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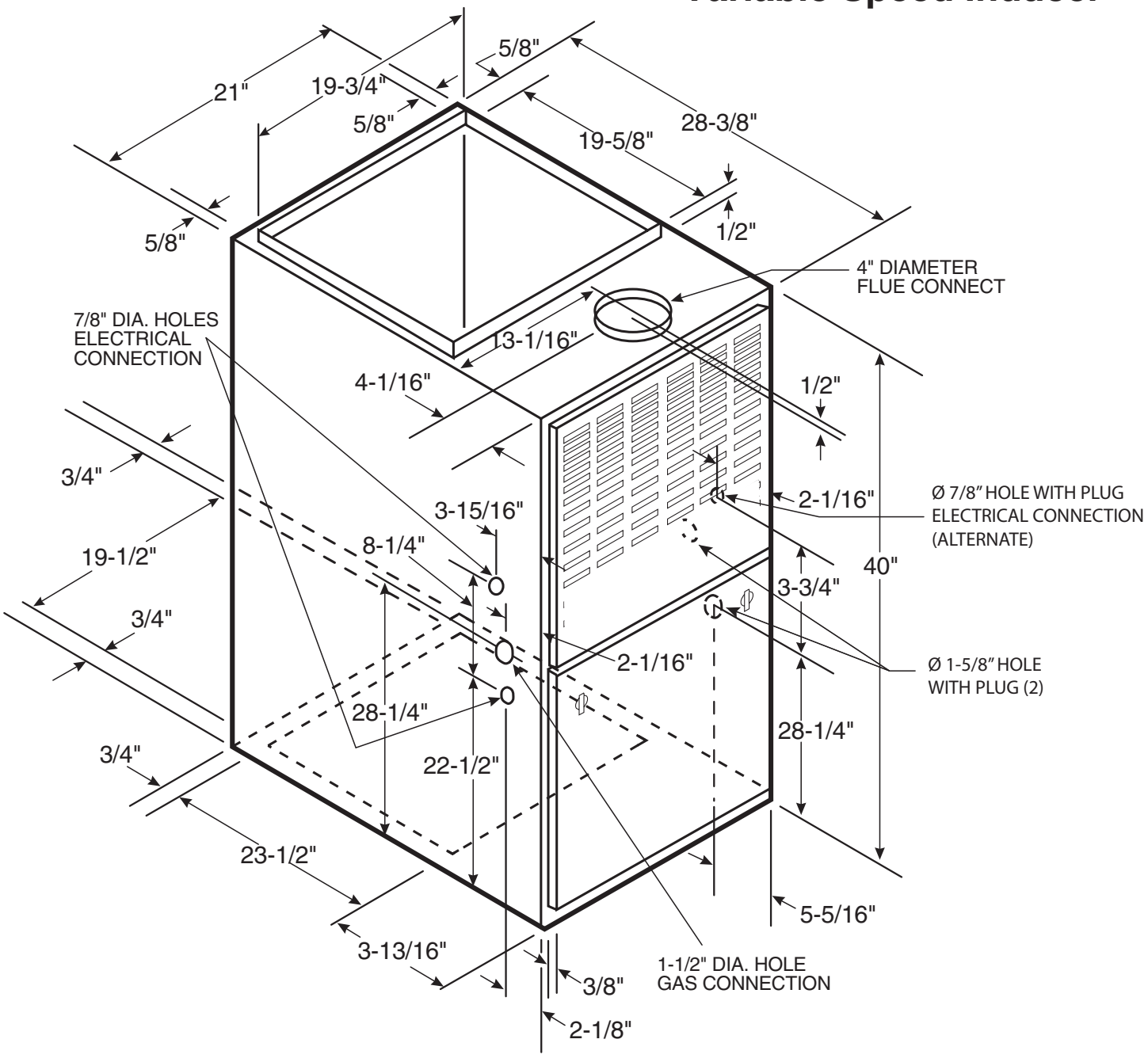
SUBMITTAL

TUD2C080ACV42B
AUD2B080ACV32B

Communicating or 24V non-communicating Upflow/Horizontal Left Direct/Non-Direct Vent 2 Stage Gas Furnace with Variable Speed Inducer



*UD2C080ACV Airflow - Heating

*UD2C080ACV42B Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure							
			0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	722	CFM	760	776	774	768	764
		TEMP RISE	50	49	50	50	50
		WATTS	86	126	191	188	231
	819	CFM	844	859	858	851	846
		TEMP RISE	45	45	45	45	45
		WATTS	88	133	207	200	253
	897	CFM	911	926	924	917	911
		TEMP RISE	42	41	41	42	42
		WATTS	93	142	224	211	273
HEATING 2ND STAGE	1110	CFM	1094	1108	1107	1099	1088
		TEMP RISE	54	53	53	54	54
		WATTS	124	183	287	258	337
	1260	CFM	1222	1236	1236	1226	1213
		TEMP RISE	48	48	48	48	49
		WATTS	160	224	347	302	389
	1380	CFM	1325	1338	1338	1329	1313
		TEMP RISE	45	44	44	44	45
		WATTS	197	266	405	344	435

*UD2C080ACV Airflow - Cooling

*UD2C080ACV42B Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter							
OD	AIRFLOW		0.1	0.3	0.5	0.7	0.9
2.5	290	CFM	732	758	759	744	728
		WATTS	61	100	137	171	207
	350	CFM	893	905	905	892	874
		WATTS	90	130	172	214	253
	400	CFM	1014	1024	1019	1013	995
		WATTS	117	163	206	251	294
	450	CFM	1091	1107	1110	1104	1101
		WATTS	137	188	237	284	337
3.0	290	CFM	888	900	897	889	876
		WATTS	86	130	170	212	253
	350	CFM	1069	1081	1081	1068	1063
		WATTS	121	179	226	270	321
	400	CFM	1202	1216	1211	1202	1190
		WATTS	175	231	281	329	380
	450	CFM	1307	1323	1328	1325	1322
		WATTS	202	277	338	392	453
3.5	290	CFM	1034	1050	1043	1034	1024
		WATTS	112	170	213	257	305
	350	CFM	1190	1208	1212	1206	1203
		WATTS	156	223	279	329	383
	400	CFM	1363	1370	1378	1377	1370
		WATTS	240	301	364	425	481
	450	CFM	1565	1572	1575	1558	1516
		WATTS	371	436	510	565	595
4.0	290	CFM	1150	1154	1147	1142	1132
		WATTS	178	231	276	330	374
	350	CFM	1363	1370	1378	1377	1370
		WATTS	240	301	364	425	481
	400	CFM	1594	1601	1603	1584	1536
		WATTS	390	456	531	585	611
	450	CFM	1824	1832	1829	1791	1703
		WATTS	539	610	697	746	742

NOTES:
1. *FIRST LETTER MAY BE “A” OR “T’
2. **FACTORY SETTING
3. CONTINUOUS FAN SPEED SETTING: HEATING OR COOLING AIRFLOW IS APPROXIMATELY 50% OF SELECTED COOLING VALUE.
4. WITH VARIABLE SPEED OUTDOOR UNIT APPLICATION, THE LOW SPEED AIRFLOWS ARE APPROXIMATELY 30% OF LISTED VALUES.
5. LOW 350 CFM/TON IS RECOMMENDED FOR VARIABLE SPEED APPLICATIONS FOR COMFORT & HUMID CLIMATE SETTING: NORMAL IS 400 CFM/TON: HIGH 450 CFM/TON IS FOR DRY CLIMATE SETTING.
6. CONTINUOUS FAN MODE DURING COOLING OPERATION MAY NOT BE APPROPRIATE IN HUMID CLIMATES. IF THE INDOOR AIR EXCEEDS 60% RELATIVE HUMIDITY OR SIMPLY FEELS UNCOMFORTABLY HUMID, IT IS RECOMMENDED THAT THE FAN ONLY BE USED IN THE AUTO MODE.

Airflow Adjustment

Check inlet and outlet air temperatures to make sure they are within the range specified on the Furnace rating nameplate. If the airflow needs to be increased or decreased, see the Airflow Label on the Furnace or the unit's Service Facts for information on changing the speed of the Blower Motor for your specific model. Blower speed changes are made on the User Interface.

INDOOR BLOWER TIMING

Heating: The Integrated Furnace Control module controls the Indoor Blower. The Blower start is fixed at 45 seconds after ignition. The FAN-OFF period is field selectable by the User Interface at 60, 100, 140, or 180 seconds. The factory setting is 100 seconds.

PRODUCT SPECIFICATIONS ①

MODEL	*UD2C080ACV42B
TYPE	Upflow / Horizontal
RATINGS ②	
1st Stage Input BTUH	52,000
1st Stage Capacity BTUH (ICS) ③	41,600
2nd Stage Input BTUH	80,000
2nd Stage Capacity BTUH (ICS) ③	64,000
Temp. rise (Min.-Max.) °F.	30 - 60
BLOWER DRIVE ⑥⑦	Direct
Diameter - Width (In.)	10 x 10
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Airflow Table
Motor HP	3/4
R.P.M.	Variable
Volts / Ph / Hz	115/1/60
FLA	8.0
COMBUSTION FAN — Type	Centrifugal
Drive - No. Speeds	Direct - 2
Motor HP - RPM	1/100 - 2543/1727
Volts / Ph / Hz	115/1/60
FLA	0.70/0.40
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 20x25 - 1in.
VENT — Size (In.)	4 Round
HEAT EXCHANGER	
Type -Fired	Alum. Steel - Type 1
-Unfired	
Gauge (Fired)	20
ORIFICES — Main ⑤	
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 Ignition
BURNERS — Type	Multi-port In-shot
Number	4
POWER CONN. — V / Ph / Hz ④	115/1/60
Ampacity (In Amps)	10.4
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.)	155 / 145

* May be "T" or "A"

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.

⑤ Furnace ships in natural gas configuration. The LP conversion kit used with the 2 stage furnace is BAYLPSS210B or BAYLPKT210B.

⑥ First stage output capacity is approximately equal to 65% of second stage capacity.

⑦ Direct drive variable speed blower motor is an ECM constant airflow blower motor.

Mechanical Specifications

COMMUNICATING MODE

Furnace is shipped ready to be connected in communicating mode using three wire hook-up using T/ACONT900 comfort control.

ALTERNATE 24V MODE

Furnace is field configurable to 24V non-communicating mode.

COMFORT CONTROL

Communicating furnace design, offers plug and play – walk away installation. Assures the entire heating and air conditioning system is set up in the proper modes to optimize the engineered performance of the matched system installed.

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 a positive discharge of gas fumes to the outside.

BURNERS

Multiport In-shot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas.**

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 includes connection points for E.A.C./humidifier.

AIR DELIVERY

The variable speed, direct drive blower motor, has sufficient airflow 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.

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.

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 High Efficiency Gas Furnace employs a 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.

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 TUD2C080ACV-SUB-1F-EN (December 2019)