



# THE WALL-MOUNT™ - AIR CONDITIONERS - WE (50Hz)

**WE-SERIES "GREEN" Refrigerant R407C**  
**21,900 Btuh (6.42KW) to 60,000 Btuh (17.58KW)**  
**Right Side Control Panel** **50Hz**

The Bard Wall-Mount Air Conditioner 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, telecommunication structures, portable structures, or correctional facilities. Factory or field installed accessories are available to meet specific job requirements.

## Engineered Features

### Aluminum Finned Copper Coils:

Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

### Twin Blowers:

Move air quietly. Most models feature multispeed blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

### Air Conditioner Compressor:

Scroll compressors are designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater. Standard on all models.

### Phase Rotation Monitor:

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

### Liquid Line Filter/Drier:

Is standard for maximizing refrigerant circuit protection.

### Galvanized 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, beige textured enamel which allows it to withstand 1000 hours of salt spray exposure.

### Slope Top:

Standard feature for water run-off.

### Top Rain Flashing:

Standard feature on all models.

### 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 or toggle disconnect switch.

### Electric Heat Strips:

Features an automatic limit and thermal cut-off safety control. Heater packages are factory installed for all models.

### 1-Inch (25mm), Disposable Air Filters:

Are standard equipment. Optional 1-inch (25mm) washable filters available and filter racks permit the addition of 2-inch (51mm) pleated filter. Factory or field installed.

### Condenser Fan and Motor Shroud Assembly:

Slides out for easy access.

### Barometric Fresh Air Damper:

Standard on all units. Allows up to 25% outside fresh air.

### Built-in Circuit Breakers:

Standard on all versions of single (240/220 volt) phase equipment. Toggle disconnects are standard on all versions of three phase (415/380 volt) equipment.

### Full Length Mounting Brackets:

Built into cabinet for improved appearance and easy installation. NOTE: Bottom mounting bracket included to assist in installation.



Economizer



Unit shown with optional Economizer.

## Ventilation System Packages

All packages are designed to meet your specific ventilation requirements utilizing one of five ventilation options for the product. The ventilation package is mounted within the unit eliminating the need for an exterior mounted hood or damper assembly on the unit. All assemblies can be factory installed, installed in the field at time of installation or as a retrofit system after installation.

- Standard - Barometric Fresh Air Damper
- Optional - Motorized Fresh Air Damper
- Optional - Blank off Plate
- Optional - Commercial Room Ventilator (CRV)
- Optional - Economizer



## Capacity and Efficiency Ratings

MODELS	WE253	WE302	WE372	WE422	WE483	WE603	WE702
Cooling Capacity Btuh	21,900	27,600	32,000	39,000	42,000	51,000	60,000
Cooling Capacity KW	6.42	8.09	9.38	11.43	12.30	14.95	17.58
EER	9.2	9.2	9.2	10.0	10.0	9.5	9.5

All capacity, efficiency and cost of operation information is based on high speed operation with fresh air cover plate. Cover plate must be ordered separately and is recommended for use to obtain maximum energy efficiency where fresh air is not required.

## Specifications 21,900 Btuh (6.42 KW) through 27,600 Btuh (8.04 KW)

MODELS	WE253-D	WE253-F	WE302-D	WE302-F
Cooling Capacity Btuh	21,900	21,900	27,600	27,600
Cooling Capacity KW	6.42	6.42	8.09	8.09
Heating Capacity	See Electric Heat Table			
Electrical Rating-50 Hz	240/220 - 1	415/380 - 3 Ⓣ	240/220 - 1	415/380 - 3 Ⓣ
Operating Voltage Range	198-254	342-456	198-254	342-456
<b>Compressor--Circuit A</b>				
Voltage	240/220	415/380	240/220	415/380
Rated Load Amps	8.9/10.1	3.4/4.0	13.9/14.9	5.2
Branch Circuit Selection Current	10.9	4.2	15.0	5.2
Lock Rotor Amps	61/53	29/24	79/71	38/34
Compressor Type	Scroll	Scroll	Scroll	Scroll
<b>Fan Motor &amp; Condenser</b>				
Fan Motor--HP--RPM	1/5 - 950	1/5 - 950	1/5 - 950	1/5 - 950
Fan Motor--Amps	1.0	1.0	1.5	1.5
Fan--DIA. m <sup>3</sup> /s	458/0.66	458/0.66	508/0.86	508/0.86
<b>Blower Motor &amp; Evaporator</b>				
Blower Motor--HP-RPM-SPD	1/5-950-1	1/5-950-1	1/3-950-2	1/3-950-2
Blower Motor--Amps	1.2	1.2	2.2	2.2
m <sup>3</sup> /s Cooling & E.S.P. (pa) w/Filter (Rated-Wet Coil)	0.32/55	0.32/55	0.45/55	0.45/55
Filter Sizes (mm) STD.	405x635x25	405x635x25	405x765x25	405x765x25
Shipping Weight -- Lbs. (Kg)	300 (136)	300 (136)	355 (161)	355 (161)

## Specifications 32,000 Btuh (9.38 KW) through 60,000 Btuh (17.58 KW)

MODELS	WE372D	WE372-F	WE422-F	WE483-F	WE603-F	WE702-F
Cooling Capacity Btuh	32,000	32,000	39,000	42,000	51,000	60,000
Cooling Capacity KW	9.38	9.38	11.43	12.30	14.95	17.58
Heating Capacity	See Electric Heat Table					
Electrical Rating--50 Hz	240/220-1	415/380-3 Ⓣ	415/380-3 Ⓣ	415/380-3 Ⓣ	415/380-3 Ⓣ	415/380-3 Ⓣ
Operating Voltage Range	198-254	342-456	342-456	342-456	342-456	342-456
<b>Compressor--Circuit A</b>						
Voltage	240/220	415/380	415/380	415/380	415/380	415/380
Rated Load Amps	15.1/15.8	5.9/6.2	5.8/5.8	7.85/7.85	6.8/6.8	10.2/10.2
Branch Circuit Selection Current	15.8	6.2	6.0	7.0	9.0	10.2
Lock Rotor Amps	81/75	47/42	48/48	60/60	64/58	74/67
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
<b>Fan Motor &amp; Condenser</b>						
Fan Motor--HP-RPM	1/5-950	1/5-950	1/3-825	1/3-825	1/3-825	1/3-825
Fan Motor--Amps	1.5	1.5	2.5	2.5	2.5	2.5
Fan--DIA. m <sup>3</sup> /s	508/0.86	508/0.86	610/1.01	610/1.01	610/1.01	610/1.01
<b>Blower Motor &amp; Evaporator</b>						
Blower Motor--HP-RPM-SPD	1/3-950-2	1/3-950-2	1/2-950-2	1/2-950-2	1/2-950-2	1/2-950-2
Blower Motor--Amps	2.2	2.2	3.3	3.3	3.3	3.3
m <sup>3</sup> /s Cooling & E.S.P. (pa) w/Filter (Rated-Wet Coil)	0.47/50	0.47/50	0.55/75	0.60/50	0.66/75	0.70/50
Filter Sizes (mm) STD.	405x765x25	405x765x25	508x765x25	508x765x25	508x765x25	508x765x25
Shipping Weight -- Lbs. (Kg)	355 (161)	355 (161)	500 (227)	500 (227)	500 (227)	520 (236)

Ⓣ 415/380-3 electrical ratings are 3-phase wye (star) systems requiring three (3) phase legs plus neutral and ground. NOTE: The indoor and outdoor fan motors, and 24V transformer primary, are connected at 240V derived from one (1) phase leg to neutral. This is internally connected and no field wiring required.

**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 all existing local codes.

## Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. Standard on all units is the barometric fresh air damper. All packages can be ordered built-in at the factory or can be easily field-installed at the time of installation of the Wall-Mount, or can be retrofitted at a later date.



**BAROMETRIC FRESH AIR DAMPER**

### **BAROMETRIC FRESH AIR DAMPER - BFAD**

### **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 - BOP**

### **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 - MFAD**

### **OPTIONAL**

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

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



**COMMERCIAL ROOM VENTILATOR**

### **COMMERCIAL ROOM VENTILATOR - CRV**

### **OPTIONAL**

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

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



**ECONOMIZER**

### **ECONOMIZER - EIFM**

### **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.

**Clearances - Inches (mm)  
Required for Service Access and  
Adequate Condenser Airflow**

MODELS	LEFT SIDE	RIGHT SIDE
WE25, WE30, WE37	15 (380)	20 (510)
WE42, WE48, WE60, WE70	20 (510)	20 (510)

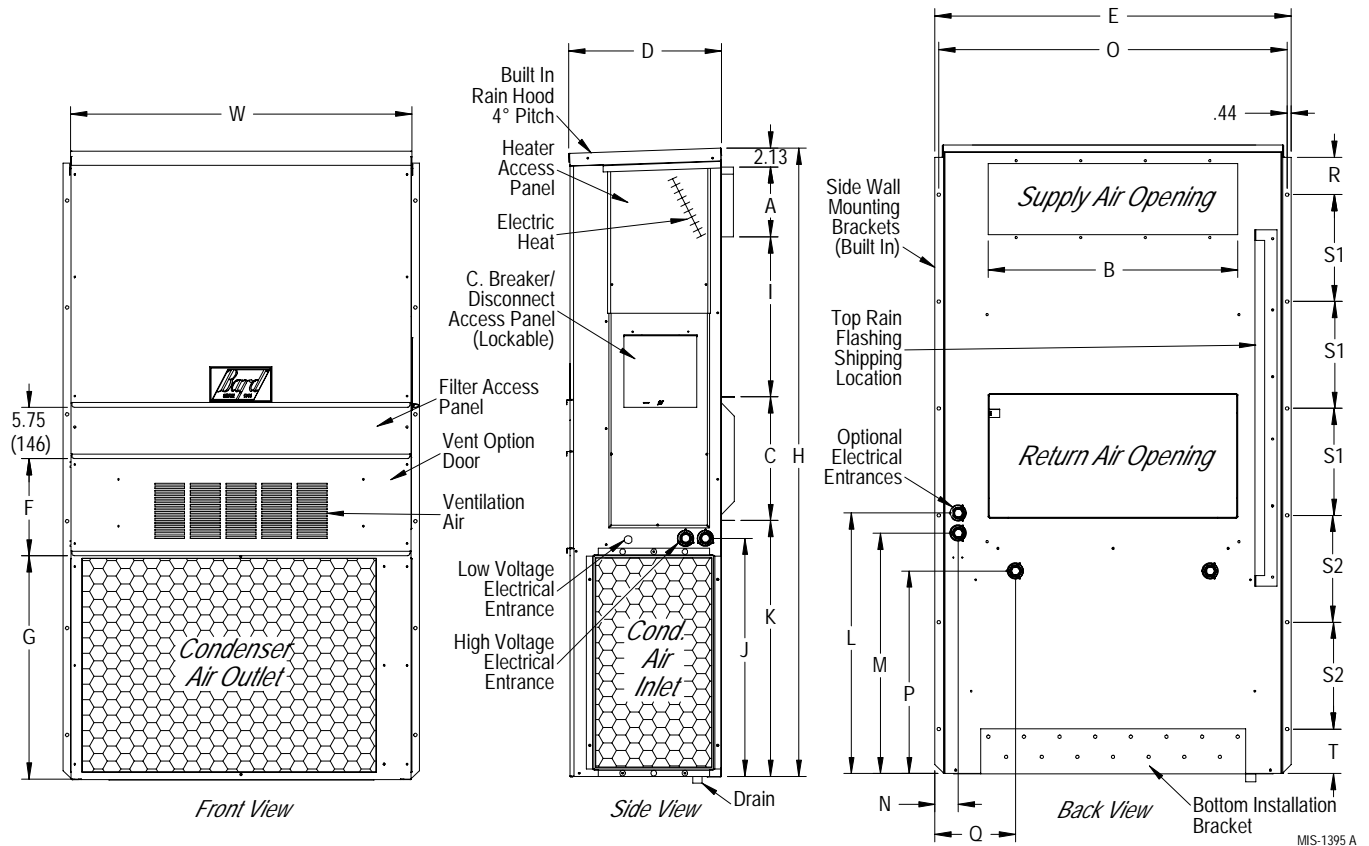
**Minimum Clearances - Inches (mm)  
Required to Combustible Materials**

MODELS ①	SUPPLY AIR DUCT	
	FIRST 3 FEET (1m)	CABINET
WE25	0	0
WE30, WE37	.25 (6.35)	0
WE42, WE48, WE60, WE70	.25 (6.35)	0

① Refer to the installation manual for more detailed information.

**Dimensions of Basic Unit for Architectural and Installation Requirements - Inches (mm)**

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN																	
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S1	S2	T
WE25	33.300 (845)	17.125 (435)	70.563 (1792)	7.88 (200)	19.88 (505)	11.88 (302)	19.88 (505)	35.00 (889)	10.88 (276)	25.75 (654)	20.56 (522)	26.75 (680)	28.06 (713)	29.25 (743)	27.00 (686)	2.63 (67)	34.13 (867)	22.06 (560)	10.55 (268)	4.75 (121)	12.00 (305)	12.00 (305)	5.00 (127)
WE30 WE37	38.200 (970)	17.125 (435)	70.563 (1792)	7.88 (200)	27.88 (708)	13.88 (353)	27.88 (708)	40.00 (1016)	10.88 (276)	25.75 (654)	17.93 (455)	26.75 (680)	28.75 (730)	29.25 (743)	27.00 (686)	2.75 (70)	39.19 (996)	22.75 (578)	9.14 (232)	4.75 (121)	12.00 (305)	12.00 (305)	5.00 (127)
WE42 WE48 WE60	42.075 (1069)	22.432 (570)	84.875 (2156)	9.88 (251)	29.88 (759)	15.88 (403)	29.88 (759)	43.88 (1115)	13.56 (344)	31.66 (804)	30.00 (762)	32.68 (830)	26.94 (684)	34.69 (881)	32.43 (824)	3.37 (86)	42.88 (1089)	23.88 (607)	10.00 (254)	2.00 (51)	16.00 (406)	16.00 (406)	1.88 (48)
WE70	42.075 (1069)	22.432 (570)	94.875 (2410)	9.88 (251)	29.88 (759)	15.88 (403)	29.88 (759)	43.88 (1115)	13.56 (344)	41.66 (1056)	30.00 (762)	42.68 (1084)	36.94 (939)	44.69 (1135)	42.43 (1078)	3.37 (86)	42.88 (1089)	33.88 (861)	10.00 (254)	2.00 (51)	16.00 (406)	21.00 (533)	1.88 (48)



MIS-1395 A

## Electrical Specifications

Model	Rated Volts and Phase	Operating Voltage Range	No. Field Power Circuits	② Minimum Circuit Ampacity	① Maximum External Fuse or Circuit Breaker
WE253 - D0Z D05 D08	240/220-1	198-254	1 1 1	16 27 43	20 30 45
WE253 - F0Z F05	415/380-3 ③	342-456	1 1	8 10	15 15
WE302 - D0Z D05 D10	240/220-1	198-254	1 1 1	23 29 55	35 35 60
WE302 - F0Z F07 F12	415/380-3 ③	342-456	1 1 1	11 15 23	15 15 25
WE372 - D0Z D05 D10	240/220-1	198-254	1 1 1	24 29 55	35 35 60
WE372 - F0Z F07 F12	415/380-3 ③	342-456	1 1 1	12 16 25	15 20 25
WE422 - F0Z F07 F14	415/380-3 ③	342-456	1 1 1	11 16 30	15 20 30
WE483 - F0Z F07 F14	415/380-3 ③	342-456	1 1 1	13 16 30	20 20 30
WE603 - F0Z F07 F14	415/380-3 ③	342-456	1 1 1	15 16 30	20 20 30
WE702 - F0Z F07 F14	415/380-3 ③	342/456	1 1 1	19 19 32	25 25 35

① Maximum size of the time delay fuse or "D" rated circuit breaker for protection of field wiring conductors.

② These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors.

③ 415/380-3 electrical ratings are 3-phase wye (star) systems requiring three (3) phase legs plus neutral and ground. NOTE: The indoor and outdoor fan motors, and 24V transformer primary are connected at 240V derived from one (1) phase leg to neutral. This is internally connected and no field wiring required.

**NOTE:** Based on 75C copper wire. All wiring must conform to NIC/EIC latest edition.

**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 all existing local codes.

### Indoor Blower Performance - CFM (m<sup>3</sup>/s) at 220 Volts

ESP in Inches H <sub>2</sub> O (Pa)	WE25	WE30 WE37		WE42 WE48		WE60 WE70	
	Dry / Wet Coil	High Speed Dry / Wet Coil	Low Speed Dry / Wet Coil	High Speed Dry / Wet Coil	Low Speed Dry / Wet Coil	High Speed Dry / Wet Coil	Low Speed Dry / Wet Coil
.00 (0)	800 / 845 (0.38 / 0.40)	1160 / 1095 (0.55 / 0.52)	790 / 780 (0.37 / 0.37)	1565 / 1500 (0.74 / 0.71)	1370 / 1330 (0.65 / 0.63)	1825 / 1660 (0.86 / 0.78)	1330 / 1200 (0.63 / 0.57)
.10 (25)	830 / 780 (0.39 / 0.37)	1115 / 1060 (0.53 / 0.50)	775 / 760 (0.36 / 0.35)	1470 / 1380 (0.69 / 0.65)	1285 / 1240 (0.61 / 0.59)	1740 / 1570 (0.82 / 0.74)	- / -
.20 (50)	780 / 720 (0.37 / 0.34)	1070 / 1000 (0.50 / 0.47)	760 / 740 (0.35 / 0.35)	1360 / 1285 (0.64 / 0.61)	1200 / 1160 (0.57 / 0.55)	1660 / 1500 (0.78 / 0.71)	- / -
.30 (75)	710 / 640 (0.33 / 0.30)	1000 / 915 (0.47 / 0.43)	- / -	1250 / 1160 (0.59 / 0.55)	1120 / 1080 (0.53 / 0.51)	1550 / 1400 (0.73 / 0.66)	- / -
.40 (100)	640 / 560 (0.30 / 0.26)	925 / 830 (0.44 / 0.39)	- / -	1140 / 1065 (0.54 / 0.50)	- / -	1470 / 1330 (0.69 / 0.63)	- / -

Above data is with 1 inch (25mm) standard disposable filter and 1 inch (25mm) washable filter.  
 For optional 2 inch (51mm) pleated filter - reduce ESP by .15 inches (37.33Pa)  
 See installation instructions for maximum ESP information on various KW applications.

### Electric Heat Table

Model	WE253-D		WE253-F		WE302-D WE372-D		WE302-F WE372-F		WE422-F WE483-F WE603-F WE702-F	
	240V-1 WATTS	220V-1 WATTS	415V-3 WATTS	380V-3 WATTS	240V-1 WATTS	220V-1 WATTS	415V-3 WATTS	380V-3 WATTS	415V-3 WATTS	380V-3 WATTS
5.0	5011	4220	4484	3751	5011	4220				
8.0	8011	6721								
10.0					9994	8411				
7.0							6740	5656	6740	5660
12.0							11178	9408		
14.0									13450	11280

## Cooling Application Data - Btuh (KW)

Model	DB/WB <sup>②</sup>	Cooling Capacity	OUTDOOR TEMPERATURE <sup>①</sup>				
			75°F (23.9°C)	85°F (29.4°C)	95°F (35.0°C)	105°F (40.6°C)	115°F (46.1°C)
WE253	75/62°F (23.9/16.7°C)	Total Sensible	22,700 (6.65) 17,800 (5.22)	20,900 (6.12) 16,900 (4.95)	19,100 (5.60) 16,100 (4.72)	17,500 (5.13) 15,300 (4.48)	16,100 (4.72) 14,600 (4.28)
	80/67°F (26.7/19.4°C)	Total Sensible	24,200 (7.09) 17,300 (5.07)	23,100 (6.77) 16,700 (4.89)	21,900 (6.42) 16,200 (4.75)	20,600 (6.04) 15,600 (4.57)	19,300 (5.65) 15,200 (4.45)
WE302	75/62°F (23.9/16.7°C)	Total Sensible	29,550 (8.66) 23,200 (6.80)	27,050 (7.93) 22,300 (6.53)	24,400 (7.15) 21,350 (6.26)	21,750 (6.37) 20,400 (5.98)	19,200 (5.63) 18,750 (5.49)
	80/67°F (26.7/19.4°C)	Total Sensible	31,400 (9.20) 22,200 (6.50)	29,500 (8.64) 21,800 (6.39)	27,600 (8.09) 21,400 (6.27)	25,700 (7.53) 21,000 (6.15)	23,800 (6.97) 20,600 (6.04)
WE372	75/62°F (23.9/16.7°C)	Total Sensible	33,200 (9.73) 25,100 (7.35)	30,500 (8.94) 24,300 (7.12)	28,000 (8.20) 23,500 (6.89)	25,800 (7.56) 22,500 (6.59)	23,800 (6.97) 21,200 (6.21)
	80/67°F (26.7/19.4°C)	Total Sensible	35,500 (10.40) 24,300 (7.12)	33,900 (9.93) 24,100 (7.06)	32,000 (9.38) 23,700 (6.94)	30,400 (8.91) 23,000 (6.74)	28,600 (8.38) 22,000 (6.45)
WE422	75/62°F (23.9/16.7°C)	Total Sensible	42,050 (12.32) 33,600 (9.84)	37,950 (11.12) 31,600 (9.26)	33,900 (9.93) 29,600 (8.67)	29,850 (8.75) 27,600 (8.09)	25,750 (7.54) 25,600 (7.50)
	80/67°F (26.7/19.4°C)	Total Sensible	45,200 (13.24) 32,700 (9.58)	42,100 (12.34) 31,300 (9.17)	39,000 (11.43) 29,900 (8.76)	35,900 (10.52) 28,500 (8.35)	32,800 (9.61) 27,100 (7.94)
WE483	75/62°F (23.9/16.7°C)	Total Sensible	42,350 (12.41) 34,450 (10.09)	39,450 (11.56) 33,550 (9.83)	36,500 (10.69) 32,700 (9.58)	33,550 (9.83) 31,850 (9.33)	30,650 (8.98) 30,000 (8.79)
	80/67°F (26.7/19.4°C)	Total Sensible	45,450 (13.32) 33,550 (9.83)	43,750 (12.82) 33,250 (9.74)	42,000 (12.31) 32,000 (9.38)	40,250 (11.79) 32,750 (9.60)	38,550 (11.30) 32,450 (9.51)
WE603	75/62°F (23.9/16.7°C)	Total Sensible	53,200 (15.59) 39,800 (11.66)	48,800 (14.30) 37,650 (11.03)	44,350 (12.99) 35,500 (10.40)	39,900 (11.69) 33,300 (9.76)	35,500 (10.40) 31,150 (9.13)
	80/67°F (26.7/19.4°C)	Total Sensible	57,200 (16.76) 38,850 (11.38)	54,100 (15.85) 37,300 (10.93)	51,000 (14.94) 35,800 (10.49)	47,900 (14.03) 34,250 (10.04)	44,800 (13.13) 32,750 (9.60)
WE702	75/62°F (23.9/16.7°C)	Total Sensible	62,050 (18.18) 52,875 (15.49)	56,875 (16.66) 41,475 (12.15)	51,900 (15.21) 39,160 (11.47)	47,000 (13.77) 37,025 (10.85)	42,275 (12.39) 35,150 (10.30)
	80/67°F (26.7/19.4°C)	Total Sensible	66,350 (19.44) 42,775 (12.53)	63,235 (18.53) 41,100 (12.04)	60,000 (17.58) 39,560 (11.59)	55,535 (16.27) 38,050 (11.15)	50,950 (14.93) 36,625 (10.73)

① Below 65°F (18.3°C), unit requires a factory or field installed low ambient control.

② Return air temperature.

