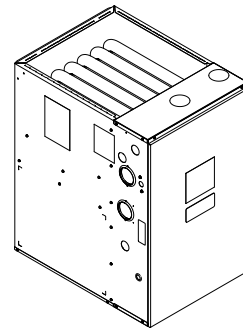


# Submittal

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

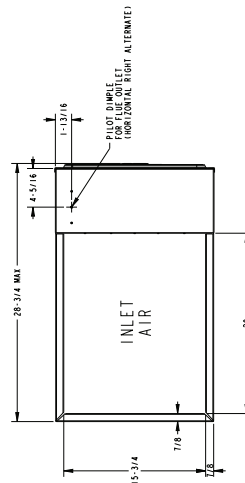
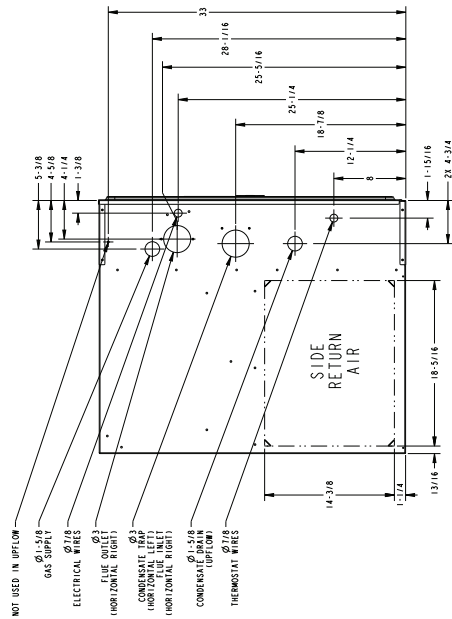
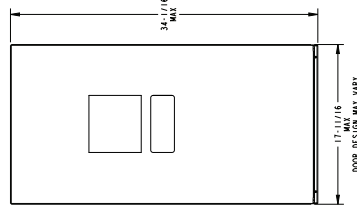
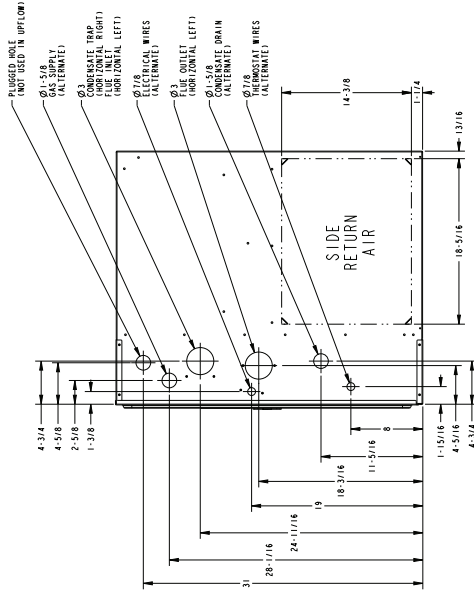
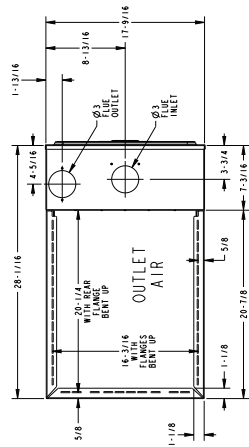
Upflow, Convertible to  
Horizontal Right or  
Horizontal Left  
A951X080BU4SAB



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

# Outline Drawings

## Upflow Furnace B Size Cabinet



# Product Specifications

MODEL	A951X080BU4SAB <sup>(a)</sup>
<b>TYPE</b>	Upflow/Horizontal
<b>RATINGS <sup>(b)</sup></b>	
Input BTUH	80,000
Capacity BTUH (ICS) <sup>(c) (d)</sup>	77,200
Temp. Rise (Min.-Max.)	45 - 75
AFUE (%) <sup>(d)</sup>	96.0
Return Air Temp. (Min. - Max.)	45°F - 80°F
<b>BLOWER DRIVE</b>	DIRECT
Diameter — Width (In.)	11 X 8
No. Used	1
Speeds (No.) <sup>(e)</sup>	9
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	3/4
RPM	1075
Volts/Ph/Hz	120 / 1 / 60
FLA	7.6
<b>COMBUSTION FAN — Type</b>	Centrifugal
Drive — No. Speeds	Direct - 1
Motor HP — RPM	3300
Volts/Ph/Hz	120 / 1 / 60
FLA	2.14
<b>FILTER — Furnished?</b>	No
Type recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 16x25 — 1 in.
<b>VENT PIPE DIAMETER — Min (in.)</b> <sup>(f) (g)</sup>	2 Round
<b>HEAT EXCHANGER</b>	
Type — Fired	409 Stainless Steel
— Unfired	29-4C Stainless Steel

MODEL	A951X080BU4SAB <sup>(a)</sup>
Gauge (Fired)	20
<b>ORIFICES — Main</b>	
Nat. Gas Qty. — Drill Size	4 - 45
LP Gas Qty. — Drill Size	4 - 56
<b>GAS VALVE</b>	Redundant - One Stage
<b>PILOT SAFETY DEVICE</b>	
Type	120 V SiNi Igniter
<b>BURNERS — Type</b>	Multiport Inshot
Number	4
<b>POWER CONN. — V/Ph/Hz <sup>(h)</sup></b>	120 / 1 / 60
Ampacity (In Amps)	11.8
Max. Overcurrent Protection (Amps)	15
<b>PIPE CONN. SIZE (in.)</b>	1/2
<b>DIMENSIONS</b>	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
<b>WEIGHT</b>	
Shipping (Lbs.)/Net (Lbs.)	135/127

<sup>(a)</sup> Meets Energy Star

<sup>(b)</sup> 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.

<sup>(c)</sup> Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3 — latest edition.

<sup>(d)</sup> Based on U.S. government standard tests.

<sup>(e)</sup> 9 Speed constant torque ECM blower motor

<sup>(f)</sup> Refer to the Vent Length Table in the Installer's Guide.

<sup>(g)</sup> All furnace models have a vent outlet diameter that equals 2 in.

<sup>(h)</sup> The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

# Airflow tables

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	Tap		0.1	0.3	0.5	0.7	0.9
<b>A951X080BU4SAB</b>	1	SCFM	911	766	622	477	332
		Watts	94	104	115	125	136
	2	SCFM	1075	963	851	740	628
		Watts	139	153	168	182	197
	3	SCFM	1215	1121	1028	934	840
		Watts	185	202	219	236	253
	4	SCFM	1250	1164	1077	990	903
		Watts	203	221	239	257	274
	5	SCFM	1349	1272	1194	1116	1039
		Watts	251	271	291	310	330
	6	SCFM	1453	1387	1321	1254	1188
		Watts	313	335	356	378	400
	7	SCFM	1505	1438	1372	1305	1239
		Watts	340	362	384	406	427
	8	SCFM	1657	1597	1538	1479	1419
		Watts	453	477	500	524	547
	9	SCFM	1878	1815	1752	1690	1627
		Watts	669	686	702	718	735

# CFM Versus Temperature Rise

**Table 1. Heating Table – Upflow**

CFM VS. TEMPERATURE RISE												
MODEL	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
A951X080BU4SAB		64	61	57	54	51	48	44	39	35		

# 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.

## ENERGY EFFICIENT OPERATION

Furnace is certified by the manufacturer to leak 1.4% or less of nominal air conditioning CFM delivered when pressurized to .5" water column with all inlets, outlets, and drains sealed.

## 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.

## SECONDARY HEAT EXCHANGER

The 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 for strength. Every orientation has at least two venting options. There are no knockouts on cabinet.

## FEATURES AND GENERAL OPERATION

The 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

## **Up to 96.0% AFUE**

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 in. H<sub>2</sub>O external static pressure; setup airflow options down to 290 CFM/ton

## **REGULATORY**

All models are air tight; 1.4% or less air leakage as per ASHRAE 193

Open vestibule design provides a full 34" high open vestibule

## **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

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 aluminized steel

Integrated rail system for easy access if required

Reduces or eliminates need for baffles

## **9 SPEED CONSTANT TORQUE BLOWER MOTOR**

Greater range of operation

Higher efficiency versus a standard PSC blower motor

Taps are electronically selectable at the IFC

## **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](http://www.trane.com) or [www.americanstandardair.com](http://www.americanstandardair.com).



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