American Standard
HEATING & AIR CONDITIONING

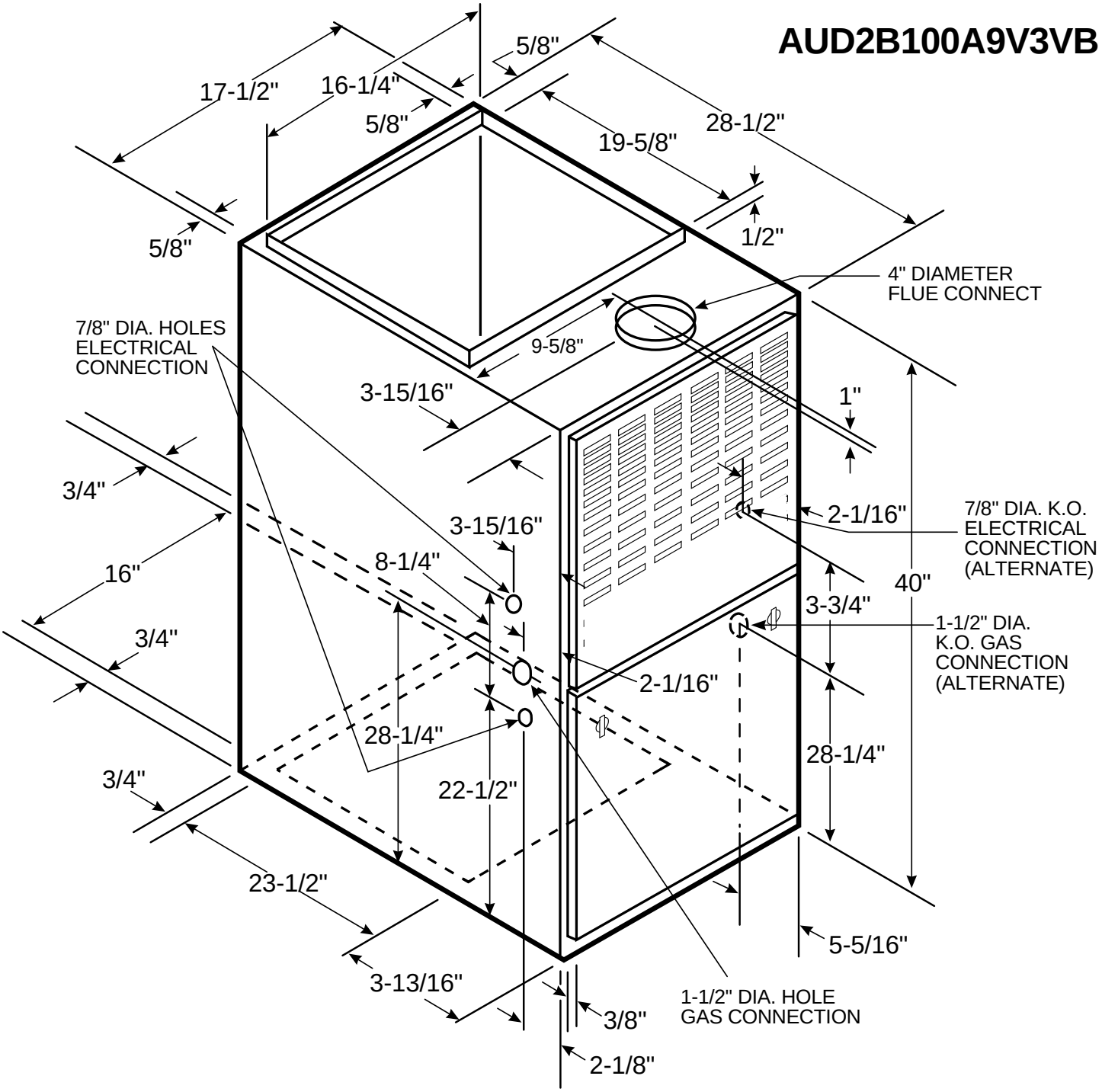
AUD2B100A9V-SPEC-2

TAG: _____

Specification

Upflow / Horizontal Gas Furnace - Variable Speed - 2 Stage Heat

AUD2B100A9V3VB



*UD2B100A9V3VB FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
	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	751 64 86	796 61 132	817 59 175	832 58 218	838 57 263
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	862 56 121	921 52 185	953 51 233	967 50 285	954 50 322
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	959 50 148	1002 48 210	1036 46 280	1036 46 325	1003 48 355
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	1099 67 227	1124 66 287	1149 64 355	1157 64 415	1055 70 395
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	1286 58 365	1321 56 450	1313 56 455	1215 61 475	1119 66 450
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1399 53 465	1419 52 570	1347 55 545	1265 59 520	1163 64 485

*UD2B100A9V3VB 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
1.5	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	516 50	536 75	551 105	547 135	530 165
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	583 59	615 92	633 127	621 157	618 185
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	681 70	697 110	701 140	709 180	712 215
2.0	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	680 75	726 120	735 150	741 190	745 230
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	769 103	819 145	843 190	858 235	865 286
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	882 130	938 190	961 245	975 300	970 345
2.5	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	831 180	903 180	928 230	935 275	935 320
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	979 167	1036 240	1053 295	1053 345	1015 368
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1121 245	1147 310	1176 383	1167 442	1055 396
3.0**	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1061 210	1081 265	1095 320	1101 382	1032 380
	NORMAL ** (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1185 278	1223 364	1251 435	1205 455	1101 426
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1351 425	1372 503	1343 535	1248 505	1168 480

NOTES:
1. * First Letter may be "A" or "T"
2. ** Factory setting
3. Continuous Fan Setting: Heating or Cooling airflow is approximately 50% of selected Cooling value.
4. For Variable Speed: low speed airflows are approximately 30% of listed values.
5. LOW 350 cfm/ton is recommended for Variable Speed application for COMFORT & HUMID CLIMATE setting; NORMAL is 400 cfm/ton; HIGH 450 cfm/ton is for DRY CLIMATE setting

INDOOR BLOWER TIMING

Heating: The ECM 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 ECM 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:

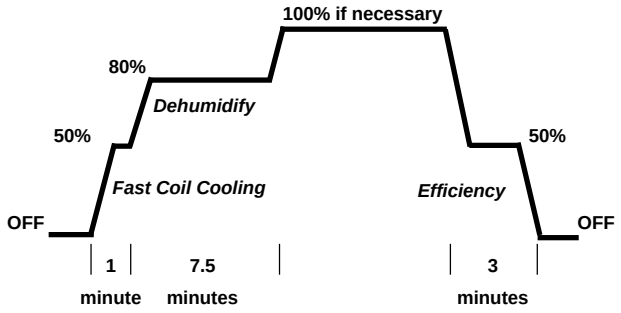
** - This selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph below shows the ramping process.

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

TYPE	Upflow / Horizontal
RATINGS 2	
1st Stage Input BTUH	65,000
1st Stage Capacity BTUH (ICS) **3**	52,000
2nd Stage Input BTUH	100,000
2nd Stage Capacity BTUH (ICS) **3**	80,000
Temp. rise (Min.-Max.) °F.	40 - 70
BLOWER DRIVE	DIRECT
Diameter-Width (In.)	10 x 7
No. Used	1
Speeds (No.)	VARIABLE SPEED
CFM vs. in. w.g.	See Fan Performance
Motor HP	1/2
R.P.M.	VARIABLE
Volts/Ph/Hz	115/1/60
COMBUSTION FAN - Type	Centrifugal
Drive - No. Speeds	Direct - 2
Motor HP - RPM	1/75 - 2708 / 1868
Volts/Ph/Hz	115/1/60
F.L. Amps	0.87 / 0.49
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.) Shipped	1 - 17 x 25 - 1in.

VENT COLLAR — Size (in.)	4 Round
HEAT EXCHANGER	
Type-Fired	Alum. Steel
-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 Ignition
BURNERS — Type	Multiport Inshot
Number	5
POWER CONN. — V/Ph/Hz ④	115/1/60
Ampacity (In Amps)	10.8
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
Uncrated (In.)	40 x 21 x 28-1/2
WEIGHT	
Shipping (Lbs.) / Net (Lbs)	142/ 132

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 applicaitons, 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 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 extra 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 discharge of gas fumes to the outside, allows common venting with hot water heater.

BURNERS — Multi-port, in-shot 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.

AIR DELIVERY — The variable speed, direct-drive blower motor, with sufficient airflow range for most heating and cooling requirements, 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. (Fan relay and 35VA control transformer is standard).

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.

FEATURES AND GENERAL OPERATION — These High Efficiency Gas Furnaces employ a Hot Surface Ignition system, which eliminates the waste of a constantly 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 differential switch.

American Standard
HEATING & AIR CONDITIONING

Technical Literature - Printed in U.S.A.

American Standard
Heating & Air Conditioning
6200 Troup Highway
Tyler, TX 75707

Library	-
Product Section	-
Product	Furnace
Model	AUD2-9V
Literature Type	Specification
Sequence	-
Date	08/10
File No.	AUD2B100A9V-SPEC-2
Supersedes	AUD100R9V-SPEC-2A