



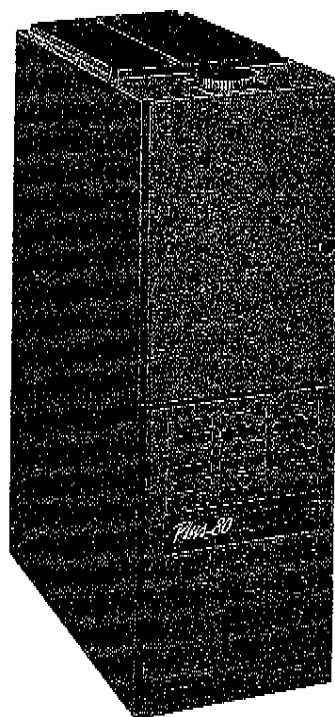
Payne
Air Conditioning

Indianapolis, IN

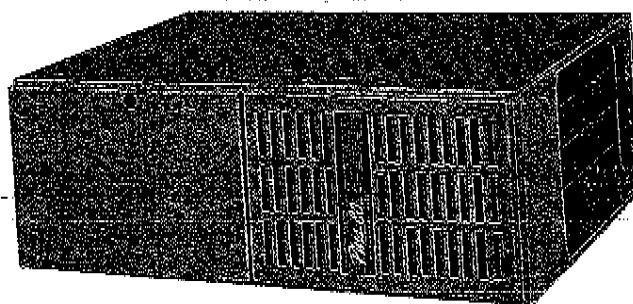
DELUXE MID-EFFICIENCY DOWNFLOW/HORIZONTAL INDUCED-COMBUSTION FURNACE

MODEL 331AAV

Size 085
Series A



DOWNFLOW



HORIZONTAL

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 331AAV Deluxe Downflow/Horizontal 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 331AAV Gas Furnace has the kind of overall performance needed in today's homes.

FEATURES

EFFICIENCY—The 331AAV Deluxe Induced-Combustion Gas Furnace provides the efficiency customers want with 80.0% AFUE.

HOT SURFACE IGNITION—This field proven ignition system will save energy and improve reliability.

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 331AAV Furnace has an intelligent control board that monitors the operation of the furnace. This control board also has a component-test feature that enables the servicing person to verify operation of the control itself, high and low inducer, hot surface ignitor, low-, medium-, and high-speed blower operation, and humidifier. 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 331AAV Induced-Combustion Furnace with a 40-in. cabinet height simplifies installation in attics, closets, and crawl spaces, especially with a high-efficiency cooling coil.

MULTIPOISED DOWNFLOW OR HORIZONTAL—Our furnace can be used in a downflow, horizontal-left, or horizontal-right configuration.

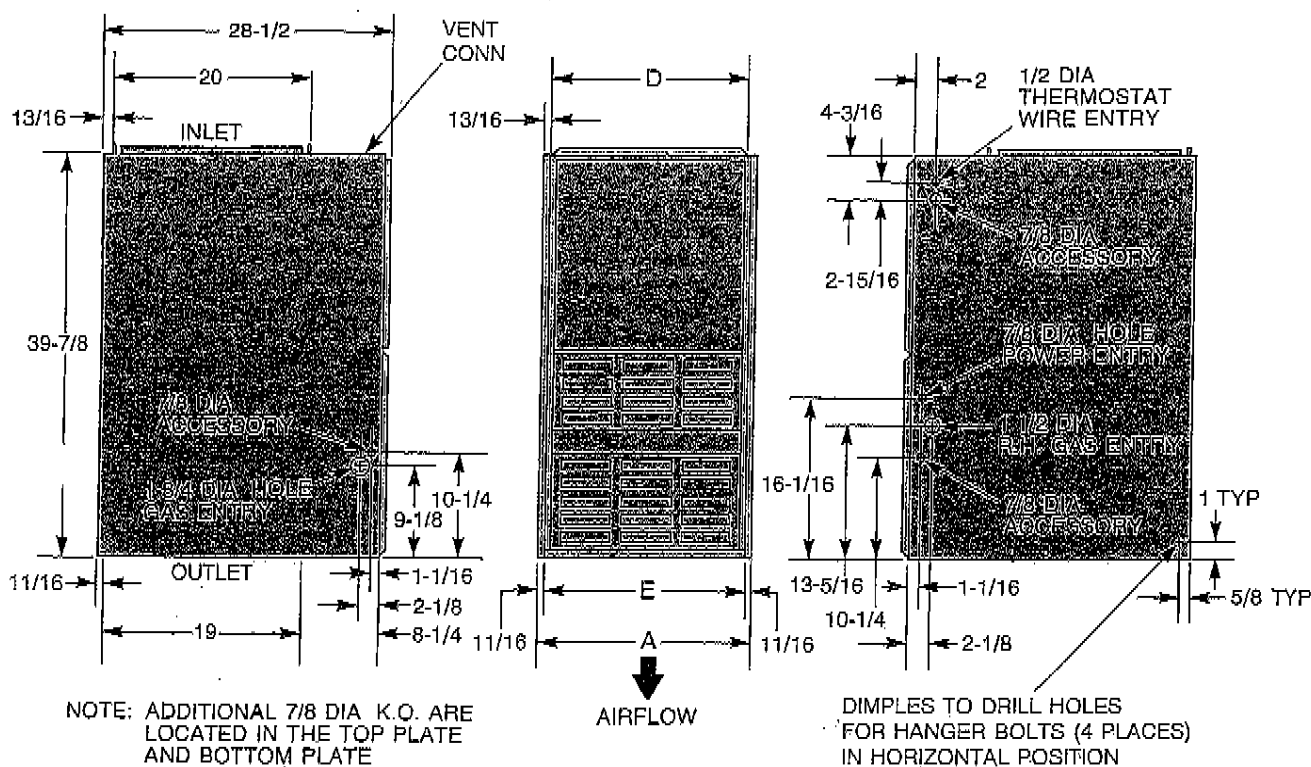
PREPAINTED CABINET—The 331AAV uses prepainted sheet metal for the cabinet. This is the same high-quality finish found on refrigerators and other appliances today. We ensure its durability by using a galvanized steel substrate to provide superior rust protection.

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 (Category I installations). An exclusive with the 331AAV Furnace.

EASY INSTALLATION—The model 331AAV has many features that make installation easier; left or right gas and electrical connections, Molex 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 reduces sound level. The 2-speed operation capability minimizes furnace and air noise for total home comfort.

VENTING—For installation flexibility, these furnaces can be vented Category I (vertical) or, with a minor field modification kit, Category III (horizontal) using high temperature plastic pipe.

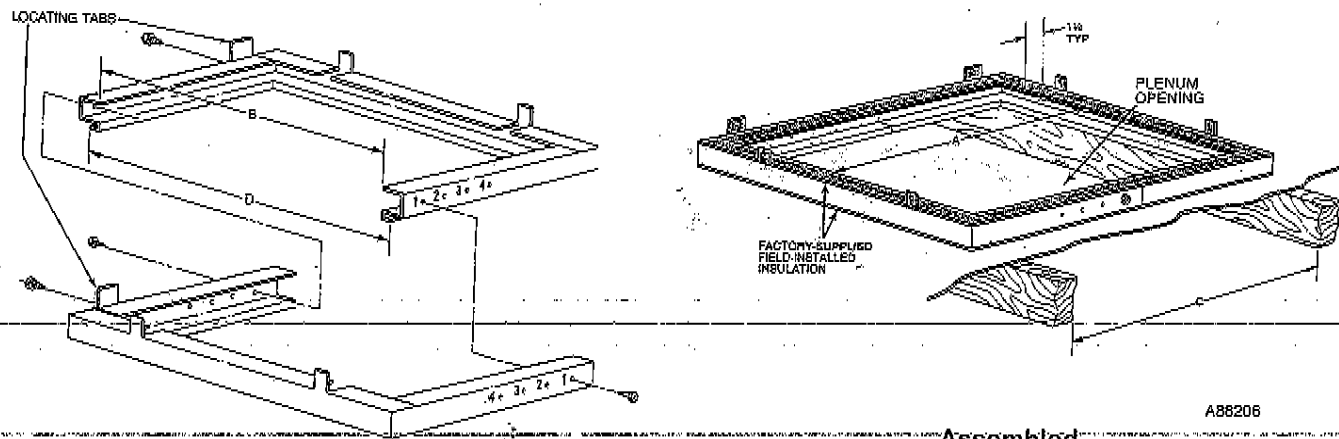


A88324

DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONN	SHIR. WT
036085	17-1/2	15-7/8	16	4	154
048085	17-1/2	15-7/8	16	4	154

ACCESSORY DOWNFLOW SUBBASE



A88206

Assembled

A88207

Disassembled

DIMENSIONAL DATA

FURNACE WIDTH	PLENUM OPENING*		FRAMED FLOOR HOLE		HOLE NO. FOR WIDTH ADJUSTMENT
	A	B	C	D	
14-3/16	11-13/16	19	13-7/16	20-3/8	4
17-1/2	15-1/8	19	16-3/4	20-3/8	3
21	18-5/8	19	20-1/4	20-3/8	2
24-1/2	22-1/8	19	23-3/4	20-3/8	1

*The plenum should be constructed 1/4 in. smaller in width and depth than the plenum dimensions shown above.

SPECIFICATIONS

UNIT SIZE		036085	048085
RATINGS AND PERFORMANCE			
Input Btuh* High/Low		84,000/54,000	84,000/54,000
Output Capacity† High/Low	Nonweatherized ICS‡	67,000/43,000	67,000/43,000
AFUE%†	Nonweatherized ICS‡	80.0	80.0
Certified Temperature Rise Range °F	High/Low	40—70/25—55	30—60/15—45
Certified External Static Pressure Heat/Cool		0.15/0.50	0.15/0.50
Airflow CFM	Heating High/Low	1165/965	1355/1170
	Cooling	1395	1580
ELECTRICAL			
Unit Volts—Hertz—Phase		115—60—1	
Operating Voltage Range	Min—Max	104—127	
Maximum Unit Ampacity		9.4	10.4
Maximum Wire Length	Ft	30	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	
Heating Blower Control		Solid-State Time Operation	
Burners (Monoport)		4	4
Gas Connection Size		1/2-in. NPT	
GAS CONTROLS			
2-Stage Gas Valve (Redundant)		White-Rodgers	
	Min Inlet Pressure (in. wc)	4.5 (Natural Gas)	
	Max Inlet Pressure (in. wc)	13.6	
Main Burner Ignitor		Hot Surface	
BLOWER DATA			
Direct-Drive Motor HP—Type		1/3—PSC	1/2—PSC
Motor Full Load Amps		5.8	7.9
RPM (Nominal)—Speeds		1075-4	1075-4
Blower Wheel Diameter x Width		10 x 7	10 x 8
Filter Size—Permanent Washable		(2) 14 x 20 x 1	
FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES			
Accessory Downflow Subbase		KGASB0201ALL	
High Altitude Pressure Switch Kit**		KGAHA5601PSW	
Category III Vent Conversion Kit		KGASW01012SP	
Gas Conversion Kit—Natural-to-Propane		KGANP24012SP	
Gas Conversion Kit—Propane-to-Natural		KGAPN20012SP	
Duct-Flange Kit		KGARF0110ALL	

* Gas inputs shown are for elevations up to 2000 ft. For elevations above 2000 ft, input should be reduced at the rate of 4% for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4.

† Tentative capacity in accordance with U.S. Government DOE test procedures.

‡ Isolated Combustion System (ICS)

** 5500 ft and above for Category I or 4000 ft and above for Category III vents.

AIR DELIVERY—CFM (With Filter)

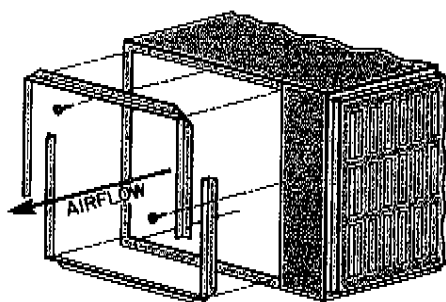
UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE (IN. WC)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
036085	1/3 PSC	High	—	1575	1515	1455	1395	1325	1230	1120
		Med-High	—	1380	1340	1285	1230	1165	1095	1005
		Med-Low	1165	1145	1130	1090	1055	1005	940	870
		Low	965	955	940	910	885	840	785	705
048085	1/2 PSC	High	1855	1765	1710	1665	1580	1570	1410	1310
		Med-High	1595	1570	1530	1485	1410	1355	1280	1200
		Med-Low	1355	1345	1305	1270	1220	1170	1110	1025
		Low	1170	1170	1140	1110	1075	1025	965	890

— Indicates unstable operating conditions.



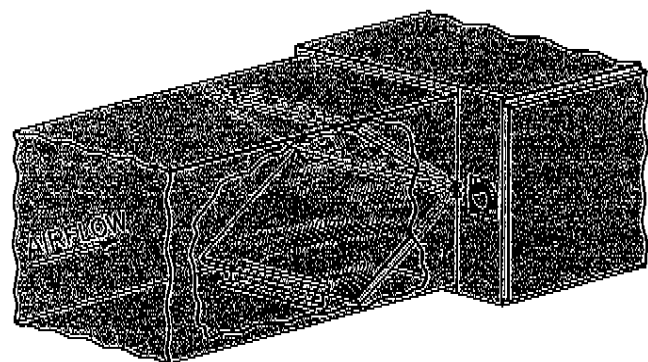
MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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



**Duct Flanges
(Accessory)**

A82172



**Filter Retainers
(Field Supplied)**

A82173

MINIMUM CLEARANCES (In. From Combustible Materials)

DOWNFLOW (Attic or Closet)	085
Sides—Single-Wall Vent	0
Type B-1 Double-Wall Vent	0
Special Gas Vents*—Diameter	3
Clearance	0
Back	0
Top	1
Front†—Single-Wall Vent	6
Type B-1 Double-Wall Vent	3
Special Gas Vents*—Diameter	3
Clearance	5
Vent—Single-Wall	6
Type B-Double-Wall	1
Special Gas Vents*—Diameter	3
Clearance	5

*Listed for Category III appliances per UL1738 (high temperature plastic pipe).

†Minimum 18-in. clearance required for alcove applications.

NOTES:

1. Provide 30-in. front clearance for servicing. An open door in front of the furnace can meet this requirement.
2. A minimum clearance of 3 in. must be provided in front of the furnace for combustion air and proper operation.

HORIZONTAL (In Alcove, Attic, or Crawl Space)	085
Sides*	1
Back	0
Top—Single-Wall Vent	1
Type B-1 Double-Wall Vent	1
Special Gas Vents†—Diameter	3
Clearance	1
Front‡—Single-Wall Vent	6
Type B-1 Double-Wall Vent	3
Special Gas Vents†—Diameter	3
Clearance	5
Vent—Single-Wall	6
Type B-1 Double-Wall	1
Special Gas Vents†—Diameter	3
Clearance	5
HORIZONTAL (In Closet)	
Sides*	1
Back	3
Top—Single-Wall Vent	2
Type B-1 Double-Wall Vent	2
Special Gas Vents†—Diameter	3
Clearance	2
Front—Single-Wall Vent	6
Type B-1 Double-Wall Vent	3
Special Gas Vents†—Diameter	3
Clearance	5
Vent—Single-Wall	6
Type B-1 Double-Wall	1
Special Gas Vents†—Diameter	3
Clearance	5

*Indicates supply or return sides when furnace is in the horizontal position. Clearance shown is for the outlet end. The inlet end must maintain 6-in. clearance from vent pipe to combustible materials when using single-wall vent.

†Listed for Category III appliances per UL1738 (high temperature plastic pipe).

‡Minimum 18-in. clearance required for alcove applications.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS