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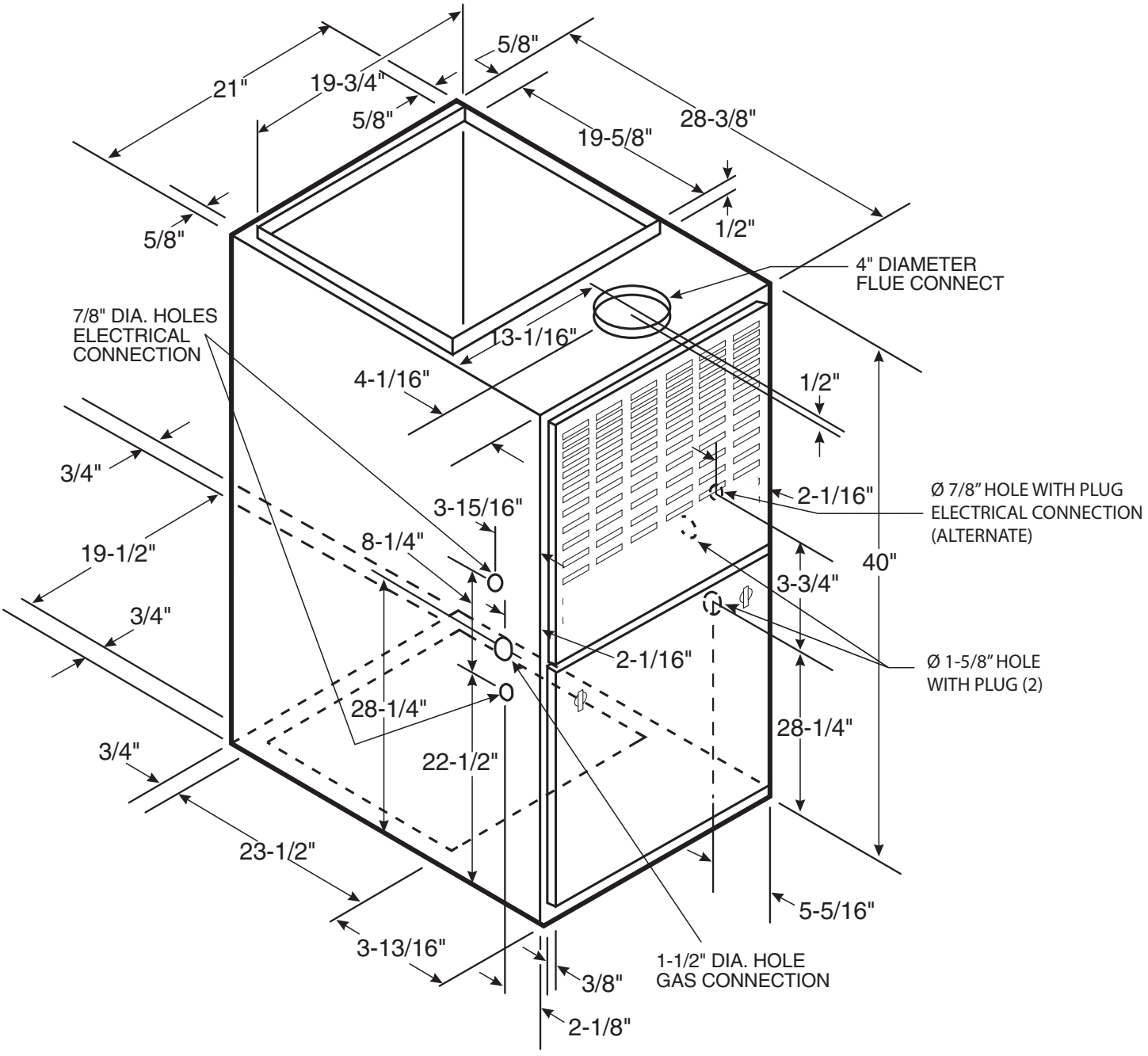
SUBMITTAL

TUD2C100ACV52B
AUD2C100ACV52B

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



*UD2C100ACV Airflow - Heating

*UD2C100ACV52B Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure							
			0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	845	CFM	738	806	847	881	908
		TEMP RISE	65	59	57	54	53
		WATTS	59	84	128	170	222
	1001	CFM	915	971	1003	1028	1046
		TEMP RISE	52	49	48	47	46
		WATTS	70	129	197	250	315
	1073	CFM	996	1047	1074	1095	1109
		TEMP RISE	48	46	45	44	43
		WATTS	84	155	232	288	357
HEATING 2ND STAGE	1300	CFM	1254	1288	1302	1310	1310
		TEMP RISE	59	57	57	56	56
		WATTS	162	261	357	413	489
	1540	CFM	1526	1543	1543	1536	1523
		TEMP RISE	48	48	48	48	48
		WATTS	303	411	512	553	623
	1650	CFM	1650	1659	1653	1640	1620
		TEMP RISE	45	44	45	45	46
		WATTS	387	493	590	620	683

*UD2C100ACV Airflow - Cooling

*UD2C100ACV52B 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
3.0	290	CFM	753	817	844	848	851
		WATTS	69	115	161	206	253
	350	CFM	972	1030	1057	1071	1067
		WATTS	105	165	218	271	321
	400	CFM	1140	1176	1193	1210	1214
		WATTS	153	214	273	333	392
	450	CFM	1284	1306	1314	1325	1337
		WATTS	212	276	337	406	474
3.5	290	CFM	939	984	1009	1017	1015
		WATTS	97	150	198	254	302
	350	CFM	1141	1168	1181	1204	1203
		WATTS	153	208	265	330	386
	400	CFM	1415	1455	1473	1486	1500
		WATTS	246	324	395	467	543
	450	CFM	1543	1569	1567	1564	1574
		WATTS	337	413	482	552	638
4.0	290	CFM	1083	1115	1129	1149	1147
		WATTS	137	195	249	311	366
	350	CFM	1415	1455	1473	1486	1500
		WATTS	246	324	395	467	543
	400	CFM	1619	1640	1650	1653	1654
		WATTS	364	447	525	601	678
	450	CFM	1855	1869	1874	1873	1867
		WATTS	526	614	699	784	866
5.0	290	CFM	1390	1412	1417	1413	1426
		WATTS	257	327	395	457	532
	350	CFM	1740	1752	1755	1756	1749
		WATTS	468	557	629	718	796
	400	CFM	2095	2102	2086	2027	1941
		WATTS	758	860	937	959	959
	450	CFM	2277	2197	2112	2035	1950
		WATTS	972	973	963	970	969

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	*UD2C100ACV52B
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	79,000
Temp. rise (Min.-Max.) °F.	35 - 65
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	1
R.P.M.	Variable
Volts / Ph / Hz	115/1/60
FLA	10.0
COMBUSTION FAN — Type	Centrifugal
Drive - No. Speeds	Direct - 2
Motor HP - RPM	1/75 - 2708/1868
Volts / Ph / Hz	115/1/60
FLA	0.87/0.49
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	5 — 45
L.P. Gas Qty. — Drill Size	5 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Ignition
BURNERS — Type	Multi-port In-shot
Number	5
POWER CONN. — V / Ph / Hz ④	115/1/60
Ampacity (In Amps)	12.9
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.)	175 / 165

* 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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TUD2C100ACV-SUB-1G-EN 18 May 2020
Supersedes TUD2C100ACV-SUB-1F-EN (December 2019)