFM	1271	1280	1289	1298	1307
			Temp. Rise	56	55	55	54	54
			Watts	160	214	268	322	376
	Medium	1404	CFM	1329	1331	1332	1334	1335
			Temp. Rise	53	53	53	53	54
			Watts	183	238	293	348	404
	High ^(a)	1620	CFM	1515	1560	1605	1649	1694
			Temp. Rise	46	45	45	44	43
			Watts	258	330	403	476	549
Heating 2nd Stage	Low	1750	CFM	1716	1715	1714	1714	1713
			Temp. Rise	63	63	63	63	63
			Watts	318	396	473	551	628
	Medium Low	1850	CFM	1814	1818	1823	1827	1831
			Temp. Rise	59	59	59	59	59
			Watts	374	453	533	612	691
	Medium	1950	CFM	1917	1904	1891	1877	1864
			Temp. Rise	56	57	57	57	58
			Watts	434	514	595	676	756
	High ^(a)	2250	CFM	2130	2140	2151	2162	2172
			Temp. Rise	51	50	50	50	49
			Watts	628	725	822	919	1016

Table 19. S9V2D120U5VS and S9V2D120D5VS Cooling Airflow

S9V2D120U5VS and S9V2D120D5VS 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
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

Maximum Vent Length Table Installation Instructions must be followed for installation of the venting system.		
Maximum Total Equivalent Length In Feet for Vent or Inlet Air, not combined total (See Notes)		
Model	2 inch Pipe	3 inch or 4 inch Pipe
Altitude 0–2,000 Feet		
S9V2B040, S9V2B060	200	200
S9V2B080, S9V2C080	100	200
S9V2C100	50	200
S9V2D120	Note 1	200
Altitude 2,001–5,400 Feet		
S9V2B040, S9V2B060	200	200
S9V2B080, S9V2C080	80	120
S9V2C100	50	150
S9V2D120	Note 1	200
Altitude 5,401–7,800 Feet		
S9V2B040, S9V2B060	100	150
S9V2B080, S9V2C080	50	70
S9V2C100	Note 1	100
S9V2D120	Note 1	100
Altitude 7,801–10,100 Feet		
S9V2B040, S9V2B060	50	90
S9V2B080, S9V2C080	Note 1	50
S9V2C100	Note 1	50
S9V2D120	Note 1	50

Notes:

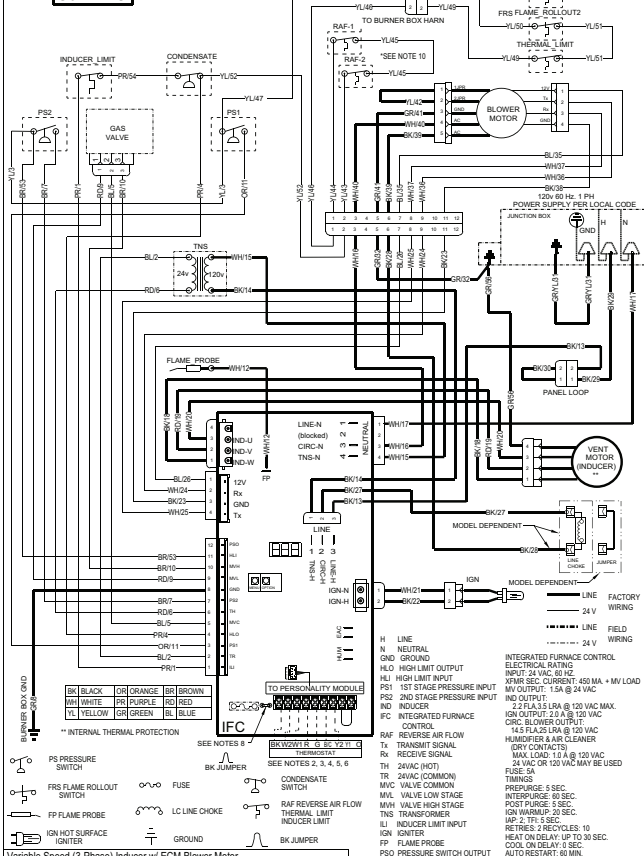
1. Not allowed
2. Minimum vent length for all models: 15 feet.
3. The INLET AIR of one pipe systems require the installation of a minimum of one 90° elbow (to prevent dust and debris from falling straight into the furnace).

S9V2-VS Wiring Diagram

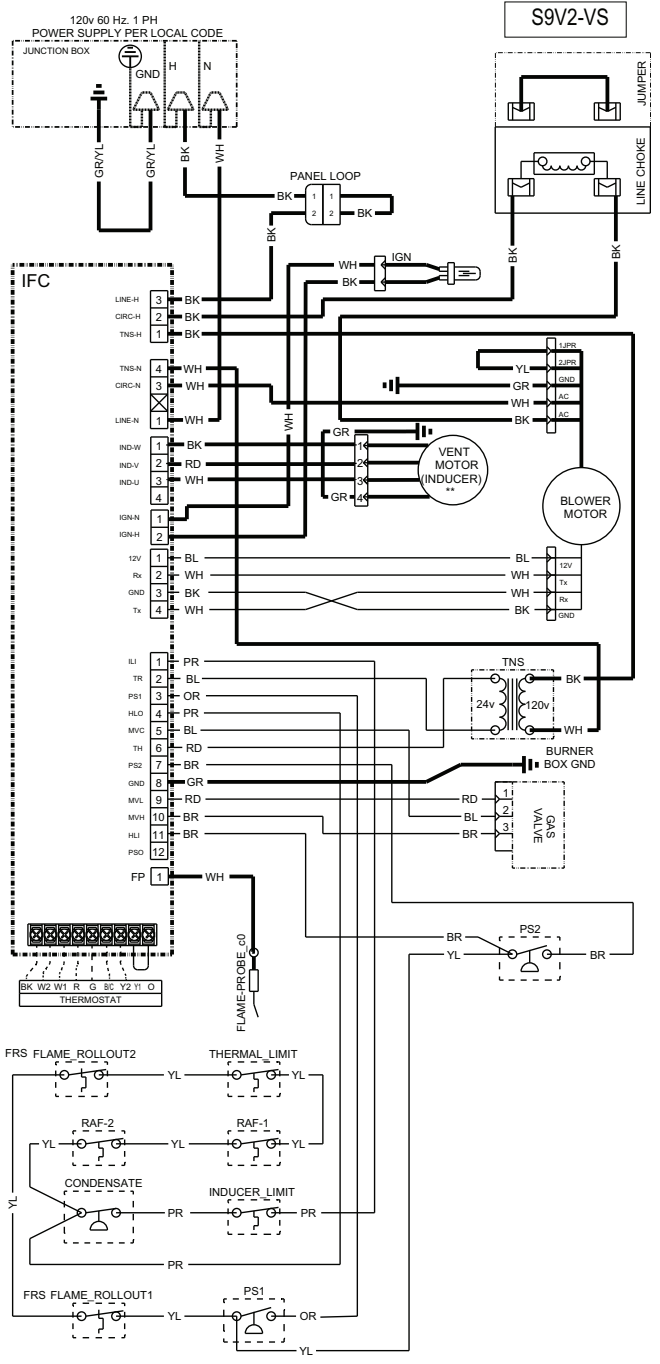
NOTES:

1. 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, 40, 50, AND 51 REQUIRE A TEMPERATURE RATING OF AT LEAST 250°C.
2. FOR PROPER AIRFLOW IN COOLING/HEAT PUMP MODES, Y1 AND/OR Y2 MUST CONNECT FROM THE THERMOSTAT TO THE IFC LOW VOLTAGE TERMINAL STRIP.
3. FOR COOLING ONLY SYSTEMS, LEAVE Y1-O JUMPER IN PLACE ON THE IFC FOR CORRECT LED READOUT.
4. 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 AND DEFOIST OPERATION.
5. VSPD OO SYSTEMS REQUIRE DIFFERENT CONNECTIONS. SEE RELAY PANEL INSTRUCTIONS.
6. IF USING A SINGLE STAGE HEATING THERMOSTAT, JUMPER W1 AND W2 TERMINALS AT THE LOW VOLTAGE TERMINAL STRIP, HT2 WILL BE SHOWN ON THE SEVEN SEGMENT DISPLAY AT ALL TIMES. SECOND STAGE OPERATION WILL BEGIN AFTER THE INTERSTAGE DELAY HAS COMPLETED.
7. TO CHANGE AIRFLOW, REFER TO THE INTEGRATED FURNACE CONTROL MENU AND OPTIONS TO SET AIRFLOW AND BLOWER DELAYS.
8. THE "BK" JUMPER MUST BE CUT WHEN APPLYING AN AIRFLOW COMMAND TO THE "BK" TERMINAL, SUCH AS PULSE WIDTH MODULATION.
9. 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.
10. WIRE YL4S AND RAF-2 ARE NOT PRESENT ON DOWNFLOW MODELS.

S9V2-VS



Variable	Speed (3-Phase) Inducer w/ ECM Blower Motor	Status Codes	Indoor Unit	Outdoor Unit	
L d	Idle	CDF	Blower Constant Fan Airflow Multiplier %	E04	Open Thermal Limit, Rollout Switch, or Reverse Airflow Switch
Hb	1st Stage Gas Heating	CPC	Cooling (CFM/Ton)	E05	Flame detected, should not be present
Lr	1st Stage Gas Heating Learning Routine	CPH	Heat Pump Heating (CFM/Ton)	E06	Voltage reversed polarity or Bad Grounding
Hb2	2nd Stage Gas Heating	H04	Heat Off Delay (sec)	E07	(1) Igniter relay fails, (2) Igniter open
Lr2	2nd Stage Gas Heating Learning Routine	9d	Inter-Stage Delay (sec)	E11	1st stage gas valve (WV) is energized when it should be off
R-F	Airflow (followed by Airflow times 10)	9Hc	Gas Heating CFM 2nd Stage (1st Stage is not adjustable) (Airflow x10)	E12	Redundant Relay (HLO output) Energized when it should NOT be
Run	Test Mode	rUn	Run Test Mode	E08	Flame current is low, but still strong enough to allow operation.
Continuous Fan		E09	Error Codes	E09	Open Inducer Limit Switch or Condensate Switch
CL	1st Stage Cooling	E10	Loss of the IRQ/other internal failures	E10	Inducer Motor no communication response, could be communication failure between two micro-controllers.
CLC	2nd Stage Cooling	E11	Retry exceeded (Failed to est flame)	E11	(1) 2nd stage gas valve energized when it should NOT be
HP	1st Stage Heat Pump	E22	Recycles exceeded (loss of established flame) or 10X PS1 open	E12	(2) 2nd stage gas valve not energized when it should be
HP2	2nd Stage Heat Pump	E23	1st Stage Gas Valve not energized when it should be exceeded after 10 times	E13	(3) 1st stage gas valve not energized when it should be
dF	Defrost Mode	E24	Redundant Relay (HLO output) Not Energized when it should be exceeded after 10 times	E14	(4) Redundant relay (HLO output) not energized when it should be
Menu Options		E25	Open Pressure Switch, 1st Stage	E15	Open fuse
Active Alarm Menu		E26	Shorted Pressure Switch, 2nd Stage	E16	Blower HPI/DEM ID
Last 6 Faults (To Clear, Hold Option Button 5 sec)		E27	Open Pressure Switch, 2nd Stage	E17	No PM and local copy bad
Code Release Number		E28	Open Pressure Switch, 2nd Stage	E18	Both of Unit Data File in PM and local Unit Data File are Corrupt
Cooling Off Delay (sec)		E29	Open Pressure Switch, 2nd Stage	E19	Blower motor no communication response
Outdoor Tonnage		E30	Open Pressure Switch, 2nd Stage	E20	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.

⚠ WARNING

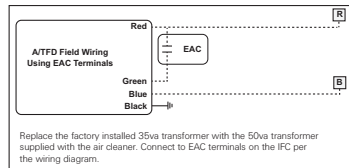
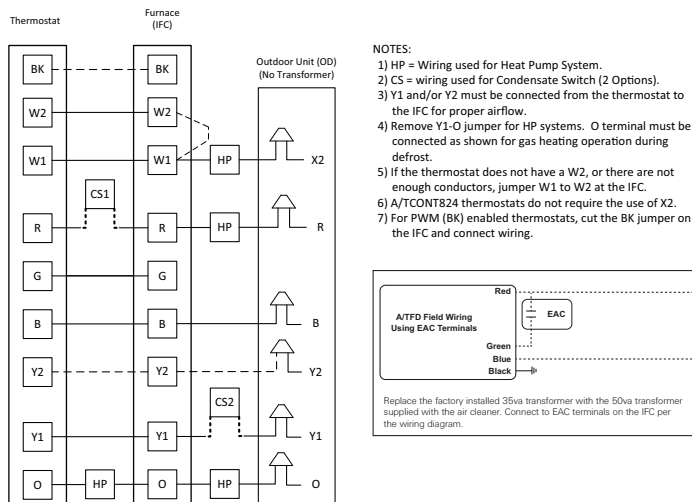
FIRE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

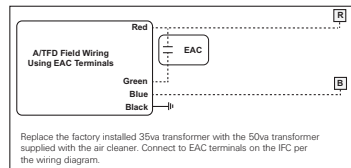
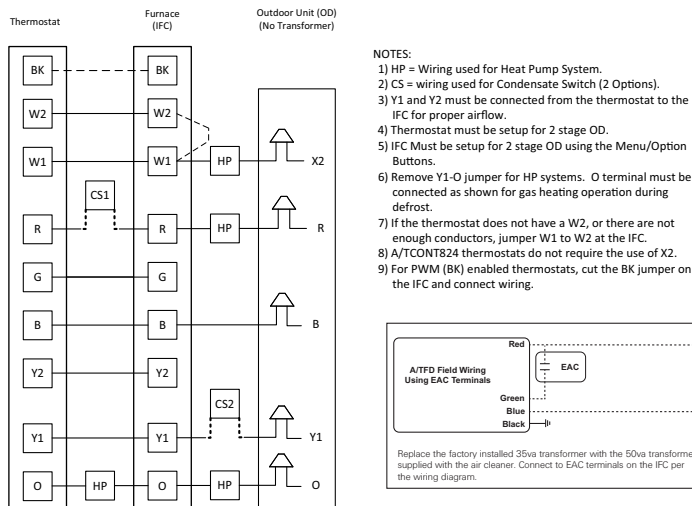
This Warning applies to installations with a flammable refrigeration system. The furnace must be powered except for service. The furnace shall be installed and connected according to installation instructions and wiring diagrams that are provided with the evaporator coil.

Field Wiring

FIELD WIRING DIAGRAM FOR S9V2-VS WITH ONE / TWO STAGE AC OR HEAT PUMP



FIELD WIRING DIAGRAM FOR S9V2-VS WITH SINGLE STAGE AC OR HEAT PUMP WITH 2 STAGE AIRFLOW



Outline Drawings

Table 20. 17.5", 21", and 24.5" Upflow Cabinets

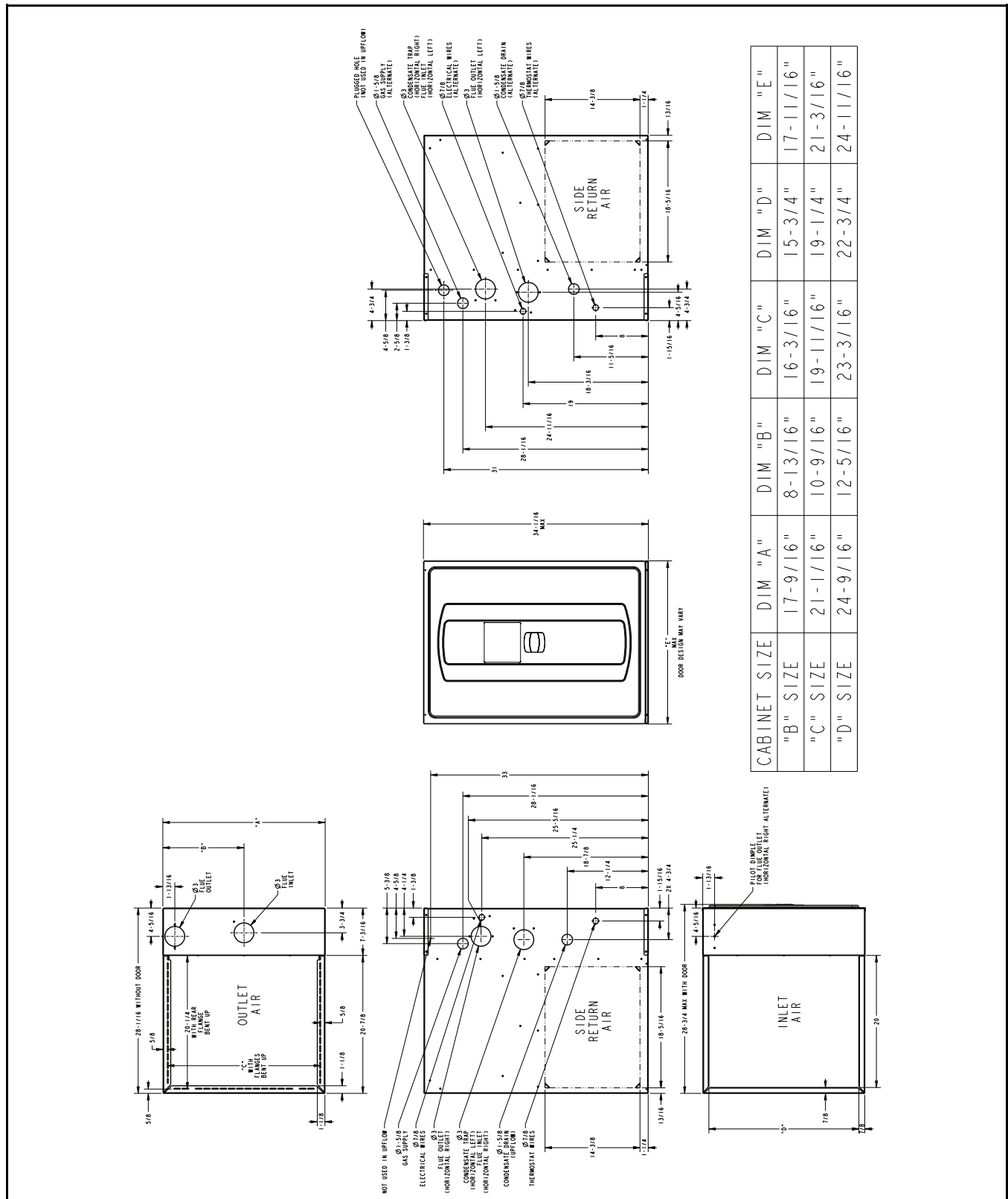
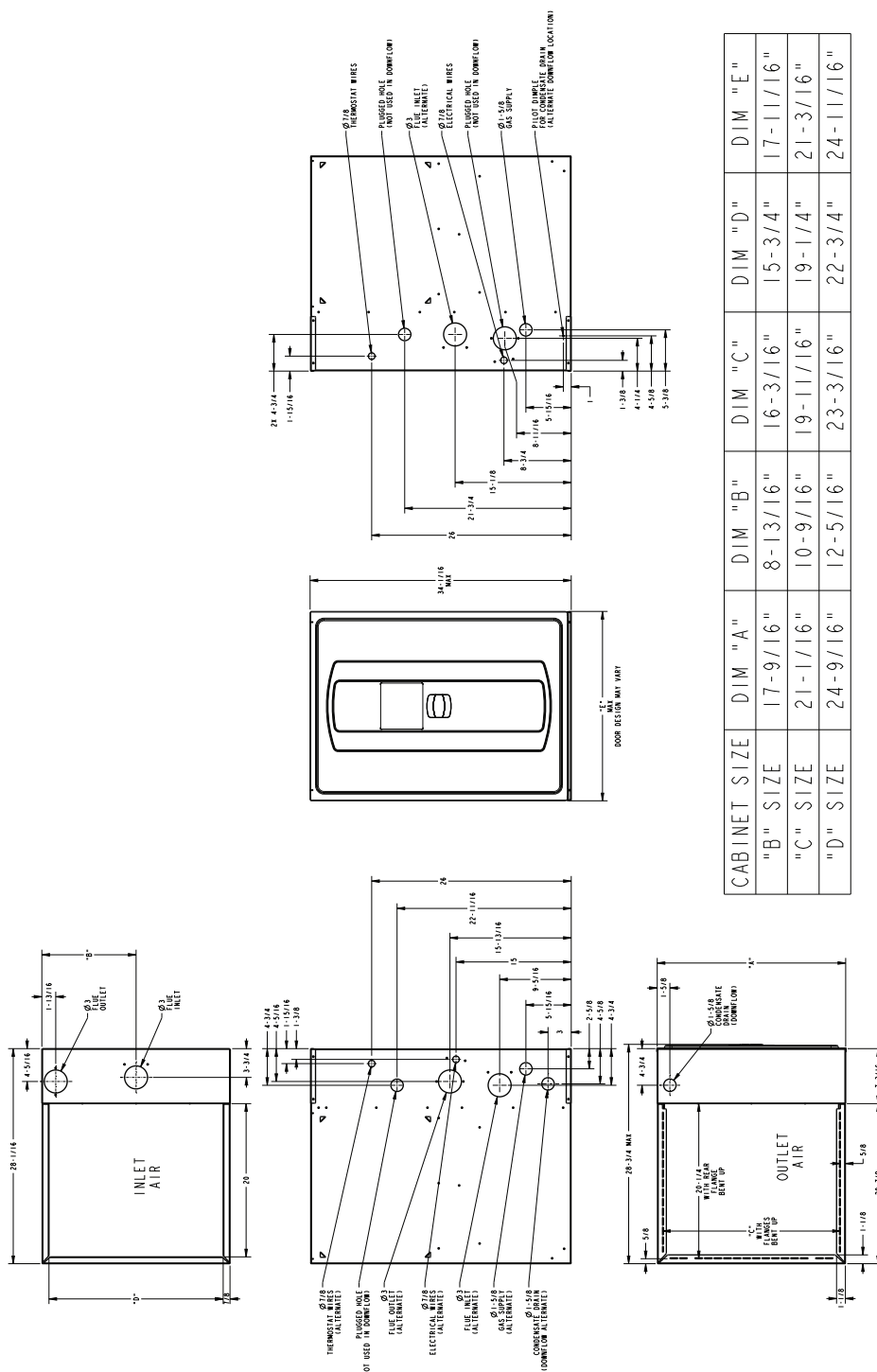


Table 21. 17.5", 21", and 24.5" Downflow Cabinets





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