

HEATING INPUT: 46,000–115,000 BTU/H



Standard Features

- Heavy-duty Million-Air[®] stainless-steel dual-diameter, tubular heat exchanger
- Stainless-steel secondary heat exchanger
- Two-stage convertible gas valve automatically adjust to high or low stage
- Durable SureStart[™] Silicon Nitride igniter
- Quiet single-speed draft inducer
- Self-diagnostic control board with constant memory fault code
- Color-coded low-voltage terminals with provisions for electronic air cleaner and humidifier
- Multi-speed blower motor
- Low continuous fan speed options offer quiet air circulation
- All models comply with California Low NOx emissions standards

Cabinet Features

- Multi-position installation: downflow, horizontal left or right
- Certified for direct vent (2-pipe) or non-direct vent (1-pipe)
- Easy-to-install top venting with optional side venting
- Convenient left or right connection for gas and electrical service
- Cabinet air leakage (Q_{Leak}) $\leq 2\%$
- Heavy-gauge steel cabinet with durable baked-enamel finish
- Fully insulated heat exchanger and blower section
- Airtight solid bottom or side return with easy-cut tabs for effortless removal in bottom air-inlet applications

Contents

Nomenclature	2
Product Specifications	3
Dimensions	4
Airflow Data	5
Wiring Diagrams	6
Accessories	8



* Complete warranty details available from your local dealer or at www.amana-hac.com. To receive the Lifetime Unit Replacement Limited Warranty (good for as long as you own your home) and 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec.



NOMENCLATURE

	A	C	S	H	96	045	3	B	X	A	A
	1	2	3	4	5,6	7,8,9	10	11	12	13	14
Brand	A- Amana										
Configuration	M - Upflow/Horizontal C - Downflow/Horizontal K - Dedicated Upflow D - Dedicated Downflow										
Motor	V - Variable Speed/ComfortNet E - High Efficiency S - Single Speed										
Gas Valve	M - Modulating C - 2 Stage H - Convertible 2 Stage S - Single Stage										
AFUE	97 - 97% AFUE 80 - 80% AFUE										
MBTU/h	040 - 40,000 BTU/h 060 - 60,000 BTU/h 140 - 140,000 BTU/h										
											Minor Revision A - Initial Release B - 1st Revision
											Major Revision A - Initial Release B - 1st Revision
											NOx N - Natural Gas X - Low NOx
											Cabinet Width A - 14" B - 17½" C - 21" D - 24½"
											Maximum CFM 3 - 1200 CFM 4 - 1600 CFM 5 - 2000 CFM

SPECIFICATIONS

	ACSH96 0453BX**	ACSH96 0703BX**	ACSH96 0704CX**	ACSH96 0904CX**	ACSH96 0905DX**	ACSH96 1155DX**
HEATING CAPACITY						
Input ¹	46,000	69,000	69,000	92,000	92,000	115,000
Natural Gas Output ¹	44,200	66,300	66,300	88,400	88,400	106,500
LP Gas Output ¹	39,800	59,700	59,700	79,600	79,600	96,255
AFUE ²	96.1	96.1	96.1	96.1	96.1	93.0
Available AC @ 0.5" ESP	3	3	4	4	5	5
Temperature Rise Range (°F)	25-55	35-65	25-55	40 - 70	35-65	40 - 70
CIRCULATOR BLOWER						
Size (D x W)	10" x 8"	10" x 8"	10" x 10"	10" x 10"	11" x 10"	11" X 10"
Horsepower @ 1075 RPM	½	½	½	½	¾	¾
Speed	4	4	4	4	4	4
Vent Diameter ³	2"	2"	2"	2"	2"	2"
No. of Burners	2	3	3	4	4	5
Disposable Filter Size (in ²)	576	564	564	752	752	940
ELECTRICAL DATA						
Min. Circuit Ampacity ⁴	9.8	9.8	12.9	12.9	13.4	13.4
Max. Overcurrent Device (amps) ⁵	15	15	15	15	15	15
SHIP WEIGHT (LBS)						
	120	123	123	144	146	160

¹ Natural Gas BTU/h. For altitudes above 2,000', reduce input rating 4% for each 1,000' above sea level. Low-fire rate is 75% of high-fire rate

² DOE AFUE based upon Isolated Combustion System (ICS)

³ Vent and combustion air diameters may vary depending upon vent length. Refer to the latest editions of the National Fuel Gas Code NFPA 54/ANSI Z223.1 (in the USA) and the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2 (in Canada).

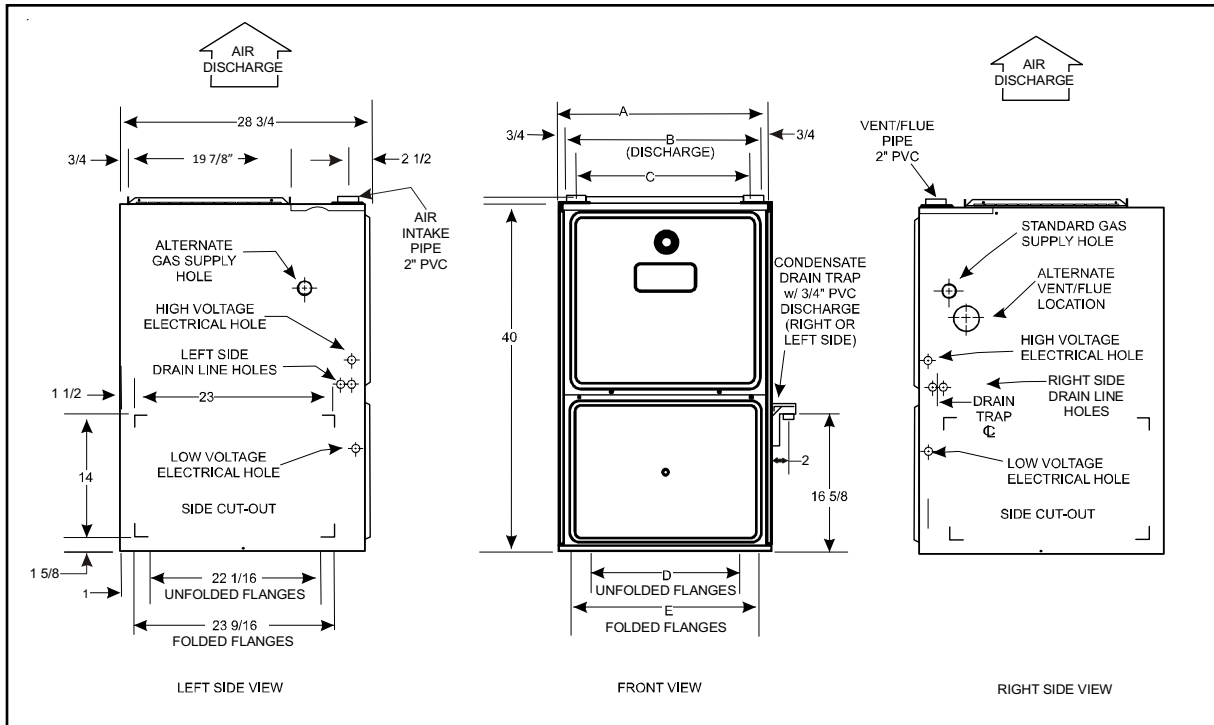
⁴ Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

⁵ Maximum Overcurrent Protection Device refers to maximum recommended fuse or circuit breaker size. May use fuses or HACR-type circuit breakers of the same size as noted.

Notes

- All furnaces are manufactured for use on 115 VAC, 60 Hz, single-phase electrical supply.
- Gas Service Connection ½" FPT
- Important: Size fuses and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.

DIMENSIONS



MODEL	A	B	C	D	E
ACSH960453BX**	17½"	16"	12¾"	14½"	16"
ACSH960703BX**	17½"	16"	12¾"	14½"	16"
ACSH960704CX**	21"	19½"	16⅝"	18"	19½"
ACSH960904CX**	21"	19½"	16⅝"	18"	19½"
ACSH960905DX**	24½"	23"	20⅝"	21½"	23"
ACSH961155DX**	24½"	23"	20⅝"	21½"	23"

NOTES:

- Installer must supply one or two PVC pipes: one for combustion air (optional) and one for the flue outlet (required). Vent pipe must be either 2" or 3" in diameter, depending upon furnace input, number of elbows, length of run, and installation (1 or 2 pipes). The optional combustion air pipe is dependent on installation/code requirements and must be 2" or 3" diameter PVC.
- Line voltage wiring can enter through the right or left side of furnace. Low-voltage wiring can enter through the right or left side of furnace.
- Conversion kits for high-altitude natural gas operation are available. Contact your Amana distributor or dealer for details.
- Installer must supply the following gas line fittings, according to which entrance is used:
 Left: One 90° street elbow; one 2½" pipe nipple; one 90° elbow; straight pipe; one ground joint union
 Right: Straight pipe to reach gas valve
- Installations using a bottom return: Failure to unfold flanges will reduce airflow area by approximately 18%. This could result in performance and noise issues.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

POSITION	SIDES	REAR	FRONT	BOTTOM	FLUE	TOP
Downflow	0"	0"	1"	C	0"	1"
Horizontal	6"	0"	1"	C	0"	4"

C = If placed on combustible floor, the floor MUST be wood ONLY.

NC = Non-Combustible: A combustible floor sub-base must be used for installation on combustible flooring

NOTES

- For servicing or cleaning, a 24" front clearance is recommended.
- Unit connections (electrical, flue, and drain) may necessitate greater clearances than the minimum clearances listed above.
- In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.
- Refer to the appropriate USA and Canadian codes:
 In the USA: the National Fuel Gas Code NFPA 54 / ANSI Z223.1
 In Canada: the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2 Approved for line contact in the horizontal position.

AIRFLOW DATA

(CFM & TEMPERATURE RISE VS. EXTERNAL STATIC PRESSURE)

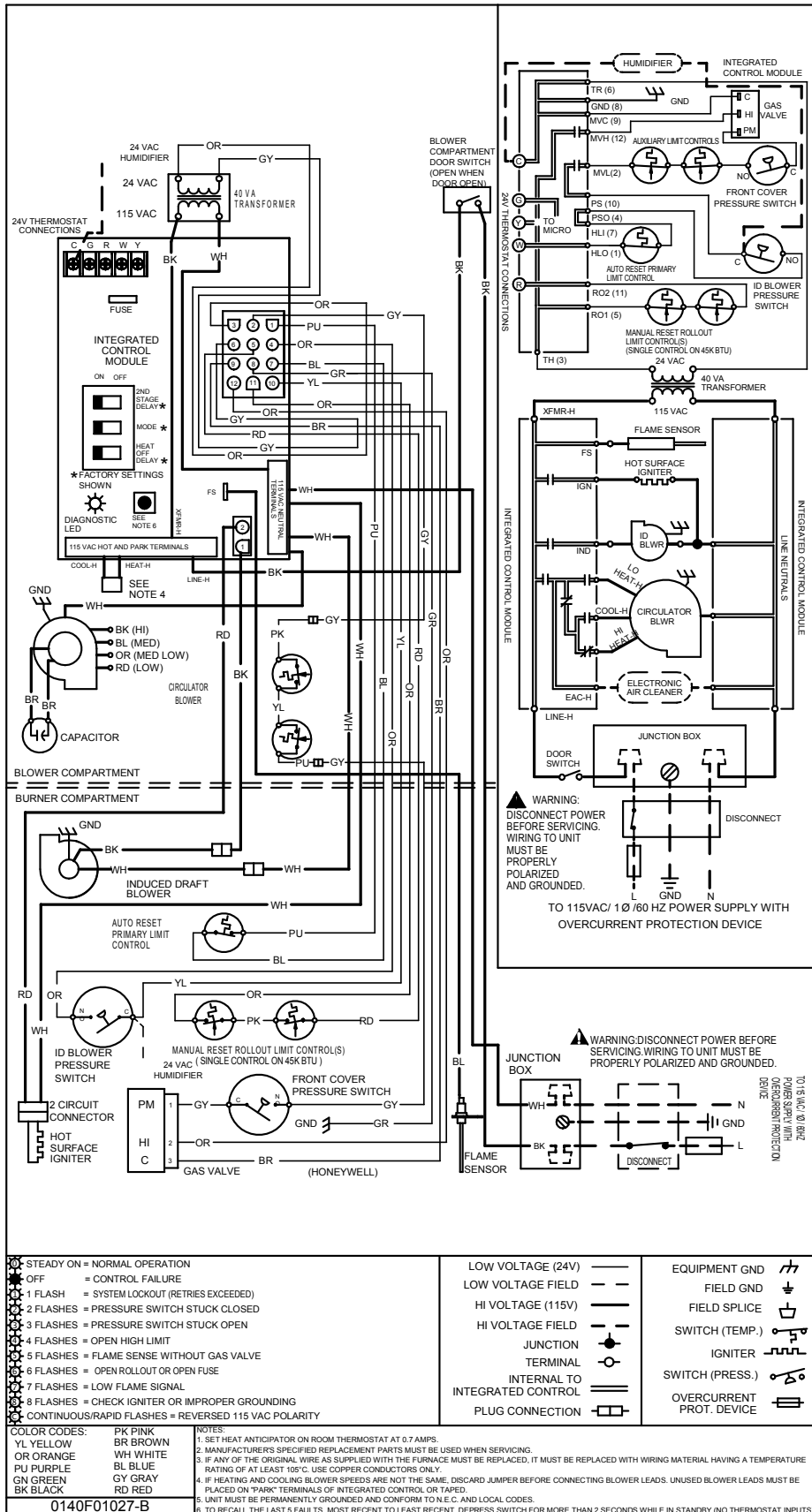
MODEL	MOTOR SPEED	TONS AC ¹	EXTERNAL STATIC PRESSURE, (INCHES WATER COLUMN)												
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM
ACSH96 0453BX**	High	3	1,415	28	1,352	30	1,290	31	1,196	34	1,127	36	1,035	936	825
	Med	2.5	1,221	33	1,178	34	1,127	36	1,073	38	1,007	40	932	834	733
	Med-Lo	2	1,034	39	1,000	40	976	41	935	43	881	46	818	733	662
	Low	1.5	860	47	845	48	812	50	783	51	740	54	682	619	534
ACSH96 0703BX**	High	3	1,431	42	1,368	44	1,296	47	1,228	49	1,150	53	1,055	962	860
	Med	2.5	1,212	50	1,182	51	1,138	53	1,091	55	1,019	59	944	871	769
	Med-Lo	2	1,002	60	978	62	956	63	921	66	878	69	825	738	647
	Low	1.5	813	74	805	75	790	76	759	80	726	83	689	644	605
ACSH96 0704CX**	High	4	1,755	34	1,674	36	1,632	37	1,510	40	1,423	42	1,325	1,241	1,116
	Med	3.5	1,656	36	1,585	38	1,536	39	1,429	42	1,355	45	1,268	1,145	1,059
	Med-Lo	3	1,551	39	1,488	41	1,427	42	1,353	45	1,290	47	1,195	1,100	1,017
	Low	2.5	1,286	47	1,258	48	1,241	49	1,185	51	1,112	54	1,067	983	886
ACSH96 0904CX**	High	4	1,734	46	1,652	49	1,578	51	1,508	53	1,413	57	1,336	1,248	1,154
	Med	3.5	1,642	49	1,558	52	1,487	54	1,418	57	1,336	60	1,243	1,164	1,039
	Med-Lo	3	1,522	53	1,458	55	1,396	58	1,321	61	1,253	64	1,182	1,101	986
	Low	2.5	1,287	63	1,244	65	1,184	68	1,148	70	1,098	73	1,034	953	849
ACSH96 0905DX**	High	5	2,189	37	2,109	38	2,025	40	1,948	41	1,862	43	1,757	1,644	1,537
	Med	4	1,885	43	1,831	44	1,776	45	1,711	47	1,637	49	1,539	1,453	1,346
	Med-Lo	3.5	1,665	48	1,627	50	1,584	51	1,524	53	1,462	55	1,400	1,323	1,220
	Low	3	1,474	55	1,440	65	1,401	57	1,356	59	1,310	61	1,255	1,193	1,109
ACSH96 1155DX**	High	5	2,134	46	2,103	47	2,029	48	1,941	51	1,906	51	1,818	1,733	1,625
	Med	4	1,678	58	1,643	60	1,643	60	1,577	62	1,527	64	1,489	1,423	1,339
	Med-Lo	3.5	1,453	68	1,440	68	1,426	69	1,363	72	1,349	73	1,314	1,253	1,205
	Low	3	1,259	78	1,239	79	1,220	80	1,181	83	1,159	85	1,118	1,082	1,015

¹ at 0.5" ESP

NOTES

- CFM in chart is without filter(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
- All furnaces ship as high-speed cooling and medium-speed heating. Installer must adjust blower cooling & heating speed as needed.
- For most jobs, about 400 CFM per ton when cooling is desirable.
- INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
- This chart is for information only. For satisfactory operation, external static pressure should not exceed value shown on the rating plate. The shaded area indicates ranges in excess of maximum static pressure allowed when heating.
- The above chart is for U.S. furnaces installed at 0-2000 feet. At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while ESP at the CFM will be lower.

WIRING DIAGRAMS WITH HONEYWELL VALVE



WARNING

Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.

ACCESSORIES

MODEL	DESCRIPTION	ACSH96 0453BX**	ACSH96 0703BX**	ACSH96 0704CX**	ACSH96 0904CX**	ACSH96 0905DX**	ACSH96 1155DX**
LPM-06	LP Conversion Kit (Springs & Orifice)	√	√	√	√	√	√
LPLP03	LP Gas Low Pressure Kit	√	√	√	√	√	√
FTK04	Twinning Kit	√	√	√	√	√	√
ASAS	Electronic Air Cleaners	√	√	√	√	√	√
AMU	Media Air Cleaners	√	√	√	√	√	√
HANG11	High Altitude Natural Gas Kit	1	1	1	1	---	1
HANG12	High Altitude Natural Gas Kit	2	2	2	2	---	2
HALP10	High Altitude LP Gas Kit	3	3	3	3	---	3
HAPS27	High Altitude Pressure Switch Kit	3	3	3	3	---	3
EFR01	External Filter Rack	√	√	√	√	√	√
DCVK-20	Horizontal/Vertical Concentric Vent Kit (2")	√	√	---	---	---	---
DCVK-30	Horizontal/Vertical Concentric Vent Kit (3")	√	√	√	√	√	√
017K00000S	Flush-mount Vent Kit	√	√	√	√	√	√

NOTES

- √ Indicates available for this model
- 1 Indicates 7,001' to 9,000' altitude
- 2 Indicates 9,001' to 11,000' altitude
- 3 Indicates 7,001' to 11,000' altitude
- All installations above 7,000' require a pressure switch change.
- For installation in Canada, gas furnaces are certified only to 4,500'.

