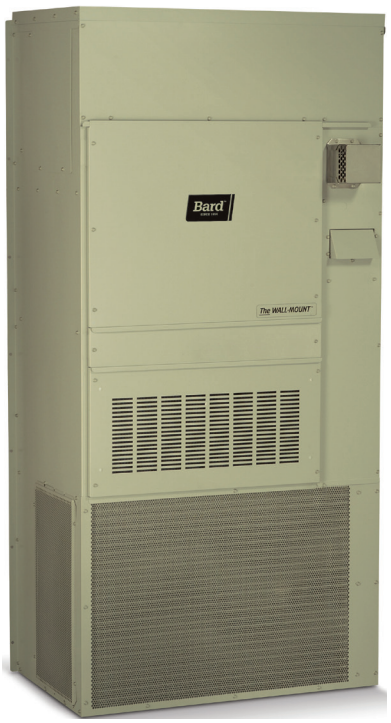
Bard
SINCE 1914
Climate Control Solutions

THE WALL-MOUNT™ GAS/ELECTRIC Low NOx Certified Models

Models: W24G3 to W60G3 Up to 10.5 EER
26,000 to 57,500 BTUH Cooling Capacity
37,000 to 74,00 BTUH Heating Capacity

GREEN REFRIGERANT R-410A

The Bard Wall-Mount Electric Air Conditioner with gas fired heating is a self contained energy efficient system which is designed to offer maximum indoor comfort at a minimal cost without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: new construction, modular offices, school modernization, portable structures, correctional facilities, retail stores or other commercial applications. Factory or field installed accessories are available to meet specific job requirements.



Engineered Features

Air Conditioner Compressor:
Scroll compressors are used on all models and no crankcase heaters are required.

R-410A Refrigerant:
Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

Liquid Line Filter Drier:
Protects system against moisture.

Aluminum Finned Copper Coils:
Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

High & Low Pressure Switches are Auto-Reset:
Built-in lockout circuit resets from the room thermostat. Provides commercial quality protection to the compressor.

Compressor Control Module:
Standard on all units. Built-in off-delay timer adjustable from 30 seconds to 5 minutes. 2-minute on-delay if power interrupt. 120-second bypass for low pressure control, and both soft and manual lockouts for high and low pressure controls. Alarm output for alarm relay.

Phase Rotation Monitor:
Standard on all 3 phase scroll compressors. Protects against reverse rotation if power supply is not properly connected.

Twin Blowers:
Move air quietly. All models feature multispeed blower motors providing airflow adjustment for high and low static operation.

Electrical Components:
Are easily accessible for routine inspection and maintenance through a right side service panel opening. Features a lockable, hinged access cover to the circuit breaker.

Pre-Painted 20 Gauge Zinc Coated Steel Cabinet:
Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on textured enamel, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03.

16 Gauge Zinc Coated Unit Base.

Heat Exchanger:
Heavy duty 18-gauge stainless steel tubular heat exchanger. Mechanically joined construction. Ten-year warranty.

In-Shot Burners:
Advanced burner design, quiet operation. NOx models can be converted to LP gas. High altitude kits available.

Built-in Circuit Breakers:
Standard on all single (230/208 volt) and three phase (230/208 volt) equipment. Toggle disconnects are standard on all three phase (460 volt) equipment.

Integrated DSI Control:
Direct spark ignition control and remote sensor delivers smooth, proven ignition sequence. Timed blower control and diagnostics are also features of integrated control.

Gas Controls:
Honeywell gas valve and burner orifices are factory standard for natural gas. Field convertible to LP gas with certified conversion kit.

Filter Service Door:
Separate service door provides easy access for filter change.

Condenser Fan and Motor Shroud Assembly:
Slides out for easy access.

Air Filters:
Two-inch pleated air filters are standard equipment. Optional 1-inch washable filter available. Factory or field installed.

Barometric Fresh Air Damper:
Standard on all units. Allows up to 25% outside fresh air.

Ventilation Options:
Several ventilation options are available and can be factory or field installed.

Slope Top:
Standard feature for water run-off.

Top Rain Flashing:
Standard feature on all models.

Full Length Mounting Brackets:
Built into cabinet for improved appearance and easy installation. **NOTE:** Bottom mounting bracket included to assist in installation.

AHRI CERTIFIED™ www.ahridirectory.org Single Package Vertical AC AHRI Standard 390

AHRI CERTIFIED™ www.ahridirectory.org Residential Furnaces DOE 10 CFR Part 430

- Complies with efficiency requirements of ANSI/ASHRAE/IESNA 90.1-2013.
- Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Fourth Edition.
- Intertek ETL Listed to Standard for Gas-Fired Central Furnaces ANSI Z21.47-2006, CSA 2.3-2006 Fifth Edition, Addenda A dated 10-01-2007, Addenda B dated 06-01-2008.
- Commercial Product - Not intended for Residential application.

INTERTEK ISO 9001:2008

ETL LISTED C US Intertek

Form No. S3501-1016
Supersedes S3501-615

Specifications 2 Ton through 3 Ton

MODELS	W24G3-A	W24G3-B	W24G3-C	W30G3-A	W30G3-B	W30G3-C	W36G3-A	W36G3-B	W36G3-C
Electrical Rating – 60 Hz	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253	187-253	414-506	197-253	187-253	414-506	197-253	187-253	414-506
Minimum Circuit Ampacity	21	16	10	23	17	11	28	22	11
*Field Wire Size/	10	12	14	10	12	14	8	10	14
Ground Wire Size	10	12	14	10	12	14	10	10	14
** Delay Fuse - Max.	30	25	15	35	25	15	45	35	15
Compressor									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	9.9/10.9	6.4/7.1	3.9	11.8/12.9	7.5/8.2	4.7	15.3/16.7	7.8/8.8	5.1
Branch Circuit Selection Current	12.8	8.3	5.1	14.1	9	5.6	17.9	10.5	6
Lock Rotor Amps	64/64	58/58	28	77/77	71/71	38	112/112	73/73	44
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor--HP--RPM-SPD	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1
Fan Motor--Amps	1.5	1.5	.8	1.5	1.5	.8	1.5	1.5	.8
Fan--DIA/CFM	20" - 2400	20" - 2400	20" - 2400	20" - 2400	20" - 2400	20" - 2400	20" - 2400	20" - 2400	20" - 2400
Blower Motor & Evap.									
Blower Motor--HP-RPM-SPD	1/4-950-3	1/4-950-3	1/4-950-34	1/3-1075-3	1/3-1075-3	1/3-1075-3	1/3-1075-3	1/3-1075-3	1/3-1075-3
Blower Motor--Amps	1.8	1.8	.8	2.2	2.2	1.1	2.2	2.2	1.1
CFM Cooling & E.S.P.	800 - .15	800 - .15	800 - .15	1000 - .35	1000 - .35	1000 - .35	1100 - .25	1100 - .25	1100 - .25
Filter Size	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2	20 x 25 x 2
Shipping Weight --LBS.	500	500	500	530	530	530	530	530	530

Specifications 3.5 Ton through 5 Ton

MODELS	W42G3-A	W42G3-B	W42G3-C	W48G3-A	W48G3-B	W48G3-C	W60G3-A	W60G3-B	W60G3-C
Electrical Rating – 60 Hz	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253	187-253	414-506	197-253	187-253	414-506	197-253	187-253	414-506
Minimum Circuit Ampacity	32	23	12	38	27	13	40	28	14
*Field Wire Size/	8	8	14	8	8	14	8	8	12
Ground Wire Size	10	10	14	10	10	14	10	10	12
** Delay Fuse - Max.	50	35	15	50	40	20	60	40	20
Compressor									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	15.5/17.5	10.2/11.5	4.8	19.5/22.2	12.1/13.8	5.9	21.6/24.7	12.8/14.7	6.4
Branch Circuit Selection Current	19.9	13.1	6.1	22.2	18.6	9.5	26.3	15.6	7.8
Lock Rotor Amps	109/109	83/83	41	135/135	98/98	55	134/134	110/110	52
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor--HP--RPM-SPD	1/3-825- 2	1/3-825-2	1/3-825-1	1/3-825-2	1/3-825-2	1/3-825-1	1/3-825-2	1/3-825-2	1/3-825-1
Fan Motor--Amps	2.5	2.5	1.3	2.5	2.5	1.3	2.5	2.5	1.3
Fan--DIA/CFM	24" - 3050	24" - 3050	24" - 3050	24" - 3050	24" - 3050	24" - 3050	24" - 3050	24" - 3050	24" - 3050
Blower Motor & Evap.									
Blower Motor--HP-RPM-SPD	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3	1/2-1050-3
Blower Motor--Amps	3.4	3.4	1.5	3.4	3.4	1.5	3.4	3.4	1.5
CFM Cooling & E.S.P.	1300 - .35	1300 - .35	1300 - .35	1550 - .38	1550 - .38	1550 - .38	1650 - .30	1650 - .30	1650 - .30
Filter Size	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2	20 x 30 x 2
Shipping Weight --LBS.	700	700	700	710	710	710	725	725	725

*Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.
**Maximum time delay fuse or HACR type circuit breaker.

Cooling System Capacity, Efficiency & Airflow Ratings and Available Heating Inputs

Models	W24G3	W30G3	W36G3	W42G3	W48G3	W60G3
Cooling Capacity BTUH ①	26,000	32,000	35,000	42,000	48,000	57,500
EER ②	10.0	10.0	10.2	10.0	10.5	10.1
Rated CFM	800	1000	1100	1300	1550	1650
Acceptable Airflow Range	680 - 920	850 - 1150	935 - 1265	1030 - 1500	1280 - 1750	1340 - 1910
Available Heating Inputs ③	90,000	90,000	90,000	125,000	125,000	125,000
	68,000	68,000	68,000	100,000	100,000	100,000
	45,000	45,000	45,000	75,000	75,000	75,000

① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.
② EER = Energy Efficiency Ratio and is certified in accordance with ARI Standard 390-2003.
All ratings based on fresh air intake being 100% closed (no outside air introduction).
③ Any one of the heating inputs shown is available for each basic cooling model as indicated. Each input can be field derated 10% from factory standard and main burner orifices are included with each unit to accomplish this. See table below for additional information.

Heating System Capacity, Efficiency, Derate & Airflow Ratings W24G, W30G, W36G

	Factory Standard	Factory Standard	Factory Standard
Input	90,000	68,000	45,000
Output	74,000	55,500	37,000
Thermal Efficiency (T.E.)	82.0	82.0	82.0
Temp. Rise Range	50 - 80	40 - 70	25 - 55
Mid-Rise Range Airflow	1040	925	830
Acceptable Airflow Range	845 - 1350	730 - 1275	610 - 1330

Heating ratings certified in accordance with ANSI Z21.47-2006.

Heating System Capacity, Efficiency, Derate & Airflow Ratings W42G, W48G, W60G

	Factory Standard	Factory Standard
Input	90,000	68,000
Output	74,000	56,000
Thermal Efficiency (T.E.)	82.0	82.0
Temp. Rise Range	40 - 70	30 - 60
Mid-Rise Range Airflow	1230	1135
Acceptable Airflow Range	965 - 1700	850 - 1700

Heating ratings certified in accordance with ANSI Z21.47-2006.

Indoor Blower Performance

Factory Connected Speeds SPEED

W24G cooling airflow is rated **800 CFM @ .15 ESP**, and wet coil range is **700 - 910 CFM**.
See Heating Airflow Ratings Chart for heating details.

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	Med	**Low**	**High**	Med	Low
.10			820	1260	1060	
.20		950	770	1200	1010	
.30		880	700	1120		
.40		790		1030		
.50	910	710				
.60	800					

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	Med	**Low**	**High**	Med	Low
.10			820	1260	1060	870
.20		950	770	1200	1010	
.30		880	700	1120	910	
.40		790		1030		
.50	910	710		950		
.60	800					

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 45,000 BTU Input		
	High	Med	**Low**	**High**	Med	Low
.10			820	1260	1060	870
.20		950	770	1200	1010	810
.30		880	700	1120	910	
.40		790		1030	860	
.50	910	710		950	780	
.60	800			840		

Voltage adjustment - Reduce airflow by 100 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 50 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 100 CFM for SG-3 and RG-3 installations

W30G cooling airflow is rated **1000 CFM @ .35 ESP**, and wet coil range is **880 - 1150 CFM**.
See Heating Airflow Ratings Chart for heating details.

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10			1000		1260	1060
.20		1160	950	1370	1200	1010
.30		1080	880	1290	1120	940
.40	1150	990		1190	1030	
.50	1050	910		1090	950	
.60	940			980		

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10			1000		1260	1060
.20		1160	950		1200	1010
.30		1080	880		1120	940
.40	1150	990		1190	1030	860
.50	1050	910		1090	950	780
.60	940			980	840	

ESP Inches H_20	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 45,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10			1000		1260	1060
.20		1160	950		1200	1010
.30		1080	880	1290	1120	940
.40	1150	990		1190	1030	860
.50	1050	910		1090	950	780
.60	940			980	840	660

Voltage adjustment - Reduce airflow by 100 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 50 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 100 CFM for SG-3 and RG-3 installations

Indoor Blower Performance

Factory Connected Speeds SPEED

W36G cooling airflow is rated **1100 CFM @ .25 ESP**, and wet coil range is **940 - 1250 CFM**. See Heating Airflow Ratings Chart for heating details.

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10		1220	1000		1260	1060
.20		1160	950	1370	1200	1010
.30	1250	1080		1290	1120	940
.40	1150	990		1190	1030	
.50	1050			1090	950	
.60	940			980		

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10		1220	1000		1260	1060
.20		1160	950		1200	1010
.30	1250	1080			1120	940
.40	1150	990		1190	1030	860
.50	1050			1090	950	780
.60	940			980	840	

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 45,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low
.10		1220	1000		1260	1060
.20		1160	950		1200	1010
.30	1250	1080		1290	1120	940
.40	1150	990		1190	1030	860
.50	1050			1090	950	780
.60	940			980	840	660

Voltage adjustment - Reduce airflow by 100 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 50 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 100 CFM for SG-3 and RG-3 installations

W42G cooling airflow is rated **1300 CFM @ .35 ESP**, and wet coil range is **1030 - 1480 CFM**. See Heating Airflow Ratings Chart for heating details.

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	**Med**	Low	High	Med	Low
.10		1560	1160		1630	1230
.20		1490	1090		1560	1160
.30		1440	1070		1510	1140
.40	1530	1330		1720	1390	1020
.50	1440	1210		1610	1290	
.60	1320			1480	1180	

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	**Med**	Low	High	Med	Low
.10		1600	1260		1680	1280
.20		1530	1190		1610	1210
.30		1480	1120		1560	1190
.40		1360	1100		1440	1070
.50	1490	1280		1660	1340	970
.60	1370			1530	1230	

Voltage adjustment - Reduce airflow by 130 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 65 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 170 CFM for SG-5 and RG-5 installations

W48G cooling airflow is rated **1550 CFM @ .20 ESP**, and wet coil range is **1250 - 1780 CFM**. See Heating Airflow Ratings Chart for heating details.

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	**Med**	Low	High	Med	Low
.10		1560			1630	1230
.20	1760	1490			1560	1160
.30	1630	1440			1510	1140
.40	1530	1330		1720	1390	1020
.50	1440	1210		1610	1290	
.60	1320			1480	1180	

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	**Med**	Low	High	Med	Low
.10		1600			1680	1280
.20	1805	1530			1610	1210
.30	1680	1480			1560	1190
.40	1580	1360			1440	1070
.50	1490	1280		1660	1340	970
.60	1370			1530	1230	

Voltage adjustment - Reduce airflow by 130 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 65 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 170 CFM for SG-5 and RG-5 installations

W60G cooling airflow is rated **1650 CFM @ .30 ESP**, and wet coil range is **1360 - 1850 CFM**. See Heating Airflow Ratings Chart for heating details.

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 90,000 BTU Input		
	High	Med	Low	High	Med	Low
.10	1860	1560			1630	1230
.20	1760	1490			1560	1160
.30	1630	1440			1510	1140
.40	1530	1330		1720	1390	1020
.50	1440			1610	1290	
.60	1320			1480	1180	

ESP Inches H_2O	Cooling Mode Wet Coil			MANUAL FAN & HEATING MODE 68,000 BTU Input		
	High	Med	Low	High	Med	Low
.10	1910	1600			1680	1280
.20	1805	1530			1610	1210
.30	1680	1480			1560	1190
.40	1580	1360			1440	1070
.50	1490			1660	1340	970
.60	1370			1530	1230	

Voltage adjustment - Reduce airflow by 130 CFM for 208 Volt
Dehumidification coil adjustment - Reduce airflow by 35 CFM for dehumidification coil installed
Top outlet adjustment - Increase airflow by 65 CFM for top outlet models
SG-3, RG-3, non-ducted application adjustment - Reduce airflow by 170 CFM for SG-5 and RG-5 installations

Important Information Concerning Altitude Impact on Heating Input Ratings

Heating input, and thus heating output, decreases with altitude. No orifice change is required up to 6,000 feet elevation and derate occurs naturally due to altitude impact. **Natural gas models may require orifice change based on BTU content of gas. See Natural Gas Orifice and Altitude Tables on next page for details.** For Propane Gas see the Propane Gas Conversion Table below.

Above 6,000 feet elevation orifice changes are required, and capacity reductions are a function of altitude impact and orifice change. Pressure switch change is required above 6,000 feet elevation. For Natural Gas see the Orifice and Altitude Tables on next page. For Propane Gas see the Propane Gas Conversion Table below.

NATURAL GAS DERATE CAPACITIES											
WG Rated Input**	**Sea Level**	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**	**7000**	**8000**	**9000**	**10,000**
68,000	68,000	65,340	63,180	61,020	59,400	58,320	56,970	56,160	55,080	54,405	53,460
90,000	90,000	87,120	84,240	81,360	79,200	77,760	75,960	74,880	73,440	72,540	71,280

PROPANE (LP) DERATE CAPACITIES											
WG Rated Input**	**Sea Level**	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**	**7000**	**8000**	**9000**	**10,000**
68,000	68,000	66,420	65,880	65,340	64,260	63,720	62,640	61,020	59,400	57,240	54,540
90,000	90,000	88,560	87,840	87,120	85,680	84,960	83,520	81,360	79,200	76,320	72,720

Gas Pressure Inches W.C.

Minimum permissible gas supply pressure for purpose of input adjustment:	Natural 4.5	LP 11.0
Maximum permissible gas supply pressure for purpose of input adjustment:	Natural 11.0	LP 13.0
Manifold Pressure:	Natural 3.5	LP 10.0

Propane Gas Conversion Kits -- Fits All WG-Series Models

PROPANE (LP) GAS -- Use Gas Conversion Kits As Indicated					
MODELS	**Propane Gas Conversion Kit**		**Use WGCK-1**	**Use WGCK-2**	
W24G **W30G**	Factory Standard Input	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet Install Orifice	6001 to 8000 Feet Requires Pressure Switch Change and Orifice as Shown	8001 to 10,000 Feet Requires Pressure Switch Change and Orifice as Shown
W36G	**22,500 - 22,650 BTU Per Burner**	2500	**1.45**	**1.45**	**1.40**
		Pressure Switch	Standard (.55)	Pressure Switch (.42) Included in Conversion Kit	

PROPANE (LP) GAS -- Use Gas Conversion Kits As Indicated					
MODELS	**Propane Gas Conversion Kit**		**Use WGCK-1**	**Use WGCK-2**	
W42G **W48G**	Factory Standard Input	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet Install Orifice	6001 to 8000 Feet Requires Pressure Switch Change and Orifice as Shown	8001 to 10,000 Feet Requires Pressure Switch Change and Orifice as Shown
W60G	**22,500 - 22,650 BTU Per Burner**	2500	**1.45**	**1.45**	**1.40**
		Pressure Switch	Standard (.55)	Pressure Switch (.42) Included in Conversion Kit	

All orifice sizes shown are millimeters (mm).

Natural Gas Orifice and Altitude Tables

NATURAL GAS -- W24G, W30G, W36G Models				
Factory Standard Input	Gas Heat* Value BTU/Cu. Ft.	Up to 6000 Feet No Changes Except For BTU Content	6001 to 8000 Feet Requires Pressure Switch Change and Orifice Change Based on BTU Content	8001 to 10,000 Feet Requires Pressure Switch Change and Orifice Change Basesd on BTU Content
22,500 to 22,650 BTU Per Burner	700-749	2.75	2.70	2.60
	750-799	2.70	2.60	2.50
	800-849	2.60	2.50	2.45
	850-899	2.50	2.40	2.35
W24G	900-949	2.45	2.35	**(2.30)**
	950-999	2.35	**(2.30)**	2.25
W30G	1000-1049**	**(2.30)**	2.25	2.20
	1050-1100	2.25	2.20	2.15
W36G	Pressure Switch	Standard (.55)	Order 8620-189 High Altitude Pressure Switch Kit (.42)	

(2.30) is the standard factory installed orifice size.

All other orifice sizes shown are available as individual items, see orifice chart below for part numbers.

*** At standard conditions: 30.00 Inches Mercury, 60F, Saturated, .60 Specific Gravity**
**** All Natural Gas factory orifice sizing and standard input ratings based on nominal 1025 BTU per cubic foot gas and sea level conditions.**

Optional 10% Field Converted Derate	Gas Heat* Value BTU/Cu. Ft.	Up to 6000 Feet No Changes Except For BTU Content	6001 to 8000 Feet Requires Pressure Switch Change and Orifice Change Based on BTU Content	8001 to 10,000 Feet Requires Pressure Switch Change and Orifice Change Basesd on BTU Content
22,500 BTU Per Burner	700-749	2.75	2.70	2.60
	750-799	2.70	2.60	2.50
	800-849	2.60	2.50	2.45
	850-899	2.50	2.45	2.40
W42G	900-949	2.40	2.35	**[2.30]**
	950-999	2.35	**[2.30]**	2.25
W48G	1000-1049**	**[2.30]**	2.25	2.20
	1050-1100	2.25	2.25	2.20
W60G	Pressure Switch	Standard (.55)	Order 8620-189 High Altitude Pressure Switch Kit (.42)	

[2.30] is the standard factory installed orifice size.

All other orifice sizes shown are available as individual items, see orifice chart below for part numbers.

*** At standard conditions: 30.00 Inches Mercury, 60F, Saturated, .60 Specific Gravity**
**** All Natural Gas factory orifice sizing and standard input ratings based on nominal 1025 BTU per cubic foot gas and sea level conditions.**

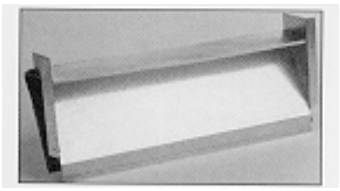
Bard Part No.	**Orifice Size (mm)**	**Orifice Diameter**
9010-092	2.10	0.0826
9010-088	2.15	0.0846
9010-087	2.20	0.0866
9010-086	2.25	0.0885
9010-082	2.30	0.0905
9010-085	2.35	0.0925
9010-079	2.40	0.0945
9010-084	2.45	0.0964
9010-093	2.50	0.0984
9010-094	2.60	0.1024
9010-095	2.70	0.1063
9010-096	2.75	0.1082
9010-097	2.80	0.1102
9010-098	2.90	0.1142

All orifice sizes shown are in millimeters (mm).

No. of Orifices Required Based on Unit Input Rating
45,000 (2)
68,000 (3)
90,000 (4)

Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. All units are equipped with a barometric fresh air damper as the standard ventilation package. All ventilation packages can be built-in at the factory, or field-installed at a later date.



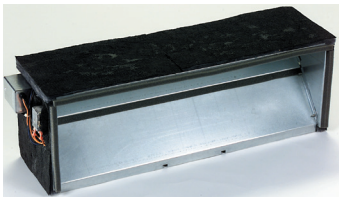
BAROMETRIC FRESH AIR DAMPER

BAROMETRIC FRESH AIR DAMPER - WGBFAD — STANDARD

The barometric fresh air damper is a standard feature on all models. It is installed on the inside of the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The damper opens during blower operation and closes when the blower is off. Adjustable blade stops allow different amounts of outside air to be introduced into the building and can be easily locked closed if required.

BLANK OFF PLATE - WGBOP — OPTIONAL

A blank off plate is installed on the inside of the service door. It covers the air inlet openings which restricts any outside air from entering the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.

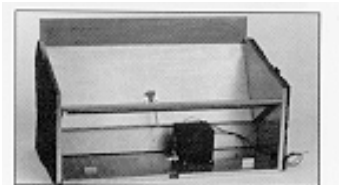


MOTORIZED FRESH AIR DAMPER

MOTORIZED FRESH AIR DAMPER - WGMFAD — OPTIONAL

The motorized fresh air damper is internally mounted behind the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The two position damper can be fully open or closed. The damper blade is powered open by a 24VAC motor with spring return on power loss. The damper can be controlled by indoor blower operation or can be field connected to be managed based on building occupancy.

NOTE: The above vent systems are intake only without built-in exhaust capability. Building will likely require separate field installed barometric relief or mechanical exhaust elsewhere within the conditioned space. Balancing dampers in the return air grille may be required to achieve specified amount of outdoor air intake.



COMMERCIAL ROOM VENTILATOR

COMMERCIAL ROOM VENTILATOR - WGCRV — OPTIONAL

The built-in commercial room ventilator is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit, to be introduced through the air inlet openings. It includes a built-in exhaust air damper.

The commercial room ventilator (WGCRV) is a simple and innovative approach to improving the indoor air quality by providing fresh air intake and exhaust capability through the WGCRV. The damper can be easily adjusted to control the amount of fresh air supplied into the building. The WGCRV can be controlled by indoor blower operation or field controlled based on room occupancy. Complies with ANSI/ASHRAE Standard 62.1 “Ventilation for Acceptable Indoor Air Quality”.

Two Models Available: WGCRVS - spring return on power loss or deactivation
WGCRVP - power return (will not close on power loss)

ECONOMIZER

ECONOMIZER - WGJIFM — OPTIONAL

The built-in economizer system is internally mounted behind the service door and allows outdoor air to be introduced through the air inlet openings. The amount of outdoor air varies in response to the system controls and settings defined by the end user. It includes a built-in exhaust air damper. The economizer is designed to provide “free cooling” when outside air conditions are cool and dry enough to satisfy cooling requirements without running the compressor. This in turn provides lower operating costs, while extending the life of the compressor.

Standard Features:

- One Piece Construction - Easy to install with no mechanical linkage adjustment required.
- Exhaust Air Damper - Built in with positive closed position. Provides exhaust air capability to prevent pressurization of tight buildings.
- Actuator Motor - 24 volt, power open, spring return with built in torque limiting switch.
- Proportioning Type Control - for maximum “free cooling” economy and comfort.
- Moisture Eliminator & Prefilter - permanent, washable aluminum construction.
- Enthalpy Control - adjustable to monitor outdoor temperature and humidity.
- Honeywell JADE™ electronic economizer module with precision settings and diagnostics.
- Mixed Air Sensor - to monitor outside and return air to automatically modulate damper position.

ENERGY RECOVERY VENTILATOR

WALL-MOUNT ENERGY RECOVERY VENTILATOR - WGERV — OPTIONAL

The wall-mount energy recovery ventilator (WGERV) is a highly innovative approach to address indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The WGERV allows up to 450 CFM (depending upon speed setting) of fresh air and exhaust through the unit while maintaining superior indoor comfort and humidity levels. In most cases this can be accomplished without increasing equipment sizing or operating costs. Heat transfer efficiency is up to 74% during summer and 80% during winter conditions.

The WGERV consists of a unique “rotary energy recovery cassette” that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only.

The WGERV is designed to be internally mounted behind the service door in the WG Gas/Electric units. It can be built-in at the factory or field installed as an option. WGERV can be independently adjusted for intake and exhaust rates.

NOTE: See Page 8 for WGERV Performance Data and Page 9 for WGCRV Performance Data

Energy Recovery Ventilator Performance Data

APPLICATION DATA — WGERV-*3

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°DB/62°WB)

Ambient O.D.		VENTILATION RATE -- 450CFM High Speed (Black) 72% EFFICIENCY						VENTILATION RATE -- 370 CFM Medium Speed (Blue) 73% EFFICIENCY						VENTILATION RATE -- 280 CFM Low Speed (Red) 74% EFFICIENCY					
DB/WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL
105	75	21465	14580	6884	15455	10498	4957	17649	11988	5661	12884	8751	4133	13356	9072	4284	9883	6713	3170
	70	14580	14580	0	10498	10498	0	11988	11988	0	8751	8751	0	9072	9072	0	6713	6713	0
	65	14580	14580	0	10498	10498	0	11988	11988	0	8751	8751	0	9072	9072	0	6713	6713	0
100	80	31500	12150	19440	22680	8748	13932	25900	9990	15910	18907	7293	11614	19600	7560	12040	14504	5594	8910
	75	21465	12150	9314	15455	8748	6707	17649	9990	7659	12884	7293	5591	13356	7560	5796	9883	5594	4289
	70	12352	12150	202	8893	8748	145	10156	9990	166	7414	7293	121	7686	7560	126	5687	5594	93
	65	12150	12150	0	8748	8748	0	9990	9990	0	7293	7293	0	7560	7560	0	5594	5594	0
	60	12150	12150	0	8748	8748	0	9990	9990	0	7293	7293	0	7560	7560	0	5594	5594	0
95	80	31590	9720	21870	22745	6998	15746	25974	7992	17982	18961	5834	13127	19656	6048	13608	14545	4476	10070
	75	21465	9720	11744	15455	6998	8456	17649	7992	9657	12884	5834	7050	13356	6048	7308	9883	4476	5408
	70	12352	9720	2632	8893	6998	1895	10156	7992	2164	7414	5834	1580	7686	6048	1638	5687	4476	1212
	65	9720	9720	0	6998	6998	0	7992	7992	0	5834	5834	0	6048	6048	0	4476	4476	0
	60	9720	9720	0	6998	6998	0	7992	7992	0	5834	5834	0	6048	6048	0	4476	4476	0
90	80	31590	7290	24300	22745	5249	17496	25974	5994	19980	18961	4376	14585	19656	4536	15120	14545	3357	11189
	75	21465	7290	14175	15455	5249	10206	17649	5994	11655	12884	4376	8508	13356	4536	8820	9883	3357	6527
	70	12352	7290	5062	8893	5249	3645	10156	5994	4162	7414	4376	3038	7686	4536	3150	5687	3357	2331
	65	7290	7290	0	5249	5249	0	5994	5994	0	4376	4376	0	4536	4536	0	3357	3357	0
	60	7290	7290	0	5249	5249	0	5994	5994	0	4376	4376	0	4536	4536	0	3357	3357	0
85	80	31590	4860	26730	22745	3499	19246	25974	3996	21978	18961	2917	16044	19656	3024	16632	14545	2238	12308
	75	21465	4860	16605	15455	3499	11956	17649	3996	13653	12884	2917	9967	13356	3024	10332	9883	2238	7646
	70	12352	4860	7492	8893	3499	5394	10156	3996	6160	7414	2917	4497	7686	3024	4662	5687	2238	3450
	65	4860	4860	0	3499	3499	0	3996	3996	0	2917	2917	0	3024	3024	0	2238	2238	0
	60	4860	4860	0	3499	3499	0	3996	3996	0	2917	2917	0	3024	3024	0	2238	2238	0
80	75	21465	2430	19035	15455	1750	13705	17649	1998	15651	12884	1459	11425	13356	1512	11844	9883	1119	8765
	70	12352	2430	9922	8893	1750	7144	10156	1998	8158	7414	1459	5955	7686	1512	6174	5687	1119	4569
	65	4252	2430	1822	3061	1750	1312	3496	1998	1498	2552	1489	1094	2646	1512	1134	1958	1119	839
	60	2430	2430	0	1750	1750	0	1998	1998	0	1459	1459	0	1512	1512	0	1119	1119	0
75	70	12352	0	12352	8893	0	8893	10156	0	10156	7414	0	7414	7686	0	7686	5687	0	5687
	65	4252	0	4252	3061	0	3061	3496	0	3496	2552	0	2552	2646	0	2646	1958	0	1958
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPLICATION DATA — WGERV-*5

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°DB/62°WB)

Ambient O.D.		VENTILATION RATE -- 450CFM High Speed (Black) 60% EFFICIENCY						VENTILATION RATE -- 370 CFM Medium Speed (Blue) 62% EFFICIENCY						VENTILATION RATE -- 280 CFM Low Speed (Red) 64% EFFICIENCY					
DB/WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL
105	75	21465	14580	6884	12879	8748	4131	17649	11988	5661	10942	7433	3510	13356	9072	4284	8548	5806	2742
	70	14580	14580	0	8748	8748	0	11988	11988	0	7433	7433	0	9072	9072	0	5806	5806	0
	65	14580	14580	0	8748	8748	0	11988	11988	0	7433	7433	0	9072	9072	0	5806	5806	0
100	80	31500	12150	19440	18900	7290	11610	25900	9990	15910	16058	6194	9864	19600	7560	12040	12544	4838	7706
	75	21465	12150	9314	12879	7290	5589	17649	9990	7659	10942	6194	4749	13356	7560	5796	8548	4838	3709
	70	12352	12150	202	7411	7290	121	10156	9990	166	6297	6194	103	7686	7560	126	4919	4838	80
	65	12150	12150	0	7290	7290	0	9990	9990	0	6194	6194	0	7560	7560	0	4838	4838	0
	60	12150	12150	0	7290	7290	0	9990	9990	0	6194	6194	0	7560	7560	0	4838	4838	0
95	80	31590	9720	21870	18954	5832	13122	25974	7992	17982	16104	4955	11149	19656	6048	13608	12580	3871	8709
	75	21465	9720	11744	12879	5832	7047	17649	7992	9657	10942	4955	5987	13356	6048	7308	8548	3871	4677
	70	12352	9720	2632	7411	5832	1579	10156	7992	2164	6297	4955	1342	7686	6048	1638	4919	3871	1048
	65	9720	9720	0	5832	5832	0	7992	7992	0	4955	4955	0	6048	6048	0	3871	3871	0
	60	9720	9720	0	5832	5832	0	7992	7992	0	4955	4955	0	6048	6048	0	3871	3871	0
90	80	31590	7290	24300	18954	4374	14580	25974	5994	19980	16104	3716	12388	19656	4536	15120	12580	2903	9677
	75	21465	7290	14175	12879	4374	8505	17649	5994	11655	10942	3716	7226	13356	4536	8820	8548	2903	5645
	70	12352	7290	5062	7411	4374	3037	10156	5994	4162	6297	3716	2580	7686	4536	3150	4919	2903	2016
	65	7290	7290	0	4374	4374	0	5994	5994	0	3716	3716	0	4536	4536	0	2903	2903	0
	60	7290	7290	0	4374	4374	0	5994	5994	0	3716	3716	0	4536	4536	0	2903	2903	0
85	80	31590	4860	26730	18954	2916	16038	25974	3996	21978	16104	2478	13626	19656	3024	16632	12580	1935	10644
	75	21465	4860	16605	12879	2916	9963	17649	3996	13653	10942	2478	8465	13356	3024	10332	8548	1935	6612
	70	12352	4860	7492	7411	2916	4495	10156	3996	6160	6297	2478	3819	7686	3024	4662	4919	1935	2983
	65	4860	4860	0	2916	2916	0	3996	3996	0	2478	2478	0	3024	3024	0	1935	1935	0
	60	4860	4860	0	2916	2916	0	3996	3996	0	2478	2478	0	3024	3024	0	1935	1935	0
80	75	21465	2430	19035	12879	1458	11421	17649	1998	15651	10942	1239	9704	13356	1512	11844	8548	968	7580
	70	12352	2430	9922	7411	1458	5953	10156	1998	8158	6297	1239	5058	7686	1512	6174	4919	968	3951
	65	4252	2430	1822	2551	1458	1093	3496	1998	1498	2168	1239	929	2646	1512	1134	1693	968	726
	60	2430	2430	0	1458	1458	0	1998	1998	0	1239	1239	0	1512	1512	0	968	968	0
75	70	12352	0	12352	7411	0	7411	10156	0	10156	6297	0	6297	7686	0	7686	4919	0	4919
	65	4252	0	4252	2551	0	2551	3496	0	3496	2168	0	2168	2646	0	2646	1693	0	1693
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WGERV-*3 WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE					
	450 CFM 76% EFFICIENCY		370 CFM 78% EFFICIENCY		280 CFM 80% EFFICIENCY	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1847	1998	1558	1512	1210
60	4860	3694	3996	3117	3024	2419
55	7290	5540	5994	4675	4536	3629
50	9720	7387	7992	6234	6048	4838
45	12150	9234	9990	7792	7560	6048
40	14580	11081	11988	9351	9072	7258
35	17010	12928	13986	10909	10584	8467
30	19440	14774	15984	12468	12096	9677
25	21870	16621	17982	14026	13608	10886
20	24300	18468	19980	15584	15120	12096
15	26730	20315	21978	17143	16632	13306

NOTE: Sensible performance only is shown for winter application.

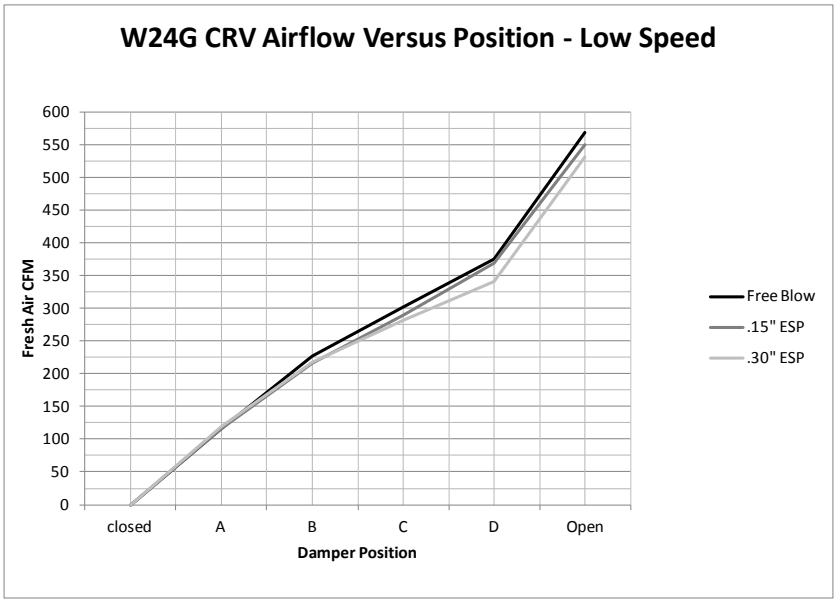
LEGEND:

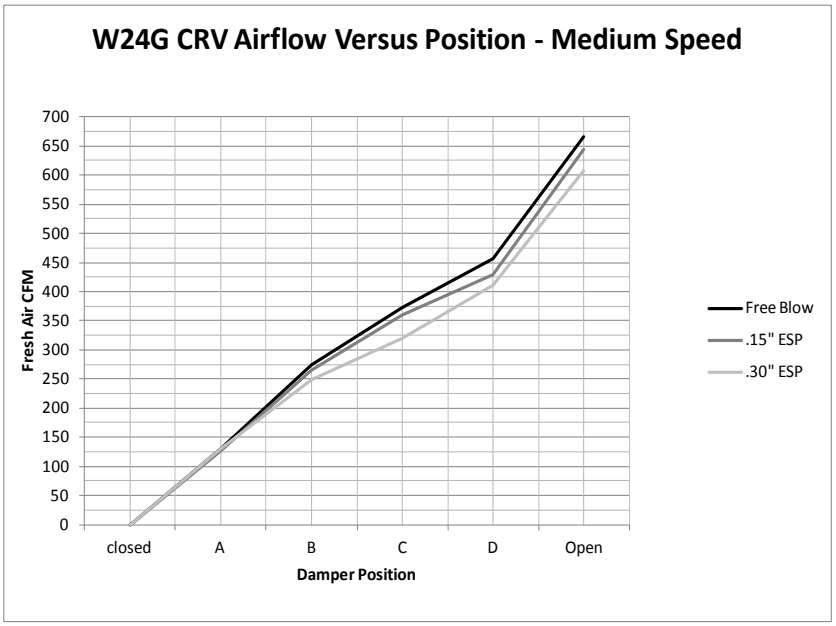
VLT = Ventilation Load - Total
VLS = Ventilation Load - Sensible
VLL = Ventilation Load - Latent
HRT = Heat Recovery - Total
HRS = Heat Recovery - Sensible
HRL = Heat Recovery - Latent
WVL = Winter Ventilation Load
WHR = Winter Heat Recovery

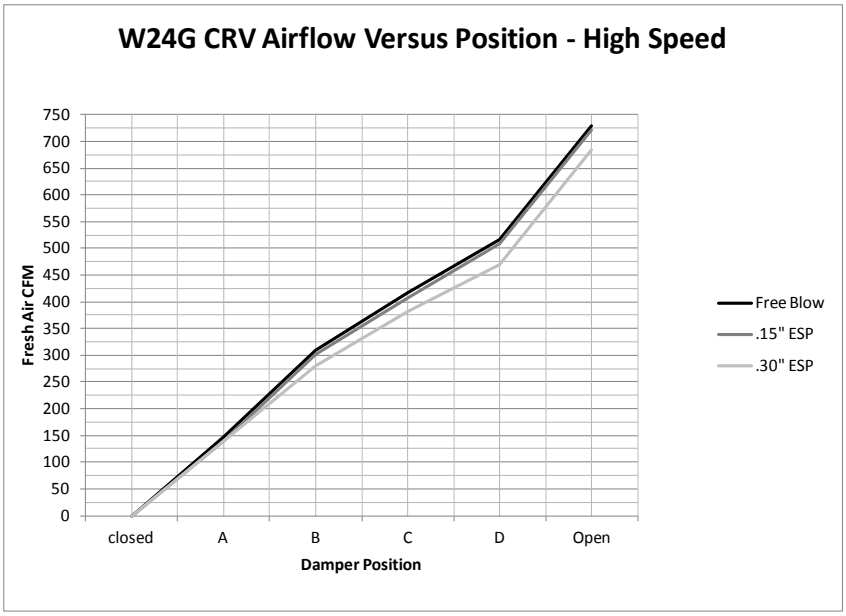
WGERV-*5 WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

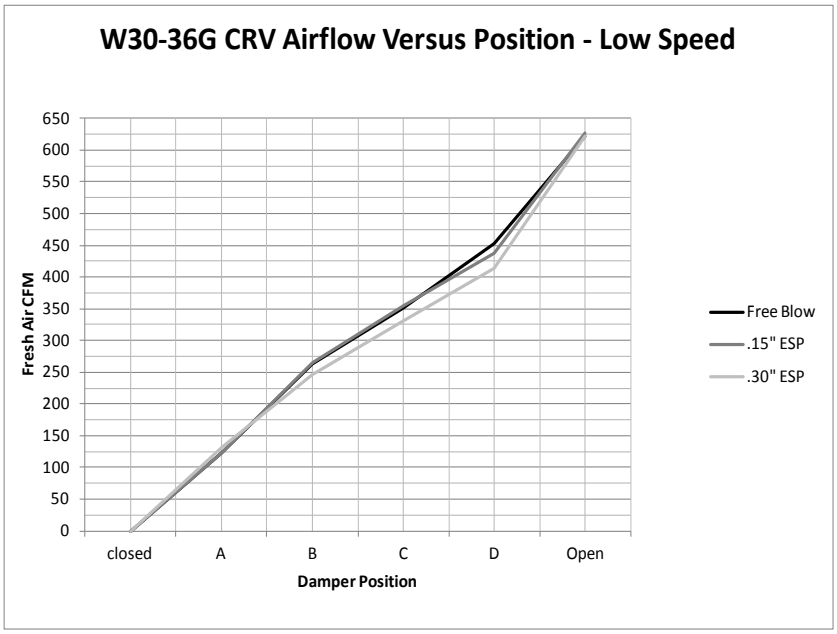
Ambient O.D.	VENTILATION RATE					
	450 CFM 77% EFFICIENCY		370 CFM 78% EFFICIENCY		280 CFM 79% EFFICIENCY	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1870	2000	1560	1510	1190
60	4860	3740	4000	3120	3020	2390
55	7290	5610	5990	4680	4540	3580
50	9720	7480	8000	6230	6050	4780
45	12150	9360	9990	7790	7560	5970
40	14580	11230	11990	9350	9070	7170
35	17010	19100	13990	10910	10580	8360
30	19440	14970	15980	12470	12100	9560
25	21870	16840	17980	14030	13610	10750
20	24300	18710	19980	15580	15120	11950
15	26730	20580	21980	17140	16630	13140

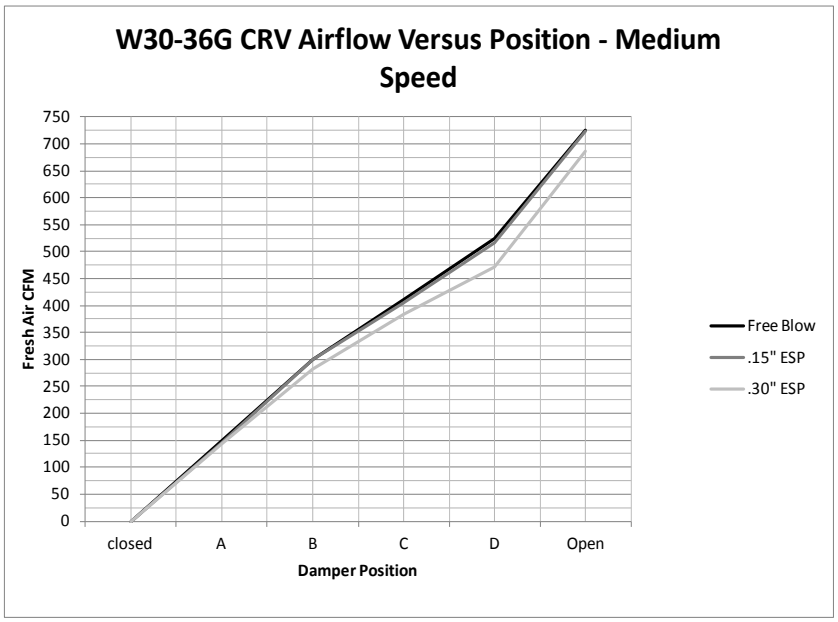
NOTE: Sensible performance only is shown for winter application.

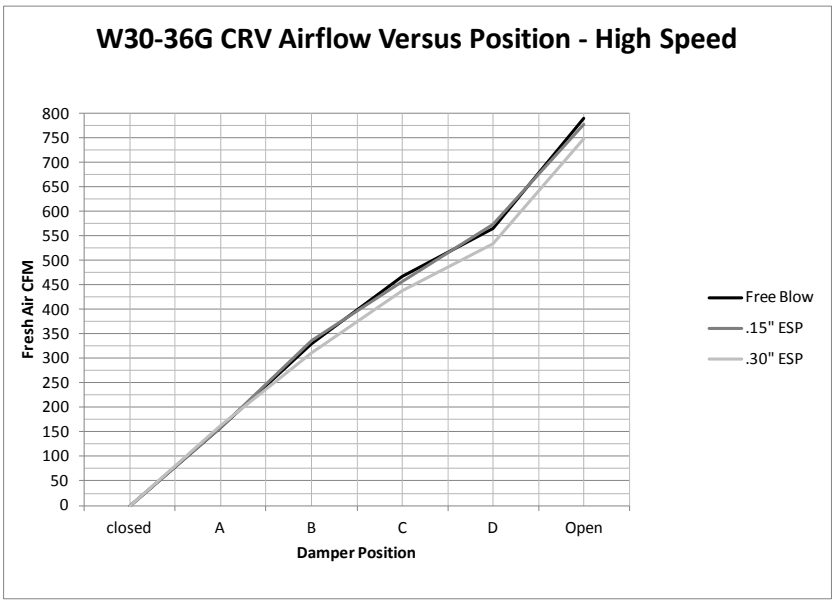

W24G CRV Airflow Versus Position - Low Speed
Fresh Air CFM
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP

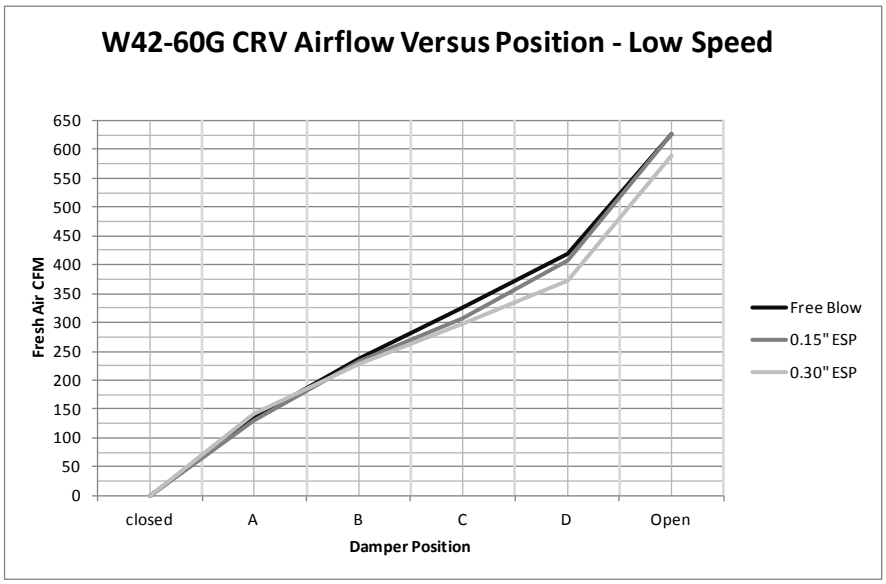

W24G CRV Airflow Versus Position - Medium Speed
Fresh Air CFM
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP

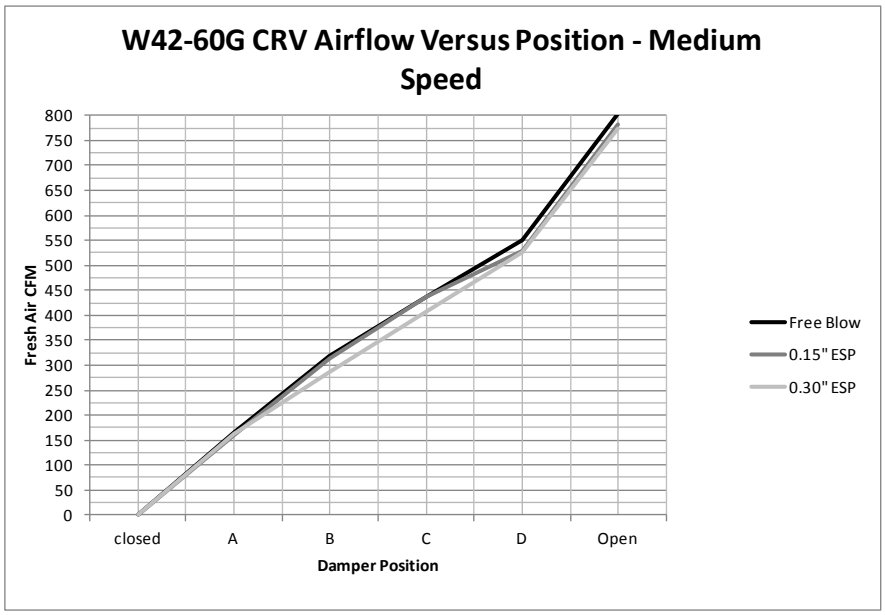

W24G CRV Airflow Versus Position - High Speed
Fresh Air CFM
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP

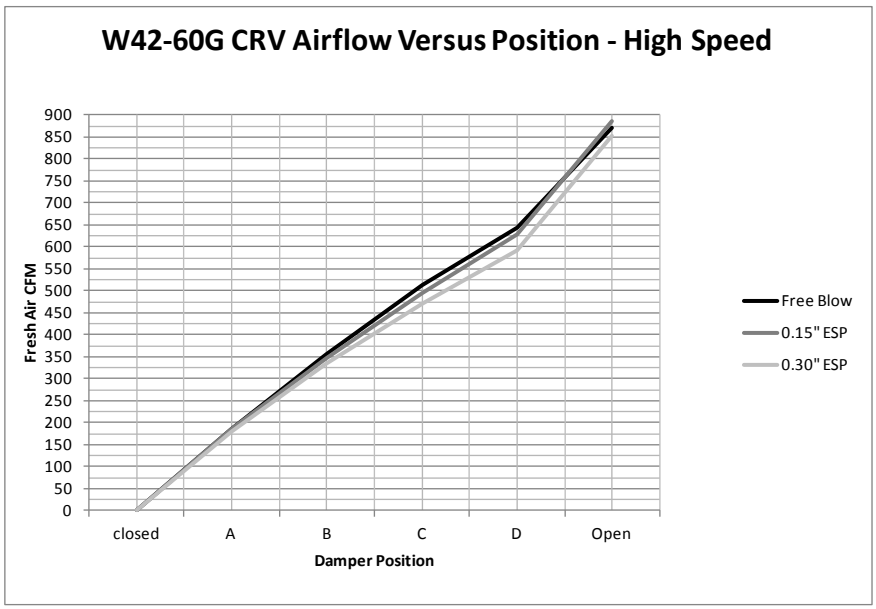

W30-36G CRV Airflow Versus Position - Low Speed
Fresh Air CFM
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP


W30-36G CRV Airflow Versus Position - Medium Speed
Fresh Air CFM
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP


W30-36G CRV Airflow Versus Position - High Speed
Fresh Air CFM
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
.15" ESP
.30" ESP


W42-60G CRV Airflow Versus Position - Low Speed
Fresh Air CFM
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
0.15" ESP
0.30" ESP


W42-60G CRV Airflow Versus Position - Medium Speed
Fresh Air CFM
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
0.15" ESP
0.30" ESP


W42-60G CRV Airflow Versus Position - High Speed
Fresh Air CFM
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
closed
A
B
C
D
Open
Damper Position
Free Blow
0.15" ESP
0.30" ESP

Cooling Application Data - Outdoor Temperature ①

Model	Return Air (DB/WB) ②	Cooling Capacity	Air Temperature Entering Outdoor Coil Degree F												
			65°F	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
W24G3	75/62	Total Cooling	28,300	27,500	26,700	26,000	25,200	24,400	23,700	22,800	21,900	21,000	20,000	19,300	18,600
		Sensible Cooling	20,100	19,900	19,700	19,500	19,300	19,100	18,900	18,500	18,100	17,700	17,400	17,000	16,800
	80/67	Total Cooling	30,600	29,800	29,000	28,300	27,500	26,700	26,000	25,000	24,000	23,000	22,000	21,200	20,400
		Sensible Cooling	19,900	19,700	19,500	19,400	19,200	19,100	19,000	18,600	18,200	17,800	17,500	17,200	16,900
	85/72	Total Cooling	33,200	32,300	31,400	30,500	29,600	28,800	27,900	26,800	25,800	24,700	23,600	22,800	21,900
		Sensible Cooling	19,700	19,500	19,300	19,100	19,000	18,800	18,600	18,300	17,900	17,500	17,100	16,900	16,500
W30G3	75/62	Total Cooling	34,600	33,600	32,700	31,800	30,900	30,000	29,100	27,900	26,700	25,400	24,200	23,200	22,300
		Sensible Cooling	26,300	25,900	25,400	25,000	24,500	24,000	23,600	23,100	22,500	22,000	21,500	21,000	20,600
	80/67	Total Cooling	37,400	36,500	35,500	34,600	33,800	32,900	32,000	30,700	29,300	28,000	26,600	25,500	24,400
		Sensible Cooling	26,000	25,600	25,200	24,800	24,500	24,100	23,700	23,200	22,600	22,100	21,600	21,200	20,700
	85/72	Total Cooling	40,600	39,500	38,400	37,400	36,400	35,400	34,400	32,900	31,500	30,000	28,600	27,400	26,200
		Sensible Cooling	25,800	25,400	25,000	24,500	24,100	23,700	23,300	22,800	22,200	21,700	21,200	20,800	20,400
W36G3	75/62	Total Cooling	39,500	37,900	36,500	34,900	33,400	32,000	30,500	29,100	27,700	26,300	24,800	23,400	21,900
		Sensible Cooling	30,300	29,500	28,800	28,200	27,500	26,800	26,200	25,500	24,900	24,200	23,600	23,000	22,300
	80/67	Total Cooling	40,300	39,600	38,900	38,000	37,100	36,100	35,000	33,900	32,600	31,300	29,800	28,300	26,700
		Sensible Cooling	28,700	28,300	27,900	27,600	27,200	26,800	26,400	25,900	25,500	25,000	24,500	24,100	23,500
	85/72	Total Cooling	50,000	48,100	46,400	44,500	42,600	40,800	38,900	37,100	35,200	33,300	31,300	29,400	27,500
		Sensible Cooling	29,900	29,200	28,600	28,000	27,400	26,600	25,900	25,100	24,300	23,500	22,600	21,800	20,800
W42G3	75/62	Total Cooling	46,500	44,900	43,400	41,700	40,100	38,300	36,600	34,900	33,100	31,200	29,300	27,500	25,500
		Sensible Cooling	35,400	34,900	34,300	33,700	32,900	32,200	31,400	30,600	29,700	28,800	27,800	26,800	25,700
	80/67	Total Cooling	47,400	46,900	46,300	45,400	44,500	43,300	42,000	40,600	39,000	37,200	35,300	33,300	31,000
		Sensible Cooling	33,500	33,400	33,200	33,000	32,600	32,200	31,700	31,100	30,400	29,700	28,900	28,000	27,000
	85/72	Total Cooling	58,800	57,000	55,200	53,100	51,100	48,900	46,700	44,400	42,100	39,600	37,100	34,600	31,900
		Sensible Cooling	34,800	34,500	34,000	33,500	32,800	32,000	31,100	30,100	29,000	27,900	26,600	25,300	23,900
W48G3	75/62	Total Cooling	55,900	53,100	50,600	48,200	46,000	43,900	41,800	39,900	38,200	36,500	34,900	33,300	31,900
		Sensible Cooling	41,200	40,400	39,500	38,600	37,800	36,900	36,100	35,300	34,400	33,600	32,700	31,900	31,000
	80/67	Total Cooling	57,000	55,500	54,000	52,500	51,100	49,600	48,000	46,500	45,000	43,500	42,000	40,400	38,900
		Sensible Cooling	39,000	38,700	38,300	37,800	37,400	36,900	36,400	35,900	35,300	34,700	34,000	33,400	32,600
	85/72	Total Cooling	70,600	67,400	64,300	61,400	58,700	56,000	53,300	50,900	48,500	46,300	44,100	42,000	40,000
		Sensible Cooling	40,600	40,000	39,200	38,400	37,600	36,700	35,700	34,700	33,700	32,500	31,300	30,200	28,900
W60G3	75/62	Total Cooling	67,800	64,400	61,400	58,300	55,500	52,700	50,100	47,600	45,200	42,900	40,700	38,500	36,400
		Sensible Cooling	48,900	47,600	46,200	44,900	43,600	42,400	41,200	40,000	38,800	37,600	36,500	35,400	34,300
	80/67	Total Cooling	69,200	67,300	65,500	63,500	61,600	59,600	57,500	55,500	53,300	51,200	49,000	46,700	44,400
		Sensible Cooling	46,300	45,600	44,800	44,000	43,200	42,400	41,600	40,700	39,800	38,900	38,000	37,100	36,100
	85/72	Total Cooling	85,700	81,700	78,000	74,200	70,700	67,300	63,900	60,700	57,500	54,500	51,500	48,500	45,700
		Sensible Cooling	48,100	47,100	45,900	44,700	43,400	42,100	40,800	39,400	37,900	36,500	35,000	33,500	32,000

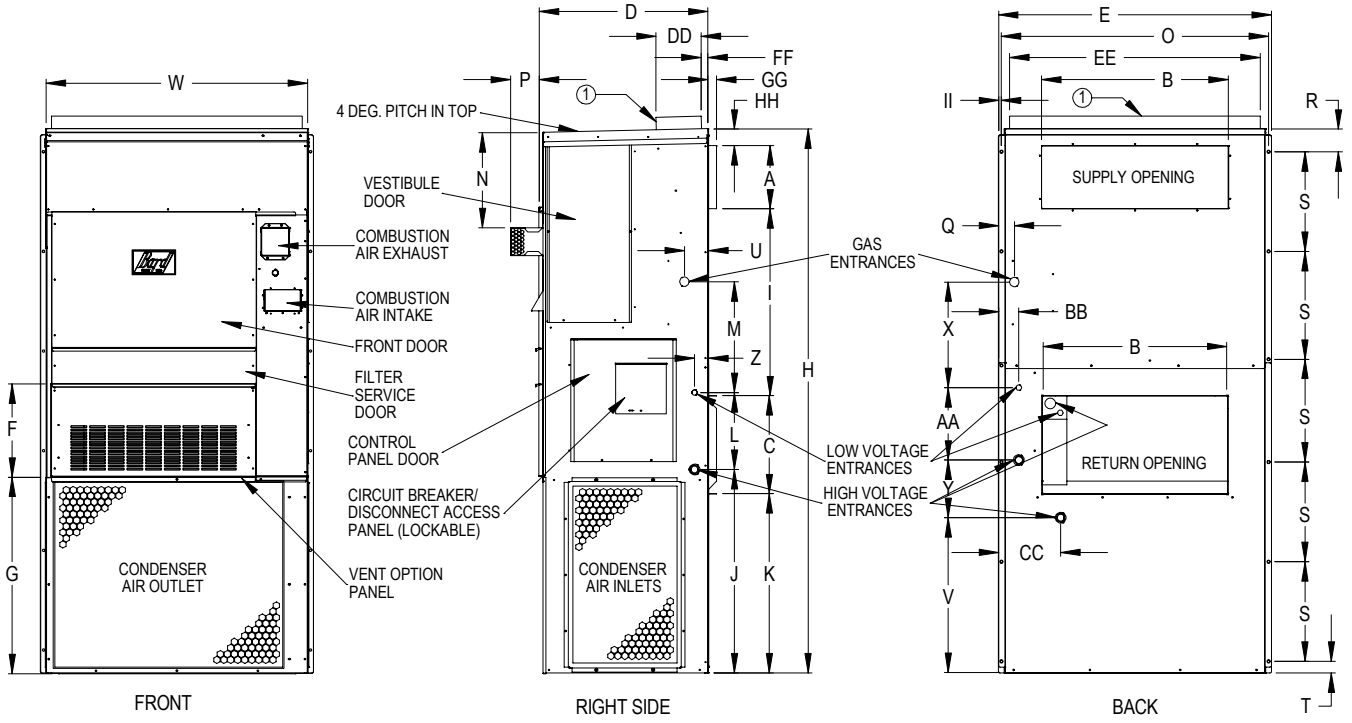
① Below 50°F, unit requires a factory or field installed low ambient control.
② Return air temperature °F.

Capacity Multiplier Factors			
% of Rated Airflow	-10	Rated	+10
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

DIMENSIONS OF BASIC UNIT

UNIT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
W24G-W30G-W36G	7.88	27.88	13.88	24.25	40	14.88	25.63	81.63	30	27.38	27.5	14.12	15.44	15.31	39.25	4.5	2.5	5.88
W42G-W48G-W60G	9.88	29.88	15.88	27.25	43.81		31.63	87.5		33.38	28.75				42.88			3.75

UNIT	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II
W24G-W30G-W36G	12 - 7 HOLES	3.75	2.88	22.9	38	17.84	4.44	2.25	11.44	3.25	9	7.25	36.25	1.13	1.25	2	0.38
W42G-W48G-W60G	16 - 6 HOLES		3.88	24.9	42	17.34	8.44		12.19		10		40.25			2.75	0.44



① Optional top outlet in place of standard front supply opening, see Nomenclature outlet options (next page). Standard unit can also be field converted to this configuration using approved top supply outlet conversion kit shown on next page.

MIS-3239 A

Minimum Clearances

INSTALLATION	W24G - W30G - W36G	W42G - W48G - W60G
Installation Wall (from combustible materials)	0"	0"
Outlet Duct (from combustible materials)	1" first 3'	1" first 3'
Vent Terminal (from combustible materials)	17"	16"
Top (from combustible materials)	1" ①	0" ②
Condenser Air Inlets	20"	20"

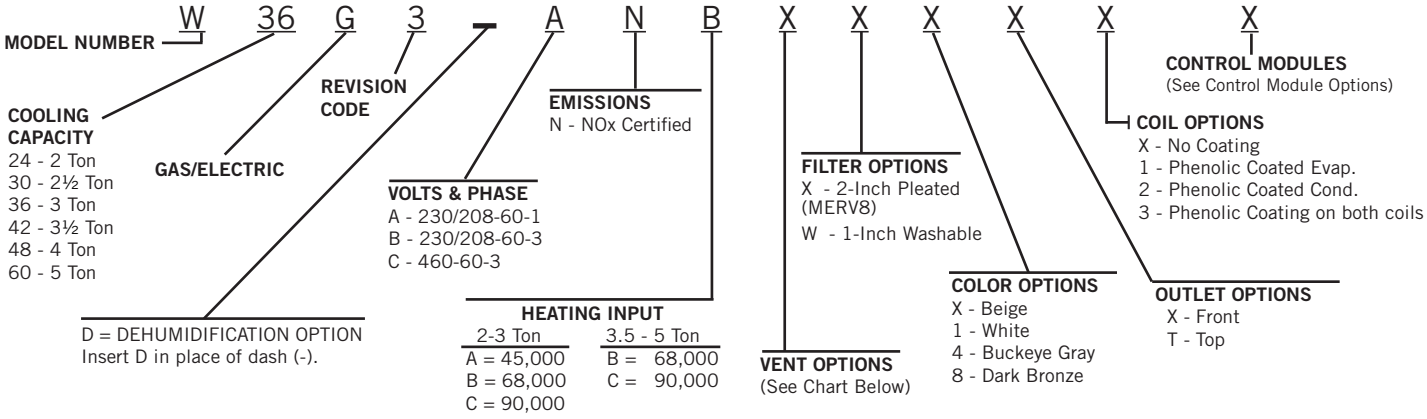
① 1-inch clearance at rear top of unit (at the wall surface). The 4° pitch of top creates 1.688 inch clearance between front top and any extended overhang above the top of the unit.

② 0-inch clearance at rear top of unit (at the wall surface). The 4° pitch of top creates .688 inch clearance between front top and any extended overhang above the top of the unit.

Service Access

ALL MODELS	
Burner Service - Right side	20"
Compressor - Right side	20"
Controls - Right side	20"
Condenser Fan - Left side	20"

Air Conditioning Wall-Mount Model Nomenclature



Ventilation Options

Models	W24G, W30G, W36G		W42G, W48G, W60G	
Description	Factory Installed Code No.	Field Installed Part No.	Factory Installed Code No.	Field Installed Part No.
Barometric Fresh Air Damper - No Exhaust	X	WGBFAD-3	X	WGBFAD-5
Blank-Off Plate	B	WGBOP-3	B	WGBOP-5
Motorized Fresh Air Damper - No Exhaust	M	WGMFAD-3A	M	WGMFAD-5A
Commercial Ventilator - Spring Return w/Exhaust	V	WGCRVS-3A	V	WGCRVS-5A
Commercial Ventilator - Power Return w/Exhaust	P	WGCRVP-3A	P	WGCRVP-5A
Economizer (Internal) Fully Modulating ① w/Exhaust	E	WGJIFM-3	E	WGJIFM-5
Energy Recovery Ventilator - 230 Volt w/Exhaust ②	R	WGERV-A3B-✱	R	WGERV-A5B-✱
Energy Recovery Ventilator - 460 Volt w/Exhaust ②	R	WGERV-C3C-✱	R	WGERV-C5C-✱

① Low ambient control is required with economizer for low temperature compressor operation.
② Independent selection of intake and exhaust speeds (rate) with terminal block selection.
✱ Color option must be specified to match unit ("X" = Beige; "4" = Buckeye Gray)

Top Supply Outlet Conversion Kits-Field Installed (Convert Standard Front Outlet to Top Outlet)

USED WITH MODELS	UNIT COLOR X - BEIGE	UNIT COLOR 4 - BUCKEYE GRAY	UNIT COLOR 8 - DARK BRONZE
W24G, W30G, W36G	TSO-WG3-X	TSO-WG3-4	TSO-WG3-8
W42G, W48G, W60G	TSO-WG5-X	TSO-WG5-4	TSO-WG5-8

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS				Factory Installed Code	Standard Unit Field Installed Code	Dehumidification Unit Field Installed Code
CCM ①	HPC ②	LPC ③	LAC ④			
STD	STD	STD		X	N/A	N/A
STD	STD	STD	●	H	CMA-6	CMA-28

STD = Standard equipment
① CCM. Compressor control module has adjustable 30-second to 5-minute delay-on-break timer. On initial power-up, or any time the power is interrupted, the delay-on-make will be 2-minutes plus 10% of the delay-on-break setting. There is no delay-on-make during routine operation of the unit. The module also provides the lockout feature (with 1 retry) for high and/or low-pressure controls, and a 2-minute timed bypass for low-pressure control.
② HPC. High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ①.
③ LPC. Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ①.
④ LAC. Low ambient control permits cooling operation down to 0°F.

Optional Field Installed Accessories

DESCRIPTION	PART NUMBER
Natural Gas High Altitude Pressure Switch Kit (6000 - 10,000 Feet)	8620-189
Note: Natural Gas Orifice Change May Be Required Depending Upon Altitude and Gas BTU content. See Orifice and Altitude Tables.	
Propane Gas Conversion Kit (0 - 6000 Feet Altitude)	WGCK-1
Propane Gas Conversion Kit (6000 - 10,000 Feet Altitude)	WGCK-2
Vertical Vent Kit (Includes all parts for 5 foot vertical vent)	VVK-5A
Additional 1 foot vertical vent pipe section for VVK-5A	8620-201
Additional 2 foot vertical vent pipe section for VVK-5A	8620-170
Additional 3 foot vertical vent pipe section for VVK-5A	8620-200
Additional 5 foot vertical vent pipe section for VVK-5A	8620-171

Bard® SINCE 1914
Climate Control Solutions
Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Due to our continuous 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.

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