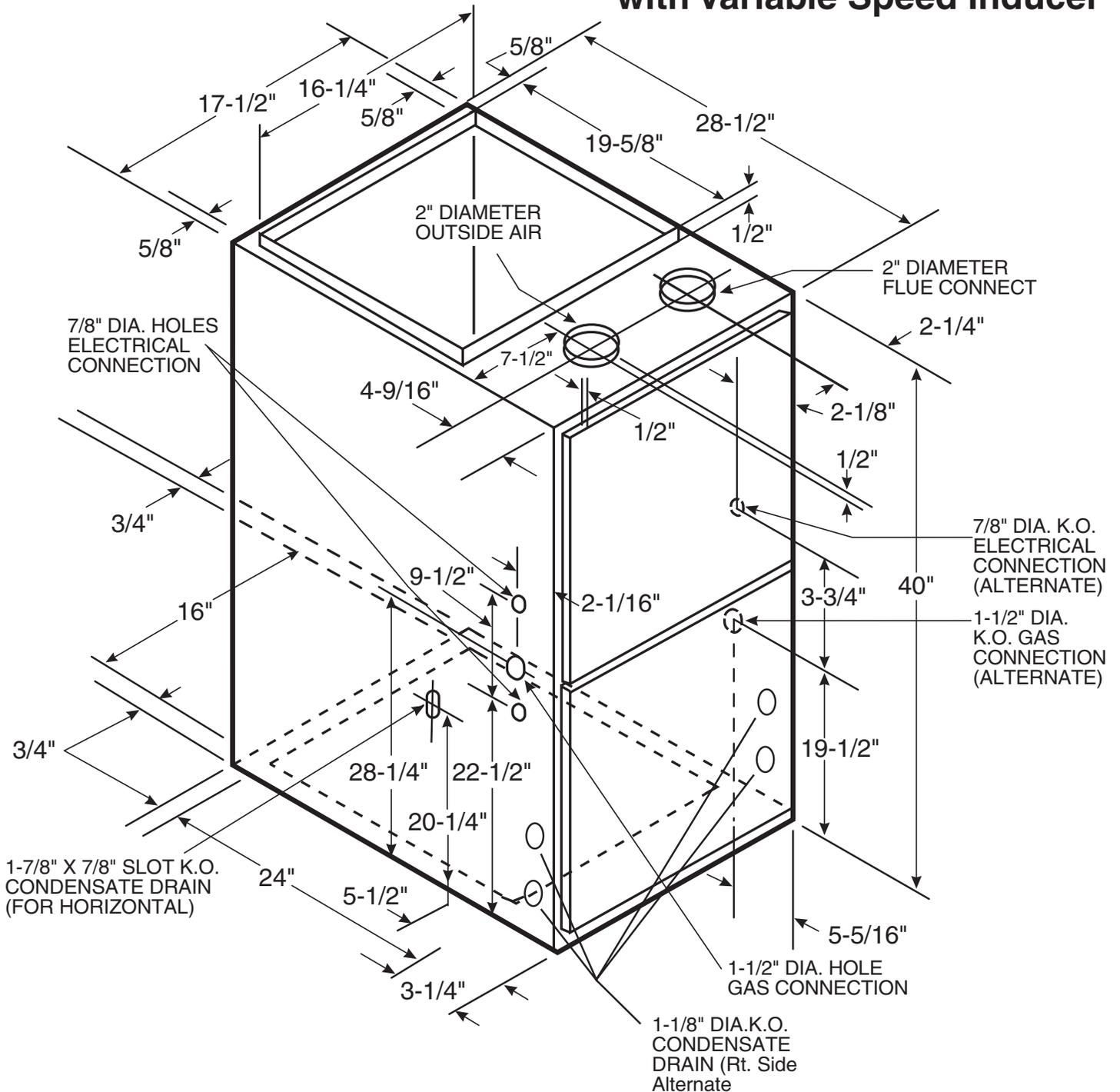


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SPECIFICATION

AUHMB080ACV3VB

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



AUHMB080 Airflow - Heating

UHMB080ACV3VB 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																
			CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts									
40% (low) Heat	Low	571	CFM	512	564	581	538	572	Temp. Rise	70	63	62	66	62	Watts	45	77	112	109	146			
			Medium Low	643	CFM	586	634	649	606	634	Temp. Rise	61	56	55	59	56	Watts	57	90	129	127	177	
					Medium**	714	CFM	661	704	717	673	696	Temp. Rise	54	51	50	53	51	Watts	71	106	148	146
	High	821					CFM	772	809	819	774	789	Temp. Rise	46	44	44	46	45	Watts	99	136	184	176
			65% (medium) Heat	Low			806	CFM	757	794	805	760	776	Temp. Rise	67	63	63	66	65	Watts	95	132	179
					Medium Low	907		CFM	862	893	901	855	864	Temp. Rise	59	56	56	59	58	Watts	127	165	217
	Medium**	1008						CFM	967	992	997	951	951	Temp. Rise	52	51	51	53	53	Watts	165	205	262
			High	1159			CFM	1125	1139	1141	1093	1083	Temp. Rise	45	44	44	46	47	Watts	233	276	341	288
					100% (high) Heat	Low	1120	CFM	1084	1101	1104	1056	1048	Temp. Rise	65	64	63	66	67	Watts	214	256	319
	Medium Low	1260						CFM	1230	1238	1237	1188	1170	Temp. Rise	57	57	57	59	60	Watts	286	331	401
			Medium**	1400				CFM	1376	1375	1370	1320	1292	Temp. Rise	51	51	51	53	54	Watts	369	418	495
					High	1610	CFM	1595	1580	1570	1519	1474	Temp. Rise	44	44	45	46	48	Watts	398	470	522	522

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.

AUHMB080 Airflow - Cooling

UHMB080ACV3VB Furnace Cooling Airflow (CFM) and Power (Watts) vs. External Static Pressure With Filter																						
Cooling	Unit Outdoor	Airflow Setting	External Static Pressure																			
			0.1	0.3	0.5	0.7	0.9															
			CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts	CFM	Temp. Rise	Watts								
2	290 CFM/ton	CFM	504	565	586	521	540	Temp. Rise	34	70	104	138	172	Watts	547	604	624	559	579			
			310 CFM/ton	CFM	547	604	624	559	579	Temp. Rise	40	77	112	147	182	Watts	590	644	663	597	617	
				330 CFM/ton	CFM	47	85	121	157	193	Temp. Rise	47	85	121	157	193	Watts	656	695	701	703	694
		350 CFM/ton			CFM	54	93	130	167	204	Temp. Rise	54	93	130	167	204	Watts	676	724	740	674	694
			370 CFM/ton		CFM	62	102	140	179	217	Temp. Rise	62	102	140	179	217	Watts	764	792	801	795	789
				400 CFM/ton	CFM	74	116	157	197	238	Temp. Rise	75	116	157	197	238	Watts	806	844	856	788	810
		430 CFM/ton			CFM	89	133	175	216	259	Temp. Rise	89	133	175	216	259	Watts	877	899	901	895	886
			450 CFM/ton		CFM	102	145	188	230	275	Temp. Rise	102	145	188	230	275	Watts	660	709	726	659	680
				2.5	290 CFM/ton	CFM	59	99	136	174	212	Temp. Rise	59	99	136	174	212	Watts	740	768	772	769
		310 CFM/ton				CFM	70	109	149	189	229	Temp. Rise	70	109	149	189	229	Watts	768	809	822	755
			330 CFM/ton			CFM	81	123	164	205	246	Temp. Rise	81	123	164	205	246	Watts	848	869	871	868
					350 CFM/ton	CFM	94	138	179	220	265	Temp. Rise	94	138	179	220	265	Watts	875	909	918	850
	370 CFM/ton	CFM				107	153	197	240	284	Temp. Rise	107	153	197	240	284	Watts	978	994	992	989	980
		400 CFM/ton	CFM			130	179	224	270	316	Temp. Rise	130	179	224	270	316	Watts	1037	1058	1063	994	1017
			430 CFM/ton		CFM	157	209	258	305	354	Temp. Rise	157	209	258	305	354	Watts	1093	1096	1082	1065	1051
	450 CFM/ton				CFM	174	227	276	324	378	Temp. Rise	174	227	276	324	378	Watts	816	854	865	798	819
		3			290 CFM/ton	CFM	92	136	178	220	262	Temp. Rise	92	136	178	220	262	Watts	881	914	923	855
			310 CFM/ton			CFM	108	155	199	242	286	Temp. Rise	108	155	199	242	286	Watts	945	974	981	912
	330 CFM/ton					CFM	127	176	222	266	313	Temp. Rise	127	176	222	266	313	Watts	1029	1043	1043	1035
					350 CFM/ton	CFM	148	199	246	292	340	Temp. Rise	148	199	246	292	340	Watts	1074	1093	1097	1027
			370 CFM/ton	CFM		170	224	274	322	372	Temp. Rise	170	224	274	322	372	Watts	1170	1181	1184	1180	1174
	400 CFM/ton			CFM		206	262	317	370	423	Temp. Rise	206	262	317	370	423	Watts	1268	1276	1270	1199	1224
				430 CFM/ton	CFM	254	314	372	430	484	Temp. Rise	254	314	372	430	484	Watts	1321	1321	1306	1295	1251
			450 CFM/ton		CFM	287	351	415	477	518	Temp. Rise	287	351	415	477	518	Watts	972	998	1005	936	959
	3.5				290 CFM/ton	CFM	135	185	232	277	324	Temp. Rise	135	185	232	277	324	Watts	1047	1068	1073	1003
				310 CFM/ton		CFM	161	213	262	310	359	Temp. Rise	161	213	262	310	359	Watts	1123	1138	1140	1070
			330 CFM/ton			CFM	189	244	296	347	398	Temp. Rise	189	244	296	347	398	Watts	1195	1204	1208	1205
					350 CFM/ton	CFM	215	275	329	383	437	Temp. Rise	215	275	329	383	437	Watts	1273	1278	1275	1204
		370 CFM/ton		CFM		257	317	376	433	488	Temp. Rise	257	317	376	433	488	Watts	1375	1385	1384	1383	1305
			400 CFM/ton	CFM		316	383	444	513	513	Temp. Rise	316	383	444	513	513	Watts	1499	1487	1491	1392	1303
				430 CFM/ton	CFM	389	457	513	513	513	Temp. Rise	389	457	513	513	513	Watts	1513	1512	1508	1418	1341
		450 CFM/ton			CFM	398	470	529	524	522	Temp. Rise	398	470	529	524	522	Watts					

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	AUHMB080ACV3VB ⑥
TYPE	Upflow/Horizontal Left
RATINGS ②	
40% (low) heat Input BTUH	32,000
40% (low) heat Capacity BTUH (ICS) ③	30,944
100% (high) heat Input BTUH	80,000
100% (high) heat Capacity BTUH (ICS) ③	77,360
Temp. rise (Min.-Max.) °F	35 - 65
AFUE	96.7
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	115/3/60
FLA	1.0
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 17x25 - 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	4 — 45
L.P. Gas Qty. — Drill Size ⑤	4 — 56
GAS VALVE	Redundant - Three Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Igniter
BURNERS — Type	Multiport Inshot
Number	4
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)	168 / 156

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

Mechanical Specifications

MODULATING OPERATION

The modulating gas valve provides longer heating cycles for more consistent heating comfort. Modulates from 45% to 100% of the normal firing rates 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 ACONT900 comfort control.

ALTERNATE 24V MODE

Furnace is field configurable to 24V non-communicating mode.

COMFORT CONTROL

Acculink II™ 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 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

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 FREEDOM 95 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 FREEDOM 95 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.

American Standard Heating & Air Conditioning has a policy of continuous product and product data improvement and reserves the right to change specifications and design without notice.

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