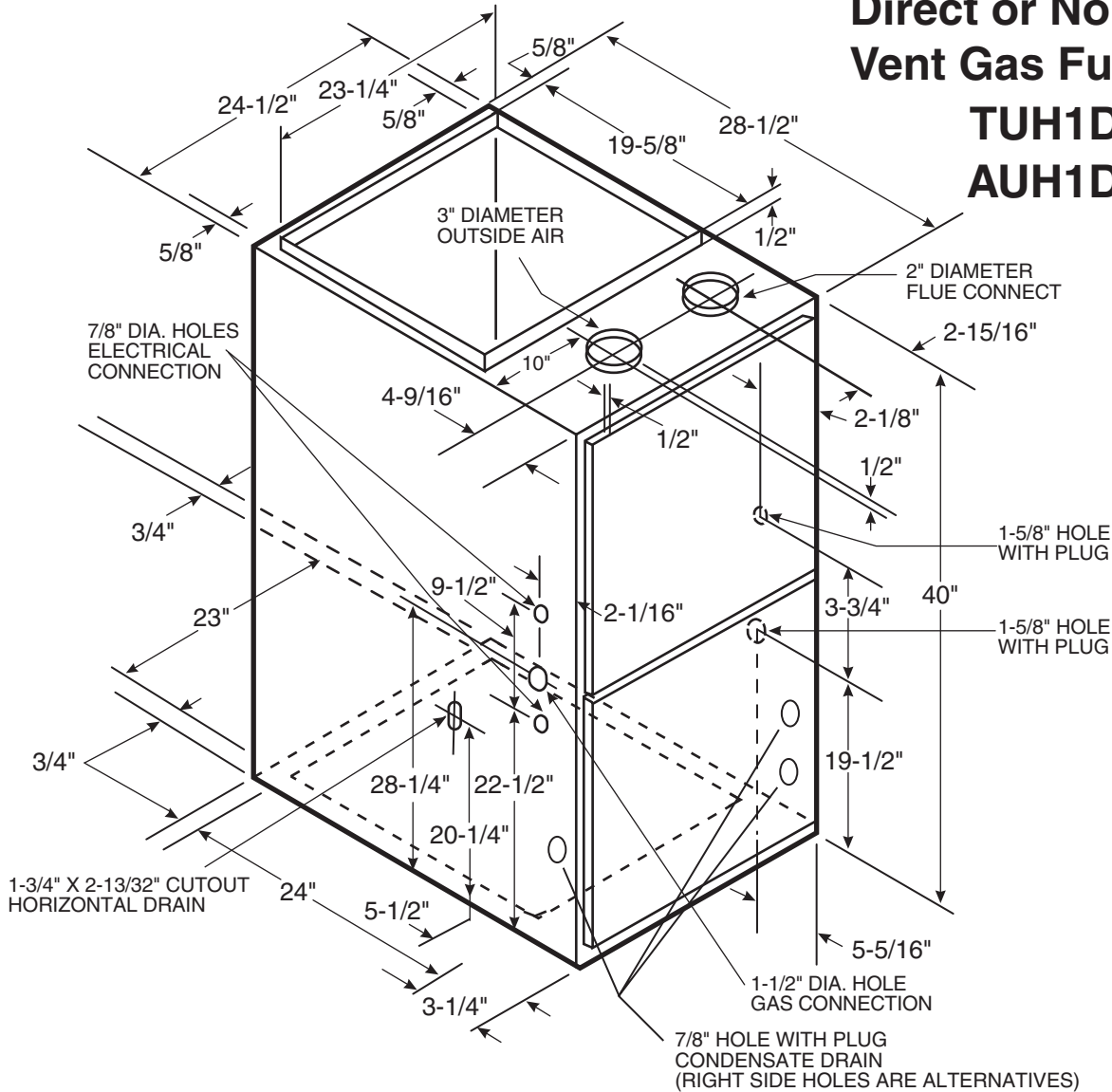


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# SUBMITTAL

## Upflow/Horizontal Direct or Non-Direct Vent Gas Furnace

**TUH1D120A9H51B**  
**AUH1D120A9H51B**



FURNACE AIRFLOW (CFM) VS. STATIC PRESSURE (ins.w.g.)										
MODEL	SPEED TAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
TUH1D120A9H51B AUH1D120A9H51B	4 - HIGH - Black	2141	2108	2076	2041	2013	1976	1939	1894	1826
	3 - MED-HIGH - Blue**	2072	2038	2007	1975	1938	1910	1880	1845	1797
	2 - MED-LOW - Yellow	1886	1853	1816	1785	1754	1718	1688	1652	1619
	1 - LOW - Red	1647	1609	1573	1540	1497	1465	1429	1391	1358

\*\* = HEATING SPEED TAP

CFM VS. TEMPERATURE RISE								
MODEL	CFM (CUBIC FEET PER MINUTE)							
	1500	1600	1700	1800	1900	2000	2100	2200
TUH1D120A9H51B, AUH1D120A9H51B	65	60	57	54	51	48	46	44

# General Data ①

<b>MODEL</b>	<b>TUH1D120A9H51B, AUH1D120A9H51B</b>	
<b>TYPE</b>	Upflow/Horizontal	
<b>RATINGS ②</b>		
Input BTUH ③	110,000	
Capacity BTUH (ICS) ③	104,500	
AFUE	95.0	
Temp. rise (Min.-Max.) °F.	40 - 70	
<b>BLOWER DRIVE ⑥</b>	DIRECT	
Diameter-Width (In.)	11 x 10	
No. Used	1	
Speeds (No.)	4	
CFM vs. in. w.g.	See Fan Performance	
Motor HP ⑤	1	
R.P.M.	1100	
Volts/Ph/Hz	115/1/60	
FLA	10.9	
<b>COMBUSTION FAN - Type</b>	Centrifugal	
Drive - No. Speeds	Direct - 1	
Motor HP - RPM	1/20 - 3450	
Volts/Ph/Hz	115/1/60	
F.L. Amps	.70	
<b>FILTER — Furnished?</b>	Yes	
Type Recommended	High Velocity	
Hi Vel. (No.-Size-Thk.)	1 - 24x25 - 1in.	

<b>VENT PIPE DIAMETER — Min. (in.) ⑥⑦</b>	3 Round
<b>HEAT EXCHANGER</b>	
Type-Fired	Alum. Steel
-Unfired	
Gauge (Fired)	20
<b>ORIFICES — Main</b>	
Nat. Gas. Qty. — Drill Size	6 — 45
L.P. Gas Qty. — Drill Size	6 — 56
<b>GAS VALVE</b>	Redundant - Single Stage
<b>PILOT SAFETY DEVICE</b>	
Type	Hot Surface Ignition
<b>BURNERS — Type</b>	Multiport Inshot
Number	6
<b>POWER CONN. — V/Ph/Hz ④</b>	115/1/60
Ampacity (In Amps)	14.5
Max. Overcurrent Protection (amps)	15
<b>PIPE CONN. SIZE (IN.)</b>	1/2
<b>DIMENSIONS</b>	H x W x D
Crated (In.)	41- 3/4 x 26-1/2 x 30-1/2
Uncrated (In.)	40 x 24-1/2 x 28-1/2
<b>WEIGHT</b>	
Shipping (Lbs.)/Net (Lbs.)	205 / 193

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 Constant torque ECM blower motor

⑥ Refer to the Vent Length Table in the Installer's Guide or the Allowable Vent Length label located on the furnace.

⑦ All TUH1 and TDH1 furnace models have a vent outlet diameter that equals 2".

⑧ 4 Speed, direct drive X13 style high efficiency DC motor

## Mechanical Specifications

**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. Slow opening, dual solenoid combination gas valve and regulator provide extra safety and quieter operation.

**QUICK HEATING** — Durable, cycle tested, heavy gauge **aluminized steel heat exchanger and stainless steel secondary heat exchanger** quickly transfer over 90% of the 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 as it draws outdoor air in for sealed combustion, which means it uses no indoor air for combustion.

**BURNERS** — Multi-port, in-shot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas** without changing burners.

Technical Literature - Printed in U.S.A.

Ingersoll Rand  
6200 Troup Highway  
Tyler, TX 75707

### 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.

### 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. The built-in, selectable "**Cooling Fan Off**" feature provides time-delay capability like a BAY24X045 Time-Delay Kit for cooling operation. Also contains connection points for E.A.C./humidifier.

**AIR DELIVERY** — The multispeed, direct-drive blower motor, with sufficient airflow range 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. (Fan relay and 35VA control transformer is standard).

**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.

**FEATURES AND GENERAL OPERATION** — These High Efficiency, Direct Vent, Condensing Gas Furnaces employ a Hot Surface Ignition system, which eliminates the waste of a constantly burning pilot. They are convertible for HORIZONTAL use by rotating the unit to its right side. 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 differential switch.

Library	Unitary
Product Section	Furnaces
Product	Furnace
Model	TUH1
Literature Type	Submittal
Sequence	-
Date	04/15
File No.	TUH1D120-H-SUB-1C
Supersedes	TUH1D120-H-SUB-1B

