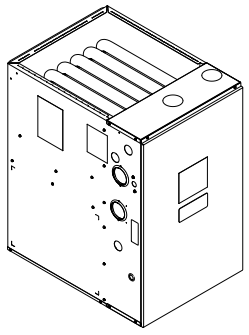
Submittal

Upflow/ Horizontal Left/Right
Single Stage Condensing
Gas Fired Furnace
120,000 BTUH

Upflow, Convertible to Horizontal Right or Horizontal Left
A951X120DU5SAB

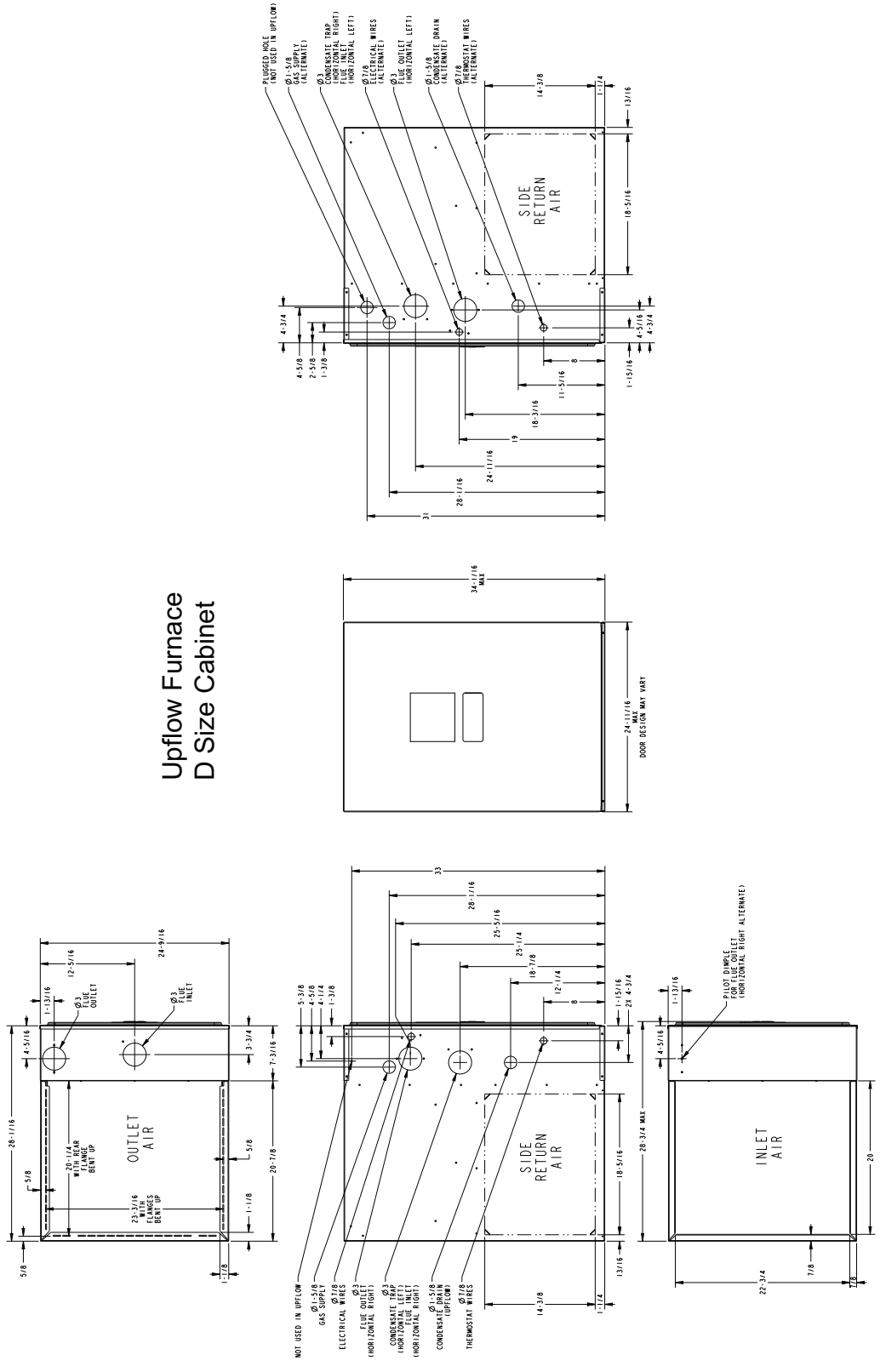


Note: *Graphics in this document are for representation only. Actual model may differ in appearance.*

May 2020

A951X120DU-SUB-1C-EN

Outline Drawings



Product Specifications

MODEL	A951X120DU5SAB [a]
TYPE	Upflow/Horizontal
RATINGS [b]	
Input BTUH	120,000
Capacity BTUH (ICS) [c] [d]	113,400
Temp. Rise (Min.-Max.)	40 - 70
AFUE (%) [d]	95.0
Return Air Temp. (Min. - Max.)	45°F - 80°F
BLOWER DRIVE	DIRECT
Diameter — Width (In.)	11 X 10
No. Used	1
Speeds (No.) [e]	9
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	1
RPM	1075
Volts/Ph/Hz	120 / 1 / 60
FLA	10.6
COMBUSTION FAN — Type	Centrifugal
Drive — No. Speeds	Direct - 1
Motor HP — RPM	3300
Volts/Ph/Hz	120 / 1 / 60
FLA	0.66
FILTER — Furnished?	No
Type recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 24x25 — 1 in.
VENT PIPE DIAMETER — Min (in.) [f] [g]	3 Round
HEAT EXCHANGER	
Type — Fired	409 Stainless Steel
— Unfired	29–4C Stainless Steel

MODEL	A951X120DU5SAB [a]
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	6 - 45
LP Gas Qty. — Drill Size	6 - 56
GAS VALVE	Redundant - One Stage
PILOT SAFETY DEVICE	
Type	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot
Number	6
POWER CONN. — V/Ph/Hz [h]	120 / 1 / 60
Ampacity (In Amps)	14.1
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (in.)	1/2
DIMENSIONS	H x W x D
Uncrated (In.)	34 x 24-1/2 x 28–3/4
Crated (In.)	35-1/2 x 26-1/2 x 30-7/8
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	167/156

[a] Meets Energy Star

[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. 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.

[c] Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

[d] Based on U.S. government standard tests.

[e] 9 Speed constant torque ECM blower motor

[f] Refer to the Vent Length Table in the Installer's Guide.

[g] All furnace models have a vent outlet diameter that equals 2 in.

[h] 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**
A951X120DU5SAB	1	SCFM	707	443	179	-	-
		Watts	46	55	64	-	-
	2	SCFM	1344	1218	1092	966	840
		Watts	163	183	202	222	241
	3	SCFM	1532	1419	1307	1195	1083
		Watts	225	247	268	290	312
	4	SCFM	1584	1477	1370	1263	1156
		Watts	247	270	292	315	338
	5	SCFM	1915	1818	1722	1625	1529
		Watts	401	428	454	480	506
	6	SCFM	2104	2016	1927	1839	1750
		Watts	525	553	582	610	639
	7	SCFM	2132	2045	1958	1870	1783
		Watts	546	575	604	633	662
	8	SCFM	2410	2328	2247	2165	2084
		Watts	833	868	903	937	972
	9	SCFM	2472	2401	2329	2257	2186
		Watts	909	944	979	1013	1048

CFM Versus Temperature Rise

Table 1. Heating Table — Upflow

CFM VS. TEMPERATURE RISE												
MODEL												
	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
A951X120CU5SAB				67	65	60	55	54	51	48	44	41

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

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

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_20 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 aluminumized 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 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.

A951X120DU-SUB-1C-EN 15 May 2020
Supersedes A951X120DU-SUB-1B-EN (November 2019)