American Standard
HEATING & AIR CONDITIONING

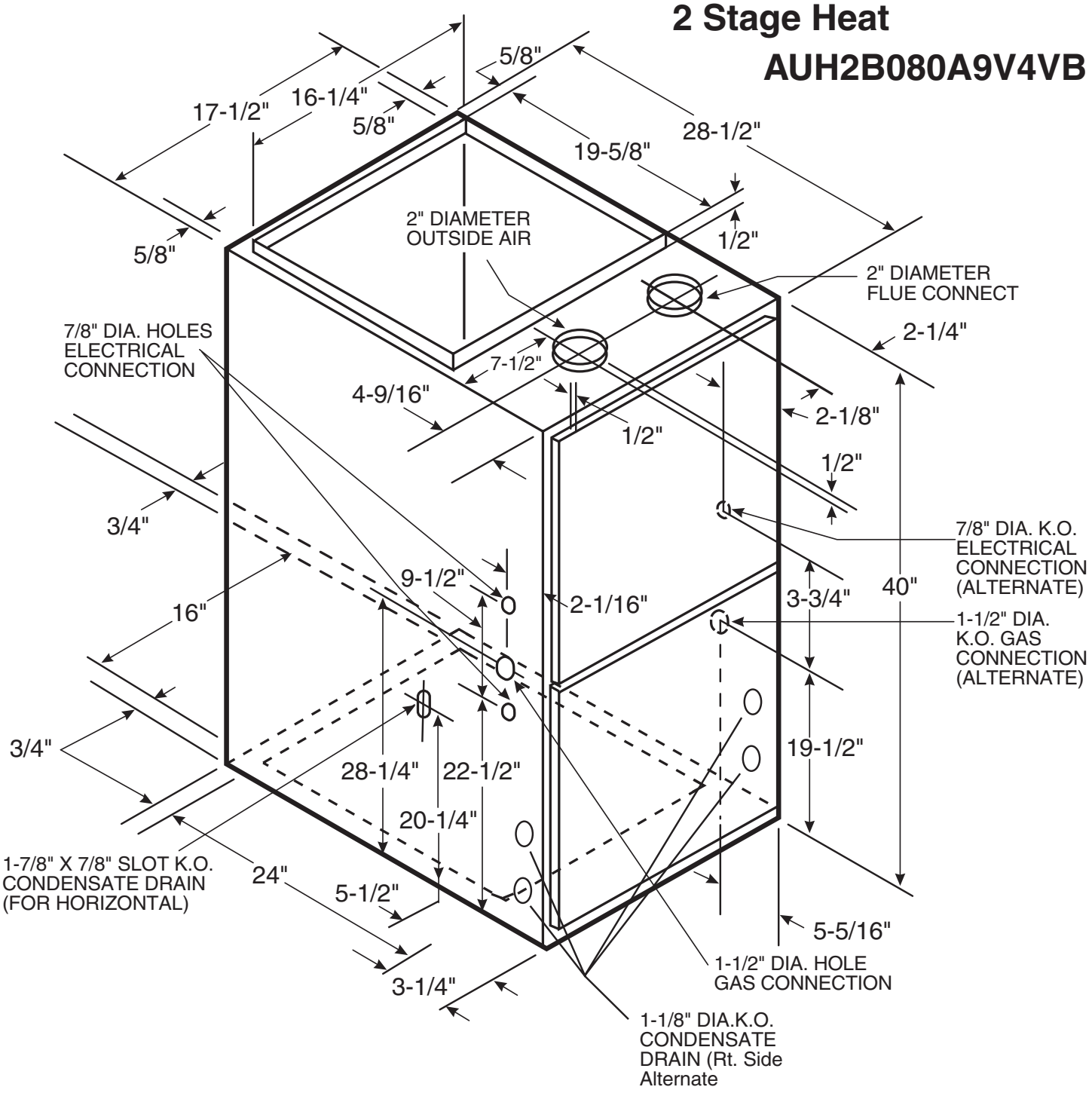
AUH2B080-SPEC-2C

TAG: _____

SPECIFICATION

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

AUH2B080A9V4VB



*UH2B080A9V4V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
					50,440 77,600				
	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	800 56 105	800 56 140	800 56 180	800 56 220	800 56 265
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	860 52 115	880 51 165	890 50 215	920 48 265	910 49 320
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	960 46 150	990 45 200	1000 44 230	1020 44 310	1010 44 350
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1080 41 195	1110 40 255	1120 40 315	1120 40 365	1080 41 390
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	1100 62 205	1100 62 260	1120 61 320	1120 61 370	1090 63 400
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	1210 57 265	1240 55 340	1260 54 410	1260 54 470	1130 61 430
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	1360 50 365	1390 49 445	1400 49 500	1360 50 535	1210 57 475
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1360 50 355	1390 49 450	1400 49 520	1350 51 535	1180 58 465

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

*UH2B080A9V4V 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	857 107	849 143	841 179	833 223	825 266
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	970 158	971 205	973 251	966 298	960 345
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	1082 209	1093 266	1104 323	1099 374	1095 424
3.0	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	1004 153	1019 210	1035 267	1038 321	1041 374
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	1163 249	1173 311	1184 372	1179 426	1174 480
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1323 345	1328 411	1332 477	1320 532	1307 586
3.5	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1176 254	1188 317	1200 380	1195 437	1190 494
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1356 379	1362 446	1368 514	1353 568	1339 623
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1536 503	1536 575	1536 647	1512 699	1488 751
4.0	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1376 374	1367 429	1359 483	1354 547	1348 611
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1562 530	1562 604	1563 677	1531 720	1499 765
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1768 757	1759 830	1749 902	1654 866	1559 829

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:

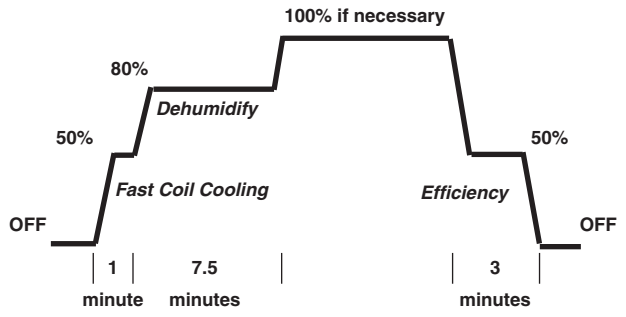
** - This selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph below shows the ramping process.

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	*UH2B080A9V4VB
TYPE	Upflow / Horizontal
RATINGS ②	
1st Stage Input BTUH	52,000
1st Stage Capacity BTUH (ICS) ③	50,440
2nd Stage Input BTUH	80,000
2nd Stage Capacity BTUH (ICS) ③	77,600
AFUE	97
Temp. rise (Min.-Max.) °F.	35 - 65
BLOWER DRIVE	DIRECT
Diameter - Width (In.)	11 x 8
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 - 17x25 - 1 in.
VENT — Size (in.)	2 Round
HEAT EXCHANGER	
Type -Fired	Aluminized Steel - Type I
-Unfired	
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas. Qty. — Drill Size	4 — 45
L.P. Gas Qty. — Drill Size	4 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Igniter
BURNERS — Type	Multiport Inshot
Number	4
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 19-1/2 x 30-1/2
WEIGHT	
Shipping (Lbs.) / Net (Lbs)	170 / 158

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