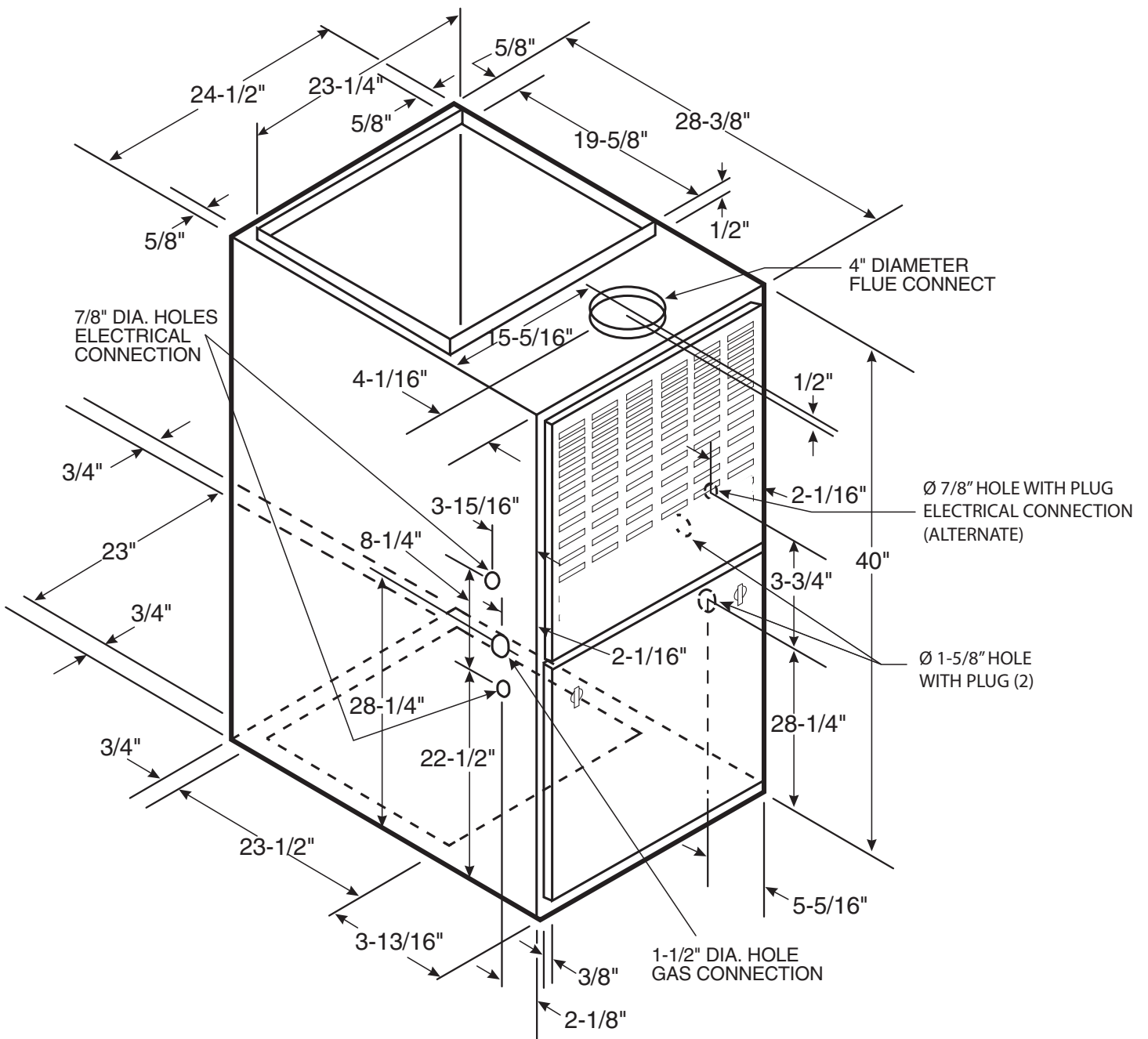


TAG: _____

SUBMITTAL

TUD2D140ACV52B
AUD2C100ACV52B

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



***UD2D140ACV Airflow - Heating**

*UD2D140ACV52B Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure			0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	1047	CFM	1012	1048	1068	1079	1095
		TEMP RISE	66	64	63	62	61
		WATTS	99	162	211	269	372
	1248	CFM	1217	1240	1250	1251	1255
		TEMP RISE	55	54	54	54	53
		WATTS	170	251	320	383	502
	1320	CFM	1290	1308	1314	1312	1311
		TEMP RISE	52	51	51	51	51
		WATTS	203	288	360	423	546
HEATING 2ND STAGE	1610	CFM	1587	1584	1577	1560	1541
		TEMP RISE	65	65	65	66	67
		WATTS	378	458	531	587	721
	1920	CFM	1903	1879	1857	1825	1787
		TEMP RISE	54	55	56	57	58
		WATTS	637	682	729	763	895
	2030	CFM	2015	1984	1956	1919	1874
		TEMP RISE	51	52	53	54	55
		WATTS	746	771	803	825	955

***UD2D140ACV Airflow - Cooling**

*UD2D140ACV52B Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure with Filter			0.1	0.3	0.5	0.7	0.9
OD	AIRFLOW						
3.5	290	CFM	960	1001	1010	1009	1010
		WATTS	106	167	218	268	320
	350	CFM	1194	1205	1213	1207	1202
		WATTS	187	243	297	356	420
	400	CFM	1364	1376	1383	1381	1378
		WATTS	249	327	392	454	525
450	CFM	1562	1553	1545	1555	1553	
	WATTS	373	434	530	573	636	
4.0	290	CFM	1119	1144	1147	1144	1142
		WATTS	148	218	271	328	388
	350	CFM	1364	1376	1383	1381	1378
		WATTS	249	327	392	454	525
	400	CFM	1597	1593	1601	1586	1585
		WATTS	378	459	534	598	672
450	CFM	1810	1812	1804	1796	1786	
	WATTS	560	638	714	790	868	
5.0	290	CFM	1417	1427	1428	1417	1411
		WATTS	275	359	421	481	546
	350	CFM	1757	1754	1753	1739	1734
		WATTS	511	592	666	731	812
	400	CFM	2005	2001	1994	1956	1884
		WATTS	751	844	930	975	982
450	CFM	2183	2106	2031	1957	1880	
	WATTS	992	988	982	977	974	

NOTES:

- *FIRST LETTER MAY BE "A" OR "T"
- **FACTORY SETTING
- CONTINUOUS FAN SPEED SETTING: HEATING OR COOLING AIRFLOW IS APPROXIMATELY 50% OF SELECTED COOLING VALUE.
- WITH VARIABLE SPEED OUTDOOR UNIT APPLICATION, THE LOW SPEED AIRFLOWS ARE APPROXIMATELY 30% OF LISTED VALUES.
- 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.
- 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	*UD2D140ACV52B
TYPE	Upflow/Horizontal
RATINGS ^②	
1st Stage Input BTUH	91000
1st Stage Capacity BTUH (ICS) ^③	72,800
2nd Stage Input BTUH	140,000
2nd Stage Capacity BTUH (ICS) ^③	111,000
Temp. rise (Min.-Max.) °F.	40 - 70
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 - 3100/2350
Volts / Ph / Hz	115/1/60
FLA	1.16/0.54
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 24x25 - 1in.
VENT — Size (In.)	4 Round
HEAT EXCHANGER	
Type -Fired	Alum. Steel - Type 1
-Unfired	
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	7 — 45
L.P. Gas Qty. — Drill Size	7 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Ignition
BURNERS — Type	Multi-port In-shot
Number	7
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.)	197 / 187

* 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.

Ingersoll Rand has a policy of continuous product and product data improvement and it reserves the right to change specifications and design without notice.

Ingersoll Rand
6200 Troup Highway
Tyler, TX 75711-9010



Publication Number	TUD2D140ACV-SUB-1E
Supersedes	TUD2D140ACV-SUB-1D
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Since the manufacturer has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.