

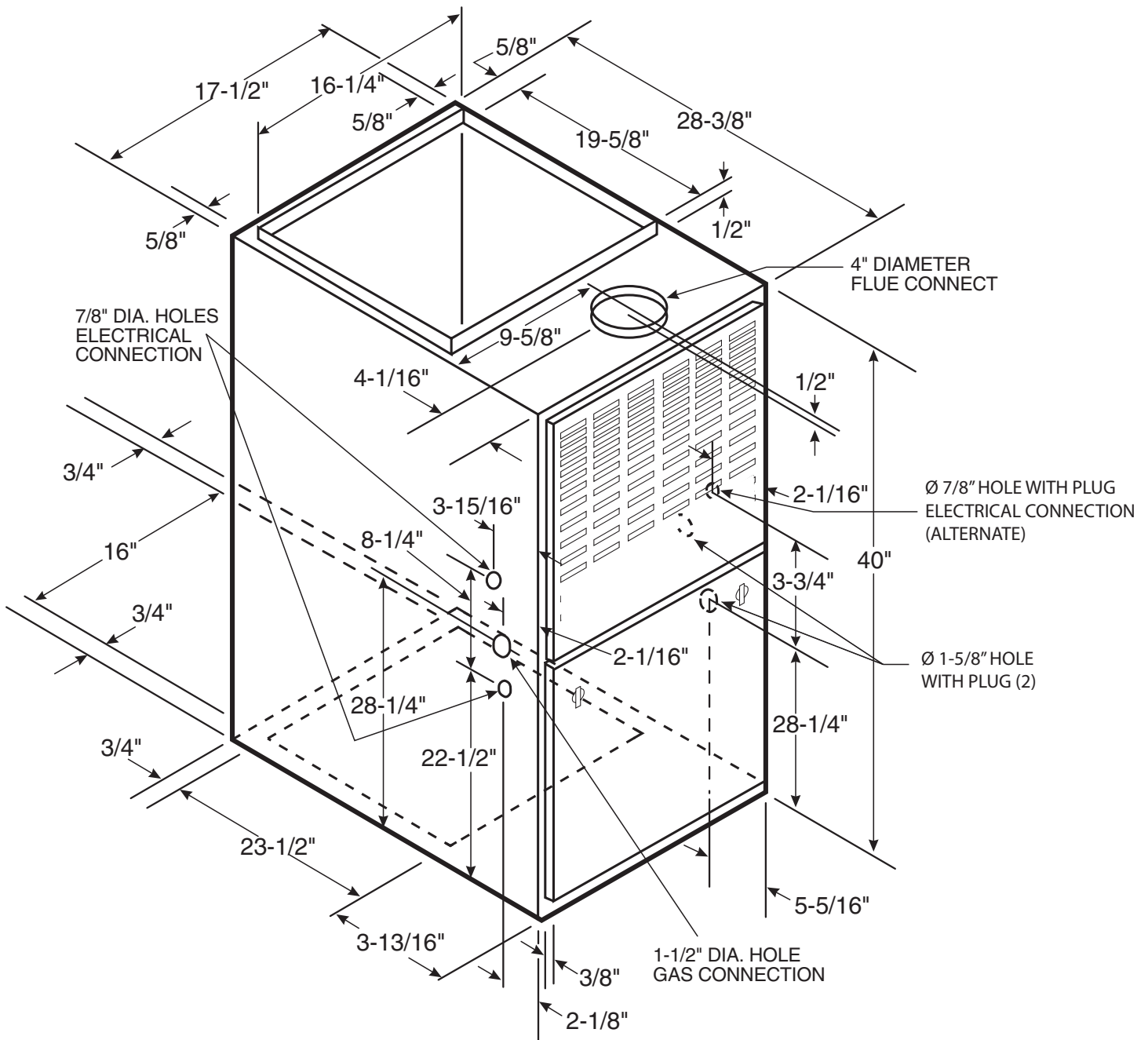
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SUBMITTAL

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

TUD2B060A9V3VB

AUD2B060A9V3VB



*UD2B060A9V3VB FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW7	SW8		0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	589 49 65	604 48 95	619 47 125	604 48 160	607 48 200
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	663 44 75	694 42 120	684 42 145	681 42 185	686 42 220
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	775 37 105	781 37 145	776 37 180	805 36 230	811 36 270
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	813 55 110	818 54 150	818 54 185	837 53 240	842 53 280
	MEDIUM **	ON	OFF	CFM TEMP. RISE WATTS	907 49 140	919 48 200	942 47 240	958 46 300	959 46 330
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1038 43 190	1066 42 260	1086 41 325	1089 41 365	1079 41 415

*UD2B060A9V3VB 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				
		SW1	SW2	SW3	SW4		0.1	0.3	0.5	0.7	0.9
1.5	LOW (350 CFM/ TON)	ON	ON	OFF	ON	CFM WATTS	499 50	537 80	520 110	520 145	500 175
	NORMAL (400 CFM/ TON)	ON	ON	OFF	OFF	CFM WATTS	605 60	610 80	610 120	597 155	593 180
	HIGH (450 CFM/ TON)	ON	ON	ON	OFF	CFM WATTS	649 75	681 110	665 145	665 180	672 220
2	LOW (350 CFM/ TON)	OFF	ON	OFF	ON	CFM WATTS	680 80	722 125	680 150	696 190	696 225
	NORMAL (400 CFM/ TON)	OFF	ON	OFF	OFF	CFM WATTS	798 105	804 145	809 170	823 235	818 280
	HIGH (450 CFM/ TON)	OFF	ON	ON	OFF	CFM WATTS	884 145	896 180	924 240	931 280	931 330
2.5	LOW (350 CFM/ TON)	ON	OFF	OFF	ON	CFM WATTS	858 125	863 175	882 220	894 275	895 320
	NORMAL (400 CFM/ TON)	ON	OFF	OFF	OFF	CFM WATTS	984 170	1017 225	1038 295	1017 330	1017 375
	HIGH (450 CFM/ TON)	ON	OFF	ON	OFF	CFM WATTS	1125 245	1138 315	1150 370	1161 435	1161 475
3 **	LOW (350 CFM/ TON)	OFF	OFF	OFF	ON	CFM WATTS	1035 205	1056 265	1076 330	1076 370	1076 430
	NORMAL ** (400 CFM/ TON)	OFF	OFF	OFF	OFF	CFM WATTS	1208 300	1247 360	1268 440	1278 485	1200 490
	HIGH (450 CFM/ TON)	OFF	OFF	ON	OFF	CFM WATTS	1380 440	1410 500	1402 550	1350 550	1235 525

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. 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:

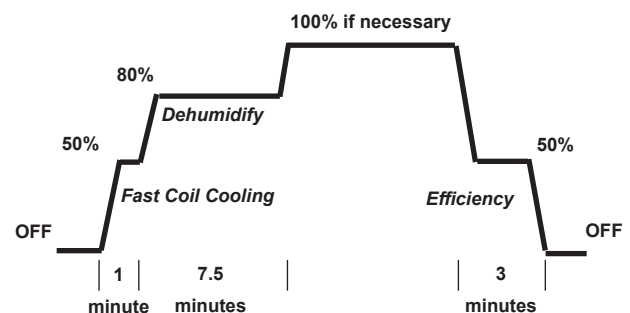
** - This selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph below shows the ramping process.

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	39,000
1st Stage Capacity BTUH (ICS) ③	31,200
2nd Stage Input BTUH	60,000
2nd Stage Capacity BTUH (ICS) ③	48,000
Temp. rise (Min.-Max.) °F.	30 - 60
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
FLA	7.7
COMBUSTION FAN - Type	Centrifugal
Drive - No. Speeds	Direct - 2
Motor HP - RPM	1/100 - 2543 / 1727
Volts/Ph/Hz	115/1/60
F.L. Amps	0.70 / 0.40
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	3 — 45
L.P. Gas Qty. — Drill Size	3 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Ignition
BURNERS — Type	Multipoint Inshot
Number	3
POWER CONN. — V/Ph/Hz ④	115/1/60
Ampacity (In Amps)	10.5
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 17-1/2 x 28-1/2
WEIGHT	
Shipping (Lbs.)/Net (Lbs.)	136 / 126

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3

② Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet; Ratings should be reduced at the rate of 4% for each 1000 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.

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



The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.