

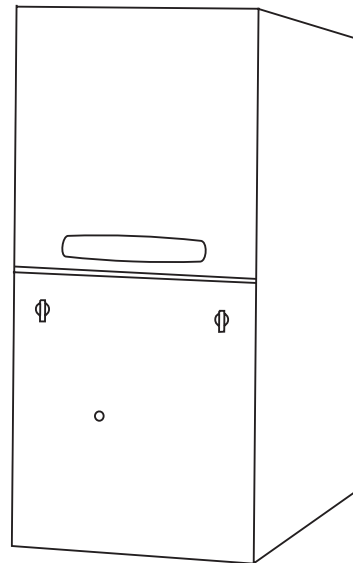
# Submittal

## Communicating Upflow/Horizontal Left Direct/Non-Direct Vent Modulating Gas Furnace with Variable Speed Inducer

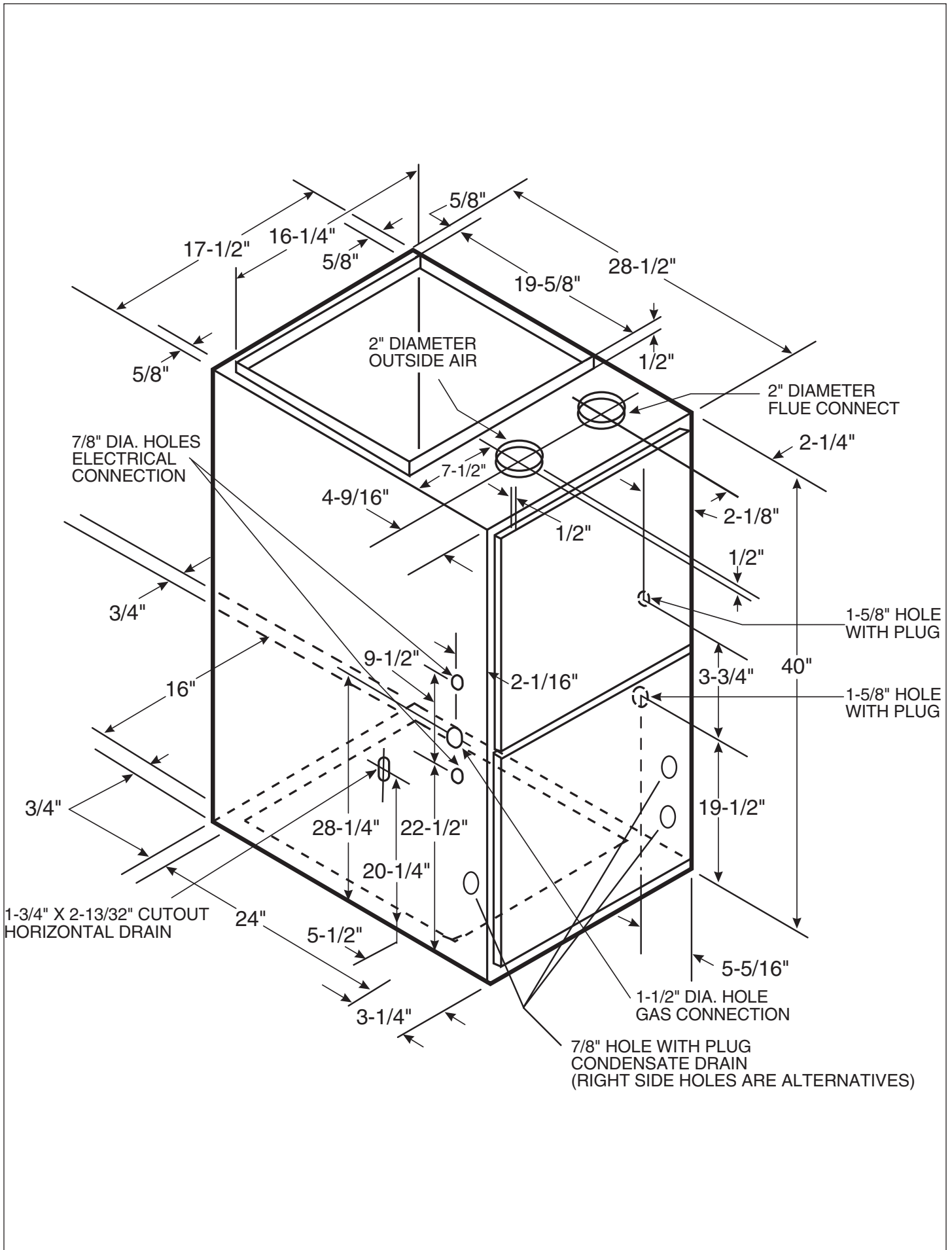
TUHMB060ACV3VB

AUHMB060ACV3VB

\*UHM



**Note:** "Graphics in this document are for representation only.  
Actual model may differ in appearance."



## TUHMB060 Airflow – Heating

*UHMB060ACV3VB* Furnace Heating Airflow (CFM) and Power (watts) vs. External Static Pressure With Filter									
	Airflow Setting	Target Airflow (See Note 5)	External Static Pressure						
			0.1	0.3	0.5	0.7	0.9		
Heating	40% (low) Heat	Low	465	CFM	393	504	512	546	560
			Temp. Rise	73	57	56	53	51	
			Watts	43	81	112	142	140	
		Medium Low	504	CFM	435	541	549	580	593
			Temp. Rise	66	53	52	50	49	
			Watts	46	86	119	150	148	
	Medium**	538	CFM	472	573	580	609	621	
		Temp. Rise	61	50	50	47	46		
		Watts	50	90	125	159	155		
	High	605	CFM	545	636	644	667	676	
		Temp. Rise	53	45	45	43	43		
		Watts	60	103	141	177	169		
65% (medium) Heat	Low	623	CFM	565	653	660	682	691	
		Temp. Rise	68	59	58	57	56		
		Watts	64	107	145	182	172		
	Medium Low	675	CFM	622	703	710	727	734	
		Temp. Rise	62	55	54	53	53		
		Watts	75	120	161	199	183		
	Medium**	720	CFM	671	745	752	766	771	
		Temp. Rise	58	52	51	50	50		
		Watts	86	133	175	215	192		
	High	810	CFM	769	831	837	843	846	
		Temp. Rise	50	46	46	46	46		
		Watts	114	164	210	250	211		
100% (high) Heat	Low	830	CFM	791	849	856	861	862	
		Temp. Rise	65	61	60	60	60		
		Watts	121	171	219	258	215		
	Medium Low	900	CFM	867	916	922	921	920	
		Temp. Rise	59	56	56	56	56		
		Watts	148	201	251	290	230		
	Medium**	960	CFM	932	972	979	973	970	
		Temp. Rise	55	53	53	53	53		
		Watts	174	229	282	319	243		
	High	1080	CFM	1063	1086	1092	1076	1069	
		Temp. Rise	48	47	47	48	48		
		Watts	236	295	353	384	268		

**Notes:**

- \* First letter may be "A" or "T".
- \*\* Factory setting.
- Continuous Fan Setting: Heating or cooling airflow is approximately 50% of selected cooling value.
- LOW 350 cfm/ton is recommended for variable speed application for COMFORT & HUMID CLIMATE setting; NORMAL is 400 cfm/ton; HIGH 450 cfm/ton is for DRY CLIMATE setting.
- Target airflow is field selectable for third stage heating. Target airflow for first and second stage heating are percentages of third stage target and are not field selectable.

## TUHMB060 Airflow – Cooling

*UHMB060ACV3VB* Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure With Filter								
Unit Outdoor	Airflow Setting		External Static Pressure					
			0.1	0.3	0.5	0.7	0.9	
Cooling	1.5	290 CFM/ton	CFM	356	476	488	511	519
			Watts	29	67	97	132	167
		310 CFM/ton	CFM	389	504	516	538	545
			Watts	32	71	102	138	174
		330 CFM/ton	CFM	422	533	544	565	572
			Watts	36	75	107	144	181
		350 CFM/ton	CFM	455	561	566	589	592
			Watts	39	79	111	150	187
		370 CFM/ton	CFM	487	589	600	619	624
			Watts	43	84	119	158	197
		400 CFM/ton	CFM	537	631	655	669	673
			Watts	50	92	130	171	212
	430 CFM/ton	CFM	586	674	684	700	702	
		Watts	57	101	139	182	223	
	450 CFM/ton	CFM	619	695	717	727	733	
		Watts	63	106	150	193	236	
	2	290 CFM/ton	CFM	515	613	623	641	646
			Watts	47	88	124	164	204
		310 CFM/ton	CFM	559	650	660	677	681
			Watts	53	96	133	175	215
		330 CFM/ton	CFM	602	688	698	713	716
			Watts	60	104	143	186	228
		350 CFM/ton	CFM	646	707	737	748	752
			Watts	68	112	156	200	243
370 CFM/ton		CFM	690	763	772	785	785	
		Watts	76	123	165	211	255	
400 CFM/ton		CFM	764	816	778	847	844	
		Watts	86	137	180	231	275	
430 CFM/ton	CFM	821	876	884	892	890		
	Watts	108	159	206	256	303		
450 CFM/ton	CFM	937	968	977	985	984		
	Watts	136	193	241	295	343		
2.5	290 CFM/ton	CFM	673	749	758	771	772	
		Watts	73	119	161	206	250	
	310 CFM/ton	CFM	732	791	756	766	818	
		Watts	79	129	160	203	268	
	330 CFM/ton	CFM	783	843	852	861	860	
		Watts	98	147	193	242	288	
	350 CFM/ton	CFM	848	894	908	917	917	
		Watts	110	163	212	262	308	
	370 CFM/ton	CFM	892	937	945	951	947	
		Watts	129	182	232	284	333	
	400 CFM/ton	CFM	972	1015	972	957	1036	
		Watts	160	213	262	312	374	
430 CFM/ton	CFM	1057	1078	1085	1085	1078		
	Watts	191	249	306	360	415		
450 CFM/ton	CFM	1115	1137	1142	1140	1139		
	Watts	214	275	333	388	447		
3	290 CFM/ton	CFM	832	885	894	901	899	
		Watts	111	162	210	260	308	
	310 CFM/ton	CFM	898	942	950	955	951	
		Watts	131	184	234	286	336	
	330 CFM/ton	CFM	964	998	1006	1009	1004	
		Watts	154	209	262	314	366	
	350 CFM/ton	CFM	1039	1065	1073	1074	1075	
		Watts	181	237	292	344	402	
	370 CFM/ton	CFM	1095	1111	1118	1116	1108	
		Watts	208	268	326	380	436	
	400 CFM/ton	CFM	1189	1212	1214	1149	1207	
		Watts	257	320	380	435	500	
430 CFM/ton	CFM	1292	1280	1285	1278	1201		
	Watts	317	383	448	501	508		
450 CFM/ton	CFM	1326	1317	1361	1242	1166		
	Watts	366	433	495	510	509		

**Notes:**

- \* First letter may be "A" or "T".
- ^ Letter may be "A" through "Z"
- \*\* Factory setting.
- Continuous Fan Setting: Heating or cooling airflow is approximately 50% of selected cooling value.
- LOW 350 cfm/ton is recommended for variable speed application for COMFORT & HUMID CLIMATE setting; NORMAL is 400 cfm/ton; HIGH 450 cfm/ton is for DRY CLIMATE setting.

**NOTE:**

**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.

MODEL	TUHMB060ACV3VB ⑥
	AUHMB060ACV3VB
TYPE	Upflow/Horizontal Left
<b>RATINGS</b> ②	
40% (low) heat Input BTUH	24,000
40% (low) heat Capacity BTUH (ICS) ③	23,000
100% (high) heat Input BTUH	60,000
100% (high) heat Capacity BTUH (ICS) ③	57,000
Temp. rise (Min.-Max.) °F.	35 - 65
AFUE (Upflow / Horizontal)	97.3 / 96.5
<b>BLOWER DRIVE</b>	DIRECT
Diameter - Width (In.)	10 x 8
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	1/2
R.P.M.	Variable
Volts/Ph/Hz	115/1/60
FLA	6.4 ⑦
<b>COMBUSTION FAN – Type</b>	Centrifugal
Drive - No. Speeds	Direct - Variable
Motor HP - RPM	1/50 - 5000
Volts/Ph/Hz	115/3/60
FLA	1.0
<b>FILTER — Furnished?</b>	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 17x25 - 1 in.
<b>VENT — Size (in.)</b>	2 Round
<b>HEAT EXCHANGER</b>	
Type -Fired	Aluminized Steel - Type I
-Unfired	
Gauge (Fired)	20
<b>ORIFICES — Main</b>	
Nat. Gas. Qty. — Drill Size	3 — 45
L.P. Gas Qty. — Drill Size ⑤	3 — 56
<b>GAS VALVE</b>	Redundant - Three Stage
<b>PILOT SAFETY DEVICE</b>	
Type	Hot Surface Igniter
<b>BURNERS — Type</b>	Multi-port In-shot
Number	3
<b>POWER CONN. — V/Ph/Hz</b> ④	115/1/60
Ampacity (In Amps)	9.2
Max. Overcurrent Protection (Amps)	15
<b>PIPE CONN. SIZE (IN.)</b>	1/2
<b>DIMENSIONS</b>	
Crated (In.)	H x W x D 41-3/4 x 19-1/2 x 30-1/2
<b>WEIGHT</b>	
Shipping (Lbs.)/Net (Lbs)	158 / 146

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 modulating furnace is BAYLPSS220B or BAYLPKT220B.

⑥ Energy Star

⑦ Check motor nameplate for actual FLA

# Mechanical Specifications

---

## **MODULATING OPERATION**

The modulating gas valve provides longer heating cycles for more consistent heating comfort. Modulates from 40% to 100% in less than 1% increments of the furnace's heating capacity saving energy, while at the same time providing maximum homeowner comfort.

## **COMMUNICATING MODE**

Furnace is shipped ready to be connected in communicating mode using three wire hook-up using A/TCONT900 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. The furnace can also be connected in 24V mode.

## **NATURAL GAS MODELS**

Central Heating furnace designs are certified by the American Gas Association 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.

## **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.

## **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 additional safety.

## **QUICK HEATING**

Durable, cycle tested, heavy gauge aluminumized 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**

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.

## **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 contains connection points for EAC and Humidifier.

## **AIR DELIVERY**

The variable speed blower motor has sufficient airflow for most heating and cooling requirements and 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.

## **SECONDARY HEAT EXCHANGER**

The furnace has a special type 29-4C™ stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost.

## **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 Furnaces utilize an Adaptive Heat Up Silicon Nitride 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](http://www.trane.com) or [www.americanstandardair.com](http://www.americanstandardair.com)

---



The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.