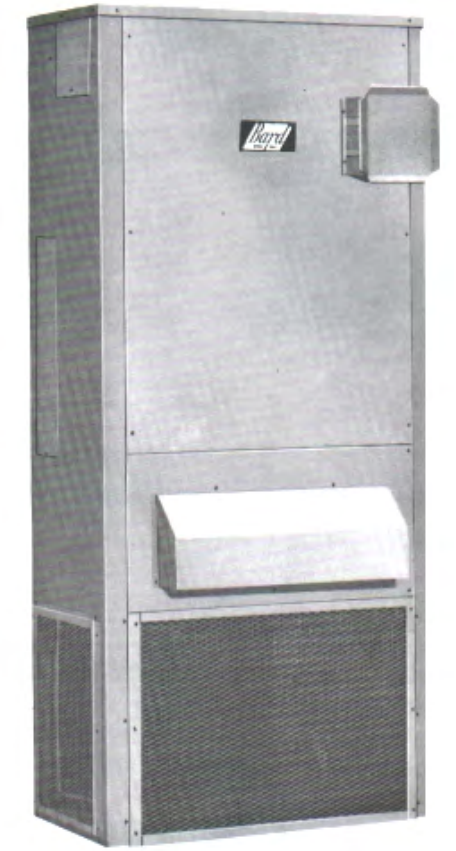
The WALL-MOUNT™ HI-BOY COMBINATION GAS/ELECTRIC

Seven Models: Heating Capacities: 43,000 to 51,000 BTUH
Cooling Capacities: 30,000 to 38,500 BTUH
SEER: 9.70 to 9.90 AFUE: 80.5



Practical, outside wall-mount installation provides versatile applications for:

- New construction
- Modular facilities
- Schools
- Offices
- Prisons

Heat Exchanger - Heavy-duty, 18-gauge aluminized steel. Airtight, welded construction, 10-year warranty.

SV9501 SmartValve™ System - Honeywell control combines the electronics components for intermittent pilot functions and redundant gas valve functions into a single unit. A 24V hot surface igniter lights the pilot on demand to conserve gas, and the redundant gas valve opens only after pilot is proven.

Pressure Switch - Verifies operation of the mechanical combustion system and assures adequate combustion air before allowing ignition sequence to begin.

Jet Tube Burner - Uniform flame distribution for greater efficiency. Corrosion resistant aluminized steel. Quiet operation. Low NOx models available on special order but are not suitable for LP application.

Electronic Blower Control - Provides one minute delay in blower shutdown in cooling mode for maximum efficiency. In heating mode there is one minute on-delay and two minutes off-delay.

Mechanical Combustion System - Regulates the amount of combustion air through heat exchanger for maximum efficiency. Minimizes off-cycle heat loss. Stainless steel shaft, aluminum fan blades and sleeve bearings provide trouble-free operation.

Aluminum Finned Copper Coil - Surfaces provide maximum heat transfer for air conditioning.

Blower and Motor Assembly - Installed on slide-out rails for easy service and maintenance. Multi-speed direct drive motor for proper heating/cooling air delivery.

Compressor - Equipped with crankcase heater and is protected with internal overload, pressure relief valve and anti-slug device.

Galvannealed Steel Cabinet - Is handsomely finished with baked-on beige polyester enamel.

Electrical Components - Are easily accessible for routine inspection and maintenance through service panel opening on right side of unit.

Air Filters - Are standard equipment. Replacement filters are easy to install.

Built-In Circuit Breakers - Standard on 230/208 volt equipment. Pull disconnects are standard on 460 volt equipment.

Ventilation Features - Standard barometric damper provides up to 450 CFM fresh air.

Field Installed Vent Options - Motorized fresh air damper allows up to 400 CFM fresh air. Energy recovery ventilator allows from 250 to 400 CFM ventilation air with energy recovery efficiencies of up to 77% in heating and 65% in cooling.

*Capacity and Efficiency Ratings**

Model	Volts-Phase	Cooling Capacity BTUH	SEER	Heating Capacity (Output)			
				BTUH+	AFUE	BTUH	AFUE
WAG30D-A54C	230/208-1	29,000	9.70	51,000	80.5	43,000	80.5
WAG36D-A54C	230/208-1	35,000	9.70	51,000	80.5	43,000	80.5
WAG36D-B54C	230/208-3	35,000	9.90	51,000	80.5	43,000	80.5
WAG36D-C54C	460-3	35,000	9.90	51,000	80.5	43,000	80.5
WAG40D-A54C	230/208-1	38,500	9.70	51,000	80.5	43,000	80.5
WAG40D-B54C	230/208-3	38,500	9.90	51,000	80.5	43,000	80.5
WAG40D-C54C	460-3	38,500	9.90	51,000	80.5	43,000	80.5

* All capacity, efficiency, and cost of operation information is in accordance with DOE and/or ARI test procedures. This information is based on high speed cooling and low speed heating operation using a fresh air cover plate. Cover plate must be ordered separately and is recommended for use to obtain maximum energy efficiency where fresh air opening is not required.

\+ All models shipped with high input orifice installed. Low input orifice is shipped with unit for field conversion.

Specifications

MODEL	WAG30D-A54C	WAG36D-A54C	WAG36D-B54C	WAG36D-C54C	WAG40D-A54C	WAG40D-B54C	WAG40D-C54C
Cooling Capacity BTUH	29,000	35,000	35,000	35,000	38,500	38,500	38,500
++Input (M/BTUH)	65/55	65/55	65/55	65/55	65/55	65/55	65/55
++Heating Capacity (M/BTUH)	51/43	51/43	51/43	51/43	51/43	51/43	51/43
Temp. Rise Range	50-80	50-80	50-80	50-80	50-80	50-80	50-80
Electric Rating - 60Hz							
Operating Voltage Range	197-253	197-253	187-253	414-506	197-253	187-253	414-506
Minimum Circuit Ampacity	23	30	21	15	31	23	15
*Field Wire Size/Ground Wire Size	8/10	8/10	10/10	14/14	8/10	10/10	14/14
**Delay Fuse - Max	35	40	30	15	45	30	15
Maximum Concurrent Amps	18.1	24.5	17.4	9.0	23.7	17.6	10.6
Compressor - Circuit A							
Volts-Phase	230/208-1	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Rated Load Amps	14.3/15.3	18.0/20.3	11.4/13.2	4.8	18.1/19.5	12.4/13.4	6.4
Branch Circuit Selection Current	15.3	20.3	13.2	4.8	19.5	13.4	6.4
Lock Rotor Amps	75	96	75	40	102	91	42
Fan Motor and Condenser							
Fan Motor - HP/RPM	1/5 - 1090	1/3 - 1110			1/3 - 1110		
Fan Motor - Amps	1.4	2.4			2.4		
Fan DIA/CFM	20" - 2100	20" - 2100			20" - 2100		
Face Area Sq. Ft./Row/Fins per in.	5.04/2/13	5.04/3/11			5.04/4/13		
Motor and Evaporator							
Blower Motor - HP/RPM	1/3 - 1085	1/3 - 1085			1/3 - 1085		
Blower Motor - Amps	1.8	1.8			1.8		
CFM Cooling & E.S.P. w/Filter (Rated)	1000/.15	1000/.15			1000/.15		
Face Area Sq. Ft./Row/Fins per in.	3.21/2/13	3.21/3/13			3.21/3/13		
Filter Sizes (inches)	20 x 30 x 1	20 x 30 x 1			20 x 30 x 1		
Refrigerant 22 (ounces)	73.5	94	94	94	106	106	106
Shipping Weight (pounds)	525	525	525	555	525	525	555

* 75° C copper wire size. **Maximum time delay fuse or HACR type circuit breaker.

\+ All capacity, efficiency, and cost of operation information is in accordance with DOE and/or ARI test procedures. This information is based on high speed cooling and low speed heating operation using a fresh air cover plate. Cover plate must be ordered separately and is recommended for use to obtain maximum energy efficiency.

++Units shipped with high input orifices installed. Low input orifices are included for field changeover.

IMPORTANT

While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all existing local codes.

INDOOR BLOWER PERFORMANCE
**CFM -- DRY COIL*

E.S.P. in H_20	WAG30, WAG36, WAG40	
	Low	High
.0	935	1235
.10	900	1150
.20	850**	1075
.30	--	990
.40	--	880
.50	--	810**

* Filter included, see specificaiton for unit CFM rating

** Max. E.S.P. -- cooling

NOTE: 3 PHASE UNITS *ARE NOT* GAMA CERTIFIED.

Heat Exchanger

Heat exchanger extracts more heat from flue gases that normally escape through the vent system. Accordion tube design causes hot gases to change direction and velocity seven times, for faster, more efficient heat transfer. Plus, Bard warrants its heat exchanger for a full 10 years.

Cutaway of heat exchanger shown with jet tube burner installed.

Photo shows access panels removed for ease of inspection and service.

Cooling Application Data

Model	*D.B./ W.B.	Cooling Capacity	** Outdoor Temperature °F 75°	80°	85°	90°	95°	100°	105°	110°	115°
WAG30	75/ 62	Total Cooling Sensible Cooling	31,000 23,100	29,800 22,700	28,400 22,100	26,900 21,500	25,300 20,800	23,600 20,200	21,800 19,400	20,000 18,700	17,900 17,800
	80/ 67	Total Cooling Sensible Cooling	33,100 22,400	32,400 22,200	31,500 21,900	30,400 21,500	29,000 21,000	27,500 20,500	25,700 19,900	23,800 19,300	21,500 18,500
	85/ 72	Total Cooling Sensible Cooling	39,500 23,000	37,900 22,600	36,200 22,000	34,300 21,400	32,200 20,600	30,100 19,900	27,700 19,000	25,400 18,100	22,600 17,100
WAG36	75/ 62	Total Cooling Sensible Cooling	38,490 28,820	36,490 27,915	34,490 27,000	32,470 26,030	30,450 25,050	28,425 24,040	26,390 23,010	24,350 21,950	22,300 20,860
	80/ 67	Total Cooling Sensible Cooling	41,610 28,140	40,100 27,500	38,500 26,815	36,800 26,080	35,000 25,300	33,110 24,475	31,125 23,605	29,045 22,690	26,870 21,730
	85/ 72	Total Cooling Sensible Cooling	42,715 25,580	42,105 25,575	41,260 25,445	40,175 25,185	38,850 24,795	37,290 24,280	35,490 23,630	33,450 22,855	31,170 21,950
WAG40	75/ 62	Total Cooling Sensible Cooling	42,395 30,700	40,130 29,535	37,890 28,400	35,680 27,295	33,495 26,215	31,340 25,160	29,205 24,140	27,100 23,145	25,025 22,175
	80/ 67	Total Cooling Sensible Cooling	45,840 30,000	44,100 29,100	42,300 28,220	40,430 27,345	38,500 26,480	36,500 25,625	34,450 24,775	32,330 23,930	30,150 23,100
	85/ 72	Total Cooling Sensible Cooling	47,060 27,270	46,300 27,060	45,330 26,775	44,140 26,400	42,735 25,950	41,115 25,415	39,285 24,800	37,240 24,110	34,975 23,330

** Below 65°F unit requires a field installed low ambient control. * Return air temp. °F.

Capacity Multiplier Factors

% of Rated Air Flow	-10	Rated	+10
Total Btuh	0.975	1.0	1.02
Sensible Btuh	0.950	1.0	1.05

WAG-SERIES MODEL NUMBER NOMENCLATURE

WAG XX D — A 54 C X

CAPACITY
30 - 2-1/2 Ton
36 - 3 Ton
40 - 3-1/2 Ton

REVISIONS

VOLTS - PHASE
A - 230/208-60-1
B - 230/208-60-3
C - 460-60-3

FEATURES
C - Circuit Breaker (230/208V Only)
X - Low NOx Burner and Circuit Breaker

FACTORY INSTALLED CONTROL MODULES (See option list below)

Optional Field Installed Accessories

TSO-1	Top outlet supply air conversion kit
GCK-3	Propane gas conversion kit
BOP-A-X	Fresh air cover plate (Single pack)
STG3-1-X	Slope top (Single pack)
MFADWAG-3A-X	Motorized fresh air damper
ERVR-A3C-X	Energy recovery ventilator 230/208V
ERVR-C3C-X	Energy recovery ventilator 460V

Optional Field Installed Control Options

CMA-5	Compressor TDR
CMA-6	LAC
CMA-10A	HPC, LPC and Compressor Module
CMA-12	LAC and Compressor TDR
CMA-13A	HPC, LPC, Compressor Module and LAC
-15	Start Kit (PTCR)

Factory Installed Control Options

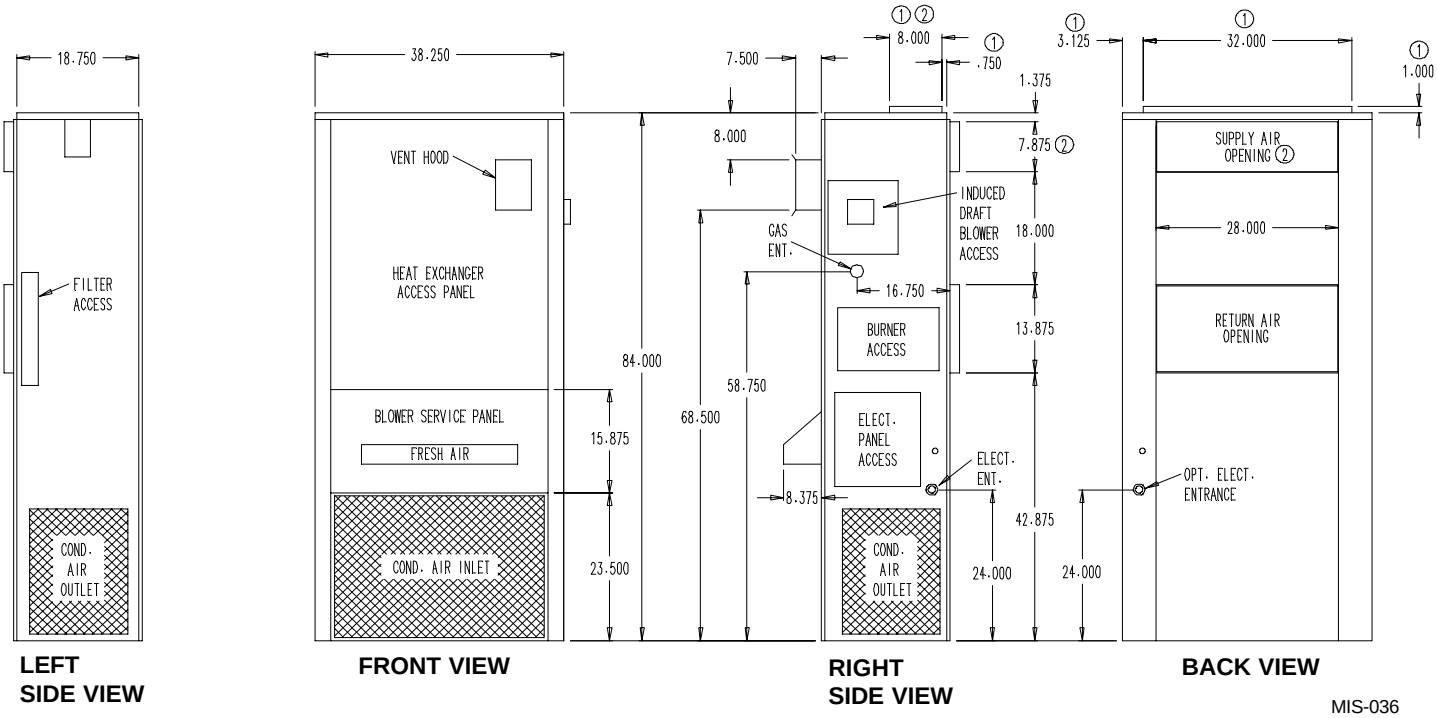
X	None
D	Compressor TDR
E	LAC
G	HPC, LPC, and Compressor Module with TDR
H	HPC, LPC, LAC, and Compressor Module with TDR
I	LAC and Compressor TDR

Control Legend

Compressor Module with TDR:	Has adjustable 30 second - 5 minute delay on break relay. Also delay on make = 10% of delay on break setting. Module also provides lockout, with retry, for pressure controls and 2-minute bypass for LPC.
Compressor TDR:	Time delay relay, 5-minute fixed delay on break.
HPC:	High pressure control, automatic reset
LPC:	Low pressure control, automatic reset
LAC:	Low ambient control, fan cycling
Start Kit:	PTCR type, soft start

Dimensions of Basic Unit for Architectural and Installation Requirements (Nominal)

Dimensions are in inches



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NOTE: ① Optional top supply air opening with TSO-1 conversion kit field installed.

② The supply duct requires a one inch clearance on all four sides from combustible materials for either standard or optional top supply air openings. This is required for the first three feet of supply duct. Refer to the installation manual for more detailed information.

Minimum Installation Clearances

Vent terminal (from combustible materials)	14 inches
Outlet duct (first 3 feet)	1 inch
Condenser inlet	30 inches
Filter access	30 inches
Top (for 18-3/4" depth of unit)	0 inches
Burner and induced draft blower access	17 inches
Combustible base (wood or class A,B, or C roof covering material)	0 inches

CAUTION

"X" suffix low NOx models not approved for LP gas conversion

BARD MANUFACTURING CO.
BRYAN, OH 43506

Since 1914 . . . Moving ahead, just as planned.

Due to our continous product improvement policy, all specifications subject to change without notice.

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

Form No. S3119
March, 2000

Supersedes S3119-0999