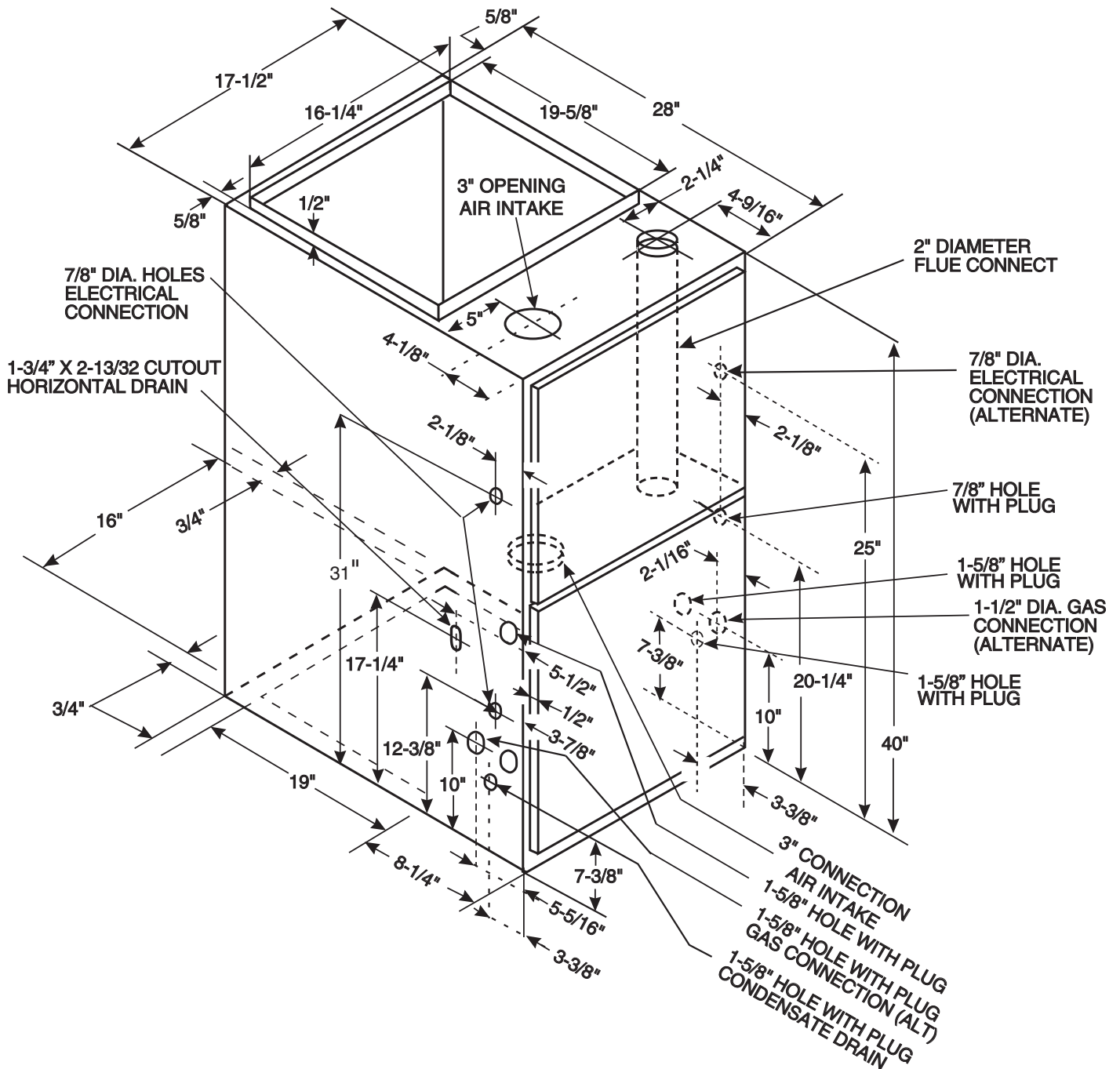


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SUBMITTAL

**TDHMB060BCV3VB
ADHMB060BCV3VB**

**Communicating
Downflow/Horizontal Right
Direct/Non-Direct Vent
Modulating Gas Furnace
with Variable Speed Inducer**



TDHMB060 Airflow - Heating

DHMB060BCV3VB Furnace Heating Airflow (CFM) and Power (Watts) vs. External Static Pressure With Filter								
Heating	Airflow Setting	Target Airflow (See Note 5)		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
40% (low) Heat	Low	414	CFM	438	436	458	462	474
			Temp. Rise	48	48	46	46	45
			Watts	26	49	70	90	115
	Medium Low	437	CFM	460	458	479	483	493
			Temp. Rise	46	46	44	44	43
			Watts	28	52	73	92	118
	Medium**	478	CFM	499	497	516	518	526
			Temp. Rise	42	42	41	41	40
			Watts	33	58	79	100	127
	High	534	CFM	553	551	567	567	571
			Temp. Rise	38	38	37	37	37
			Watts	42	68	90	114	144
65% (medium) Heat	Low	702	CFM	715	713	720	714	708
			Temp. Rise	48	48	48	48	48
			Watts	76	106	140	176	217
	Medium Low	741	CFM	753	751	755	749	740
			Temp. Rise	46	46	45	45	45
			Watts	87	117	154	194	237
	Medium**	811	CFM	820	818	819	810	797
			Temp. Rise	42	42	42	42	43
			Watts	108	140	183	228	275
	High	905	CFM	911	909	904	892	873
			Temp. Rise	38	38	38	38	39
			Watts	142	177	226	276	326
100% (high) Heat	Low	900	CFM	906	904	900	888	869
			Temp. Rise	58	58	59	59	61
			Watts	140	175	223	274	323
	Medium Low	950	CFM	954	952	945	931	910
			Temp. Rise	55	55	56	57	58
			Watts	160	197	248	300	350
	Medium**	1040	CFM	1041	1039	1027	1010	983
			Temp. Rise	51	51	51	52	54
			Watts	202	243	295	347	393
	High	1160	CFM	1157	1155	1136	1115	1080
			Temp. Rise	46	46	46	47	49
			Watts	269	317	361	405	439

Notes:
 1. * First letter may be "A" or "T".
 2. ^ Letter may be "A" through "Z".
 3. ** Factory setting.
 4. Continuous Fan Setting: Heating or cooling airflow is approximately 50% of selected cooling value.
 5. 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.
 6. Target airflow is field selectable for high (100%) heat. Target airflow for low and medium heat are percentages of high heat and are not field selectable.

TDHMB060 Airflow - Cooling

DHMB060BCV3VB Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure With Filter								
Cooling	Unit Outdoor Size (tons)	Airflow Setting		External Static Pressure				
				0.1	0.3	0.5	0.7	0.9
1.5	290 CFM/ton	CFM	458	456	477	481	491	
		Watts	28	52	73	92	118	
	310 CFM/ton	CFM	487	485	504	507	515	
		Watts	32	56	77	97	124	
	330 CFM/ton	CFM	516	514	532	533	540	
		Watts	36	61	82	104	132	
	350 CFM/ton	CFM	545	543	559	560	564	
		Watts	40	66	88	111	141	
	370 CFM/ton	CFM	574	572	586	586	589	
		Watts	45	72	95	120	151	
	400 CFM/ton	CFM	617	615	627	625	625	
		Watts	54	81	107	135	169	
	430 CFM/ton	CFM	660	658	668	665	662	
		Watts	63	91	120	152	189	
	450 CFM/ton	CFM	689	687	695	691	686	
		Watts	70	99	130	164	203	
	2	290 CFM/ton	CFM	598	596	609	608	609
			Watts	50	77	101	128	161
		310 CFM/ton	CFM	636	634	645	643	641
			Watts	58	85	113	142	177
		330 CFM/ton	CFM	675	673	682	678	674
			Watts	66	95	125	158	196
		350 CFM/ton	CFM	713	711	718	713	706
			Watts	76	105	139	175	216
370 CFM/ton		CFM	752	750	754	748	739	
		Watts	87	117	154	193	236	
400 CFM/ton		CFM	810	808	809	800	788	
		Watts	104	136	178	222	265	
430 CFM/ton		CFM	868	866	863	853	836	
		Watts	125	159	205	253	301	
450 CFM/ton		CFM	906	904	900	888	869	
		Watts	140	175	223	274	323	
2.5		290 CFM/ton	CFM	738	735	741	735	727
			Watts	82	113	148	186	228
		310 CFM/ton	CFM	786	784	786	778	767
			Watts	97	128	168	210	255
		330 CFM/ton	CFM	834	832	831	822	808
			Watts	112	145	189	235	282
		350 CFM/ton	CFM	882	880	877	866	849
			Watts	130	164	212	261	310
	370 CFM/ton	CFM	930	928	922	909	889	
		Watts	150	186	236	287	337	
	400 CFM/ton	CFM	1003	1000	990	975	950	
		Watts	183	222	274	326	375	
430 CFM/ton	CFM	1075	1073	1059	1041	1011		
	Watts	220	263	314	364	408		
450 CFM/ton	CFM	1123	1121	1104	1084	1052		
	Watts	248	294	341	389	427		
3	290 CFM/ton	CFM	877	875	872	861	845	
		Watts	128	162	209	258	307	
	310 CFM/ton	CFM	935	933	927	914	893	
		Watts	152	188	238	289	339	
	330 CFM/ton	CFM	993	991	981	966	942	
		Watts	176	217	268	321	370	
	350 CFM/ton	CFM	1051	1049	1036	1019	991	
		Watts	207	249	300	352	398	
	370 CFM/ton	CFM	1109	1106	1090	1071	1040	
		Watts	239	284	333	381	422	
	400 CFM/ton	CFM	1195	1193	1172	1150	1113	
		Watts	294	345	384	422	449	
430 CFM/ton	CFM	1282	1280	1254	1229	1186		
	Watts	357	414	436	456	463		
450 CFM/ton	CFM	1334	1331	1272	1201	1125		
	Watts	405	466	463	459	455		

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	TDHMB060BCV3VB ADHMB060BCV3VB
TYPE	Downflow/Horizontal Right
RATINGS ②	
40% (low) heat Input BTUH	24,000
40% (low) heat Capacity BTUH (ICS) ③	22,800
100% (high) heat Input BTUH	60,000
100% (high) heat Capacity BTUH (ICS) ③	57,000
Temp. rise (Min.-Max.) °F	30 - 60
AFUE	95.0
BLOWER DRIVE	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	5.2
COMBUSTION FAN - Type	Centrifugal
Drive - No. Speeds	Direct - Variable
Motor HP - RPM	1/50 - 5000
Volts/Ph/Hz	33 - 110/3/60 - 180
FLA	1.0
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	2 - 14x20 - 1 in.
VENT — Size (in.)	2 Round
HEAT EXCHANGER	
Type -Fired	Aluminized Steel - Type I
-Unfired	
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas Qty. — Drill Size	3 — 45
L.P. Gas Qty. — Drill Size ⑤	3 — 56
GAS VALVE	Redundant - Three Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Igniter
BURNERS — Type	Multiport Inshot
Number	3
POWER CONN. — V/Ph/Hz ④	115/1/60
Ampacity (In Amps)	7.7
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (IN.)	1/2
DIMENSIONS	H x W x D
Crated (In.)	41-3/4 x 19-1/2 x 30-1/2
WEIGHT	
Shipping (Lbs.)/Net (Lbs)	160/ 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.

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.

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

