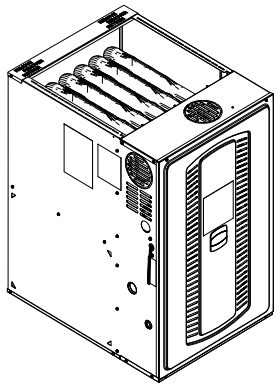
# Submittal

## Upflow / Downflow / Horizontal Left/Right
## Single Stage Non-condensing
## Gas Fired Furnace
## 80,000 BTUH

S8X1C080M5PSCA/C



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

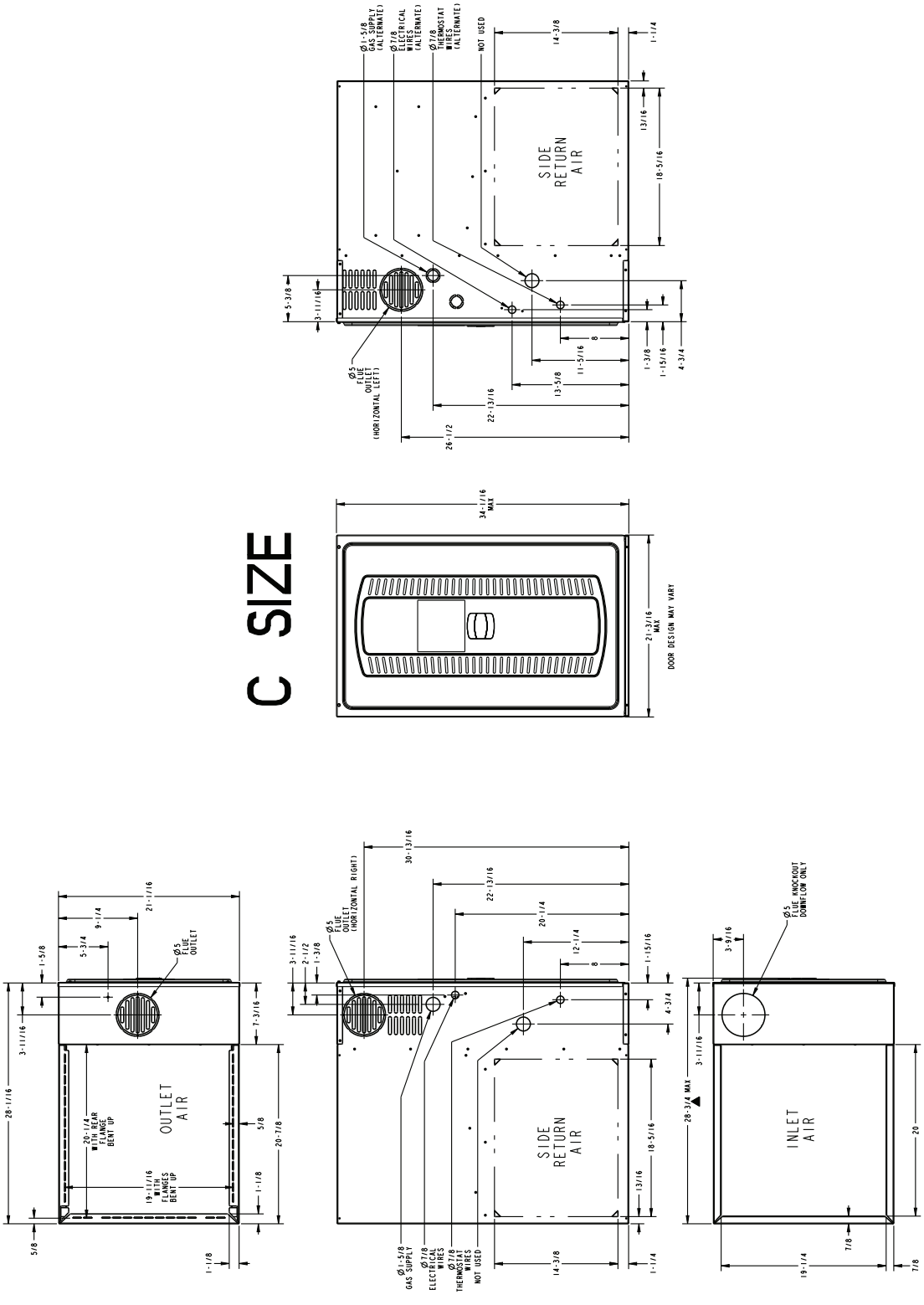
***Note:*** *Graphics in this document are for representation only. Actual model may differ in appearance.*

April 2024

**S8X1C080M5-SUB-2D-EN**

# Outline Drawing

**Table 1. 21″ Width Cabinet**



# Product Specifications

| MODEL | S8X1C080M5PSCA/C [a] |
|---|---|
| **Type** | Upflow / Horizontal / Downflow |
| **RATINGS** [b] | |
| Input BTUH | 80,000 |
| Capacity BTUH (ICS) [c] | 64,700 |
| Temp. Rise (Min. - Max.) °F | 30 - 60 |
| 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] | CTM - 9 |
| CFM vs. in. w.g. | See Fan Performance Table |
| Motor HP | 1 |
| R.P.M. | 1050 |
| Volts / Ph / Hz | 120 / 1 / 60 |
| FLA | 10.9 |
| **COMBUSTION FAN - Type** | PSC |
| Drive - No. Speeds | Direct - 1 |
| Motor RPM | 3300 / 2971 |
| Volts/Ph/Hz | 120 / 1 / 60 |
| FLA | 0.30 / 0.43 |
| Inducer Orifice | 1.80 |
| **FILTER - Furnished?** | No |
| Type Recommended | High Velocity |
| Hi Vel. (No.-Size-Thk.) | 1 - 20 X 25 - 1 in. |

| MODEL | S8X1C080M5PSCA/C [a] |
|---|---|
| **VENT PIPE DIAMETER - Min. (in.)** [e] | 4 Round |
| **HEAT EXCHANGER - Type** | Aluminized Steel |
| Gauge (Fired) | 20 - 19 |
| **ORIFICES - Main** | |
| Nat. Gas Qty. - Drill Size | 4 - 45 |
| L.P. Gas Qty. - Drill Size | 4 - 56 |
| **GAS VALVE** | Redundant - Single Stage |
| **PILOT SAFETY DEVICE - Type** | 120 V SiNi Igniter |
| **BURNERS - QTY** | 4 |
| **POWER CONN. - V/Ph/HZ** [f] | 120 / 1 / 60 |
| Ampacity (Amps) | 14.1 / 14.2 |
| Max. Overcurrent Protection (Amps) | 15 |
| **PIPE CONN. SIZE (IN.)** | 1/2 |
| **DIMENSIONS** | H x W x D |
| Uncrated (in.) | 34 x 21 x 28.75 |
| Crated (in.) | 35.5 x 23 x 30.87 |
| **WEIGHT** | |
| Shipping (Lbs.)/Net (Lbs.) | 142 / 134 |

[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] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

# Airflow Table

| Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model** | **Tap** | **Static** | **0.1** | **0.3** | **0.5** | **0.7** | **0.9** |
| **S8X1C080M5PSC** | **1** | **SCFM** | 728 | 358 | | | |
| | | **Watts** | 44 | 49 | | | |
| | **2** | **SCFM** | 809 | 540 | 271 | | |
| | | **Watts** | 53 | 63 | 74 | | |
| | **3** | **SCFM** | 1440 | 1273 | 1105 | 938 | 770 |
| | | **Watts** | 185 | 201 | 218 | 234 | 250 |
| | **4** | **SCFM** | 1536 | 1385 | 1233 | 1081 | 929 |
| | | **Watts** | 220 | 238 | 257 | 275 | 293 |
| | **5** | **SCFM** | 1689 | 1552 | 1414 | 1277 | 1140 |
| | | **Watts** | 278 | 299 | 320 | 342 | 363 |
| | **6** | **SCFM** | 1792 | 1661 | 1530 | 1400 | 1269 |
| | | **Watts** | 326 | 348 | 371 | 394 | 417 |
| | **7** | **SCFM** | 1899 | 1771 | 1643 | 1515 | 1387 |
| | | **Watts** | 373 | 397 | 422 | 446 | 471 |
| | **8** | **SCFM** | 2094 | 1985 | 1875 | 1766 | 1656 |
| | | **Watts** | 500 | 527 | 554 | 582 | 609 |
| | **9** | **SCFM** | 2533 | 2414 | 2295 | 2176 | 2058 |
| | | **Watts** | 931 | 932 | 933 | 933 | 934 |

# CFM Versus Temperature Rise

***S8X1 Furnaces have one stage heating***

**Table 2. S8X1**

| Model | CFM Versus Temperature Rise | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 |
| S8X1C080M5PSC | | | | | | | 59 | 54 | 49 | 46 | 42 | 40 | 37 | 35 | 33 | | | | | | |

# General Features

### 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 9 speed constant torque blower motor has sufficient airflow for most heating and cooling requirements and will switch from heating to cooling speeds on demand from 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

**80% AFUE on S8X1 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**

8 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. $H_20$ 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: 21"

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.

---




Intertek

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.

S8X1C080M5-SUB-2D-EN 08 Apr 2024

Supersedes S8X1C080M5-SUB-2C-EN (March 2023)

©2024