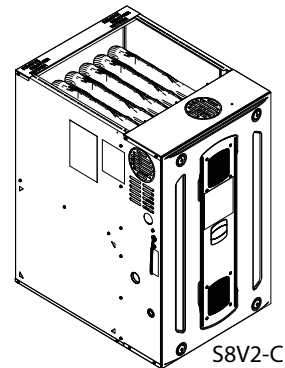


Submittal

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

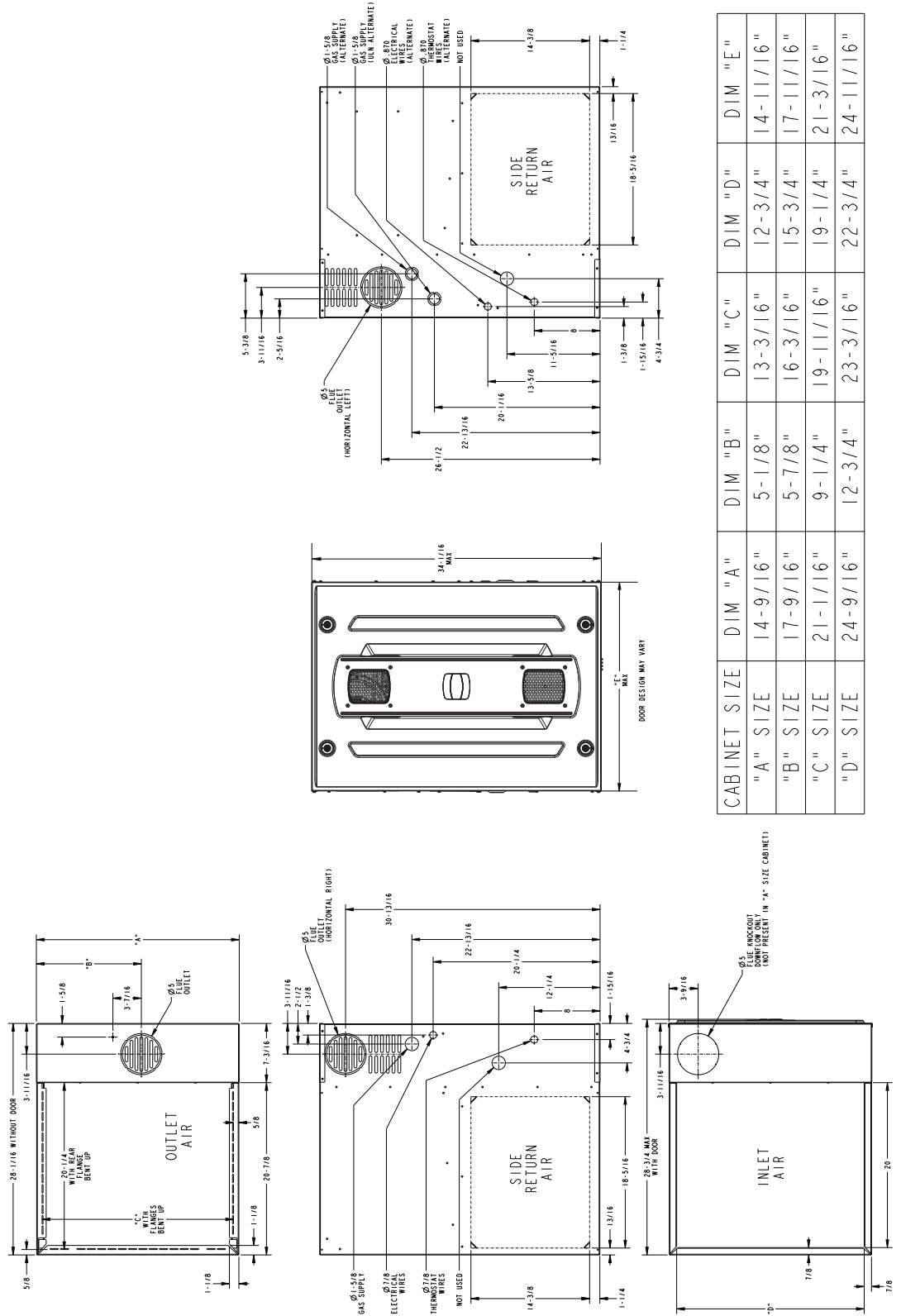
S8V2D120M5PC/D

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



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 |
| 3.5 | 290 | CFM / WATTS | 869 / 54 | 867 / 99 | 859 / 149 | 848 / 203 | 834 / 263 |
| | 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.



The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.