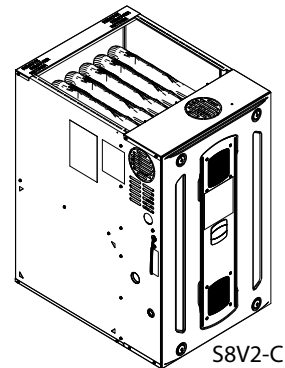


Submittal

Link Communicating or 24 Volt Gas-Fired 2 Stage Induced Draft Furnaces with Variable Speed Motor 120,000 BTUH

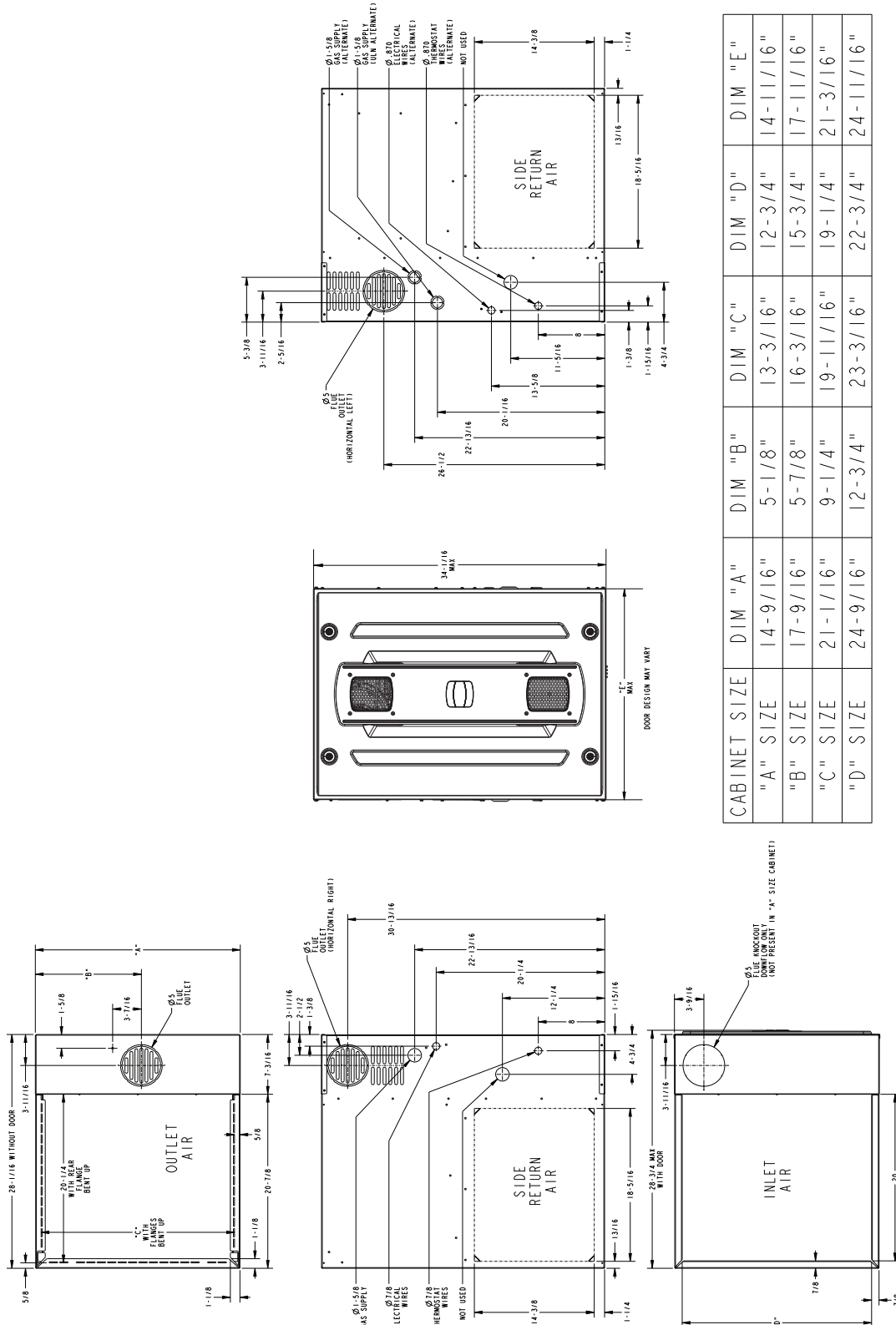
S8V2D120M5PC/D

Note: Models that have a "D" in the 12th digit designating they meet California less than 40 ng/J (NOx) emissions requirements.



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

Outline Drawing



CABINET SIZE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
"A" SIZE	14-9/16"	5-1/8"	13-3/16"	12-3/4"	14-11/16"
"B" SIZE	17-9/16"	5-7/8"	16-3/16"	15-3/4"	17-11/16"
"C" SIZE	21-1/16"	9-1/4"	19-11/16"	19-1/4"	21-3/16"
"D" SIZE	24-9/16"	12-3/4"	23-3/16"	22-3/4"	24-11/16"

Product Specification

Model	S8V2D120M5PC ^(a) S8V2D120M5PD ^(a)
Type	Upflow / Horizontal / Downflow
RATINGS ^(b)	
1st Stage Input BTUH	84,000
1st Stage Capacity BTUH (ICS)	67,900
2nd Stage Input BTUH	120,000
2nd Stage Capacity BTUH (ICS) ^(c)	98,000
1st Stage Temp. Rise (Min. - Max.) °F	30 - 60
2nd Stage Temp. Rise (Min. - Max.) °F	35 - 65
AFUE - Rating ^(c)	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F
BLOWER DRIVE	DIRECT
Diameter - Width (in.)	11 X 11
No. Used	1
Speeds (No.) ^(d)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	1
R.P.M.	Variable
Volts / Ph / Hz	120 / 1 / 60
FLA	10
COMBUSTION FAN - Type	PSC
Drive - No. Speeds	Direct - 2
Motor HP - RPM	3200/2900
Volts/Ph/Hz	120 / 1 / 60
FLA	0.33
Inducer Orifice	2.15
FILTER - Furnished?	No
Type Recommended	High Velocity

Model	S8V2D120M5PC ^(a) S8V2D120M5PD ^(a)
Hi Vel. (No.-Size-Thk.)	1 - 24 X 25 - 1 in.
VENT PIPE DIAMETER - Min. (in.) ^(e)	4 Round
HEAT EXCHANGER - Type	Aluminized Steel
Gauge (Fired)	20 - 19
ORIFICES - Main	
Nat. Gas Qty. - Drill Size	6 - 45
L.P. Gas Qty. - Drill Size	6 - 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE - Type	120 V SiNi Igniter
BURNERS - QTY	6
POWER CONN. - V/Ph/HZ ^(f)	120 / 1 / 60
Ampacity (Amps)	13.0
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (IN.)	1/2
DIMENSIONS	H x W x D
Uncrated (in.)	34 x 24.5 x 28.75
Crated (in.)	35.5 x 26.5 x 30.87
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	160/152

- ^(a) Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
- ^(b) For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
- ^(c) Based on U.S. government standard tests.
- ^(d) Direct drive variable speed blower motor is an ECM constant airflow blower motor.
- ^(e) Refer to the Installation, Operation, and Maintenance Manual.
- ^(f) The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Airflow Tables

Table 1. S8V2D120M5P Heating Airflow

S8V2D120M5P Furnace Heating Airflow (CFM), Temp. Rise (°F), and Power (Watts) vs. External Static Pressure with Filter (iwc)								
				1st Stage Capacity = 67,900 2nd Stage Capacity = 98,000				
Heating	Airflow Setting	Target Airflow		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
Heating 1st Stage	Low	1155	CFM	1223	1238	1254	1270	1286
			Temp. Rise	52	51	51	50	49
			Watts	103	173	243	313	384
	Medium Low ^(a)	1340	CFM	1398	1421	1443	1466	1488
			Temp. Rise	44	44	44	43	43
			Watts	149	229	310	390	471
	Medium	1450	CFM	1496	1510	1525	1540	1555
			Temp. Rise	42	41	41	41	41
			Watts	181	264	347	430	513
	High	1540	CFM	1629	1633	1638	1642	1647
			Temp. Rise	39	38	38	38	38
			Watts	225	312	398	484	571
Heating 2nd Stage	Low	1500	CFM	1597	1603	1608	1613	1619
			Temp. Rise	56	56	56	55	55
			Watts	200	294	388	482	575
	Medium Low ^(a)	1740	CFM	1822	1832	1843	1854	1865
			Temp. Rise	50	49	49	49	48
			Watts	296	405	514	624	733
	Medium	1850	CFM	1916	1930	1944	1958	1972
			Temp. Rise	47	46	46	46	45
			Watts	366	484	602	721	839
	High	2000	CFM	2045	2064	2082	2101	2120
			Temp. Rise	44	44	43	43	42
			Watts	463	593	723	854	983

^(a) Factory Setting

Table 2. S8V2D120M5P Cooling Airflow

S8V2D120M5P Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - "CPC" (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
3.0	450	CFM / WATTS	1376 / 149	1382 / 217	1382 / 287	1378 / 359	1371 / 434
	420	CFM / WATTS	1283 / 126	1288 / 189	1286 / 255	1281 / 323	1274 / 395
	400	CFM / WATTS	1221 / 112	1225 / 172	1222 / 235	1216 / 301	1208 / 370
	370	CFM / WATTS	1126 / 93	1129 / 149	1125 / 208	1118 / 271	1108 / 337
	350	CFM / WATTS	1063 / 82	1064 / 135	1059 / 192	1051 / 252	1040 / 316
	330	CFM / WATTS	998 / 71	999 / 122	993 / 176	984 / 234	972 / 297
	310	CFM / WATTS	934 / 62	933 / 110	926 / 162	916 / 218	904 / 279
	290	CFM / WATTS	869 / 54	867 / 99	859 / 149	848 / 203	834 / 263
3.5	450	CFM / WATTS	1602 / 219	1611 / 299	1614 / 380	1613 / 463	1609 / 547
	420	CFM / WATTS	1497 / 184	1505 / 258	1506 / 334	1504 / 412	1499 / 492
	400	CFM / WATTS	1427 / 163	1433 / 234	1434 / 306	1431 / 380	1425 / 457
	370	CFM / WATTS	1319 / 134	1325 / 200	1324 / 267	1319 / 337	1312 / 409
	350	CFM / WATTS	1247 / 117	1251 / 179	1249 / 243	1244 / 310	1235 / 380
	330	CFM / WATTS	1174 / 102	1177 / 160	1174 / 221	1167 / 286	1158 / 353
	310	CFM / WATTS	1100 / 88	1102 / 143	1098 / 201	1090 / 263	1080 / 328
	290	CFM / WATTS	1025 / 76	1026 / 127	1021 / 182	1012 / 241	1001 / 304

Table 2. S8V2D120M5P Cooling Airflow (continued)

S8V2D120M5P Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter (iwc)							
Outdoor Tonnage - "Odt" (tons)	Airflow Setting - "CPC" (CFM/ton)		EXTERNAL STATIC PRESSURE (IN. W. C.)				
			0.1	0.3	0.5	0.7	0.9
4.0	450	CFM / WATTS	1821 / 310	1832 / 402	1838 / 495	1839 / 588	1838 / 683
	420	CFM / WATTS	1705 / 259	1715 / 344	1719 / 431	1720 / 519	1717 / 608
	400	CFM / WATTS	1627 / 228	1636 / 310	1639 / 392	1638 / 476	1635 / 561
	370	CFM / WATTS	1507 / 187	1515 / 262	1517 / 338	1515 / 416	1510 / 497
	350	CFM / WATTS	1427 / 163	1433 / 234	1434 / 306	1431 / 380	1425 / 457
	330	CFM / WATTS	1345 / 141	1351 / 207	1350 / 276	1346 / 347	1339 / 420
	310	CFM / WATTS	1262 / 121	1267 / 184	1265 / 248	1260 / 316	1252 / 386
	290	CFM / WATTS	1179 / 103	1182 / 162	1179 / 223	1173 / 287	1164 / 355
4.5	450	CFM / WATTS	2032 / 423	2045 / 528	2053 / 632	2057 / 738	2059 / 844
	420	CFM / WATTS	1907 / 352	1918 / 449	1925 / 547	1927 / 645	1928 / 744
	400	CFM / WATTS	1821 / 310	1832 / 402	1838 / 495	1839 / 588	1838 / 683
	370	CFM / WATTS	1691 / 253	1700 / 338	1704 / 423	1705 / 510	1702 / 599
	350	CFM / WATTS	1602 / 219	1611 / 299	1614 / 380	1613 / 463	1609 / 547
	330	CFM / WATTS	1512 / 189	1520 / 264	1522 / 341	1520 / 419	1515 / 499
	310	CFM / WATTS	1421 / 161	1428 / 232	1429 / 304	1426 / 378	1420 / 455
	290	CFM / WATTS	1329 / 137	1335 / 203	1334 / 271	1330 / 341	1323 / 414
5.0 ^(a)	450	CFM / WATTS	2236 / 561	2250 / 678	2260 / 796	2266 / 913	2270 / 1031
	420	CFM / WATTS	2101 / 466	2114 / 575	2123 / 684	2128 / 793	2130 / 903
	400	CFM / WATTS	2009 / 409	2022 / 512	2029 / 616	2033 / 720	2035 / 825
	370	CFM / WATTS	1869 / 333	1880 / 428	1886 / 523	1888 / 619	1888 / 717
	350 ^(a)	CFM / WATTS	1773 / 288	1784 / 377	1789 / 467	1790 / 558	1788 / 651
	330	CFM / WATTS	1676 / 247	1685 / 331	1689 / 416	1689 / 502	1687 / 590
	310	CFM / WATTS	1577 / 210	1586 / 289	1588 / 369	1587 / 450	1583 / 533
	290	CFM / WATTS	1477 / 178	1485 / 251	1486 / 326	1483 / 403	1478 / 482

^(a) Factory Setting

General Features

COMMUNICATING MODE

Furnace is shipped ready to be connected in communicating mode.

A/T LINK360A2VVUA Link Smart Thermostat and System Controller must be ordered separately.

COMFORT CONTROL

Link communicating technology seamlessly connects each of the system's components, allowing for advanced diagnostics, system performance updates, and optional remote monitoring that can help keep the system running at optimal performance levels throughout its lifetime.

ALTERNATE 24V MODE

Furnace is field configurable to 24V non-communicating mode.

NATURAL GAS MODELS

Central Heating furnace designs are certified by Intertek 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 aluminized steel heat exchanger** quickly transfers heat to provide warm conditioned air to the structure. **Low energy power vent blower**, to increase efficiency and provide a discharge of gas fumes to the outside.

BURNERS

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

INTEGRATED SYSTEM CONTROL

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

ENERGY EFFICIENT OPERATION

Air-Tite™ cabinet design is certified to <1% air leakage per ASHRAE 193 "Method of Test for Determining the Airtightness of HVAC Equipment."

AIR DELIVERY

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

STYLING

Heavy gauge steel and "wrap-around" cabinet construction is used 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

LINK COMMUNICATION OR 24 VOLT CONTROL

Seamless connection between system components to monitor system performance and efficiency

Diagnostics and configuration capability through Mobile App

Field configurable to 24 volt non-communicating mode

80% AFUE on S8V2 FURNACE MODELS

Lowers utility bills

ELECTRICALLY EFFICIENT

Efficient airflow design reduces electrical energy use

34 INCH TALL

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

Works great with larger, high-efficiency coils

No knockouts

4-WAY MULTI-POISE

12 SKU's — Upflow / Downflow / Horizontal Left / Horizontal Right

Added application flexibility and reduction in specification errors

AIRFLOW

At least 400 CFM/ton at 0.5 in. H₂O external static pressure

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 for ease of installation and service

DIMENSIONS

Width is industry standard: 24.5"

Depth remains approximately 28"

Cabinet is 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 ALUMINIZED STEEL HEAT EXCHANGER

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

Improved airflow efficiency

Durable, easy to clean, housing

Single piece belly band/ motor arm assembly

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

FOUR-WAY MULTI-POISE (UPFLOW, DOWNFLOW, HORIZONTAL LEFT AND RIGHT)

Easier to specify

Shipped ready to install (no conversion kits required)

Every model has at least two venting options

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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