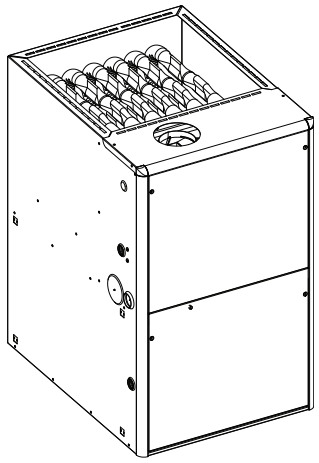
Submittal

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

Upflow, Convertible to Horizontal Right or Horizontal Left

L9X1C100U5VSAA

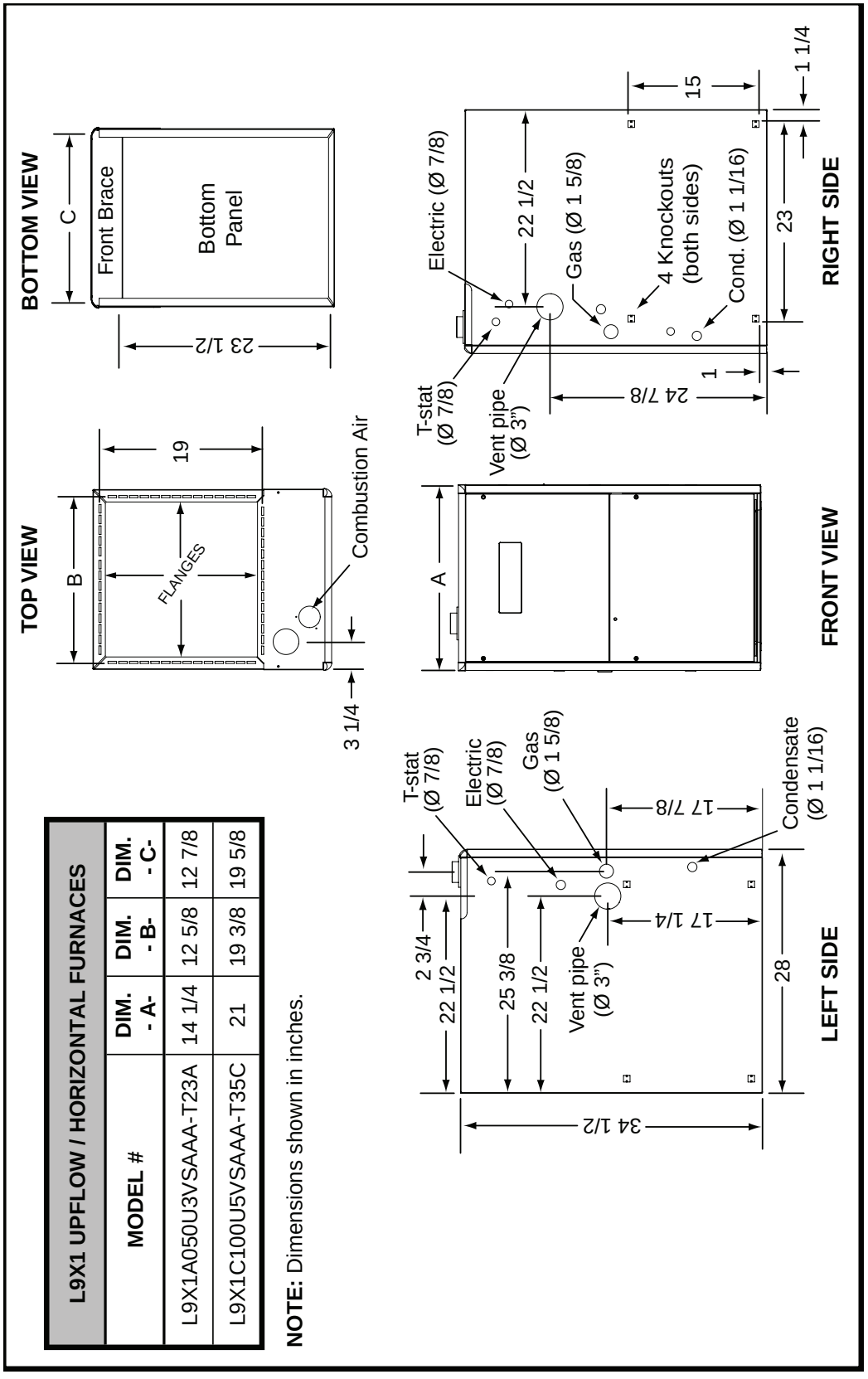


Note: *Graphics in this document are for representation only. Actual model may differ in appearance.*

March 2021

L9X1C100U5-SUB-1A-EN

Outline Drawings



L9X1 UPFLOW / HORIZONTAL FURNACES			
MODEL #	DIM. - A-	DIM. - B-	DIM. - C-
L9X1A050U3VSAAA-T23A	14 1/4	12 5/8	12 7/8
L9X1C100U5VSAAA-T35C	21	19 3/8	19 5/8

NOTE: Dimensions shown in inches.

Product Specifications

MODEL	L9X1C100U5VSAA[a]
TYPE	Upflow / Horizontal
RATINGS [b]	
Input BTUH	100,000
Capacity BTUH (ICS) [c] [d]	97,000
Temp. Rise (Min.-Max.)	35 - 65
AFUE (%) [d]	95.0
Return Air Temp. (Min. - Max.)	45°F - 80°F
BLOWER DRIVE	DIRECT
Diameter — Width (In.)	11 X 11
No. Used	1
Speeds (No.) [e]	9
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	1
RPM	1050
Volts/Ph/Hz	120 / 1 / 60
FLA	10
COMBUSTION FAN — Type	Centrifugal
Drive — No. Speeds	Direct - VSPD
Motor HP — RPM	4700
Volts/Ph/Hz	120 / 1 / 60
FLA	1
FILTER — Furnished?	No
Type recommended	High Velocity
Hi Vel. (No.-Size-Thk.) in.	1 - 20 x 25 - 1
VENT PIPE DIAMETER — Min (in.) [f] [g]	2 Round
HEAT EXCHANGER	
Type — Fired	Aluminized Steel
— Unfired	Stainless Steel
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	6 - 16
GAS VALVE	Redundant - One Stage
PILOT SAFETY DEVICE	
Type	120 V SiNi Igniter
BURNERS — Type	Premix
Number	6
POWER CONN. — V/Ph/Hz [h]	120 / 1 / 60
Ampacity (In Amps)	12.5
Max. Overcurrent Protection (Amps)	20
PIPE CONN. SIZE (in.)	1/2
DIMENSIONS	H x W x D
Uncrated (In.)	34-1/2 x 21 x 28
Crated (In.)	35-3/4 x 24-1/4 x 31
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	150/136

[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

Table 1. Cooling Airflow (CFM)

MODEL NAME/ HEATING INPUT	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
			CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
L9X1C100U5VSAAA-T35A 100,000 BTU/Hr Input 95,000 BTU/Hr Output	Bottom Only	9	2,250	2,250	2,190	2,130	2,080	2,025	1,975	1,915
		8	2,055	2,010	1,970	1,900	1,840	1,790	1,730	1,675
		7	1,900	1,845	1,795	1,750	1,700	1,650	1,575	1,520
		6*	1,850	1,790	1,745	1,700	1,650	1,595	1,535	1,470
		5**	1,745	1,690	1,645	1,590	1,535	1,485	1,420	1,365
		4	1,480	1,420	1,360	1,300	1,230	1,165	1,110	1,055
		3	1,315	1,245	1,170	1,100	1,025	975	915	860
		2	1,140	1,055	975	890	820	765	705	660
		1***	1,025	920	830	745	690	625	580	500
	Side Only	9	2,155	2,110	2,075	2,020	1,975	1,965	1,950	1,900
		8	1,980	1,940	1,890	1,850	1,805	1,760	1,710	1,650
		7	1,835	1,785	1,740	1,685	1,635	1,585	1,545	1,495
		6*	1,785	1,740	1,690	1,640	1,590	1,540	1,490	1,440
		5**	1,690	1,640	1,595	1,540	1,490	1,440	1,390	1,340
		4	1,435	1,375	1,300	1,250	1,195	1,140	1,080	1,020
		3	1,265	1,190	1,140	1,070	1,005	935	875	815
		2	1,095	1,015	945	870	790	715	665	615
		1***	980	905	835	740	665	590	525	440
	Bottom + Side	9	2,245	2,195	2,155	2,095	2,065	2,070	2,015	1,950
		8	2,080	2,030	1,980	1,930	1,880	1,820	1,765	1,705
		7	1,915	1,875	1,820	1,765	1,715	1,655	1,600	1,535
		6*	1,865	1,810	1,755	1,695	1,645	1,585	1,530	1,485
		5**	1,760	1,705	1,655	1,595	1,535	1,480	1,430	1,370
		4	1,495	1,430	1,365	1,290	1,235	1,170	1,115	1,065
		3	1,325	1,245	1,175	1,095	1,035	970	910	855
		2	1,175	1,065	965	900	810	775	705	635
		1***	1,040	930	850	750	680	610	560	475

* Denotes the factory (default) COOL setting.
** Denotes the factory (default) HEAT setting.
*** Denotes the factory (default) FAN setting. If an alternate speed is to be used, refer to the installation instructions for Speed Tap Selection.

Notes:

1. *To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.*
2. *Data is shown without filter.*
3. *Temperature rises in the table are approximate. Actual temperature rises may vary.*
4. *Individual cells shaded in gray indicate a temperature rise outside of the recommended range.*
5. *To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.*

CFM Versus Temperature Rise

Table 2. Heating Airflow (CFM) and Temperature Rise (˚F)

MODEL NAME/ HEATING INPUT	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)									
			0.1		0.2		0.3		0.4		0.5	
			CFM	RISE	CFM	RISE	CFM	RISE	RISE	RISE	CFM	RISE
L9X1C100U5VSAAA-T35A 100,000 BTU/Hr Input 95,000 BTU/Hr Output	Bottom Only	9										
		8										
		7										
		6*	1,850	48	1,790	49	1,745	50	1,700	52	1650	53
		5**	1,745	50	1,690	52	1,645	53	1,590	55	1,535	57
		4	1,480	59	1,420	62	1,360	65				
		3										
		2										
		1***										
	Side Only	9										
		8										
		7										
		6*	1,785	49	1,740	51	1,690	52	1,640	54	1,540	55
		5**	1,690	52	1,640	54	1,595	55	1,540	57	1,490	59
		4	1,435	61	1,375	64						
		3										
		2										
		1***										
	Bottom + Side	9										
		8										
		7										
		6*	1,865	47	1,810	49	1,755	50	1,695	52	1,645	53
		5**	1,760	50	1,705	52	1,655	53	1,595	55	1,535	57
		4	1,495	59	1,430	62	1,365	64				
		3										
		2										
		1***										

* Denotes the factory (default) COOL setting.
** Denotes the factory (default) HEAT setting.
*** Denotes the factory (default) FAN setting. If an alternate speed is to be used, refer to the installation instructions for Speed Tap Selection.

Notes:

1. *To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.*
2. *Data is shown without filter.*
3. *Temperature rises in the table are approximate. Actual temperature rises may vary.*
4. *Individual cells shaded in gray indicate a temperature rise outside of the recommended range.*
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General Features

NATURAL GAS MODELS

Central Heating furnace designs are certified by the American Gas Association for natural 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 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.

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. L9X1 also contains dry contacts for EAC and HUM.

ENERGY EFFICIENT OPERATION

L9X1 Furnace is certified by the manufacturer to leak 2% or less of nominal air conditioning CFM delivered when pressurized to 0.5" water column with all inlets, outlets, and drains sealed.

AIR DELIVERY

The 9 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 L9X1 furnace has a stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost.

STYLING

Heavy gauge steel is used in the cabinet with a painted finish for strength and beauty. Every orientation has at least two venting options.

FEATURES AND GENERAL OPERATION

The L9X1 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 95.0% AFUE ON L9X1 FURNACE MODELS

Meets utility rebates

Lowers utility bills

ELECTRICALLY EFFICIENT

Efficient airflow design reduces electrical energy use

34.5 INCH TALL

Lighter, easier to move and fit into tight spaces like short basements or tight closets

Works great with larger, high-efficiency coils

AIRFLOW

At least 400 CFM/ton at 0.5 in. H_20 external static pressure

REGULATORY

Models are certified to operate with NOx levels below 14 ng/J

DIMENSIONS

Industry standard width of 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 on L9X1 models

All Molex connections; no spade terminals

Low voltage labeled above and below

TUBULAR ALUMINIZED STEEL PRIMARY HEAT EXCHANGER
STAINLESS STEEL SECONDARY HEAT EXCHANGER

THREE–WAY MULTI-POISE (UPFLOW, HORIZONTAL LEFT AND RIGHT)

Easier to specify

Shipped ready to install (no conversion 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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Supersedes (New)