American Standard
HEATING & AIR CONDITIONING

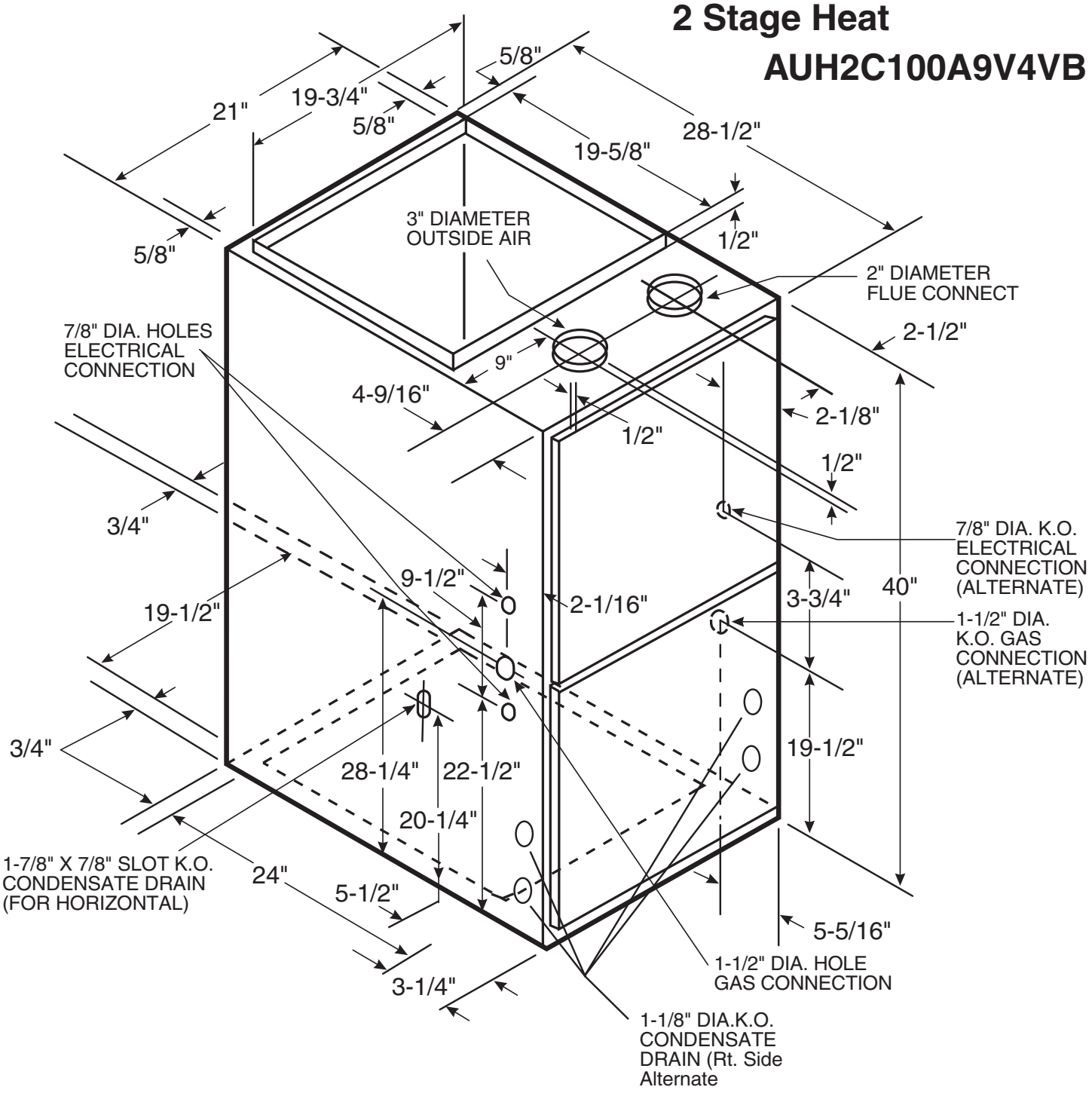
AUH2C100-SPEC-1D

TAG: _____

SPECIFICATION

Upflow/Horizontal Direct Vent Gas Furnace Variable Speed Inducer 2 Stage Heat

AUH2C100A9V4VB



*UH2C100A9V4V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
1st Stage Capacity = 62,855 2nd Stage Capacity = 96,700									
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	873 64 100	893 63 145	900 62 195	899 62 240	902 62 290
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	971 58 115	997 56 170	1006 56 220	1022 55 280	1029 54 335
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	1136 49 160	1146 49 230	1165 48 295	1180 47 365	1184 47 425
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1258 44 225	1298 43 300	1319 42 390	1328 42 450	1286 44 490
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	1260 68 213	1304 66 305	1329 65 380	1334 65 460	1317 65 510
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	1464 59 315	1471 59 405	1478 58 485	1478 58 560	1350 64 540
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	1631 53 450	1678 51 570	1690 51 670	1579 55 645	1419 61 585
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1846 47 640	1867 46 760	1794 48 770	1644 52 700	1498 57 650

NOTES:
* First letter may be "A" or "T"
** Factory setting

*UH2C100A9V4V FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
2.5	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	808 75	824 125	840 170	835 210	830 250
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	938 100	963 160	959 205	964 255	975 310
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	1058 150	1100 200	1121 265	1136 330	1142 395
3.0	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	1004 120	1010 175	1027 230	1044 285	1050 345
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	1141 170	1190 245	1214 310	1229 380	1234 450
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1336 250	1375 330	1387 410	1388 480	1384 545
3.5	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1153 180	1206 250	1230 320	1239 395	1244 460
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1390 285	1418 465	1439 445	1441 515	1373 540
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1575 400	1606 495	1632 590	1596 645	1445 590
4.0	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1388 290	1423 360	1444 440	1444 515	1390 540
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1610 415	1641 515	1666 635	1607 650	1449 595
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1847 630	1863 735	1816 780	1687 720	1532 665

NOTES: *First letter may be "A" or "T"
1. At Continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
NORMAL airflow (400 cfm/ton) is typical setting;
HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

INDOOR BLOWER TIMING

Heating: The ICM Fan Control controls the variable speed indoor blower. The blower "on" time is fixed at 45 seconds after ignition. The FAN-OFF period is field selectable by dip switches #2 and #3 on the Integrated Furnace Control at 60, 100, 140, or 180 seconds. The factory setting is 100 seconds, (See unit wiring diagram).

Cooling: The fan delay-off period is set by dip switches on the ICM Fan Control board connected to the Integrated Furnace Control. The options for cooling delay off is field selectable by dip switches #5 and #6. However, dip switch #1 on the Integrated Furnace Control must be set to "ON" for cooling mode to function properly.

The following table and graph explain the delay-off settings:

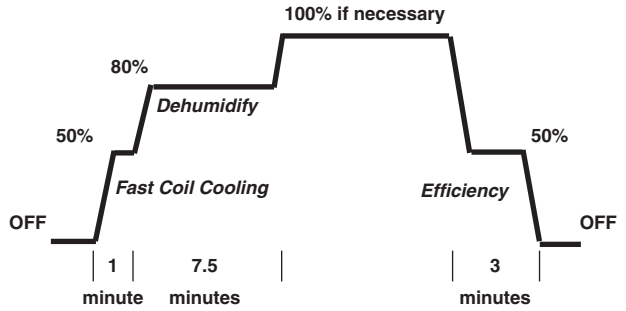
** - This selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph below shows the ramping process.

COOLING OFF - DELAY OPTIONS

SWITCH SETTINGS		SELECTION	NOMINAL AIRFLOW
5 - OFF	6 - OFF	NONE	SAME
5 - ON	6 - OFF	1.5 MINUTES	100% *
5 - OFF	6 - ON	3 MINUTES	50%
5 - ON	6 - ON	**	50 - 100%

* - This setting is equivalent to BAY24X045 relay benefit

** - This selection provides ***ENHANCED MODE,*** which is a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. See Wiring Diagram notes on the unit or in the Service Facts for complete wiring setup for ***ENHANCED MODE***. The graph which follows, shows the ramping process.



GENERAL DATA ①

MODEL	*UH2C100A9V4VB
TYPE	Upflow / Horizontal
RATINGS ②	
1st Stage Input BTUH	65,000
1st Stage Capacity BTUH (ICS) ③	62,855
2nd Stage Input BTUH	100,000
2nd Stage Capacity BTUH (ICS) ③	96,700
AFUE	96.7
Temp. rise (Min.-Max.) °F.	35 - 65
BLOWER DRIVE	DIRECT
Diameter - Width (In.)	10 x 10
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	3/4
R.P.M.	Variable
Volts / Ph / Hz	115/1/60
FLA	9.6
COMBUSTION FAN - Type	Centrifugal
Drive - No. Speeds	Direct - Variable
Motor HP - RPM	1/50 - 5000
Volts / Ph / Hz	33 - 110/3/60 - 180
FLA	1.0
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 20x25 - 1 in.
VENT — Size (in.)	3 Round
HEAT EXCHANGER	
Type -Fired	Aluminized Steel - Type I
-Unfired	
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas. Qty. — Drill Size	5 — 45
L.P. Gas Qty. — Drill Size	5 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Igniter
BURNERS — Type	Multiport Inshot
Number	5
POWER CONN. — V / Ph / Hz ④	115/1/60
Ampacity (In Amps)	13.2
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (IN.)	1/2
DIMENSIONS	H x W x D
Crated (In.)	41-3/4 x 23 x 30-1/2
WEIGHT	
Shipping (Lbs.) / Net (Lbs)	197 / 185

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3
② 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.
③ Based on U.S. government standard tests.
④ The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

Mechanical Specifications

NATURAL GAS MODELS
Central Heating furnace designs are certified by to ANSI Z21.47 / CSA 2.3 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 has solid state devices, which continuously monitor 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 **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 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** without changing burners.

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 connection points for E.A.C./Humidifier.

ENERGY EFFICIENT OPERATION
Furnace is certified to leak 2% 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. The blower door safety switch will prevent or terminate furnace operation when the blower door is removed.

SECONDARY HEAT EXCHANGER
The FREEDOM 95 has a special type 29-4C™ stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost instead.

STYLING
Heavy gauge steel and "wrap-around" cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. The heat exchanger section of the cabinet is completely lined with foil faced fiberglass insulation. This results in quiet and efficient operation due to the excellent acoustical and insulating qualities of fiberglass. Built-in bottom pan and alternate bottom, left or right side return air connection provision.

FEATURES AND GENERAL OPERATION
The FREEDOM 95 High Efficiency Gas Furnaces utilize an Adaptive Heat Up 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 switch.

American Standard
Heating & Air Conditioning
6200 Troup Highway
Tyler, TX 75711-9010
www.americanstandardair.com