



THE WALL-MOUNT™ GAS/ELECTRIC – 10.0 EER

Models: W24G to W60G 60Hz
26,000 to 57,500 BTUH Cooling Capacity
32,000 to 99,000 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. Low NOx models available. Low 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.

Hinged Service Door:

Hinged door with compression latches (one lockable) for filter service access, heat exchanger inspection, and indoor blower/motor service.



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 patented 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.



- Complies with efficiency requirements of ANSI/ASHRAE/IESNA 90.1-2010.
- 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, Third 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.



Form No. S3418-1111
Supersedes S3418-1210
Page 1 of 16

Specifications 2 Ton through 3 Ton

Model	W24G1-A	W24G1-B	W24G1-C	W30G1-A	W30G1-B	W30G1-C	W36G1-A	W36G1-B	W36G1-C
Electric Rating - 60Hz	230/208-60-1	230/208-60-3	460-60-3	230/208-60-1	230/208-60-3	460-60-3	230/208-60-1	230/208-60-3	460-60-3
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									
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Volts	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	11.3/12.3	5.1
BCSC	12.8	8.3	5.1	14.1	9	5.6	17.9	15.6	6
Locked Rotor Amps	64/64	58/58	28	77/77	71/71	38	112/112	88/88	44
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
Motor & Evaporator									
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 & ESP	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

Model	W42G1-A	W42G1-B	W42G1-C	W48G1-A	W48G1-B	W48G1-C	W60G1-A	W60G1-B	W60G1-C
Electric Rating - 60Hz	230/208-60-1	230/208-60-3	460-60-3	230/208-60-1	230/208-60-3	460-60-3	230/208-60-1	230/208-60-3	460-60-3
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									
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Volts	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
BCSC	19.9	13.1	6.1	22.2	18.6	9.5	26.3	15.6	7.8
Locked Rotor Amps	109/109	83/83	41	135/135	98/98	55	134/134	110/110	52
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
Motor & Evaporator									
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 & ESP	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 and Airflow Ratings, and Available Heating Inputs

Model	W24G	W30G	W36G	W42G	W48G	W60G
Cooling BTUH ①	26,000	32,000	37,000	41,500	48,000	57,000
EER ②	10.0	10.0	10.0	10.0	10.0	10.0
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
	67,500	67,500	67,500	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 and Airflow Ratings W24G, W30G, W36G

	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate
Input	90,000	81,000	67,500	61,000	45,000	41,000
Output	74,000	66,000	55,000	49,000	36,000	32,000
AFUE	81.0	81.0	81.0	81.0	81.0	81.0
Temp. Rise Range	50 - 80	50 - 80	40 - 70	40 - 70	25 - 55	25 - 55
Mid-Rise Range Airflow	1040	940	925	825	830	740
Acceptable Airflow Range	845 - 1350	765 - 1220	730 - 1275	650 - 1135	610 - 1330	540 - 1185

Heating ratings certified in accordance with AHRI Residential Furnace DOE 10 CFR Part 430.

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

	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate
Input	125,000	113,000	100,000	90,000	75,000	68,000
Output	99,000	87,000	81,000	72,000	61,000	55,000
AFUE	81.0	81.0	81.0	81.0	81.0	81.0
Temp. Rise Range	50 - 80	50 - 80	40 - 70	40 - 70	30 - 60	30 - 60
Mid-Rise Range Airflow	1410	1270	1365	1230	1250	1135
Acceptable Airflow Range	1145 - 1830	1030 - 1650	1075 - 1875	965 - 1700	940 - 1875	850 - 1700

Heating ratings certified in accordance with AHRI Residential Furnace DOE 10 CFR Part 430.

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 ₂ O	Cooling Mode			MANUAL FAN and HEATING MODE					
	Wet Coil			90,000 BTU Input			81,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			820	1260	1060			1060	870
.20		950	770	1200	1010		1200	1010	
.30		880	700	1120			1120	940	
.40		790		1030			1030	860	
.50	910	710					950		
.60	800						840		

ESP Inches H ₂ O	Cooling Mode			MANUAL FAN and HEATING MODE					
	Wet Coil			68,000 BTU Input			61,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			820	1260	1060	870		1060	870
.20		950	770	1200	1010			1010	810
.30		880	700	1120	910		1120	940	
.40		790		1030	860		1030	860	
.50	910	710		950			950	780	
.60	800						840		

ESP Inches H ₂ O	Cooling Mode			MANUAL FAN and HEATING MODE					
	Wet Coil			45,000 BTU Input			41,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			820	1260	1060	870		1060	870
.20		950	770	1200	1010	810	1200	1010	810
.30		880	700	1120	910		1120	940	750
.40		790		1030	860		1030	860	680
.50	910	710		950	780		950	780	
.60	800			840			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 ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			90,000 BTU Input			81,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			1000		1260	1060		1260	1060
.20		1160	950	1370	1200	1010		1200	1010
.30		1080	880	1290	1120	940		1120	940
.40	1150	990		1190	1030		1190	1030	860
.50	1050	910		1090	950		1090	950	
.60	940			980			980	840	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			68,000 BTU Input			61,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			1000		1260	1060			1060
.20		1160	950		1200	1010			1010
.30		1080	880		1120	940		1120	940
.40	1150	990		1190	1030	860		1030	860
.50	1050	910		1090	950	780	1090	950	780
.60	940			980	840		980	840	660

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			45,000 BTU Input			41,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10			1000		1260	1060			1060
.20		1160	950		1200	1010		1200	1010
.30		1080	880		1120	940		1120	940
.40	1150	990		1190	1030	860		1030	860
.50	1050	910		1090	950	780	1090	950	780
.60	940			980	840	660	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

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 ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			90,000 BTU Input			81,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1220	1000		1260	1060		1260	1060
.20		1160	950	1370	1200	1010		1200	1010
.30	1250	1080		1290	1120	940		1120	940
.40	1150	990		1190	1030		1190	1030	860
.50	1050			1090	950		1090	950	
.60	940			980			980	840	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			68,000 BTU Input			61,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1220	1000		1260	1060			1060
.20		1160	950		1200	1010			1010
.30	1250	1080			1120	940		1120	940
.40	1150	990		1190	1030	860		1030	860
.50	1050			1090	950	780	1090	950	780
.60	940			980	840		980	840	660

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			45,000 BTU Input			41,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1220	1000		1260	1060			1060
.20		1160	950		1200	1010		1200	1010
.30	1250	1080		1290	1120	940		1120	940
.40	1150	990		1190	1030	860		1030	860
.50	1050			1090	950	780	1090	950	780
.60	940			980	840	660	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

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 ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			125,000 BTU Input			113,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1520			1580	1180		1580	1180
.20	1710	1450		1880	1510			1510	1110
.30	1600	1400		1760	1460			1460	1090
.40	1480	1290		1670	1340		1670	1340	
.50	1390			1560	1240		1560	1240	
.60	1270			1430			1430	1130	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			100,000 BTU Input			90,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1560			1630	1230		1630	1230
.20	1760	1490			1560	1160		1560	1160
.30	1630	1440		1810	1510	1140		1510	1140
.40	1530	1330		1720	1390		1720	1390	1020
.50	1440	1210		1610	1290		1610	1290	
.60	1320			1480	1180		1480	1180	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			75,000 BTU Input			68,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1600			1680	1280		1680	1280
.20	1805	1530			1610	1210		1610	1210
.30	1680	1480		1860	1560	1190		1560	1190
.40	1580	1360		1770	1440	1070		1440	1070
.50	1490	1280		1660	1340		1660	1340	970
.60	1370			1530	1230		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-5, RG-5, non-ducted application adjustment - Reduce airflow by 170 CFM for SG-5 and RG-5 installations

Factory Connected Speeds

SPEED

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

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			125,000 BTU Input			113,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1520	1110		1580	1180		1580	1180
.20		1450	1050	1880	1510			1510	1090
.30		1400		1760	1460			1460	
.40	1480	1290		1670	1340		1670	1340	
.50	1390			1560	1240		1560	1240	
.60	1270			1430			1430	1130	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			100,000 BTU Input			90,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1560	1160		1630	1230		1630	1230
.20		1490	1090		1560	1160		1560	1160
.30		1440	1070	1810	1510	1140		1510	1140
.40	1530	1330		1720	1390		1720	1390	1020
.50	1440	1210		1610	1290		1610	1290	
.60	1320			1480	1180		1480	1180	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			75,000 BTU Input			68,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10		1600	1260		1680	1280		1680	1280
.20		1530	1190		1610	1210		1610	1210
.30		1480	1120	1860	1560	1190		1560	1190
.40		1360	1100	1770	1440	1070		1440	1070
.50	1490	1280		1660	1340		1660	1340	970
.60	1370			1530	1230		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-5, RG-5, non-ducted application adjustment - Reduce airflow by 170 CFM for SG-5 and RG-5 installations

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

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			125,000 BTU Input			113,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10	1800	1520		1950	1580	1180		1580	1180
.20	1710	1450		1880	1510		1880	1510	1110
.30	1600	1400		1760	1460		1760	1460	1090
.40	1480			1670	1340		1670	1340	
.50	1390			1560	1240		1560	1240	
.60				1430			1430	1130	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			100,000 BTU Input			90,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10	1860	1560			1630	1230		1630	1230
.20	1760	1490		1930	1560	1160		1560	1160
.30	1630	1440		1810	1510	1140		1510	1140
.40	1530	1330		1720	1390		1720	1390	1020
.50	1440			1610	1290		1610	1290	
.60	1320			1480	1180		1480	1180	

ESP Inches H ₂ O	Cooling Mode			Manual Fan and Heating Mode					
	Wet Coil			75,000 BTU Input			68,000 BTU Input		
	High	Med	Low	High	Med	Low	High	Med	Low
.10	1910	1600			1680	1280		1680	1280
.20	1805	1530		1980	1610	1210		1610	1210
.30	1680	1480		1860	1560	1190		1560	1190
.40	1580	1360		1770	1440	1070		1440	1070
.50	1490			1660	1340		1660	1340	970
.60	1370			1530	1230		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-5, RG-5, 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											
W**G Rated Input	Sea Level	1000	2000	3000	4000	5000	6000	7000	8000	9000	10,000
41,000	41,000	39,204	37,908	36,612	35,640	34,992	34,182	33,696	33,048	32,643	32,076
45,000	45,000	43,560	42,120	40,680	39,600	38,880	37,980	37,440	36,720	36,270	35,640
61,000	61,000	58,806	56,862	54,918	53,460	52,488	51,273	50,544	49,572	48,965	48,114
67,500	68,000	65,340	63,180	61,020	59,400	58,320	56,970	56,160	55,080	54,405	53,460
75,000	75,000	72,600	70,200	67,800	66,000	64,800	63,300	62,400	61,200	60,450	59,400
81,000	81,000	78,408	75,816	73,224	71,280	69,984	68,364	67,392	66,096	65,286	64,152
90,000	90,000	87,120	84,240	81,360	79,200	77,760	75,960	74,880	73,440	72,540	71,280
100,000	100,000	96,800	93,600	90,400	88,000	86,400	84,400	83,200	81,600	80,600	79,200
113,000	113,000	108,900	105,300	101,700	99,000	97,200	94,950	93,600	91,800	90,675	89,100
125,000	125,000	121,000	117,000	113,000	110,000	108,000	105,500	104,000	102,000	100,750	99,000

PROPANE (LP) DERATE CAPACITIES											
W**G Rated Input	Sea Level	1000	2000	3000	4000	5000	6000	7000	8000	9000	10,000
41,000	41,000	39,852	39,528	39,204	38,556	38,232	37,584	36,612	35,640	34,344	32,724
45,000	45,000	44,280	43,920	43,560	42,840	42,480	41,760	40,680	39,600	38,160	36,360
61,000	61,000	59,778	59,292	58,806	57,834	57,348	56,376	54,918	53,460	51,516	49,086
67,500	68,000	66,420	65,880	65,340	64,260	63,720	62,640	61,020	59,400	57,240	54,540
75,000	75,000	73,800	73,200	72,600	71,400	70,800	69,600	67,800	66,000	63,600	60,600
81,000	81,000	79,704	79,056	78,408	77,112	76,464	75,168	73,224	71,280	68,688	65,448
90,000	90,000	88,560	87,840	87,120	85,680	84,960	83,520	81,360	79,200	76,320	72,720
100,000	100,000	98,400	97,600	96,800	95,200	94,400	92,800	90,400	88,000	84,800	80,800
113,000	113,000	110,700	109,800	108,900	107,100	106,200	104,400	101,700	99,000	95,400	90,900
125,000	125,000	123,000	122,000	121,000	119,000	118,000	116,000	113,000	110,000	106,000	101,000

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	Factory Standard Input	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet	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
	22,500 - 22,650 BTU Per Burner	2500	1.45	1.45	1.40
W30G		Pressure Switch	Standard (.55)	Pressure Switch (.42) Included in Conversion Kit	
W36G	Optional 10% Field Converted Derate	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet	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
	20,250 - 20,500 BTU Per Burner	2500	1.35	1.35	1.30
		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	Factory Standard Input	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet	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
	25,000 BTU Per Burner	2500	1.50	1.50	1.45
W48G		Pressure Switch	Standard (.55)	Pressure Switch (.42) Included in Conversion Kit	
W60G	Optional 10% Field Converted Derate	Gas Heat Value BTU/Cu. Ft.	Up to 6000 Feet	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
	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 Based 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
	900-949	2.45	2.35	(2.30)
W24G	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)	
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 Based on BTU Content
20,250 to 20,500 BTU Per Burner	700-749	2.60	2.50	2.45
	750-799	2.50	2.45	2.40
	800-849	2.45	2.40	(2.30)
	850-899	2.40	(2.30)	2.25
	900-949	(2.30)	2.25	(2.20)
W24G	950-999	2.25	(2.20)	2.15
W30G	1000-1049**	(2.20)	2.15	2.10
	1050-1100	2.15	2.15	2.10
W36G	Pressure Switch	Standard (.55)	Order 8620-189 High Altitude Pressure Switch Kit (.42)	

(2.30) is the standard factory installed orifice size.

[2.20] orifices are shipped with the unit for field installed optional 10% derate.

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

[2.20] orifices are shipped with the unit for field installed optional 10% input derate.

(2.30) is the factory installed orifice size for full rated input.

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.

NATURAL GAS -- W42G, W48G, W60G 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 Based on BTU Content
25,000 BTU Per Burner	700-749	2.90	2.80	2.70
	750-799	2.80	2.70	2.60
	800-849	2.70	2.60	2.50
	850-899	2.60	2.50	2.45
	900-949	2.50	2.45	(2.40)
W42G	950-999	2.45	(2.40)	2.35
W48G	1000-1049**	(2.40)	2.35	(2.30)
	1050-1100	(2.30)	2.25	2.20
W60G	Pressure Switch	Standard (.55)	Order 8620-189 High Altitude Pressure Switch Kit (.42)	
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 Based 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	2.45	(2.40)
	900-949	(2.40)	2.35	(2.30)
W42G	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)	

(2.40) is the standard factory installed orifice size.

[2.30] orifices are shipped with the unit for field installed optional 10% derate.

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

[2.30] orifices are shipped with the unit for field installed optional 10% input derate.

(2.40) is the factory installed orifice size for full rated input.

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

No. of Orifices Required Based on Unit Input Rating
41,000 (2)
45,000 (2)
61,000 (3)
68,000 (3)
75,000 (3)
81,000 (4)
90,000 (4)
100,000 (4)
113,000 (5)
125,000 (5)

All orifice sizes shown are in millimeters (mm).

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 - 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.



COMMERCIAL ROOM VENTILATOR

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 - WGEIFM

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.
- Minimum Position Potentiometer - adjustable to control minimum damper blade position for ventilation purposes.
- Mixed Air Sensor - to monitor outside and return air to automatically modulate damper position.



ECONOMIZER

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.

Manufactured under U.S. Patent Nos. 5,301,744; 5,485,878.

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°F DB/62°F WB)

Ambient O.D.	DB/ WB	VENTILATION RATE -- 450 CFM High Speed (Black) 72% EFFICIENCY					VENTILATION RATE -- 370 CFM Medium Speed (Blue) 73% EFFICIENCY					VENTILATION RATE -- 280 CFM Low Speed (Red) 74% EFFICIENCY								
		F	VL	VLS	VLL	HRT	HRS	HL	VL	VLS	VLL	HRT	HRS	HL	VL	VLS	VLL	HRT	HRS	HL
105	75	21.465	14580	6884		15455	10498	4957	17649	11988	5661	12884	8751	4133	13356	9072	4284	9883	6713	3170
	105	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	
	80	31500	12150	19440		22680	8748	13932	25900	9990	15910	18907	7293	11614	19072	7560	12040	14504	5594	8910
100	75	21.465	12150	9314		15455	8748	6707	17649	9990	7659	12884	7293	5591	13356	7560	5796	9883	5594	4289
	100	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	21.465	9720	11744		15455	6998	8456	17649	7992	9657	12884	5834	7050	13356	6048	7308	9883	4476	5408
	95	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	
90	60	9720	9720	0	6998	6998	0	7992	7992	0	5834	5834	0	6048	6048	0	4476	4476	0	
	80	31590	7290	24300		22745	5249	17496	25974	5994	19980	18961	4376	14580	19656	4536	15120	14545	3357	11189
	75	21.465	7290	14175		15455	5249	10206	17649	5994	11655	12884	4376	8508	13356	4536	8820	9883	3357	6527
	90	70	12352	7290	5062	8893	5249	3645	10156	5994	4162	7414	4376	3038	7686	4536	3150	5687	3357	2331
85	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	
	80	31590	4860	26730		22745	3499	19246	25974	3996	21978	18961	2917	16044	19656	3024	16632	14545	2238	12308
	75	21.465	4860	16605		15455	3499	11956	17649	3996	13653	12884	2917	9967	13356	3024	10332	9883	2238	7646
80	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	
	75	21.465	2430	19035		15455	1750	13705	17649	1998	15651	12884	1459	11425	13356	1512	11844	9883	1119	8765
75	70	12352	2430	9922	8893	1750	1744	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	
	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		

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

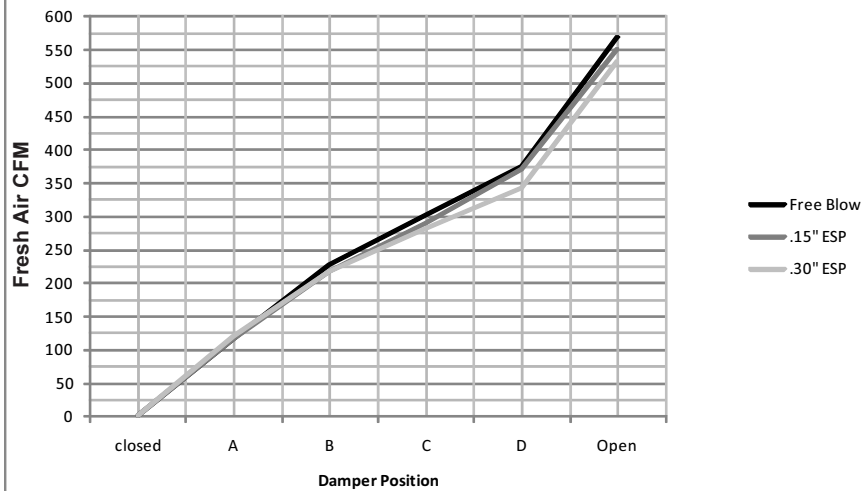
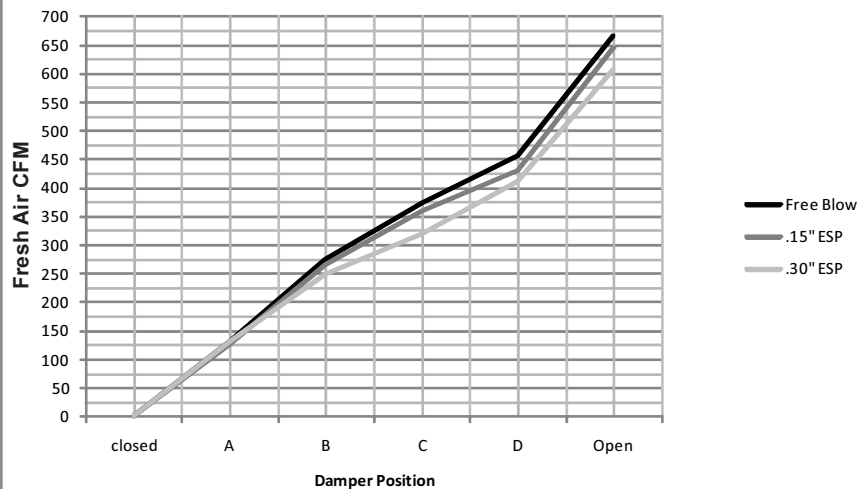
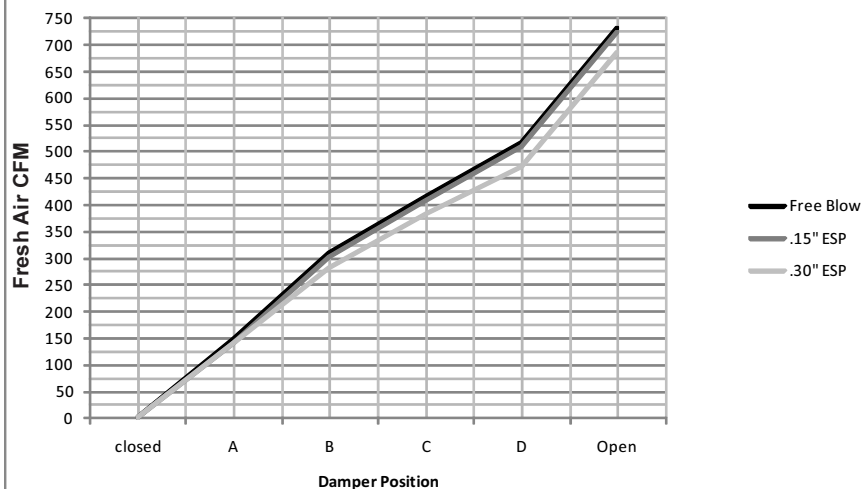
Ambient O.D.	DB/°F	VENTILATION RATE 450 CFM 76% EFF.				VENTILATION RATE 370 CFM 78% EFF.				VENTILATION RATE 280 CFM 80% EFF.			
		WVL	WHR	WVL	WHR	WVL	WHR	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1847	1998	1558	1512	1210							
60	4860	3694	3996	3117	3024	2419							
55	7290	5540	5994	4675	4536	3629							
50	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.

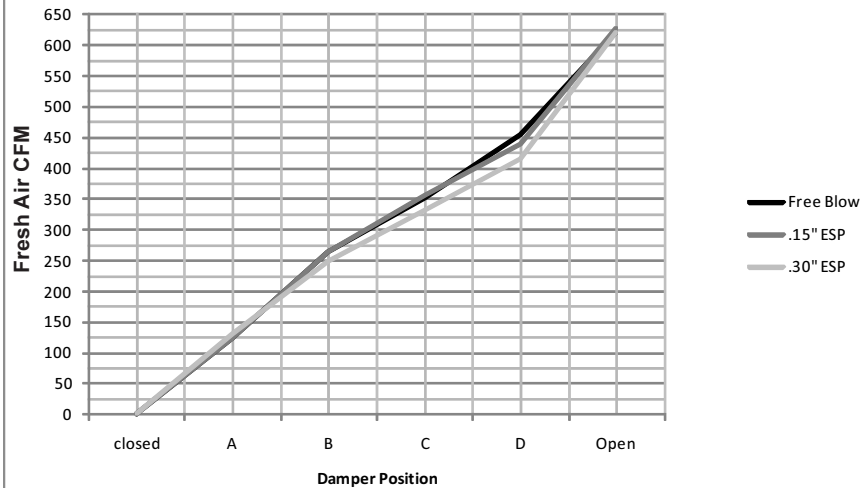
APPLICATION DATA -- WGERV-*5

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°F DB/63°F WB)

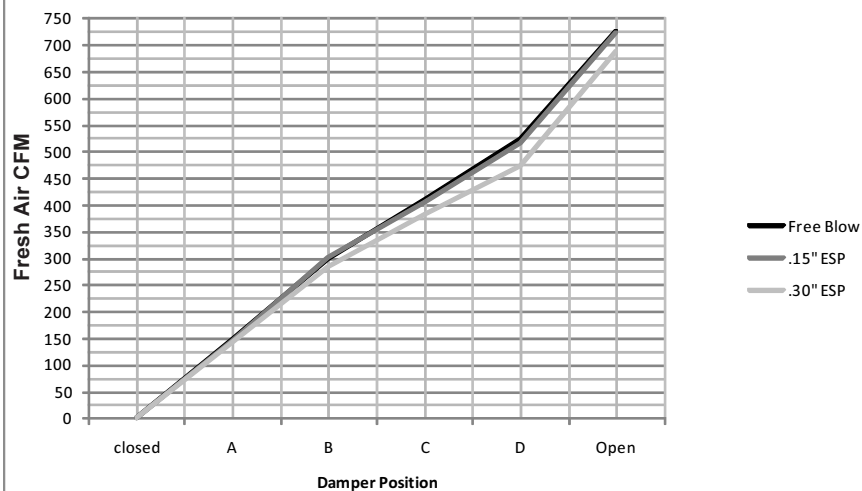
Ambient O.D.	DB/ WB	VENTILATION RATE -- 450 CFM					VENTILATION RATE -- 370 CFM					VENTILATION RATE -- 280 CFM						
		High Speed (Black) 60% EFFICIENCY					Medium Speed (Blue) 62% EFFICIENCY					Low Speed (Red) 64% EFFICIENCY						
		F	VLS	VLL	HRT	HRS	F	VLS	VLL	HRT	HRS	F	VLS	VLL	HRT	HRS		
75	21465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

W24G CRV Airflow Versus Position - Low Speed**W24G CRV Airflow Versus Position - Medium Speed****W24G CRV Airflow Versus Position - High Speed**

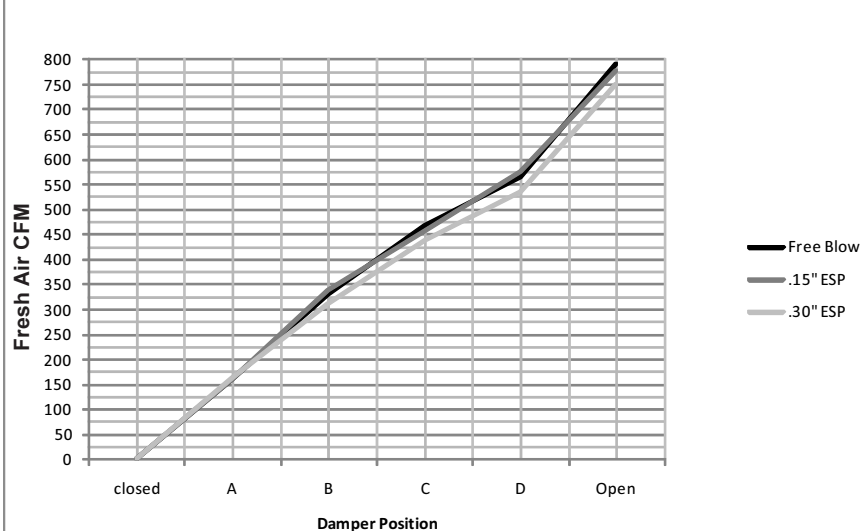
W30-36G CRV Airflow Versus Position - Low Speed



W30-36G CRV Airflow Versus Position - Medium Speed



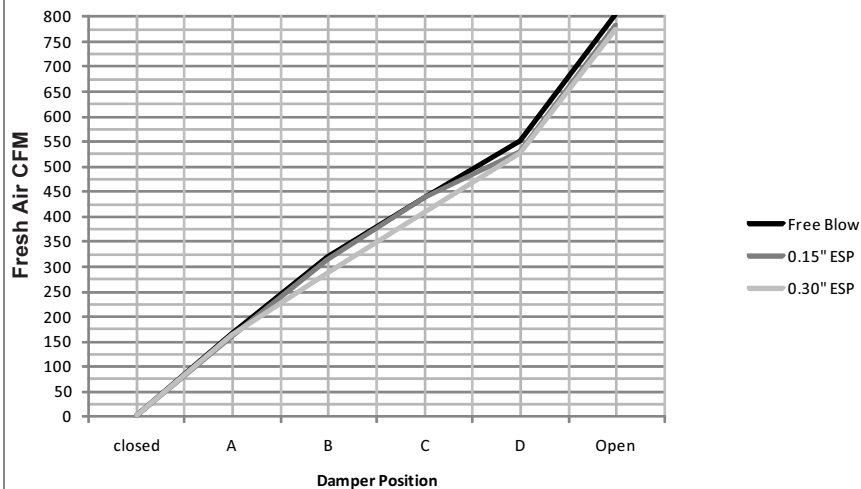
W30-36G CRV Airflow Versus Position - High Speed



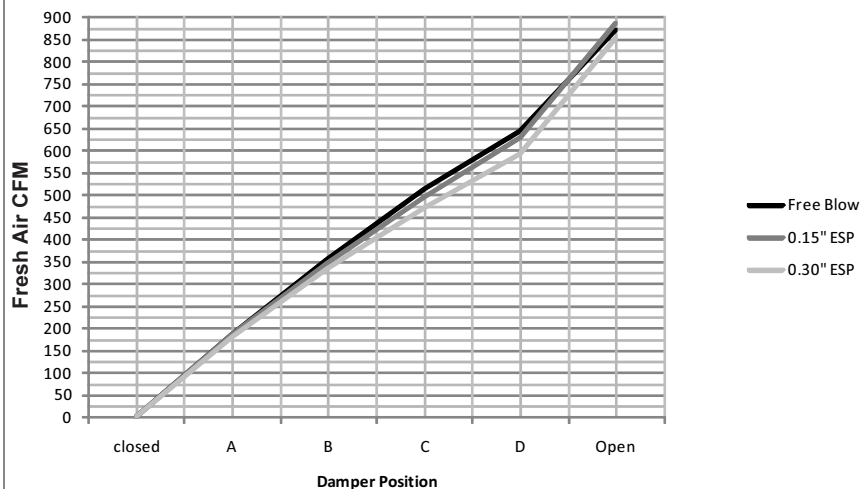
W42-60G CRV Airflow Versus Position - Low Speed



W42-60G CRV Airflow Versus Position - Medium Speed



W42-60G CRV Airflow Versus Position - High Speed



W24G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	27,900	11,900	16,000	.43	15.1	800	51.6 / 51.1	A/C
65/63	90	65	-0-	(800)	13,050	-0-	12.3	800	66.0 / 58.2	Dehum
75/62.5	50	75	28,750	19,750	7,000	.69	6.6	800	52.5 / 50.8	A/C
75/62.5	50	75	9,650	3,700	5,950	.38	5.6	800	70.8 / 58.5	Dehum
75/65.5	60	75	28,550	17,550	11,000	.62	10.4	800	54.9 / 53.7	A/C
75/65.5	60	75	10,950	2,000	8,950	.18	8.5	800	72.9 / 61.3	Dehum
75/68	70	75	29,650	15,450	14,200	.52	13.4	800	57.4 / 56.5	A/C
75/68	70	75	11,850	350	11,500	.03	10.8	800	74.7 / 63.8	Dehum
80/67	50	95	26,000	18,900	7,100	.73	6.7	800	58.8 / 56.8	A/C
80/67	50	95	-0-	(2,500)	6,000	-0-	5.7	800	82.9 / 65.8	Dehum

W30G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	35,650	15,550	20,100	.43	19.0	1000	51.1 / 50.8	A/C
65/63	90	65	-0-	(950)	16,200	-0-	15.3	1000	65.9 / 58.1	Dehum
75/62.5	50	75	33,050	25,300	7,750	.76	7.3	1000	52.1 / 50.9	A/C
75/62.5	50	75	10,300	4,200	6,100	.41	5.8	1000	71.1 / 59.2	Dehum
75/65.5	60	75	34,950	22,200	12,750	.64	12.0	1000	54.8 / 53.9	A/C
75/65.5	60	75	11,900	2,450	9,450	.21	8.9	1000	72.8 / 61.8	Dehum
75/68	70	75	36,400	19,550	16,850	.54	15.9	1000	57.2 / 56.5	A/C
75/68	70	75	13,300	700	12,600	.05	11.9	1000	74.3 / 64.1	Dehum
80/67	50	95	32,000	24,350	7,650	.76	7.2	1000	58.0 / 56.8	A/C
80/67	50	95	-0-	(2,200)	6,350	-0-	6.0	1000	82.1 / 65.8	Dehum

W36G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	42,950	18,400	24,550	.43	23.2	1100	49.9 / 49.5	A/C
65/63	90	65	18,250	(1,100)	19,350	-0-	18.3	1100	66.1 / 57.8	Dehum
75/62.5	50	75	38,600	28,700	9,900	.74	9.3	1100	51.1 / 50.1	A/C
75/62.5	50	75	12,450	4,750	7,700	.38	7.3	1100	71.1 / 58.8	Dehum
75/65.5	60	75	41,350	25,500	15,850	.62	15.0	1100	53.7 / 52.8	A/C
75/65.5	60	75	14,750	2,700	12,050	.18	11.4	1100	72.8 / 61.5	Dehum
75/68	70	75	44,000	22,600	21,400	.51	20.2	1100	56.2 / 55.4	A/C
75/68	70	75	17,850	1,000	16,850	.06	15.9	1100	74.3 / 63.3	Dehum
80/67	50	95	37,000	26,700	10,300	.72	9.7	1100	57.1 / 56.0	A/C
80/67	50	95	10,450	200	10,250	.02	9.6	1100	79.8 / 64.3	Dehum

W42G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	45,300	19,600	25,700	.43	24.2	1300	51.1 / 50.9	A/C
65/63	90	65	20,800	(1,200)	22,000	-0-	20.8	1300	65.8 / 57.6	Dehum
75/62.5	50	75	42,700	33,100	9,600	.78	9.1	1300	51.8 / 51.0	A/C
75/62.5	50	75	15,050	7,650	7,400	.51	7.0	1300	69.6 / 58.8	Dehum
75/65.5	60	75	45,650	29,000	16,650	.64	15.7	1300	54.7 / 54.1	A/C
75/65.5	60	75	17,150	4,500	12,650	.26	11.9	1300	71.8 / 61.5	Dehum
75/68	70	75	47,900	25,300	22,600	.53	21.3	1300	57.2 / 56.7	A/C
75/68	70	75	19,500	1,600	17,900	.08	16.9	1300	73.8 / 63.7	Dehum
80/67	50	95	41,500	30,500	11,000	.73	10.4	1300	57.6 / 56.6	A/C
80/67	50	95	7,850	250	7,600	.03	7.2	1300	79.8 / 65.4	Dehum

W48G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	52,150	22,300	29,850	.43	28.2	1550	51.8 / 51.5	A/C
65/63	90	65	24,800	(2,100)	26,900	-0-	25.4	1550	66.2 / 58.0	Dehum
75/62.5	50	75	50,100	38,200	11,900	.76	11.2	1550	52.5 / 51.4	A/C
75/62.5	50	75	19,900	9,800	10,100	.49	9.5	1550	69.2 / 58.3	Dehum
75/65.5	60	75	52,650	33,350	19,300	.63	18.2	1550	55.3 / 54.5	A/C
75/65.5	60	75	22,050	5,700	16,350	.26	15.4	1550	71.6 / 61.1	Dehum
75/68	70	75	54,950	29,250	25,700	.53	24.2	1550	57.7 / 57.1	A/C
75/68	70	75	23,850	2,100	21,750	.09	20.5	1550	73.8 / 63.6	Dehum
80/67	50	95	48,000	35,500	12,500	.74	11.8	1550	58.6 / 57.2	A/C
80/67	50	95	10,800	1,000	9,800	.09	9.2	1550	79.4 / 65.1	Dehum

W60G1D Application Performance Data										
Indoor Conditions		Outdoor Conditions	System Capacity				Pounds of Water/Hour	Evaporator Airflow	Approximate Supply Air	Mode
DB/WB	% RH	DB	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	65	63,700	27,400	36,300	.43	34.2	1650	49.8 / 49.6	A/C
65/63	90	65	30,550	(2,350)	32,900	-0-	31.0	1650	66.3 / 57.0	Dehum
75/62.5	50	75	60,700	43,900	16,800	.72	15.8	1650	50.7 / 49.5	A/C
75/62.5	50	75	22,700	13,850	8,850	.61	8.3	1650	67.3 / 55.2	Dehum
75/65.5	60	75	64,300	38,750	25,550	.60	24.1	1650	53.6 / 52.8	A/C
75/65.5	60	75	28,250	5,450	22,800	.19	21.5	1650	72.0 / 60.3	Dehum
75/68	70	75	66,400	34,250	32,150	.52	30.3	1650	56.0 / 55.4	A/C
75/68	70	75	30,500	1,800	28,700	.06	27.1	1650	74.0 / 62.4	Dehum
80/67	50	95	57,000	40,100	16,900	.70	5.9	1650	57.3 / 55.8	A/C
80/67	50	95	14,750	650	14,100	.04	13.3	1650	79.6 / 64.5	Dehum

Cooling Application Data - Outdoor Temperature ^①

Model	D.B./W.B. ②	Cooling Capacity	Air Temperature Entering Outdoor Coil Degree F															
			50°F	55°F	60°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
W24G1	75/	Total Cooling	30,617	29,832	29,046	28,261	27,475	26,690	25,936	25,182	24,428	23,674	22,763	21,853	20,942	20,032	19,303	18,575
	62	Sensible Cooling	20,836	20,601	20,366	20,130	19,895	19,660	19,459	19,258	19,057	18,856	18,483	18,110	17,737	17,363	17,065	16,766
	80/	Total Cooling	33,000	32,200	31,400	30,600	29,800	29,000	28,250	27,500	26,750	26,000	25,000	24,000	23,000	22,000	21,200	20,400
	67	Sensible Cooling	20,425	20,240	20,055	19,870	19,685	19,500	19,363	19,225	19,088	18,950	18,575	18,200	17,825	17,450	17,150	16,850
	85/	Total Cooling	35,915	35,008	34,100	33,193	32,286	31,379	30,513	29,647	28,781	27,916	26,842	25,768	24,695	23,621	22,762	21,903
W30G1	72	Sensible Cooling	20,383	20,170	19,957	19,744	19,531	19,318	19,143	18,969	18,795	18,621	18,252	17,884	17,515	17,147	16,852	16,557
	75/	Total Cooling	37,437	36,484	35,531	34,578	33,625	32,672	31,788	30,905	30,021	29,137	27,908	26,678	25,449	24,220	23,237	22,253
	62	Sensible Cooling	27,759	27,288	26,818	26,347	25,877	25,406	24,950	24,494	24,038	23,582	23,054	22,525	21,997	21,468	21,045	20,622
	80/	Total Cooling	40,350	39,380	38,410	37,440	36,470	35,500	34,625	33,750	32,875	32,000	30,650	29,300	27,950	26,600	25,520	24,440
	67	Sensible Cooling	27,231	26,825	26,419	26,013	25,606	25,200	24,825	24,450	24,075	23,700	23,169	22,638	22,106	21,575	21,150	20,725
W36G1	85/	Total Cooling	43,915	42,814	41,714	40,613	39,512	38,412	37,398	36,385	35,371	34,358	32,908	31,459	30,009	28,560	27,400	26,241
	72	Sensible Cooling	27,162	26,723	26,283	25,843	25,404	24,964	24,545	24,126	23,707	23,288	22,766	22,244	21,722	21,200	20,783	20,365
	75/	Total Cooling	46,318	44,905	43,492	42,079	40,666	39,253	37,862	36,471	35,080	33,689	32,187	30,685	29,182	27,680	26,478	25,276
	62	Sensible Cooling	32,881	32,177	31,474	30,770	30,067	29,363	28,615	27,866	27,117	26,368	25,846	25,324	24,801	24,279	23,861	23,443
	80/	Total Cooling	49,950	48,490	47,030	45,570	44,110	42,650	41,238	39,825	38,413	37,000	35,350	33,700	32,050	30,400	29,080	27,760
W42G1	67	Sensible Cooling	32,275	31,645	31,015	30,385	29,755	29,125	28,469	27,813	27,156	26,500	25,975	25,450	24,925	24,400	23,980	23,560
	85/	Total Cooling	54,341	52,703	51,064	49,425	47,787	46,148	44,543	42,937	41,332	39,726	37,955	36,183	34,412	32,640	31,223	29,805
	72	Sensible Cooling	32,181	31,515	30,850	30,184	29,518	28,852	28,149	27,446	26,743	26,040	25,524	25,008	24,492	23,976	23,563	23,151
	75/	Total Cooling	47,396	46,264	45,133	44,001	42,869	41,738	40,750	39,762	38,775	37,787	36,080	34,372	32,665	30,958	29,592	28,226
	62	Sensible Cooling	35,229	34,701	34,173	33,645	33,117	32,590	32,104	31,618	31,133	30,647	29,951	29,254	28,558	27,861	27,304	26,747
W48G1	80/	Total Cooling	51,075	49,930	48,785	47,640	46,495	45,350	44,388	43,425	42,463	41,500	39,625	37,750	35,875	34,000	32,500	31,000
	67	Sensible Cooling	34,550	34,105	33,660	33,215	32,770	32,325	31,944	31,563	31,181	30,800	30,100	29,400	28,700	28,000	27,440	26,880
	85/	Total Cooling	55,594	54,289	52,984	51,679	50,375	49,070	47,942	46,814	45,686	44,558	42,545	40,532	38,518	36,505	34,895	33,284
	72	Sensible Cooling	34,468	33,979	33,490	33,001	32,512	32,023	31,583	31,144	30,704	30,265	29,577	28,889	28,201	27,514	26,963	26,413
	75/	Total Cooling	54,752	53,465	52,179	50,892	49,605	48,318	47,165	46,012	44,859	43,705	41,884	40,063	38,242	36,421	34,964	33,507
W60G1	62	Sensible Cooling	41,384	40,714	40,044	39,374	38,704	38,034	37,375	36,716	36,057	35,398	34,683	33,968	33,253	32,538	31,966	31,393
	80/	Total Cooling	59,000	57,700	56,400	55,100	53,800	52,500	51,375	50,250	49,125	48,000	46,000	44,000	42,000	40,000	38,400	36,800
	67	Sensible Cooling	40,594	40,020	39,446	38,873	38,299	37,725	37,188	36,650	36,113	35,575	34,856	34,138	33,419	32,700	32,125	31,550
	85/	Total Cooling	64,223	62,739	61,256	59,773	58,289	56,806	55,489	54,171	52,854	51,537	49,389	47,242	45,095	42,947	41,229	39,512
	72	Sensible Cooling	40,493	39,869	39,245	38,621	37,996	37,372	36,768	36,165	35,561	34,957	34,251	33,545	32,838	32,132	31,567	31,002
W60G1	75/	Total Cooling	66,963	65,240	63,518	61,795	60,073	58,350	56,738	55,125	53,513	51,900	49,738	47,575	45,413	43,250	41,520	39,790
	62	Sensible Cooling	46,884	46,127	45,370	44,613	43,857	43,100	42,350	41,600	40,850	40,100	39,316	38,533	37,749	36,966	36,339	35,712
	80/	Total Cooling	72,175	70,420	68,665	66,910	65,155	63,400	61,800	60,200	58,600	57,000	54,625	52,250	49,875	47,500	45,600	43,700
	67	Sensible Cooling	45,988	45,340	44,693	44,045	43,398	42,750	42,138	41,525	40,913	40,300	39,513	38,725	37,938	37,150	36,520	35,890
	85/	Total Cooling	78,550	76,560	74,570	72,580	70,590	68,600	66,750	64,900	63,050	61,200	58,650	56,100	53,550	51,000	48,960	46,920
72	Sensible Cooling	45,874	45,169	44,464	43,760	43,055	42,350	41,663	40,975	40,288	39,600	38,826	38,052	37,279	36,505	35,886	35,267	
		Capacity Multiplier Factors																
		% of Rated Airflow																
		Total BTUH																
Sensible BTUH																		

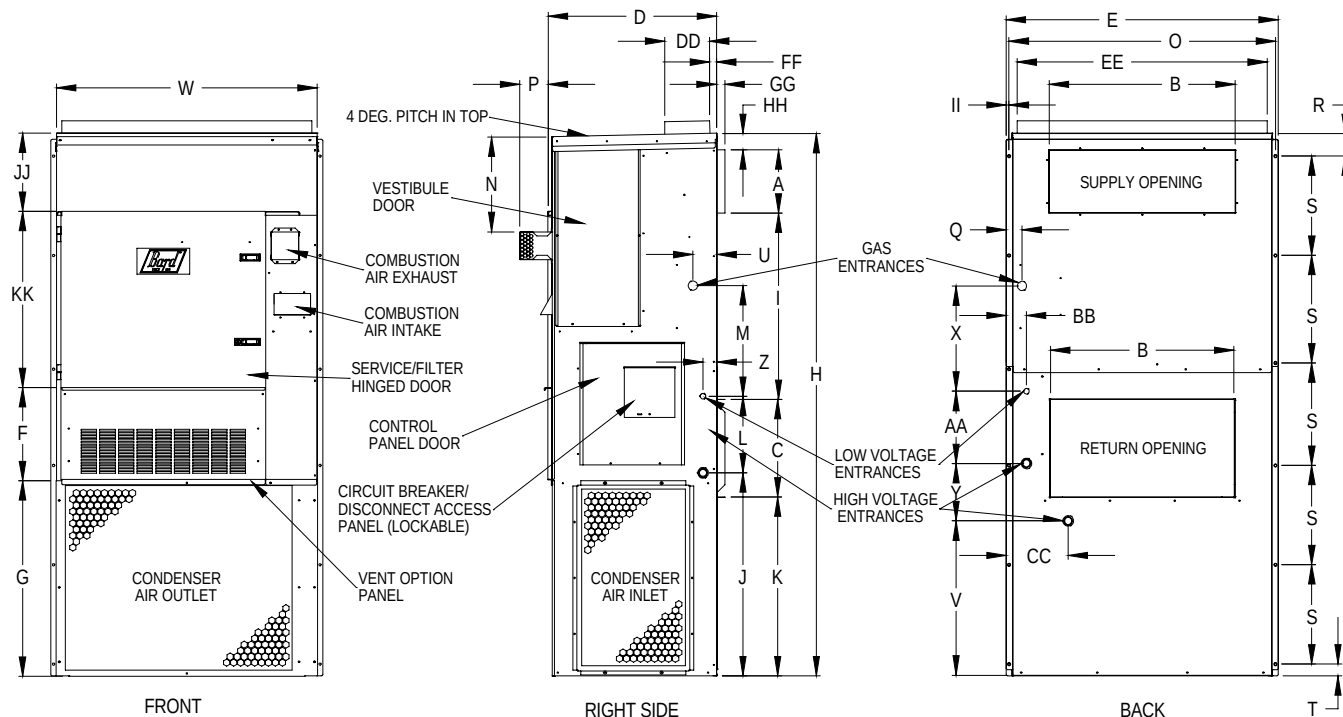
① Below 50°F, unit requires a factory or field installed low ambient control.

② Return air temperature °F.

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	14.1	15.44	15.3	39.25	4.5	2.5	5.88	
W42G-W48G-W60G	9.88	29.88	15.88	27.25	43.8		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	JJ	KK
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	12.75	28.25
W42G-W48G-W60G	16 - 6 HOLES		3.88	24.9	42	17.34	8.44		12.19		10		40.25			2.75	0.44		



MIS-2758 B

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 Outlet (sides - airflow discharge)	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.

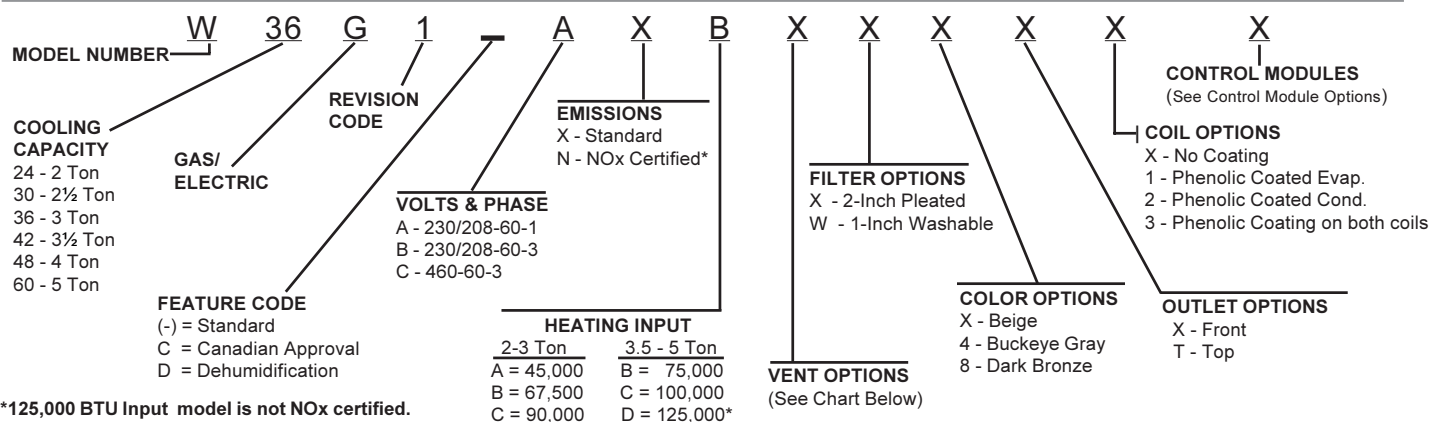
② 0-inch clearance at rear top of unit (at the wall surface). The 4° pitch of top creates .688 inch clearance between front top and any extended overhang above the top of the unit.

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	WGEIFM-3C	E	WGEIFM-5C
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

USED WITH MODELS	UNIT COLOR X - BEIGE	UNIT COLOR 4 - 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-break 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 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.

Form No.
S3418
November, 2011

Supersedes S3418-1210