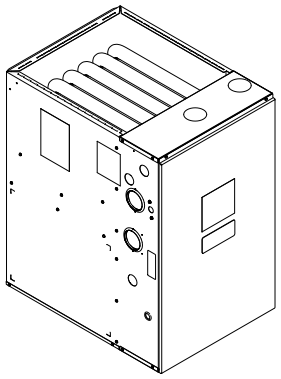
Submittal

Upflow/ Horizontal Left/Right
Two Stage Condensing
Gas Fired Furnace
100,000 BTUH

Upflow, Convertible to Horizontal Right or Horizontal Left
A952V100CU4SAB

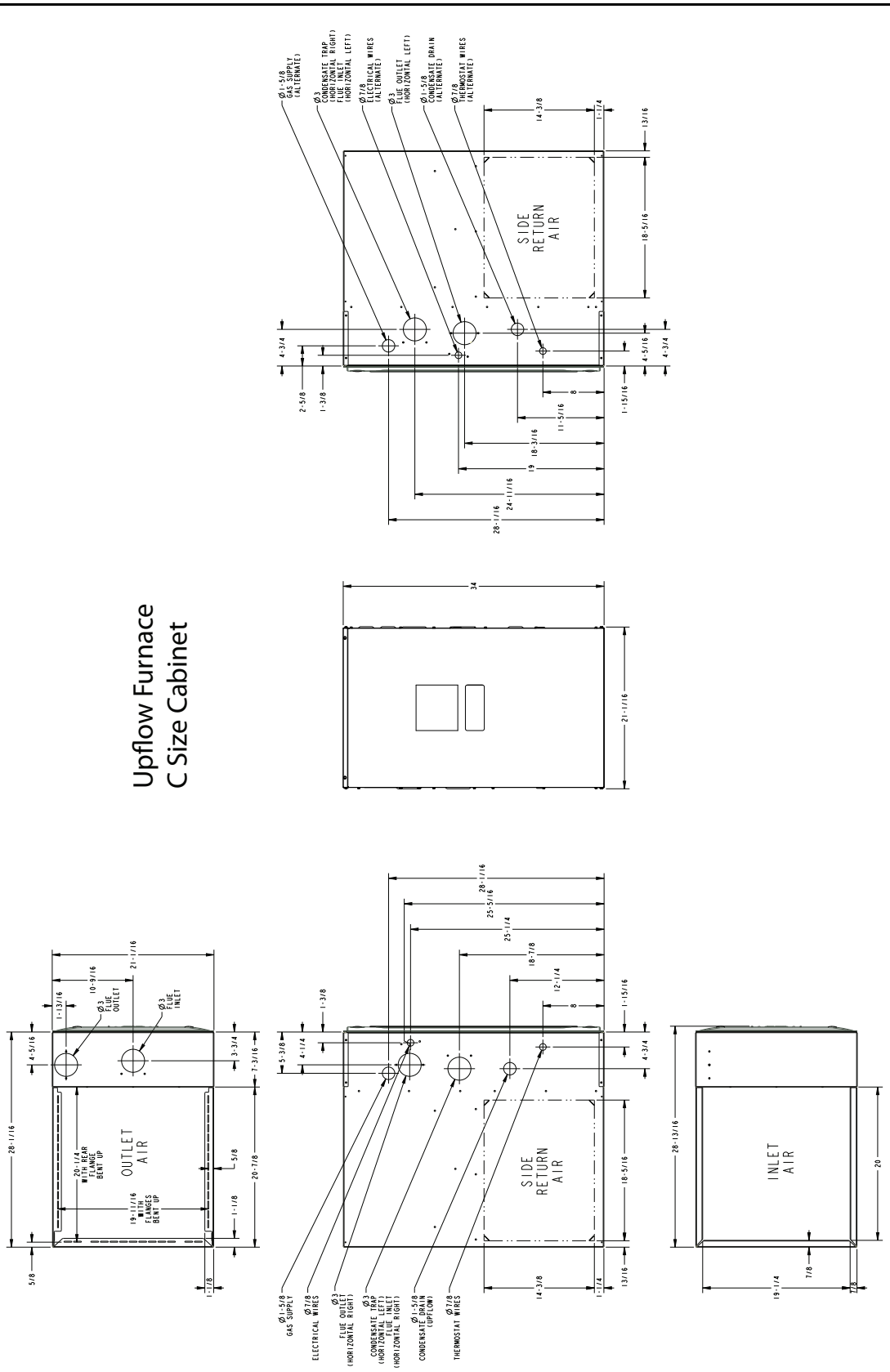


Note: *Graphics in this document are for representation only. Actual model may differ in appearance.*

May 2020

A952V100CU4-SUB-1C-EN

Outline Drawings



Product Specification

MODEL	A952V100CU4SAB[a]
TYPE	Upflow/Horizontal
RATINGS [b]	
1st Stage Input BTUH (ICS)	65,000
1st Stage Capacity BTUH	63,050
2nd Stage Input BTUH	100,000
2nd Stage Capacity BTUH (ICS) [c] [d]	97,000
1st Stage Temp. Rise (Min.-Max.)	25 - 55
2nd Stage Temp. Rise (Min.-Max.)	35 - 65
AFUE (%)	96.0
BLOWER DRIVE	DIRECT
Diameter — Width (In.)	11 X 10
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	3/4
RPM	Variable
Volts/Ph/Hz	120 / 1 / 60
FLA	8.0
COMBUSTION FAN — Type	Centrifugal
Drive — No. Speeds	Direct - 2
Motor HP — RPM	3300/2600
Volts/Ph/Hz	120 / 1 / 60
FLA	0.66
FILTER — Furnished?	No
Type recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 20x25 — 1 in.
VENT PIPE DIAMETER — Min (in.) [e] [f]	2 Round
HEAT EXCHANGER	
Type — Fired	409 Stainless Steel

MODEL	A952V100CU4SAB[a]
— Unfired	29–4C Stainless Steel
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	5 - 45
LP Gas Qty. — Drill Size	5- 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot
Number	5
POWER CONN. — V/Ph/Hz [g]	120 / 1 / 60
Ampacity (In Amps)	10.8
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (in.)	1/2
DIMENSIONS	H x W x D
Uncrated (In.)	34 x 21 x 28–3/4
Crated (In.)	35-1/2 x 23 x 30-7/8
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	154/144

[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 — latest edition.

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

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

[f] All A952V furnace models have a vent outlet diameter that equals 2 in.

[g] The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

Heating and Cooling Airflow Tables

Table 1. A952V100CU4SAB Heating Airflow

A952V100CU4SAB Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter								
				1st Stage Capacity = 63,700 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	1146	CFM	1139	1128	1118	1107	1097
			Temp. Rise	52	52	52	52	53
			Watts	139	192	246	299	352
	Medium Low	1280	CFM	1275	1260	1244	1229	1213
			Temp. Rise	46	47	47	48	48
			Watts	187	239	291	343	395
	Medium	1359	CFM	1304	1287	1270	1253	1236
			Temp. Rise	45	46	46	47	47
			Watts	211	272	332	393	454
	High [a]	1446	CFM	1437	1436	1436	1435	1434
			Temp. Rise	41	41	41	41	41
			Watts	255	311	367	423	479
Heating 2nd Stage	Low	1450	CFM	1449	1445	1440	1435	1431
			Temp. Rise	63	63	63	63	63
			Watts	272	336	401	466	531
	Medium Low	1620	CFM	1664	1651	1639	1626	1613
			Temp. Rise	55	55	55	56	56
			Watts	354	424	493	562	631
	Medium	1720	CFM	1694	1687	1681	1674	1667
			Temp. Rise	53	54	54	54	54
			Watts	408	484	559	635	711
	High [a]	1830	CFM	1849	1827	1805	1783	1761
			Temp. Rise	49	50	50	51	51
			Watts	525	579	633	687	741

[a] Factory Setting.

Table 2. A952V100CU4SAB / A952V100CD4SAB Cooling Airflow

A952V100CU4SAB / A952V100CD4SAB Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter								
Cooling	**Unit Outdoor**	**Airflow Setting (CFM/ton)**		**External Static Pressure**				
				0.1	**0.3**	**0.5**	**0.7**	**0.9**
Cooling	2.5 Ton	Cooling 450 CFM/Ton	CFM	1125	1125	1125	1125	1125
			Watts	123	178	236	296	360
		Cooling 420 CFM/Ton	CFM	1050	1050	1050	1050	1050
			Watts	104	156	210	268	329
		Cooling 400 CFM/Ton	CFM	1000	1000	1000	1000	1000
			Watts	93	142	195	251	309
		Cooling 370 CFM/Ton	CFM	925	925	925	925	925
			Watts	77	123	173	226	282
		Cooling 350 CFM/Ton	CFM	875	875	875	875	875
			Watts	68	112	160	211	265
		Cooling 330 CFM/Ton	CFM	825	825	825	825	825
			Watts	60	102	147	196	249
		Cooling 310 CFM/Ton	CFM	775	775	775	775	775
			Watts	52	92	135	183	234
		Cooling 290 CFM/Ton	CFM	725	725	725	725	725
			Watts	45	83	125	170	220
Cooling	3.0 Ton	Cooling 450 CFM/Ton	CFM	1350	1350	1350	1350	1350
			Watts	194	259	326	396	468
		Cooling 420 CFM/Ton	CFM	1260	1260	1260	1260	1260
			Watts	163	224	287	353	422
		Cooling 400 CFM/Ton	CFM	1200	1200	1200	1200	1200
			Watts	144	202	263	327	393
		Cooling 370 CFM/Ton	CFM	1110	1110	1110	1110	1110
			Watts	119	173	231	291	354
		Cooling 350 CFM/Ton	CFM	1050	1050	1050	1050	1050
			Watts	104	156	210	268	329
		Cooling 330 CFM/Ton	CFM	990	990	990	990	990
			Watts	91	140	192	247	306
		Cooling 310 CFM/Ton	CFM	930	930	930	930	930
			Watts	78	125	174	228	284
		Cooling 290 CFM/Ton	CFM	870	870	870	870	870
			Watts	67	111	158	209	264
Cooling	3.5 Ton	Cooling 450 CFM/Ton	CFM	1575	1575	1575	1575	1575
			Watts	289	363	440	519	600
		Cooling 420 CFM/Ton	CFM	1470	1470	1470	1470	1470
			Watts	241	311	383	458	535
		Cooling 400 CFM/Ton	CFM	1400	1400	1400	1400	1400
			Watts	213	280	349	421	495
		Cooling 370 CFM/Ton	CFM	1295	1295	1295	1295	1295
			Watts	175	237	302	369	439
		Cooling 350 CFM/Ton	CFM	1225	1225	1225	1225	1225
			Watts	152	211	273	338	405
		Cooling 330 CFM/Ton	CFM	1155	1155	1155	1155	1155
			Watts	131	187	247	308	373
		Cooling 310 CFM/Ton	CFM	1085	1085	1085	1085	1085
			Watts	113	166	222	281	343
		Cooling 290 CFM/Ton	CFM	1015	1015	1015	1015	1015
			Watts	96	146	199	256	315
Cooling	4.0 Ton [a]	Cooling 450 CFM/Ton	CFM	1800	1800	1800	1800	1714
			Watts	410	494	580	669	695
		Cooling 420 CFM/Ton	CFM	1680	1680	1680	1680	1680
			Watts	342	420	502	585	671
		Cooling 400 CFM/Ton	CFM	1600	1600	1600	1600	1600
			Watts	301	376	454	534	617
		Cooling 370 CFM/Ton	CFM	1480	1480	1480	1480	1480
			Watts	246	316	388	464	541
		Cooling 350 CFM/Ton	CFM	1400	1400	1400	1400	1400
			Watts	213	280	349	421	495
		Cooling 330 CFM/Ton	CFM	1320	1320	1320	1320	1320
			Watts	183	247	313	381	452
		Cooling 310 CFM/Ton	CFM	1240	1240	1240	1240	1240
			Watts	157	216	279	344	412
		Cooling 290 CFM/Ton	CFM	1160	1160	1160	1160	1160
			Watts	133	189	248	310	375

[a] Factory Setting

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. Also contains dry contacts for EAC and HUM.

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 variable speed 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

96.0% AFUE ACROSS ALL MODELS

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

8 SKU's — Upflow / Horizontal Left / Horizontal Right

6 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

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 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

VARIABLE SPEED BLOWER MOTOR

Increased efficiency

Improved home comfort

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.

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