

***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 | | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
|---|---------|-------|------|------|------|------|------|
| OD | AIRFLOW | | | | | | |
| 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 ^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 | 1/75 - 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 | |
| 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) | 13.9 |
| 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.

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



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|--------------------|--------------------|
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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.