BARD WALL MOUNT™ Two Stage Gas Electric 2 to 5 Ton Step Capacity
W2G - W5G Unit Models 208V - 460V Single and Three Phase 60hz

WG Series WALL-MOUNT™

The Bard WG Series Wall-Mount Gas Electric is an energy efficient self contained system that is designed to offer maximum indoor temperature control. Installed on an exterior wall surface, the WG Series provides cooling and heating without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: modular buildings, light commercial, mobile buildings, schools, mining, petro-chemical, telecom, industrial, energy storage, and data centers. Factory or field installed accessories are available to meet specific job requirements for your unique application.

WG Series Features:

- 2 to 5 ton cooling capacity uses energy efficient components including today's newest 2-stage compressor designs.
- Multi-speed Electronically commutated indoor motor (ECM) technology.
- Enclosed outdoor fan motor with ball bearing construction.
- Copper/Aluminum finned coils, and refrigerant system includes filter drier. Evaporator coil includes green fin coil protection.
- R-454B A2L Refrigerant that meets the global objectives outlined in the Montreal Protocol and the Kigali Amendment.
- Factory or field installed ventilation options including economizers and energy recovery ventilators.
- Multiple cabinet finishes and colors.
- Coil coating options for additional corrosion protection.
- Natural Gas and Propane heating available in multiple capacity sizes.
- Optional Circuit breakers for 208/230V single and three phase units.
- Filter options up to MERV13.
- Indoor air quality options including NPBI devices.
- Controls include short cycle protection and phase monitoring. Hi and low pressure switch refrigerant system protection standard.
- Optional hot gas reheat dehumidification is available for all models.

WG Series

- Complies with efficiency requirements of ANSI/ASHRAE/IES 90.1-2019.
- Certified to ANSI/AHRI Standard 390-2021 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety of Household and Similar Electrical Appliances ANSI/UL STD 60335-1 & ANSI/UL STD 60335-2-40/CSA STD C22.2 No. 60335-1 & CSA STD C22.2 No. 60335-2-40 Fourth Edition.
- Commercial Product - Not intended for residential applications.
- Bard is an ISO 9001:2015 Certified Manufacturer.
- The AHRI Certified® mark indicates Bard Manufacturing Company participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.

AHRI CERTIFIED® www.ahridirectory.org Globally Recognized. Industry Respected.

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/////// WALL-MOUNT WG2S (2 TON) TO WG5S (5 TON) NOMENCLATURE

MODEL #	WG	3	S	F	-	A	X	C	X	X	X	X	X	X
DIGIT #	1,2	3	4	5	6	7	8	9	10	11	12	13	14	15

1,2

1, 2. Series - Two Stage Compressor	
WG	Bard Exterior **W**all-Mount, **G**as/Electric

3

3. Nominal Capacity			
2	2.0 Ton	4	4.0 Ton
3	3.0 Ton	5	5.0 Ton

4

4. Unit Type - Capacity	
S	Step Capacity 2-Stage (66% and 100%)

5

5. Revision	
F	Revision (R-454B Refrigerant).

6

6. Special Feature Placeholder	
-	Standard Unit.
C	Canadian Version (French labeling)
D	Hot Gas Reheat Dehumidification.

7

7. Voltage		Ph.	Hz.
A	208/230VAC	1	60
B	208/230VAC	3	60
C	460VAC	3	60

8

8. Revision	
X	Standard Heat Exchanger Emissions.

9

9. Gas Heating Input (BTUH)		Units
A	45,000	WG2-WG3
B	68,000	WG2-WG3
C	90,000	WG2-WG3
B	75,000	WG4-WG5
C	100,000	WG4-WG5
D	125,000	WG4-WG5

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10. Ventilation Package Options	
X	Barometric Air Damper (Intake).
B	Block Off Plate (No Vent).
M	Motorized Air Damper (Intake).
V	Powered Comm. Vent, On/Off/Mod.
E	Partial Flow Econ, JADE, Enthalpy.
R	Energy Recovery Ventilator.

11

11. Filter and IAQ Options	
X	2" MERV8 Disposable Filter.
W	1" MERV2 Washable Filter.
M	2" MERV11 Disposable Filter.
N	2" MERV13 Disposable Filter.
B	2" MERV13 Filter with NPBI Device.
C	2" MERV8 Filter with NPBI Device.

12

12. Cabinet Color and Finish	
X	Standard Beige Enamel Painted Steel.
1	White Enamel Painted Steel.
4	Buckeye Gray Enamel Painted Steel.
8	Dark Bronze Enamel Painted Steel.

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13. Cabinet Style	
X	Front Supply Outlet Cabinet.
T	Top Supply Outlet Cabinet.

14

14. Coil and Cabinet Coatings	
X	Standard Copper/Aluminum evap and cond coils.
1	Coated indoor evap coil, std outdoor cond. coil.
2	Coated outdoor cond coil, std indoor evap coil.
3	Coated indoor evap and outdoor cond coil.

15

15. Unit Mounted Controls Options Standard: Hi/Lo Pressure and Ref. Leak (RDS) Sensor	
X	Standard Controls.
E	X + Low Ambient Control (LAC).

INTERACTIVE TABLE OF CONTENTS (SELECT 0 ICON WITH CURSOR TO GO TO LOCATION, PICK TO RETURN)

/////// WG SERIES AHRI CAPACITY AND EFFICIENCY RATINGS, AVAILABLE HEAT INPUT (BTUH)

MODELS	WG2S	WG3S	WG4S	WG5S
Cooling Capacity BTUH	23,000	36,000	49,000	56,000
Unit Cooling Energy Efficiency Ratio (EER)	11.0	11.0	11.0	11.0
Unit Cooling Integrated Part Load Value (IPLV)	14.7	15.8	16.3	14.3
Rated Full Load Cooling CFM @ Rated External Static	800 CFM@.2"WC	1100 CFM@.15"WC	1400 CFM@.2"WC	1600 CFM@.2"WC
Available Heating Input BTUH Per Unit Model	45,000 BTUH	45,000 BTUH	75,000 BTUH	75,000 BTUH
	68,000 BTUH	68,000 BTUH	100,000 BTUH	100,000 BTUH
	90,000 BTUH	90,000 BTUH	125,000 BTUH	125,000 BTUH

① Capacity is certified in accordance with ANSI/ARI Standard 390-2021.

② EER and IPLV are certified in accordance with ANSI/ARI Standard 390-2021. All ratings based on no outside air introduction).

MODELS	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate	Factory Standard	Field Derate
Heating Input BTUH	45,000	41,000	68,000	61,000	90,000	81,000	75,000	68,000	100,000	90,000	125,000	113,000
Heating Output BTUH	37,000	34,000	55,500	50,000	74,000	66,500	61,500	56,000	82,000	74,000	102,500	93,000
Thermal Efficiency (T.E.)	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%
Temperature Rise Range °F	25 - 55	25 - 55	40 - 70	40 - 70	50 - 80	50 - 80	30 - 60	30 - 60	40 - 70	40 - 70	50 - 80	50 - 80
Mid-Rise Range Airflow CFM	830	740	925	825	1040	940	1250	1135	1365	1230	1410	1270
Acceptable Airflow Range CFM	610-1330	540-1185	730-1275	650-1135	845-1350	765-1220	940-1875	850-1700	1075-1875	965-1700	1145-1830	1030-1650

/////// UNIT COOLING CAPACITY AT VARIOUS INDOOR AND OUTDOOR CONDITIONS - FULL LOAD

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA										
			75°F 23.9°C	80°F 26.6°C	85°F 29.4°C	90°F 32.2°C	95°F 35°C	100°F 37.8°C	105°F 40.5°C	110°F 43.3°C	115°F 46.1°C	120°F 48.8°C	125°F 51.6°C
WG2S FULL LOAD COOLING 2nd STAGE	75/62	Total Cooling	25200	23800	22500	21200	20100	19100	18200	17400	16700	16000	15500
		Sensible Cooling	19300	18700	18100	17500	17000	16400	16000	15500	15100	14700	14400
	80/67	Total Cooling	26900	25900	24900	23900	23000	22200	21400	20700	20000	19400	18900
		Sensible Cooling	18700	18300	17900	17500	17100	16700	16400	16000	15700	15400	15100
	85/72	Total Cooling	32100	30300	28600	27000	25600	24300	23100	22100	21000	20200	19500
		Sensible Cooling	19200	18600	18000	17400	16800	16200	15700	15000	14500	13900	13400
WG3S FULL LOAD COOLING 2nd STAGE	75/62	Total Cooling	39900	37300	35000	33000	31400	30100	29200	28500	28200	28200	28400
		Sensible Cooling	28500	27300	26200	25300	24600	24200	23900	23700	23800	24000	24400
	80/67	Total Cooling	42600	40600	38800	37300	36000	35100	34400	34000	33900	34100	34600
		Sensible Cooling	27600	26700	25900	25300	24800	24600	24500	24500	24700	25100	25700
	85/72	Total Cooling	50800	47500	44600	42100	40000	38400	37100	36200	35600	35500	35600
		Sensible Cooling	28300	27100	26000	25200	24400	23800	23400	23000	22800	22700	22800
WG4S FULL LOAD COOLING 2nd STAGE	75/62	Total Cooling	51800	49300	47000	44800	42700	40800	38900	37200	35600	34000	32500
		Sensible Cooling	40200	39000	37900	36700	35700	34700	33800	33000	32200	31500	30900
	80/67	Total Cooling	55300	53700	52200	50600	49000	47500	45900	44300	42800	41200	39600
		Sensible Cooling	39000	38200	37500	36700	36000	35300	34700	34100	33500	33000	32500
	85/72	Total Cooling	65900	62800	60000	57100	54400	52000	49500	47100	45000	42800	40700
		Sensible Cooling	40000	38800	37700	36500	35300	34200	33100	32000	30900	29800	28800
WG5S FULL LOAD COOLING 2nd STAGE	75/62	Total Cooling	59900	56800	53900	51200	48800	46500	44500	42600	40800	39200	37800
		Sensible Cooling	46200	44600	43100	41800	40500	39400	38300	37400	36500	35700	35100
	80/67	Total Cooling	63900	61900	59900	57900	56000	54200	52500	50800	49100	47500	46000
		Sensible Cooling	44800	43700	42700	41800	40900	40100	39300	38600	38000	37400	36900
	85/72	Total Cooling	76100	72400	68800	65400	62200	59300	56600	54100	51600	49400	47300
		Sensible Cooling	45900	44400	42900	41500	40100	38800	37500	36200	35000	33800	32700

////// UNIT COOLING CAPACITY AT VARIOUS INDOOR AND OUTDOOR CONDITIONS - PART LOAD

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA										
			75°F 23.9°C	80°F 26.6°C	85°F 29.4°C	90°F 32.2°C	95°F 35°C	100°F 37.8°C	105°F 40.5°C	110°F 43.3°C	115°F 46.1°C	120°F 48.8°C	125°F 51.6°C
WG2S PART LOAD COOLING 1st STAGE	75/62	Total Cooling	17300	16500	15600	14800	14100	13400	12800	12100	11500	10900	10400
		Sensible Cooling	13800	13300	12800	12300	11900	11500	11200	10900	10500	10400	10100
	80/67	Total Cooling	18400	17900	17300	16700	16200	15600	15000	14400	13800	13200	12600
		Sensible Cooling	13300	13000	12600	12300	12000	11700	11400	11200	10900	10800	10600
	85/72	Total Cooling	22000	21000	19900	18900	18000	17100	16200	15400	14500	13800	13000
		Sensible Cooling	13700	13200	12700	12300	11800	11400	10900	10500	10100	9800	9400
WG3S PART LOAD COOLING 1st STAGE	75/62	Total Cooling	28300	26800	25300	23900	22700	21400	20300	19100	18100	17200	16200
		Sensible Cooling	28300	26800	25300	22600	19400	16800	15000	14000	13600	13900	14900
	80/67	Total Cooling	30200	29200	28100	27000	26000	24900	23900	22800	21800	20800	19700
		Sensible Cooling	30200	29200	26400	22600	19500	17100	15400	14400	14100	14500	15600
	85/72	Total Cooling	36000	34200	32300	30500	28900	27300	25800	24300	22900	21600	20300
		Sensible Cooling	31000	29700	26500	22500	19200	16600	14700	13500	13000	13100	13800
WG4S PART LOAD COOLING 1st STAGE	75/62	Total Cooling	35600	34400	33200	31900	30400	28900	27300	25700	24000	22100	20200
		Sensible Cooling	28400	27500	26700	25800	25000	24200	23400	22700	21900	21200	20200
	80/67	Total Cooling	38000	37500	36800	36000	34900	33700	32200	30600	28800	26800	24600
		Sensible Cooling	27500	26900	26400	25800	25200	24600	24000	23400	22800	22200	21500
	85/72	Total Cooling	45300	43900	42300	40700	38800	36900	34700	32600	30300	27900	25300
		Sensible Cooling	28200	27300	26500	25700	24700	23800	22900	22000	21000	20100	19100
WG5S PART LOAD COOLING 1st STAGE	75/62	Total Cooling	44000	42000	40000	38200	36400	34800	33200	31700	30300	28900	27600
		Sensible Cooling	32900	32200	31300	30500	29700	29000	28200	27400	26700	25900	25200
	80/67	Total Cooling	46900	45700	44400	43100	41800	40500	39200	37800	36400	35000	33600
		Sensible Cooling	31900	31500	31000	30500	30000	29500	28900	28300	27800	27100	26500
	85/72	Total Cooling	55900	53400	51000	48700	46400	44300	42300	40200	38300	36400	34600
		Sensible Cooling	32700	32000	31200	30300	29400	28600	27600	26600	25600	24500	23500

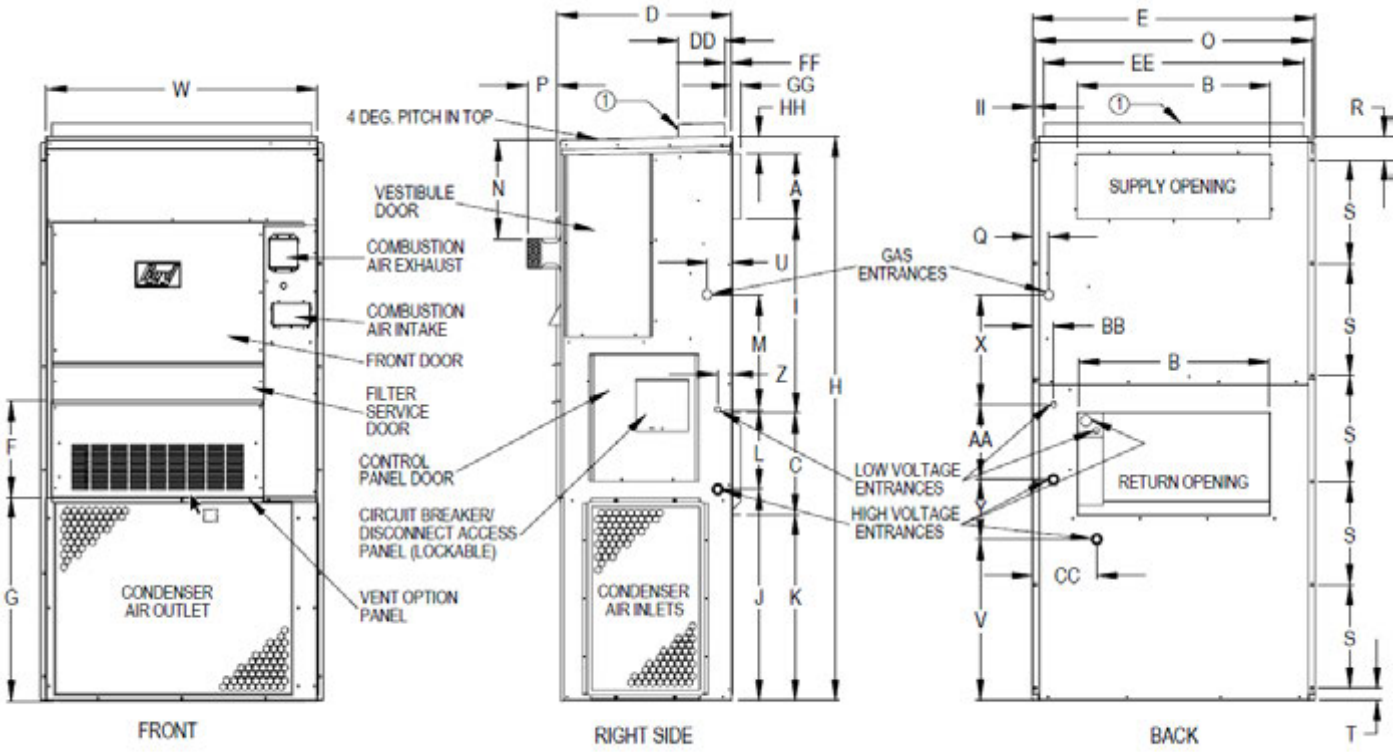
Notes:
- Unit compressor cooling operation below 60°F requires a Low Ambient Control (LAC).
- 1000 BTUH = .29307 kW
- Outdoor air temperatures provided are an average of the condenser inlet air temperature.

Capacity Multiplier Factors							
% of Rated Airflow	-30%	-20%	-10%	Rated	+10%	+20%	+30%
Total BTUH	0.93	0.95	0.97	1	1.01	1.02	1.04
Sensible BTUH	0.90	0.93	0.95	1	1.02	1.05	1.09

/////// WG SERIES CABINET DIMENSIONS

DIMENSIONS OF W42A-72A BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)																				
MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		UNIT CABINET												
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R
WG2S, WG3S	38	24.25	81.63	7.88	27.88	13.88	27.88	40.00	14.88	25.63	30	27.38	27.50	14.12	15.44	15.31	39.25	4.50	2.50	5.88
WG4S, WG5S	42	27.25	93.25	9.88	29.88	15.88	29.88	43.88	14.88	35.63	30	37.38	32.75	14.12	15.44	15.31	42.88	4.50	2.50	3.75

MODEL	S	T	U	V	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II
WG2S, WG3S	12.00 - 7 HOLES	3.75	2.88	22.90	17.84	4.44	2.25	11.44	3.25	9.00	7.25	36.25	1.13	1.25	2.00	0.38
WG4S, WG5S	16.00 - 6 HOLES	7.75	3.88	28.90	17.34	8.44	2.25	12.19	3.25	10.00	7.25	40.25	1.13	1.25	2.75	0.44



Note 1: Optional top outlet in place of standard back supply opening, see nomenclature outlet options. Standard unit can also be field converted to this configuration using approved top supply outlet conversion kit.

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Note 2: When replacing older WAG models with the WG2S or WG3S models the WGWC-* wall curb must be used due to the 30" spacing (I Dim.) between the supply and return openings.

Note 3: Follow all national, state, and local codes and regulations regarding the installation of heating and cooling equipment regarding Single Packaged Vertical Units (SPVU) including electrical access clearances.

CLEARANCES REQUIRED FOR SERVICE AND CONDENSER AIRFLOW			
MODELS	LEFT SIDE	RIGHT SIDE	FRONT
ALL UNITS	20"	20"	10'

MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS				
MODELS	SUPPLY AIR DUCT FIRST 3 FT.	INSTALLATION WALL	VENT TERMINAL	UNIT TOP AT WALL SURFACE (4° PITCHED TOP)
WG2S, WG3S	1"	0"	17"	1"
WG4S, WG5S	1"	0"	16"	0"

Refer to the Installation Manual for more detailed clearance information.

/////// SOUND DATA - DBA @ 5 FT. AND 10 FT.*

UNIT	DUCT FREE IN-DOOR COOLING OPERATION @ 5 FT.	DUCT FREE INDOOR COOLING OPERATION @ 10 FT.	DUCTED INDOOR COOLING OPERATION @ 5 FT.	DUCTED INDOOR COOLING OPERATION @ 10 FT.	OUTDOOR @ 10 FT.
WG2S	TBD	TBD	TBD	TBD	TBD
WG3S	TBD	TBD	TBD	TBD	TBD
WG4S	TBD	TBD	TBD	TBD	TBD
WG5S	TBD	TBD	TBD	TBD	TBD

Integrated values calculated per ANSI/ASA S12.60-2009/Part 2, Section 5.2.2.1.

/////// GENERAL UNIT ELECTRICAL SPECIFICATIONS

MODELS	NOMINAL VOLTAGE VAC	PH	HZ	VOLTAGE RANGE VAC	RATED LOAD AMPS (RLA)	BRANCH CIRCUIT SELECTION CURRENT (BCSC)	LOCKED ROTOR AMPS (LRA)	INDOOR MOTOR VOLTAGE	INDOOR MOTOR AMPS	INDOOR MOTOR HP	OUTDOOR MOTOR VOLTAGE	OUTDOOR MOTOR AMPS	OUTDOOR MOTOR HP
WG2SF-A	230/208V	1	60	197-253V	10.3/11.9	10.3	62	230/208	1.1/1.1	1/2HP	230/208	1.3/1.3	1/5HP
WG2SF-B	230/208V	3	60	197-253V	6.4/7.3	6.3	56	230/208	1.1/1.1	1/2HP	230/208	1.3/1.3	1/5HP
WG2SF-C	460V	3	60	414-506V	4.4	3.8	29	460	.6	1/2HP	460	.7	1/5HP
WG3SF-A	230/208V	1	60	197-253V	15.5/17.5	14.6	90	230/208	1.9/2.1	1/2HP	230/208	1.3/1.3	1/5HP
WG3SF-B	230/208V	3	60	197-253V	10.6/11.9	9.9	82	230/208	1.9/2.1	1/2HP	230/208	1.3/1.3	1/5HP
WG3SF-C	460V	3	60	414-506V	5.8	4.8	44.3	460	1.1	1/2HP	460	.7	1/5HP
WG4SF-A	230/208V	1	60	197-253V	19.6/22.5	18.3	138	230/208	2.7/3.0	3/4HP	230/208	2.1/2.0	1/3HP
WG4SF-B	230/208V	3	60	197-253V	12.8/14.7	11.9	112	230/208	2.7/3.0	3/4HP	230/208	2.1/2.0	1/3HP
WG4SF-C	460V	3	60	414-506V	8.4	6.8	61.8	460	1.5	3/4HP	460	1.1	1/3HP
WG5SF-A	230/208V	1	60	197-253V	24.5/27.5	25.2	147.3	230/208	3.6/4.0	3/4HP	230/208	2.0/2.0	1/3HP
WG5SF-B	230/208V	3	60	197-253V	13.5/15.1	13.8	150	230/208	3.6/4.0	3/4HP	230/208	2.0/2.0	1/3HP
WG5SF-C	460V	3	60	414-506V	7.5	6.9	58	460	2.0	3/4HP	460	1.0	1/3HP

Note: All units have a Short Circuit Current Protection Rating (SCCR) of 5kA RMS Symmetrical.

/////// GENERAL UNIT REFRIGERANT AND MECHANICAL SPECIFICATIONS

UNIT MODEL	REFRIGERANT SYSTEM				INDOOR EVAPORATOR BLOWER			OUTDOOR CONDENSER FAN		
	CHARGE TYPE	STANDARD UNIT CHARGE RATE LBS	DEHUMIDIFI-CATION UNIT CHARGE RATE LBS	COMPRESSOR TYPE	INDOOR MOTOR -SPEEDS	INDOOR FAN	INDOOR CFM @ RATED ESP	OUTDOOR MOTOR	OUTDOOR FAN	OUTDOOR FAN CFM
WG2SF	R-454B	4.5625	4.5625	2-Stg Scroll	ECM-5SPD	Dual Blower	800@.2"WC	PSC	20" Axial	2200
WG3SF	R-454B	5.5625	5.75	2-Stg Scroll	ECM-5SPD	Dual Blower	1100@.15"WC	PSC	20" Axial	2000
WG4SF	R-454B	8.1875	8.8125	2-Stg Scroll	ECM-5SPD	Dual Blower	1400@.2"WC	PSC	24" Axial	3000
WG5SF	R-454B	8.3125	8.25	2-Stg Scroll	ECM-5SPD	Dual Blower	1600@.2"WC	PSC	24" Axial	3000

/////// FIELD WIRING ELECTRICAL DATA

STANDARD MODELS				
UNIT MODEL	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	SINGLE CIRCUIT	
			MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)
WG2SF-A	230/208-1	C BREAKER	18	20
WG2SF-B	230/208-3	C BREAKER	13	15
WG2SF-C	460-3	DISCONNECT	8	15
WG3SF-A	230/208-1	C BREAKER	24	30
WG3SF-B	230/208-3	C BREAKER	18	25
WG3SF-C	460-3	DISCONNECT	9	15
WG4SF-A	230/208-1	C BREAKER	31	35
WG4SF-B	230/208-3	C BREAKER	23	30
WG4SF-C	460-3	DISCONNECT	12	15
WG5SF-A	230/208-1	C BREAKER	40	50
WG5SF-B	230/208-3	C BREAKER	26	30
WG5SF-C	460-3	DISCONNECT	12	15

DEHUMIDIFICATION MODELS				
UNIT MODEL	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	SINGLE CIRCUIT	
			MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)
WG2SFDA	230/208-1	C BREAKER	18	20
WG2SFDB	230/208-3	C BREAKER	13	15
WG2SFDC	460-3	DISCONNECT	8	15
WG3SFDA	230/208-1	C BREAKER	25	30
WG3SFDB	230/208-3	C BREAKER	19	25
WG3SFDC	460-3	DISCONNECT	10	15
WG4SFDA	230/208-1	C BREAKER	31	35
WG4SFDB	230/208-3	C BREAKER	23	30
WG4SFDC	460-3	DISCONNECT	12	15
WG5SFDA	230/208-1	C BREAKER	40	50
WG5SFDB	230/208-3	C BREAKER	26	30
WG5SFDC	460-3	DISCONNECT	12	15

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be de-rated. Pay special attention to Note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three current carrying conductors are in a raceway.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes. MOCP (Maximum Over-current Protection) value listed is the maximum value as per UL 60335 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Over-current Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 60335 allowable MOCP value, but still above the UL 60335 minimum calculated value or Minimum Circuit Ampacity (MCA) listed. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. Review all wiring and safety information provided in the installation manual for the product.

VENTILATION OPTIONS FOR OUTDOOR AIR INTAKE AND ROOM EXHAUST

	VENT CODE	FIELD INSTALLED KIT PART NUMBER	UNIT MODEL NUMBER	INSTALLED WEIGHT	EXTERNAL FRONT HOOD DEPTH	VENTILATION OPERATION	OCCUPANCY VENTILATION INPUT SIGNAL	VENT AIRFLOW	DAMPER LEAKAGE STANDARD	VENT USE
Bar. Dampers	X	WGBFAD-3	WG2S, WG3S	4.0 (1.8)	No Hood	Barometric	None	Up to 25% of rated intake air. No exhaust.	N/A	The Barometric Intake Damper opens when the indoor fan is operating. Pins provide an easy way to set up the damper assembly.
		WGBFAD-5	WG4S, WG5S	13 (5.9)	No Hood	Barometric	None			
No Vent	B	WGBOP-3	WG2S, WG3S	1.0 (.5)	No Hood	No Air path	None	None, Air paths are sealed with block off plates.	N/A	The No Vent option provides plates over the intake and exhaust ventilation openings.
		WGBOP-5	WG4S, WG5S	14 (6.4)	No Hood	No Air path	None			
Motorized Ventilators	M	WGMFAD-3A	WG2S, WG3S	31.0 (14.0)	No Hood	Motor,Spring Return	24VAC	Up to 25% of rated intake air. No Exhaust.	10cfm/ft2	Powered outdoor intake and room exhaust air damper. Opens when 24VAC is applied. No adjustment of intake air.
		WGMFAD-5A	WG4S, WG5S	35.0 (15.9)	No Hood	Motor,Spring Return	24VAC			
	V	WGCRV-V3	WG2S, WG3S	31.0 (14.0)	No Hood	Motor,Spring Return	24VAC or 2-10VDC	Up to 50% of rated intake air with room exhaust.	4cfm/ft2	Provides outdoor intake and room exhaust air with improved damper sealing. Opens with either a 24VAC signal or DC voltage is applied.
		WGCRV-V5	WG4S, WG5S	42 (19.1)	No Hood	Motor,Spring Return	24VAC or 2-10VDC			
Free Cooling Economizers	E	WGECON-S3	WG2S, WG3S	37.0 (16.8)	No Hood	Motor,Spring Return	24VAC or 0-10VDC	Full rated intake air with room exhaust.	10cfm/ft2	Economizer with JADE controller. User defined economizing based on enthalpy curves.
		WGECON-S5	WG4S, WG5S	44 (20)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
Energy Recovery Vents	R (230V Units)	WGERV-A3B-*	WG2S, WG3S	54.0 (24.4)	4" (10.2cm)	**208/230V** Unit Blowers	24VAC - 3 speeds	Up to 200cfm	N/A	Energy Recovery Ventilator with independently adjustable intake and exhaust fans. Heat exchange wheel used to transfer heat from outdoor intake and room exhaust air paths.
		WGERV-A5B-*	WG4S, WG5S	54.0 (24.4)	4" (10.2cm)	**208/230V** Unit Blowers	24VAC - 3 speeds	Up to 400cfm		
	R (460V Units)	WGERV-C3C-*	WG2S, WG3S	54.0 (24.4)	4" (10.2cm)	**460V** Unit Blowers	24VAC - 3 speeds	Up to 200cfm		
		WGERV-C5C-*	WG4S, WG5S	54.0 (24.4)	4" (10.2cm)	**460V** Unit Blowers	24VAC - 3 speeds	Up to 400cfm		

////// INDOOR AIRFLOW CFM @ STATIC PRESSURES AND ADJUSTABLE SPEEDS

WG2S Cooling Airflow range is 500 to 1050 CFM. See Heating Airflow Ratings for Heating details.

ESP Inches H_2O	Cooling Mode			Manual Fan and Heating Mode								
	Wet Coil			45,000 BTU Input			68,000 BTU Input			90,000 BTU Input		
	High	**Med**	Low	**High**	Med	Low	**High**	Med	Low	**High**	Med	Low
.10	1050	880	820	**1260**	1060	870	**1260**	1060	870	**1260**	1060	
.20	950	800	800	**1200**	1010	810	**1200**	1010		**1200**	1010	
.30	890	720		**1120**	910		**1120**	910		**1120**		
.40	800	650		**1030**	860		**1030**			**1030**		
.50	700	500		**950**	780							

WG3S Cooling Airflow range is 690 to 1300 CFM. See Heating Airflow Ratings for Heating details.

ESP Inches H_2O	Cooling Mode			Manual Fan and Heating Mode								
	Wet Coil			45,000 BTU Input			68,000 BTU Input			90,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low	High	**Med**	Low	High	**Med**	Low
.10	1300	**1150**	750		**1260**	1060		**1260**	1060		**1260**	1060
.20	1250	**1070**	690		**1200**	1010		**1200**	1010	1370	**1200**	1010
.30	1200	**1000**		1290	**1120**	940		**1120**	940	1290	**1120**	940
.40	1110	**950**		1190	**1030**	860	1190	**1030**	860	1190	**1030**	
.50	1050	**900**		1090	**950**	780	1090	**950**	780	1090	**950**	

WG4S Cooling Airflow range is 875 to 1600 CFM. See Heating Airflow Ratings for Heating details.

ESP Inches H_2O	Cooling Mode			Manual Fan and Heating Mode								
	Wet Coil			75,000 BTU Input			100,000 BTU Input			125,000 BTU Input		
	High	**Med**	Low	High	**Med**	Low	High	**Med**	Low	High	**Med**	Low
.10	1600	**1450**	1000		**1680**	1280		**1630**	1230		**1580**	1180
.20	1540	**1400**	875		**1610**	1210		**1560**	1160	1880	**1510**	
.30	1470	**1340**		1860	**1560**	1190	1810	**1510**	1140	1760	**1460**	
.40	1400	**1260**		1770	**1440**	1070	1720	**1390**		1670	**1340**	
.50	1325	**1190**		1660	**1340**		1610	**1290**		1560	**1240**	

WG5S Cooling Airflow range is 900 to 1610 CFM. See Heating Airflow Ratings for Heating details.

ESP Inches H_2O	Cooling Mode			Manual Fan and Heating Mode								
	Wet Coil			75,000 BTU Input			100,000 BTU Input			125,000 BTU Input		
	High	Med	Low	High	**Med**	Low	High	**Med**	Low	High	**Med**	Low
.10	1610	1545	995		**1680**	1280		**1630**	1230	1950	**1580**	1180
.20	1575	1400	900	1980	**1610**	1210	1930	**1560**	1160	1880	**1610**	
.30	1455	1330		1860	**1560**	1190	1810	**1510**	1140	1760	**1460**	
.40	1380	1260		1770	**1440**	1070	1720	**1390**		1670	**1340**	
.50	1300	1200		1660	**1340**		1610	**1290**		1560	**1240**	

INDOOR AIRSTREAM FILTRATION OPTIONS

UNIT MODEL	FILTER CODE	FILTER MERV RATING	NUMBER OF FILTERS USED	BARD PART NUMBER	FILTER SIZE INCHES (CM)	FILTER ESP	FILTRATION LEVEL
WG2S WG3S	**W**	**MERV 2**	1	7003-042	20x25x1 (51x64x3)	0" WC	Low Filtration, 1" Thickness Cleanable Media.
	C, X	**MERV 8**	1	7004-040	20x25x2 (51x64x6)	.03" WC	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	1	7004-074	20x25x2 (51x64x6)	.05" WC	High Filtration, 2" Thickness Pleated Disposable Media.
	B, N	**MERV 13**	1	7004-071	20x25x2 (51x64x6)	.08" WC	Highest Filtration, 2" Thickness Pleated Disposable Media.
WG4S WG5S	**W**	**MERV 2**	1	7003-030	20x30x1 (51x77x3)	0" WC	Low Filtration, 1" Thickness Cleanable Media.
	C, X	**MERV 8**	1	7004-027	20x30x2 (51x77x6)	.03" WC	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	1	7004-049	20x30x2 (51x77x6)	.05" WC	High Filtration, 2" Thickness Pleated Disposable Media.
	B, N	**MERV 13**	1	7004-064	20x30x2 (51x77x6)	.08" WC	Highest Filtration, 2" Thickness Pleated Disposable Media.

CABINET COLOR AND FINISH OPTIONS

UNIT MODEL	CABINET COLOR AND FINISH CODE	COLOR AND FINISH	Description
All Units	X	Beige Painted Steel	This cabinet option uses zinc coated steel panels that are cleaned, rinsed, sealed and dried before a polyurethane primer is applied. The cabinet paint coating is comprised of a textured enamel. The resulting finish is designed to withstand over 1000 hours of salt spray tests per ASTM B117-03. Unit top, structural sides, and front service panels are constructed using 20 gauge materials. The unit base is constructed using 16 gauge galvanized steel. Cabinet components are insulated with a non-fiberglass formaldehyde free insulation that has a high "R" value, is easy to clean with a FSK foil backing, and resists delamination.
	1	White Painted Steel	
	4	Buckeye Gray Painted Steel	
	8	Dark Bronze Painted Steel	

X—Beige

1—White

4—Gray

8—Bronze

ADDITIONAL CORROSION COATED EVAPORATOR COIL, CONDENSER COIL, AND CABINET OPTIONS

UNIT MODEL	COIL AND CABINET COATING OPTION	EVAPORATOR COIL	CONDENSER COIL	INTERIOR CONDENSER SECTION	EXTERIOR AND INTERIOR CABINET	DESCRIPTION
All Units	X	STANDARD	STANDARD	STANDARD	STANDARD	Standard green fin evaporator coil and copper aluminum condenser coil. Cabinet is not coated.
	1	**COATED**	STANDARD	STANDARD	STANDARD	Corrosion coated evaporator coil and copper aluminum condenser coil. Cabinet is not coated.
	2	STANDARD	**COATED**	STANDARD	STANDARD	Standard green fin evaporator coil and corrosion coated condenser coil. Cabinet is not coated.
	3	**COATED**	**COATED**	STANDARD	STANDARD	Evaporator coil and condenser coil are both corrosion coated. Cabinet is not coated.

FACTORY CONTROLS OPTIONS CHART INCLUDING SWITCHES, SENSORS, RELAYS, AND START KITS

Factory installed controls are provided by Bard to enhance a Wall-Mount product before it is shipped. All Wall-Mount products are shipped with a auto-reset high pressure switch and an auto-reset low pressure switch to help protect refrigeration components. A compressor control module with adjustable voltage protection, delay on make and break, and high/low pressure diagnostics is also standard

CONTROL CODE ALL MODELS	DESCRIPTION OF FACTORY INSTALLED COMPONENTS
X	Standard Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, Solid State Furnace Control Board, and Refrigerant leak detector (RDS). These controls are standard for all models.
E	Standard controls **and Low Ambient Control.**

FIELD KIT CONTROLS OPTIONS CHART

Field installed kits provide accessories that can be installed in the field. Required components, wires, enclosures, screws, and instructions that are needed are provided within the kit.

KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
CMA-46	ALL STANDARD MODELS	Low Ambient Control cooling between 0°F and 50°F outdoor temp. - modulating
CMA-45	ALL DEHUMIDIFICATION MODELS	Low Ambient Control cooling between 0°F and 50°F outdoor temp. - modulating
TSO-WG3-X	WG2S, WG3S	Top Supply Outlet Kit - Beige
TSO-WG3-4	WG2S, WG3S	Top Supply Outlet Kit - Gray
TSO-WG3-8	WG2S, WG3S	Top Supply Outlet Kit - Dark Bronze
TSO-WG5-X	WG4S, WG5S	Top Supply Outlet Kit - Beige
TSO-WG5-4	WG4S, WG5S	Top Supply Outlet Kit - Gray
TSO-WG5-8	WG4S, WG5S	Top Supply Outlet Kit - Dark Bronze

PROPANE AND NATURAL GAS ALTITUDE KIT OPTIONS CHART

Field installed kits provide accessories that can be installed in the field. Required components, wires, enclosures, screws, and instructions that are needed are provided within the kit.

KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
WGCK-1	Propane Conversion Kit	Kit for 0 - 6000 ft. Altitude - convert from Natural Gas to Propane
WGCK-2	Propane Conversion Kit	Kit for 6000 - 10,000 ft. Altitude - convert from Natural Gas to Propane
VVK-5A	Vertical Flue Ventilation Kit	Kit replaces external flue hood and includes all parts needed for 5' vertical vent.
8620-201	1' Vertical Flue Ventilation Pipe	Additional vertical vent pipe section. 1 foot length.
8620-170	2' Vertical Flue Ventilation Pipe	Additional vertical vent pipe section. 2 foot length.
8620-200	3' Vertical Flue Ventilation Pipe	Additional vertical vent pipe section. 3 foot length.
8620-171	5' Vertical Flue Ventilation Pipe	Additional vertical vent pipe section. 5 foot length.
8620-189	Natural Gas High Altitude Kit	Kit includes pressure switch and installation instructions.

/////// WALL CURB ACCESSORIES

Optional wall curb accessories are available to help reduce vibration through the outer wall surface or to use existing wall openings when replacing equipment. Follow all static pressure airflow requirements, safety and installation guidelines in the instructions provided with the curb and Wall-Mount products.

CURB	UNITS USING CURB	DESCRIPTION
WGWC3-*	WG2S, WG3S	Upgrade curb to use with existing WAG30, WAG36, WAG40, WG3S1, WG3S2, W30, or W36 wall openings. Supply duct required for transitioning between unit supply and existing wall opening. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure.
CFCF-32-*	WG2S, WG3S	Upgrade and sound isolation curb to use with existing W18 or W24 wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. Requires WG-9CA3-*top adapter kit.
CCURBF2430-*	WG2S, WG3S	Upgrade and sound isolation curb to use with existing WAG30, WAG36, WAG40, W24G, W36G, W30, or W36 wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. Requires WG9CA3-*top adapter kit.
CCURBT2430-*	WG2S, WG3S	Upgrade and sound isolation curb to use with existing WAG30, WAG36, WAG40, W24G, W36G, W30, or W36 wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. This is a top outlet curb. Review supply and return opening locations in curb manual.
CFCF-53-*	WG4S, WG5S	Upgrade and sound isolation curb to use with existing WAG30, WAG36, WAG40, W30, or W36 wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. Requires WG9CA5-*top adapter kit.
CCURBF4860-*	WG4S, WG5S	Sound isolation curb to use with new or existing W42, W48, W60, W72, WG3S, WG4S, WG5S or W42G-W60G wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. Requires WG9CA5-*top adapter kit.
CCURBT4860-*	WG4S, WG5S	Sound isolation curb to use with new or existing W42, W48, W60, W72, WG4S, WG5S or W42G-W60G wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure. This is a top outlet curb. Review supply and return opening locations in curb manual.

* Color Option

/////// NON-DUCTED SUPPLY AND RETURN GRILLES

Supply and return louver grilles are of a brushed aluminum finish. 2" flange versions are recommended for standard installations to allow grille attachment when large wall openings are present. Return filter grilles are available for filter access from an indoor area. Filter grilles do not include a filter, and are not recommended for unit with ventilation due to filter location. A manual damper return grille is available. The manual damper is adjustable, and is only recommended for installations where increased return duct static pressure is required.

GRILLE NO.	UNITS USING GRILLE	DESCRIPTION OF LOUVER GRILLE
SG-3	WG2S, WG3S	8" x 28" with 1" Flange 4 way deflection supply grille.
SG-5	WG4S, WG5S	10" x 30" with 1" Flange 4 way deflection supply grille.
RG-3	WG2S, WG3S	12" x 28" with 1" Flange return grille.
RG-5	WG4S, WG5S	16" x 30" with 1" Flange return grille.
SG-3W	WG2S, WG3S	8" x 28" with 2" Flange 4 way deflection supply grille.
SG-5W	WG4S, WG5S	10" x 30" with 2" Flange 4 way deflection supply grille.
RG-3W	WG2S, WG3S	12" x 28" with 2" Flange return grille.
RG-5W	WG4S, WG5S	16" x 30" with 2" Flange return grille.
RFG-3W	WG2S, WG3S	12" x 28" with 2" Flange return grille with filter bracket.*
RFG-5W	WG4S, WG5S	16" x 30" with 2" Flange return grille with filter bracket.*
RGDK-3W	WG2S, WG3S	12" x 28" with 2" manual shutter style damper that is mounted in the return duct behind the return grille (sold separately). Adjustable to restrict return air from room.
RGDK-5W	WG4S, WG5S	16" x 30" manual shutter style damper that is mounted in the return duct behind the return grille (sold separately). Adjustable to restrict return air from room.

* Not recommended to provide primary filtration with units that will bring in outdoor air.

CONTROLLER, THERMOSTAT, HUMIDISTAT AND CO2 VENTILATION CONTROL OPTIONS

Bard provides a wide variety of controllers for equipment cooling, thermostats, for equipment and comfort cooling, humidistats for dehumidification units, and CO2 sensors for ventilation control. Lockable thermostat covers are available for applications where security or supervisory control is desired.

CONTROLLER	OPERATION	DESCRIPTION
MC5300	1 to 3 Unit Lead/Lag Controller	Advanced multi-unit Lead/Lag Controller with remote alarming capability. All models have Modbus communication and web pages. Optional alarm board with NO/NC contacts. On board temperature and humidity sensor that can be remote mounted. Can use up to (2) remote temperature sensors.
MC5600	1 to 6 Unit Lead Lag Controller	Advanced multi-unit Lead/Lag Controller with remote alarming capability. All models have Modbus communication and web pages. Optional alarm board with NO/NC contacts. On board temperature and humidity sensor that can be remote mounted. Can use up to (2) remote temperature sensors.

THERMOSTAT	OPERATION	DESCRIPTION
8403-060	3 Heat/3 Cool	Programmable or Nonprogrammable, ventilation output, dehumidification operation
8403-081	3 Heat/2 Cool	Advanced controller with humidity sensor, vent, motion, BACnet or Modbus, Expansion Cards.
8403-083	3 Heat/2 Cool	Advanced controller with humidity sensor, vent, BACnet or Modbus, Expansion Cards.
8403-090	2 Heat/2 Cool	Temp. Settings per Day 4, 2, 1, 0 Programs per Week 7, 5-2, 5-1-1 or Nonprogrammable
8403-092	2 Heat/2 Cool	Programmable or Nonprogrammable, ventilation output, Wi-Fi Lyric Phone App.

HUMIDISTAT	OPERATION	DESCRIPTION
8403-047	Humidity %RH	Electronic with display, lockable keypad, humidity sensor calibration (Viconics)
8403-100	Humidity %RH	Electronic with display, lockable keypad, humidity sensor calibration (Honeywell)

CO2 CONTROL	OPERATION	DESCRIPTION
S8403-096	CO2 PPM	CO2 ventilation control with digital display. On/Off or modulating ventilation operation

THERMOSTAT COVER*	SIZE	DESCRIPTION
8405-003	(Inside) 5-1/16" H x 6-1/16" W (Outside) 6-1/2" H x 7-1/2" W x 2-15/16" D	Clear acrylic with ventilation. Fits all thermostats except 8403-060
8405-005	(Inside) 5-7/8" H x 8-3/8" W (Outside) 7-1/4" H x 9-3/4" W x 3-3/8" D	Clear acrylic with ventilation. Fits all thermostats.
8405-006	(Inside) 5-1/16" H x 6-1/16" W (Outside) 6-3/8" H x 7-3/8" W x 2-7/8" D	Clear acrylic with ventilation. Fits all thermostats except 8403-060
8405-007	(Inside) 5-7/8" H x 8-3/8" W (Outside) 7-1/8" H x 9-5/8" W x 3-1/4" D	Beige painted steel cover with ventilation. Fits all thermostats.

* Thermostat covers include ventilation, but may effect temperature control reaction time. If security control lockout is needed, the 8403-060 thermostat provides input control lockout features.