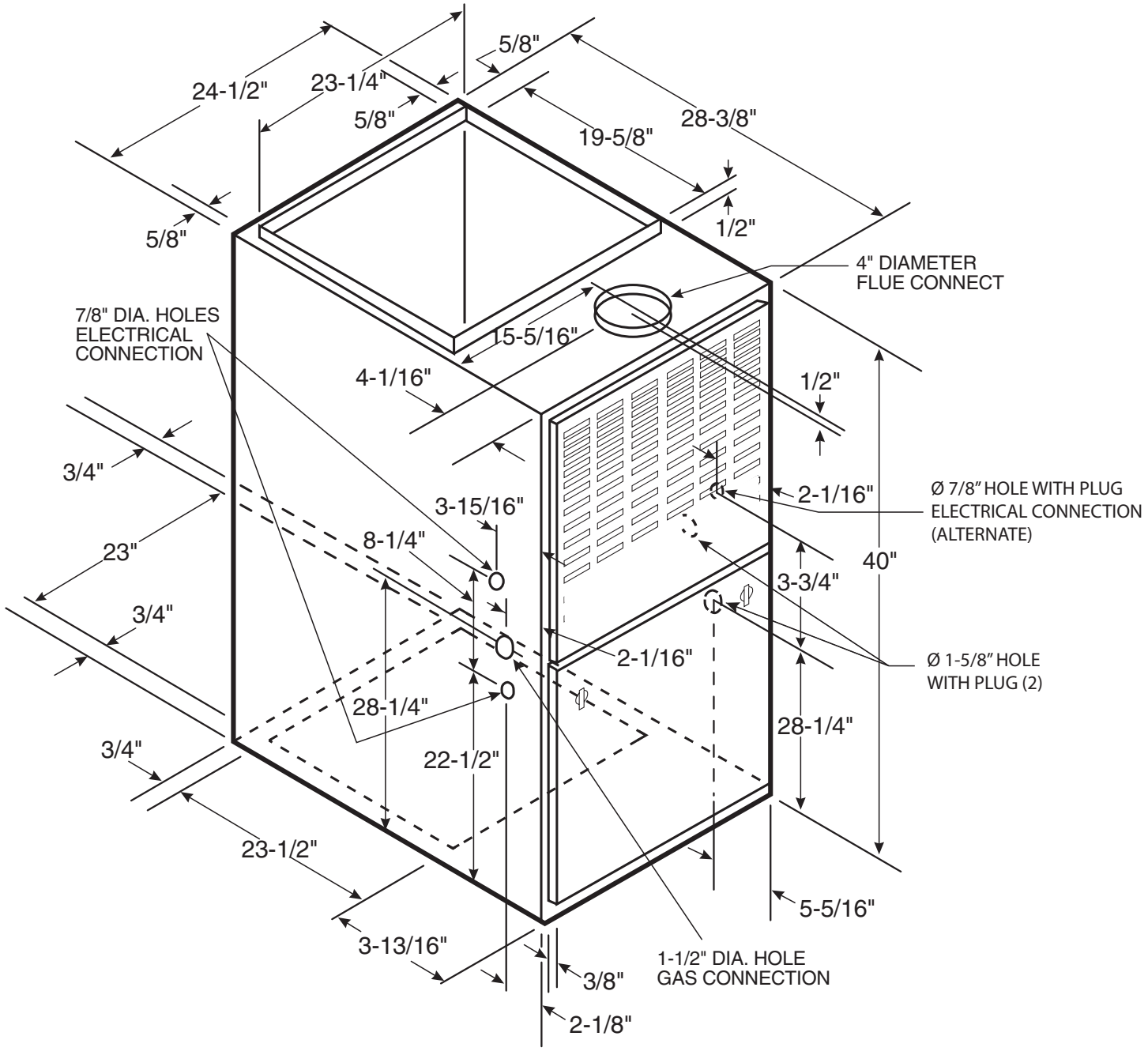
TAG: _____

SUBMITTAL

TUD2D120ACV52B
AUD2C100ACV52B

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



*UD2D120ACV Airflow - Heating

*UD2D120ACV52B 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	844	869	894	915	940
		TEMP RISE	68	66	64	63	61
		WATTS	87	132	146	185	220
	1073	CFM	1071	1090	1105	1116	1128
		TEMP RISE	54	53	52	52	51
		WATTS	126	186	227	296	345
	1235	CFM	1233	1248	1255	1259	1262
		TEMP RISE	47	46	46	46	46
		WATTS	175	244	297	380	432
HEATING 2ND STAGE	1300	CFM	1298	1311	1316	1317	1316
		TEMP RISE	68	67	67	67	67
		WATTS	200	272	327	415	467
	1650	CFM	1647	1651	1640	1626	1606
		TEMP RISE	54	54	54	54	55
		WATTS	385	469	514	611	647
	1900	CFM	1897	1894	1872	1846	1812
		TEMP RISE	47	47	47	48	49
		WATTS	569	657	674	762	770

*UD2D120ACV Airflow - Cooling

*UD2D120ACV52B 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
3.5	290	CFM	1010	1036	1038	1039	1033
		WATTS	118	168	216	266	315
	350	CFM	1212	1228	1230	1228	1223
		WATTS	167	237	291	345	403
	400	CFM	1407	1420	1417	1416	1416
		WATTS	240	318	380	441	508
	450	CFM	1580	1584	1584	1581	1580
		WATTS	342	415	484	553	624
4.0	290	CFM	1141	1159	1165	1164	1157
		WATTS	157	211	263	316	373
	350	CFM	1407	1420	1417	1416	1416
		WATTS	240	318	380	441	508
	400	CFM	1595	1609	1610	1604	1600
		WATTS	356	428	500	571	639
	450	CFM	1814	1817	1813	1801	1788
		WATTS	505	582	655	729	803
5.0	290	CFM	1441	1417	1425	1421	1422
		WATTS	267	322	386	447	512
	350	CFM	1765	1773	1771	1768	1762
		WATTS	457	550	627	705	780
	400	CFM	2014	2011	2004	1992	1945
		WATTS	662	768	849	932	974
	450	CFM	2210	2193	2116	2038	1954
		WATTS	902	990	989	984	979

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	*UD2D120ACV52B
TYPE	Upflow / Horizontal
RATINGS ②	
1st Stage Input BTUH	78,000
1st Stage Capacity BTUH (ICS) ③	62,400
2nd Stage Input BTUH	120,000
2nd Stage Capacity BTUH (ICS) ③	97,000
Temp. rise (Min.-Max.) °F.	35 - 65
BLOWER DRIVE ⑦	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	9.9
COMBUSTION FAN — Type	Centrifugal
Drive - No. Speeds	Direct - 2
Motor HP - RPM	1/60 - 3090/2225
Volts / Ph / Hz	115/1/60
FLA	1.14/0.51
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 24x25 - 1in.
VENT — Size (In.)	4 Round
HEAT EXCHANGER	
Type -Fired -Unfired	Alum. Steel - Type 1
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas. Qty. — Drill Size	6 — 45
L.P. Gas Qty. — Drill Size	6 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Ignition
BURNERS — Type	Multi-port In-shot
Number	6
POWER CONN. — V / Ph / Hz ④	115/1/60
Ampacity (In Amps)	14.3
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (In.)	1/2
DIMENSIONS	H x W x D
Crated (In.)	41-3/4 x 26-1/2 x 30-1/2
WEIGHT	
Shipping (Lbs.) / Net (Lbs.)	193 / 183

* 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.

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