

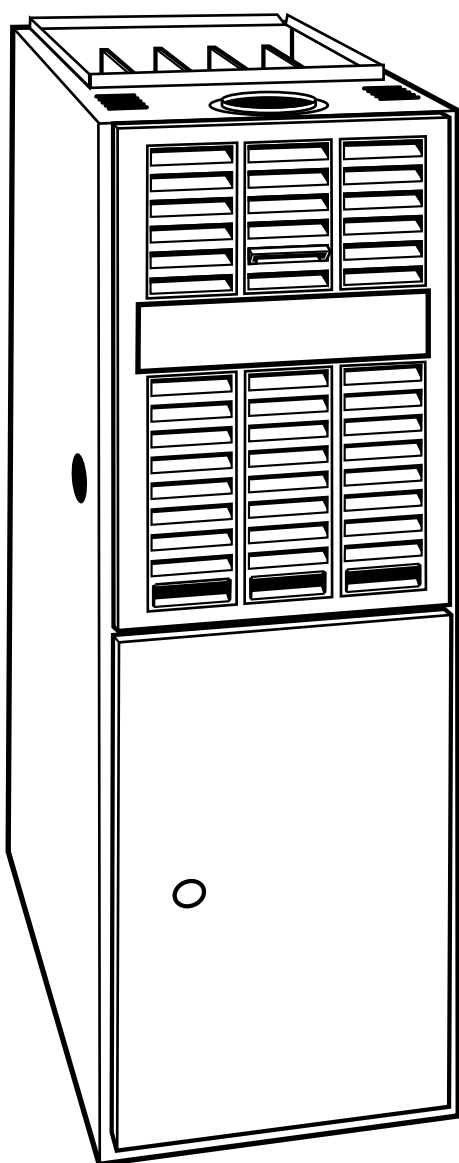


Heating & Cooling

HIGH-EFFICIENCY 2-SPEED UPFLOW INDUCED- COMBUSTION FURNACE

330AAV

Sizes 040 thru 135
Series A



With a unique approach to induced-combustion design, a 40-in. tall cabinet, a 4-pass heat exchanger, an inshot burner system and its safety features, this furnace is without peer. The model 330AAV Two-Speed Upflow Furnace achieves one of the higher Annual Fuel Utilization Efficiency (AFUE) ratings available in a noncondensing, induced-combustion furnace. Its ease and economy of installation, ease of serviceability, economical initial cost, and short payback time put it in a class well ahead of the competition. The model 330AAV Two-Speed Gas Furnace has the kind of overall performance needed in today's homes.

FEATURES

EFFICIENCY — The 330AAV Two-Speed Induced-Combustion Gas Furnace provides the efficiency customers want with 80.0% AFUE.

HOT SURFACE IGNITION — No pilot to waste gas with this field proven ignition system.

ALUMINIZED HEAT EXCHANGER — The patented 4-pass heat exchanger is made of aluminized steel and backed by a 20-year Limited Warranty.

INTELLIGENT CONTROL — The 330AAV Furnace has an intelligent control that monitors the operation of the furnace. This control also has a component-test feature that enables the servicing technician to verify operation of the control, the high and low inducer, the hot surface ignitor, and high-, medium- and low-speed blower operation. The control features a 3-amp fuse that protects the transformer and control. We guarantee the reliability of the control with a 3-year Limited Warranty.

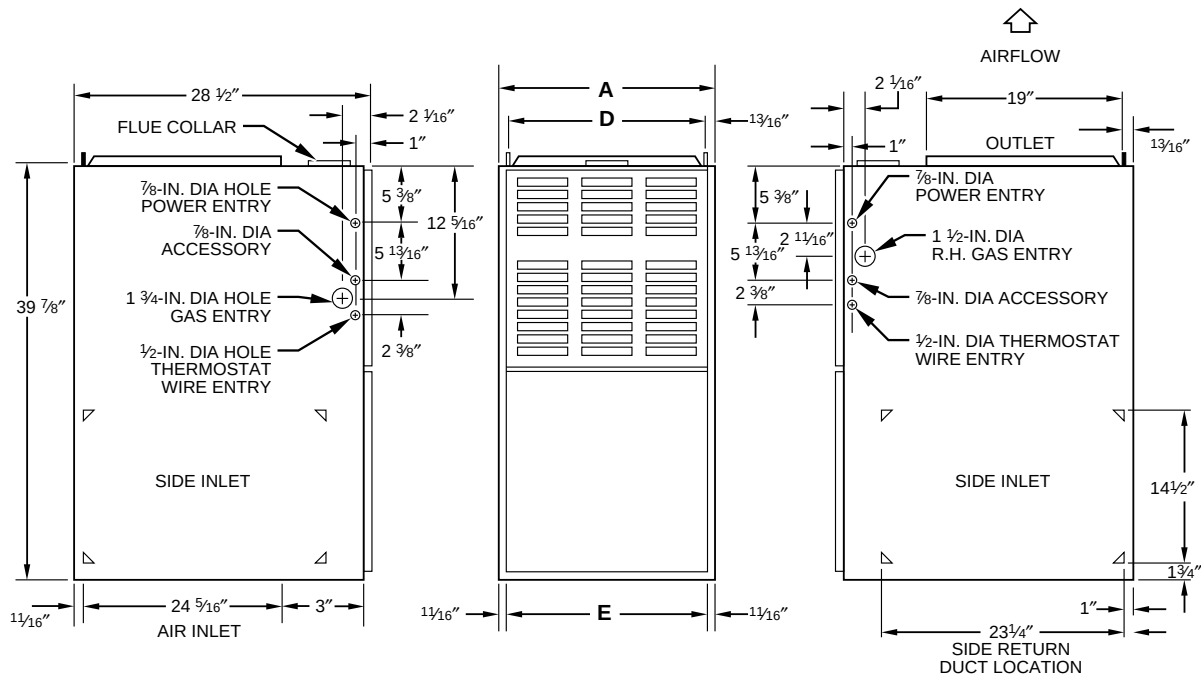
40-IN. HEIGHT — The 330AAV Furnace cabinet height is only 40 in. This simplifies installation in alcoves, attics, basements (ideal for short basement), closets, and utility rooms, especially with a taller high-efficiency cooling coil.

PREPAINTED CABINET — The 330AAV uses prepainted sheet metal for the cabinet. This is the same high-quality finish found on refrigerators and other appliances today. We ensure its durability by using a galvanized steel substrate to provide superior rust protection.

PATENTED DRAFT SAFEGUARD — Our induced-combustion furnace has a patented draft safeguard switch. The safeguard switch will stop furnace operation if the vent system becomes blocked or is not operating properly. An exclusive with the 330AAV Furnace.

EASY INSTALLATION — The model 330AAV has many features that make installation easier: left or right gas and electrical connections, heating and cooling blower speed selector, matching coil sizes, accessory low-voltage connections, and many more.

QUIET OPERATION — A soft mount inducer assembly and 2-stage slow-opening gas valve reduce sound level. The 2-speed operation capability minimizes furnace and air noise for total home comfort.



NOTE: 2 additional 7/8 In. Dia knockouts are located in the top plate.

NOTES: Minimum return-air opening at furnace:

1. For 800 CFM—16-In. round or 14 1/2 x 12-In. rectangle.
2. For 1200 CFM—20-In. round or 14 1/2 x 19 1/2-In. rectangle.
3. For 1600 CFM—22-In. round or 14 1/2 x 23 1/4-In. rectangle.
4. For airflow requirements above 1800 CFM, use both side inlets, a combination of 1 side inlet and the bottom, or the bottom only.

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DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONNECTION*	SHIPPING WEIGHT
036040	14-3/16	12-9/16	12-11/16	4	124
024060	14-3/16	12-9/16	12-11/16	4	132
036060	14-3/16	12-9/16	12-11/16	4	134
042080	17-1/2	15-7/8	16	4	150
048080	21	19-3/8	19-1/2	4	154
036100	17-1/2	15-7/8	16	4	160
048100	21	19-3/8	19-1/2	4	166
060100	24-1/2	22-7/8	23	4	184
048120	21	19-3/8	19-1/2	5	178
060120	24-1/2	22-7/8	23	5	194
060135	24-1/2	22-7/8	23	5	204

* Refer to the furnace Installation Instructions for proper venting procedures.

CLEARANCES (In.)

UNIT SIZE	040 AND 060	080—135
Furnace Sides — Single-Wall Vent	1	0
Type B-1 Double-Wall Vent	0	0
Furnace Back	0	0
Top of Plenum	1	1
Vent Connector — Single-Wall	6	6
Type B-1 Double-Wall Vent	1	1
Furnace Front* — Single-Wall	6	6
Type B-1 Double-Wall Vent	3	3
Service	30	30

* A minimum 3-in. front clearance is needed for combustion-air and ventilation-air entry.

SPECIFICATIONS

UNIT SIZE		036040	024060	036060	042080	048080
RATINGS AND PERFORMANCE						
Gas Input (Btuh)*	High Stage	40,000	60,000	60,000	80,000	80,000
	Low Stage	26,000	39,000	39,000	52,000	52,000
Output Capacity (Btuh)† Nonweatherized ICS	High Stage	32,000	49,000	48,000	65,000	65,000
	Low Stage	21,000	31,000	31,000	42,000	42,000
AFUE%†	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range (°F)	High Stage	15—45	45—75	25—55	35—65	30—60
	Low Stage	5—35	30—60	15—45	20—50	15—45
Certified External Static Pressure	Heat/Cool	0.10/0.50	0.12/0.50	0.12/0.50	0.15/0.50	0.15/0.50
Airflow CFM‡	Heating High/Low	1255/1070	740/600	1175/1025	1150/960	1445/1260
	Cooling	1270	880	1300	1335	1740
ELECTRICAL						
Unit Volts—Hertz—Phase		115—60—1				
Operating Voltage Range		104—127				
Maximum Unit Amps		10.9	8.2	11.4	11.7	13.5
Maximum Wire Length (Measured 1 Way)	Ft	34	45	32	31	27
Minimum Wire Size		14				
Maximum Fuse Size		15				
Transformer (24v)		40va				
External Control	Heating	19va				
Power Available	Cooling	35va				
Air Conditioning Blower Relay		Standard				
CONTROLS						
Limit Control		SPST (Auto-Reset)				
Heating Blower Control		Solid-State Time Operation				
Inducer		2-Speed				
Burners (Monoport)		2	3		4	4
Gas Connection Size		1/2-in. NPT				
GAS CONTROLS						
2-Stage Redundant Gas Valve		White-Rodgers				
	Min Inlet Pressure (In. wc)	4.5 (Natural Gas)				
	Max Inlet Pressure (In. wc)	13.6 (Natural Gas)				
Ignition Device		Hot Surface				
BLOWER DATA						
Direct-Drive Motor HP (PSC)		1/3	1/5	1/3	1/3	1/2
Motor Full Load Amps		5.8	2.9	5.8	5.8	7.9
RPM (Nominal)—Speeds		1075—4	1075—4	1075—4	1075—4	1075—4
Blower Wheel Diameter x Width (In.)		10 x 6	10 x 6	10 x 6	10 x 7	10 x 8
Filter Size (In.)—Permanent Washable (Supplied)		(1) 16 x 25 x 1				(1) 20 x 25 x 1
FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES						
Twinning Kit		N/A				KGATW0301HSI
High-Altitude Pressure Switch Kit**		KGAHA5501PSW				
Gas Conversion Kit—Natural-to-Propane		KGANP24012SP				
Gas Conversion Kit—Propane-to-Natural		KGAPN20012SP				
Side Filter Rack (Accepts 1 Filter)		KGAFR0201ALL (Filter Size 16 x 25 x 1)				
Return Filter Cabinet (With Washable Filters)		KGARP0201ALL (Filter Size 2—20 x 25 x 1)				

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4. In Canada, derate the unit 10% for elevations 2000 ft to 4500 ft above sea level.

† Tentative capacity in accordance with U.S. Government DOE test procedures. California Seasonal Efficiencies based on California-specified procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

** 5500 ft and higher above sea level.

ICS—Isolated Combustion System

N/A—Not Applicable



**MEETS DOE RESIDENTIAL
CONSERVATION SERVICES
PROGRAM STANDARDS.**

**Before purchasing this appliance, read important
energy cost and efficiency information available
from your retailer.**

SPECIFICATIONS

UNIT SIZE		036100	048100	060100	048120	060120	060135
RATINGS AND PERFORMANCE							
Gas Input (Btuh)*	High Stage	100,000	100,000	100,000	120,000	120,000	133,000
	Low Stage	65,000	65,000	65,000	78,000	78,000	91,000
Output Capacity (Btuh)† Nonweatherized ICS	High Stage	81,000	81,000	81,000	98,000	98,000	108,000
	Low Stage	52,000	52,000	52,000	63,000	63,000	73,000
AFUE%†	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range (°F)	High Stage	50—80	40—70	25—55	45—75	40—70	45—75
	Low Stage	30—60	20—50	15—45	30—60	25—55	30—60
Certified External Static Pressure	Heat/Cool	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50
Airflow CFM‡	Heating High/Low	1175/1020	1410/1265	1720— 1515	1415/1260	1730/1525	1695/1500
	Cooling	1210	1575	2210	1620	1980	1905
ELECTRICAL							
Unit Volts—Hertz—Phase		115—60—1					
Operating Voltage Range		104—127					
Maximum Unit Amps		10.5	13.2	19.0	13.2	18.2	17.4
Maximum Wire Length (Measured 1 Way)	Ft	35	28	30	28	31	33
Minimum Wire Size		14	14	12	14	12	12
Maximum Fuse Size		15	15	20	15	20	20
Transformer (24v)		40va					
External Control	Heating	19va					
Power Available	Cooling	35va					
Air Conditioning Blower Relay		Standard					
CONTROLS							
Limit Control		SPST (Auto-Reset)					
Heating Blower Control		Solid-State Time Operation					
Inducer		2-Speed					
Burners (Monoport)		5			6		7
Gas Connection Size		1/2-in. NPT					
GAS CONTROLS							
2-Stage Redundant Gas Valve		White-Rodgers					
	Min Inlet Pressure (In. wc)	4.5 (Natural Gas)					
	Max Inlet Pressure (In. wc)	13.6 (Natural Gas)					
Ignition Device		Hot Surface					
BLOWER DATA							
Direct-Drive Motor HP (PSC)		1/3	1/2	3/4	1/2	3/4	3/4
Motor Full Load Amps		5.8	7.9	11.1	7.9	11.1	11.1
RPM (Nominal)—Speeds		1075—4	1075—4	1075—4	1075—4	1075—4	1075—4
Blower Wheel Diameter x Width (In.)		10 x 7	10 x 8	11 x 10	10 x 8	11 x 10	11 x 10
Filter Size (In.)— Permanent Washable (Supplied)		(1) 16 x 25 x 1	(1) 20x 25 x 1	(2) 16 x 25 x 1	(1) 20 x 25 x 1	(2) 16 x 25 x 1	
FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES							
Twinning Kit		N/A	KGATW0301HSI				
High-Altitude Pressure Switch Kit**		KGAHA5501PSW					
Gas Conversion Kit— Natural-to-Propane		KGANP24012SP					
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** 5500 ft and higher above sea level.

ICS—Isolated Combustion System

N/A—Not Applicable

AIR DELIVERY— CFM (With Filter)*

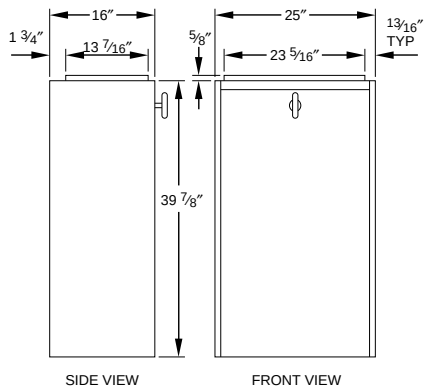
UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE (IN. WC)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
036040	1/3 PSC	High	—	1485	1410	1350	1270	1180	1080	970
		Med-High	—	1375	1315	1240	1165	1095	1000	905
		Med-Low	1255	1205	1165	1120	1060	985	905	805
		Low	1070	1035	1010	970	930	875	805	720
024060	1/5 PSC	High	1040	1010	975	935	880	810	735	640
		Med-High	855	830	800	765	715	660	600	490
		Med-Low	745	715	690	650	605	550	475	385
		Low	610	590	565	535	485	425	375	310
036060	1/3 PSC	High	—	1485	1430	1365	1300	1220	1140	1045
		Med-High	—	1355	1305	1260	1200	1135	1055	960
		Med-Low	1175	1170	1140	1110	1055	1005	950	860
		Low	1025	1015	995	965	930	885	825	745
042080	1/3 PSC	High	1585	1540	1470	1410	1335	1220	1110	980
		Med-High	1355	1325	1280	1230	1175	1090	1015	910
		Med-Low	1150	1125	1105	1085	1035	965	895	785
		Low	960	950	935	910	880	815	715	580
048080	1/2 PSC	High	2010	1950	1875	1810	1740	1660	1550	1455
		Med-High	1675	1660	1625	1600	1545	1490	1395	1295
		Med-Low	1445	1430	1415	1400	1370	1325	1265	1170
		Low	1260	1260	1260	1250	1210	1180	1115	1030
036100	1/3 PSC	High	1490	1435	1370	1300	1210	1135	1020	880
		Med-High	1375	1325	1265	1195	1125	1055	945	810
		Med-Low	1205	1175	1130	1075	1025	925	830	675
		Low	1045	1020	1000	960	905	820	700	565
048100	1/2 PSC	High	1880	1815	1745	1690	1575	1500	1400	1265
		Med-High	1660	1615	1570	1505	1435	1355	1260	1170
		Med-Low	1455	1410	1375	1350	1290	1235	1145	985
		Low	1265	1265	1240	1210	1180	1110	995	855
060100	3/4 PSC	High	2475	2405	2330	2265	2210	2130	2040	1945
		Med-High	2055	2025	2000	1965	1930	1865	1795	1720
		Med-Low	1725	1720	1705	1685	1665	1630	1585	1525
		Low	1500	1515	1510	1500	1480	1460	1415	1370
048120	1/2 PSC	High	1900	1845	1780	1705	1620	1530	1445	1320
		Med-High	1695	1645	1580	1520	1460	1385	1280	1155
		Med-Low	1460	1415	1375	1340	1290	1205	1110	—
		Low	1275	1260	1245	1230	1180	1135	—	—
060120	3/4 PSC	High	—	2210	2130	2055	1980	1895	1795	1680
		Med-High	2015	1975	1925	1880	1805	1735	1655	1555
		Med-Low	1730	1710	1670	1635	1590	1535	1470	1385
		Low	1525	1520	1495	1450	1410	1375	1315	1245
060135	3/4 PSC	High	—	2145	2060	1975	1905	1800	1680	1565
		Med-High	—	1950	1885	1815	1710	1645	1545	1435
		Med-Low	1730	1695	1660	1600	1540	1465	1400	1305
		Low	1520	1500	1460	1410	1360	1310	1245	1155

* Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace to be used for return air.

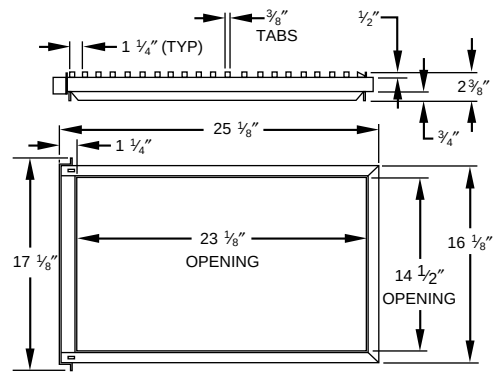
A filter is required for each return-air supply opening.

— Indicates unstable operating conditions.

DIMENSIONAL DRAWINGS OF OPTIONAL RETURN-AIR FILTER CABINET AND SIDE FILTER RACK



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A80199

SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

CALL FOR FREE CATALOG 1-800-962-9212

☐ Packaged Service Training

☐ Classroom Service Training

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS

Cancels: PDS 330A.40.4P