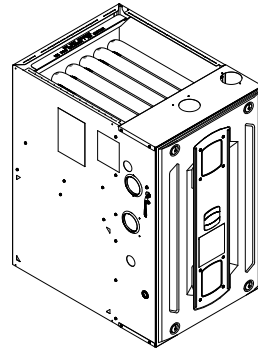


Submittal

Upflow/ Horizontal Left/Right Two Stage Condensing Gas Fired Furnace 80,000 BTUH

Upflow, Convertible to
Horizontal Right or
Horizontal Left
S9V2B080U4VSAB



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

Product Specification

MODEL	S9V2B080U4VSAB
TYPE	Upflow / Horizontal
RATINGS (a)	
1st Stage Input BTUH (ICS)	52,000
1st Stage Capacity BTUH	50,960
2nd Stage Input BTUH	80,000
2nd Stage Capacity BTUH (ICS) (b)(c)	78,400
1st Stage Temp. Rise (Min.-Max.)	30 - 60
2nd Stage Temp. Rise (Min.-Max.)	35 - 65
AFUE (%)	97.0
BLOWER DRIVE	DIRECT
Diameter — Width (In.)	11 X 8
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	3/4
RPM	Variable
Volts/Ph/Hz	120 / 1 / 60
FLA	8.0
COMBUSTION FAN — Type	Centrifugal
Drive — No. Speeds	Direct - VS
Motor HP — RPM	1/50 - 5000
Volts/Ph/Hz	33-110 / 3 / 60-180
FLA	1.0
FILTER — Furnished?	No
Type recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 16x25 — 1 in.
VENT PIPE DIAMETER — Min (in.) (d) (e)	2 Round
HEAT EXCHANGER	
Type — Fired	409 Stainless Steel

MODEL	S9V2B080U4VSAB
— Unfired	29-4C Stainless Steel
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	4 - 45
LP Gas Qty. — Drill Size	4 - 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot
Number	4
POWER CONN. — V/Ph/Hz (f)	120 / 1 / 60
Ampacity (In Amps)	11.2
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
Crated (In.)	35-1/2 x 19-1/2 x 30-7/8
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	135/127

- (a) Use high altitude pressure switch kits above 4000'. 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.
- (b) Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3 — latest edition.
- (c) Based on U.S. government standard tests.
- (d) Refer to the Vent Length Table in the Installer's Guide.
- (e) All S9V2-VS furnace models have a vent outlet diameter that equals 2 in.
- (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 1. S9V2B080U4VSAB Heating Airflow

S9V2B080U4VSAB Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter								
				1st Stage Capacity = 50,960				
				2nd Stage Capacity = 78,400				
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

(a) Factory Setting.

Table 2. S9V2B080U4VSAB / S9V2B080D4VSAB Cooling Airflow

S9V2B080U4VSAB / S9V2B080D4VSAB Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter								
Cooling	Unit Outdoor	Airflow Setting (CFM/ton)		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Cooling	2.5 Ton	Cooling 450 CFM/Ton	CFM	1125	1125	1125	1125	1125
			Watts	155	205	259	316	376
		Cooling 420 CFM/Ton	CFM	1050	1050	1050	1050	1050
			Watts	130	177	228	282	340
		Cooling 400 CFM/Ton	CFM	1000	1000	1000	1000	1000
			Watts	115	160	209	262	317
		Cooling 370 CFM/Ton	CFM	925	925	925	925	925
			Watts	94	136	183	233	286
		Cooling 350 CFM/Ton	CFM	875	875	875	875	875
			Watts	82	122	167	216	267
		Cooling 330 CFM/Ton	CFM	825	825	825	825	825
			Watts	71	110	153	199	249
		Cooling 310 CFM/Ton	CFM	775	775	775	775	775
			Watts	61	98	139	184	233
Cooling 290 CFM/Ton	CFM	725	725	725	725	725		
	Watts	52	87	127	171	218		
Cooling	3.0 Ton	Cooling 450 CFM/Ton	CFM	1350	1350	1350	1350	1350
			Watts	252	311	374	440	508
		Cooling 420 CFM/Ton	CFM	1260	1260	1260	1260	1260
			Watts	209	265	324	386	451
		Cooling 400 CFM/Ton	CFM	1200	1200	1200	1200	1200
			Watts	184	237	294	354	416
		Cooling 370 CFM/Ton	CFM	1110	1110	1110	1110	1110
			Watts	150	199	253	309	369
		Cooling 350 CFM/Ton	CFM	1050	1050	1050	1050	1050
			Watts	130	177	228	282	340
		Cooling 330 CFM/Ton	CFM	990	990	990	990	990
			Watts	112	156	205	258	313
		Cooling 310 CFM/Ton	CFM	930	930	930	930	930
			Watts	95	138	185	235	288
Cooling 290 CFM/Ton	CFM	870	870	870	870	870		
	Watts	81	121	166	214	265		
Cooling	3.5 Ton	Cooling 450 CFM/Ton	CFM	1575	1575	1575	1575	1575
			Watts	383	452	524	599	676
		Cooling 420 CFM/Ton	CFM	1470	1470	1470	1470	1470
			Watts	317	382	449	520	593
		Cooling 400 CFM/Ton	CFM	1400	1400	1400	1400	1400
			Watts	278	339	404	472	542
		Cooling 370 CFM/Ton	CFM	1295	1295	1295	1295	1295
			Watts	225	282	343	407	473
		Cooling 350 CFM/Ton (a)	CFM	1225	1225	1225	1225	1225
			Watts	194	248	306	367	431
		Cooling 330 CFM/Ton	CFM	1155	1155	1155	1155	1155
			Watts	166	218	273	331	392
		Cooling 310 CFM/Ton	CFM	1085	1085	1085	1085	1085
			Watts	141	190	242	298	356
Cooling 290 CFM/Ton	CFM	1015	1015	1015	1015	1015		
	Watts	119	165	215	268	324		
Cooling	4.0 Ton (a)	Cooling 450 CFM/Ton	CFM	1800	1784	1746	1665	1581
			Watts	555	619	665	674	681
		Cooling 420 CFM/Ton	CFM	1680	1680	1680	1665	1581
			Watts	458	531	608	674	681
		Cooling 400 CFM/Ton	CFM	1600	1600	1600	1600	1600
			Watts	400	470	543	619	697
		Cooling 370 CFM/Ton	CFM	1480	1480	1480	1480	1480
			Watts	323	388	456	527	600
		Cooling 350 CFM/Ton	CFM	1400	1400	1400	1400	1400
			Watts	278	339	404	472	542
		Cooling 330 CFM/Ton	CFM	1320	1320	1320	1320	1320
			Watts	237	295	357	421	488
		Cooling 310 CFM/Ton	CFM	1240	1240	1240	1240	1240
			Watts	201	255	314	375	439
Cooling 290 CFM/Ton	CFM	1160	1160	1160	1160	1160		
	Watts	168	220	275	334	395		

(a) Factory Setting

General Features

NATURAL GAS MODELS

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

SAFE OPERATION

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

QUICK HEATING

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

BURNERS

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

INTEGRATED SYSTEM CONTROL

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

ENERGY EFFICIENT OPERATION

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

AIR DELIVERY

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

SECONDARY HEAT EXCHANGER

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

STYLING

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

FEATURES AND GENERAL OPERATION

The S-Series furnace utilizes a Silicon Nitride Hot Surface Ignition system, which eliminates the waste of a constant burning pilot. The integrated system control lights the main burners upon a demand for heat from the room thermostat. Complete front service access.

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

Features and Benefits

97.0% AFUE ACROSS ALL MODELS

Meets utility rebates

Lowers utility bills

ELECTRICALLY EFFICIENT

Efficient airflow design reduces electrical energy use

34 INCH TALL

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

Works great with larger, high-efficiency coils

No knockouts

3-WAY MULTI-POISE / DEDICATED DOWNFLOW

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

2 SKU's — Downflow

Added application flexibility and reduction in specification errors

AIRFLOW

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

REGULATORY

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

Open vestibule design provides a full 34" high open vestibule

VARIABLE SPEED DRAFT INDUCER MOTOR

Increased efficiency

DIMENSIONS

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

Depth remains approximately 28"

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

INTEGRATED FURNACE CONTROL

Setup / Status / Diagnostics / Digital Display

No dip switches

Last six errors stored

Dry contact EAC and HUM connections

All Molex connections; no spade terminals

Low voltage labeled above and below

Rain shield over IFC keeps condensate off the control

TUBULAR STAINLESS STEEL PRIMARY HEAT EXCHANGER

29-4C STAINLESS STEEL SECONDARY HEAT EXCHANGER

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

Integrated rail system for easy access if required

Reduces or eliminates need for baffles

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

Improved airflow efficiency

Durable, easy to clean, two piece housing

Single piece belly band/ motor arm assembly

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

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

Easier to specify

Shipped ready to install (no kits required)

Every model has at least two venting options

When in horizontal, trap extends only about 2"

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

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

About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com.



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