4, 5 & 6-Ton Telecommunication Shelter Upgrade Air Conditioners

These special air conditioners are designed to replace all brands of 2 or 3 ton wall mounted air conditioners **using the existing wall openings** that have become industry standards based upon Bard's 40+ years of industry leadership. This makes it an ideal replacement/ upgrade to existing facilities where increased capacity is required because of upgrading or expanding the telecommunication or other electronic systems housed within.

Retrofitting this unit to an existing shelter equipped with 2 or 3 ton air conditioners, especially concrete designs, becomes a relatively simple task. The major openings for supply and return air require no changes. Only the mounting holes, and possibly the electrical entrance, require modification which can be easily accomplished. The units are available in both the standard WA right side compressor and control access and the WL left compressor and control access for applications where the existing units are located close together.

These models are designed for closed loop (no ventilation air) only, and some models require that air filters be installed at return air grille location. See details inside.

The building electrical wiring and circuit breaker must be reviewed to see if any changes will be required.
See Electrical Specifications on page 3.

Engineered Features

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

Twin Blowers:
Air moving system designed for non-ducted shelter applications already equipped with industry standard supply and return air wall openings. Motor overload protection is standard on all models.

Air Conditioner Compressor:
Scroll compressor designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater. Uses Refrigerant R-410A.

Liquid Line Filter Drier:
Protects system against moisture.

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.

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

Electric Heat Strips:
Available only on certain models. Features an automatic limit and thermal cut-off safety control.

Alarm Relay:
NO and NC dry contacts available for remote alarming of high or low pressure lock-out conditions.

Auto-Reset High Pressure Switch:
Built-in lock-out circuit resets from the room thermostat. Provides commercial quality protection to the compressor.

Auto-Reset Low Pressure Switch:
Built-in lock-out circuit and low pressure timed bypass circuit. Resets from room thermostat.

Compressor Control Module:
Bard exclusive control provides the lock-out circuit for high and low pressure controls, each with 1 retry, and the low pressure control 2-minute timed bypass. 30 seconds to 5 minutes adjustable time delay is also incorporated.

Low Ambient Control:
Permits cooling operation down to 0ºF outdoor ambient.

Built-in Circuit Breakers:
Standard on all single equipment.

Slope Top:
Standard built in feature on all models for water run off.

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

Top Rain Flashing:
Standard feature on all models.

Unit Component Warranty:
Parts - One Year
Compressor - Five Years

GREEN REFRIGERANT R-410A

- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Third Edition.

Specifications

Models	W48A12A W48L12A	W48A13A W48L13A	W60A12A W60L12A	W60A13A W60L13A	W70A13A W70L13A
Cooling Capacity	47,500	47,500	57,500	57,500	68,000
Heating Capacity	None	None	None	0, 5 or 10 KW	0 or 10 KW
Electrical Rating -- 60HZ	230/208-1	230/208-1	230/208-1	230/208-1	230/208-1
Operating Voltage Range	197-253	197-253	197-253	197-253	197-253
Compressor -- Circuit A					
Voltage	230/208	230/208	230/208	230/208	230/208
Rated Load Amps	20.2 / 20.8	20.2 / 20.9	26.0 / 28.5	26.0 / 28.5	26.9 / 31.0
Branch Circuit Selection Current	21.8	21.8	29	29	31
Lock Rotor Amps	131/131	131/131	148/148	148/148	145/145
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser					
Fan Motor -- HP-RPM-SPD	1/3 - 850 - 2	1/3 - 850 - 2	1/3 - 850 - 2	1/3 - 850 - 2	1/3 - 850 - 2
Fan Motor -- Amps	2.5	2.5	2.5	2.5	4.0
Fan -- DIA/CFM	24" x 2600	24" x 2600	24" x 2600	24" x 2600	24" x 3500
Blower Motor & Evaporator					
Blower Motor -- HP-RPM-SPD	1/2 - 1070 - 2	1/2 - 1070 - 2	1/2 - 1070 - 2	1/2 - 1070 - 2	1/2 - 1070 - 2
Blower Motor -- Amps	3.3	3.3	3.3	3.3	3.3
CFM (Wet Coil) non-ducted	1400	1350	1525	1425	1425
Filter Sizes (inches)	20 x 30 x 1①	14 x 28 x 1②	20 x 30 x 1①	14 x 28 x 1②	14 x 28 x 1②
Shipping Weight -- Lbs.	500	500	500	500	520

① 20 x 30 x 1 filter is installed internally in the unit.
② 14 x 28 x 1 filter is installed in return air filter grille location

WA-Models have **RIGHT** side compressor & controls
WL-Models have **LEFT** side compressor & controls

Available Model Summary

Model	Nominal Tons A/C	Volts & Phase	Compressor & Controls	Heater KW	Fits Wall Openings		
					Old Unit Nominal Size	Supply Air	Return Air
W48A12A0Z	4	230/208-1	Right	0	2	8 x 20	12 x 20
W60A12A0Z	5	230/208-1	Right	0	2	8 x 20	12 x 20
W48A13A0Z	4	230/208-1	Right	0	3	8 x 28	14 x 28
W60A13A0Z W60A13A05 W60A13A10	5	230/208-1	Right	0 5 10	3	8 x 28	14 x 28
W70A13A0Z W70A13A10	6	230/208-1	Right	0 10	3	8 x 28	14 x 28
W48L12A0Z	4	230/208-1	Left	0	2	8 x 20	12 x 20
W60L12A0Z	5	230/208-1	Left	0	2	8 x 20	12 x 20
W48L13A0Z	4	230/208-1	Left	0	3	8 x 28	14 x 28
W60L13A0Z W60L13A05 W60L13A10	5	230/208-1	Left	0 5 10	3	8 x 28	14 x 28
W70L13A0Z W70L13A10	6	230/208-1	Left	0 10	3	8 x 28	14 x 28

Electrical Specifications

MODEL	ELECTRIC HEATER KW	ELECTRIC HEATER BTU @ 240V	UNIT RATED VOLTS & PHASE	SINGLE CIRCUIT				
				NO. FIELD POWER CIRCUITS	③ MINIMUM CIRCUIT AMPACITY	① MAXIMUM EXTERNAL FUSE OR CKT. BRKR.	② FIELD POWER WIRE SIZE	② GROUND WIRE
W48A12A0Z W48L12A0Z	0	0	230/208-1	1	36	50	8	10
W48A13A0Z W48L13A0Z	0	0	230/208-1	1	36	50	8	10
W60A12A0Z W60L12A0Z	0	0	230/208-1	1	44	60	8	10
W60A13A0Z W60A13A05 W60A13A10	0 5 10	- 17,065 34,130	230/208-1	1 1 1	44 44 55	60 60 60	8 8 6	10 10 10
W60L13A0Z W60L13A05 W60L13A10	0 5 10	- 17,065 34,130	230/208-1	1 1 1	44 44 55	60 60 60	8 8 6	10 10 10
W70A13A0Z W70A13A10	0 10	- 34,130	230/208-1	1 1	49 59	60 60	8 6	10 10
W70L13A0Z W70L13A10	0 10	- 34,130	230/208-1	1 1	49 59	60 60	8 6	10 10

① Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors.
② Based on 75C copper wire. All wiring must conform to the National Electrical Code and all local codes.
③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical Code (latest version), Article 310 for power conductor sizing.

Caution: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) 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.

Rated CFM and ESP

Model	Rated CFM	ESP	Recommended Airflow Range
W48A/L12	1400	0.20	1700 - 1400 ②
W48A/L13	1350	0.20	1600 - 1350 ①
W60A/L12	1525	0.20	1850 - 1525 ②
W60A/L13	1425	0.20	1775 - 1425 ①
W70A/L13	1425	0.20	1775 - 1425 ①

① Rated CFM and ESP on High Speed with standard 8 x 28 supply grille and 14 x 28 return air filter grille with 1" filter.

② Rated CFM and ESP on High Speed with standard 8 x 20 supply grille and 12 x 20 return grille, and 20 x 30 x 1 filter installed inside the unit.

Indoor Blower Performance - CFM @ 230V

E.S.P. in H_2O	W48A12 W48L12		W48A13 W48L13		W60A12 W60L12		W60A13 W60L13 W70A13 W70L13	
	High Speed		High Speed		High Speed		High Speed	
	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil
.0	1700	1625	1600	1525	1850	1675	1775	1600
.1	1600	1525	1525	1425	1755	1600	1675	1525
.2	1475	1400	1425	1350	1700	1525	1575	1425

Clearances Required for Service Access and Adequate Condenser Clearance

MODELS	LEFT SIDE	RIGHT SIDE
W48-70A Models	15"	20"
W48-70L Models	20"	15"

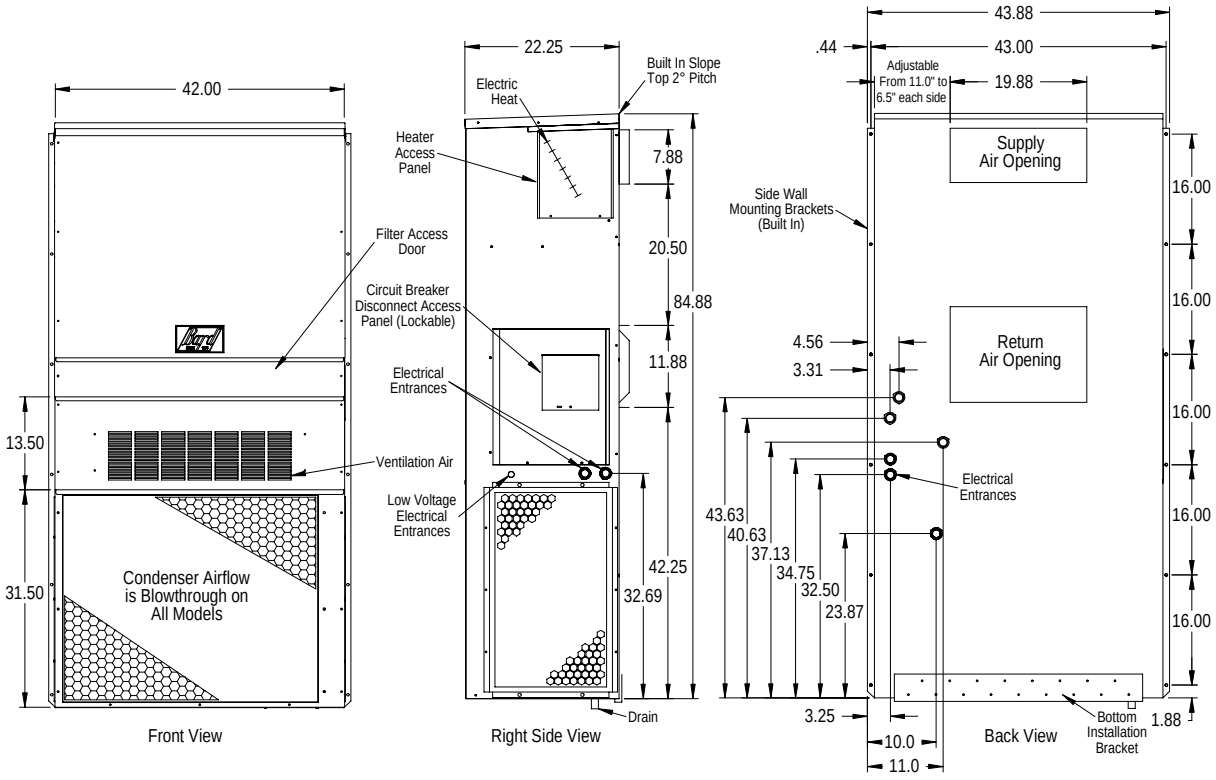
Cooling Application Data

For Cooling Application Data, refer to the standard W**A and W**L-Series Specification Sheets.

- For W48A and W60A Models - see Specification Sheet S3397
- For W48L and W60L Models - see Specification Sheet S3400
- For W70A and W70L Models - see Specification Sheet S3409

DIMENSIONS - Models W48A12 and W60A12 Only

FRONT VIEW RIGHT SIDE VIEW BACK VIEW



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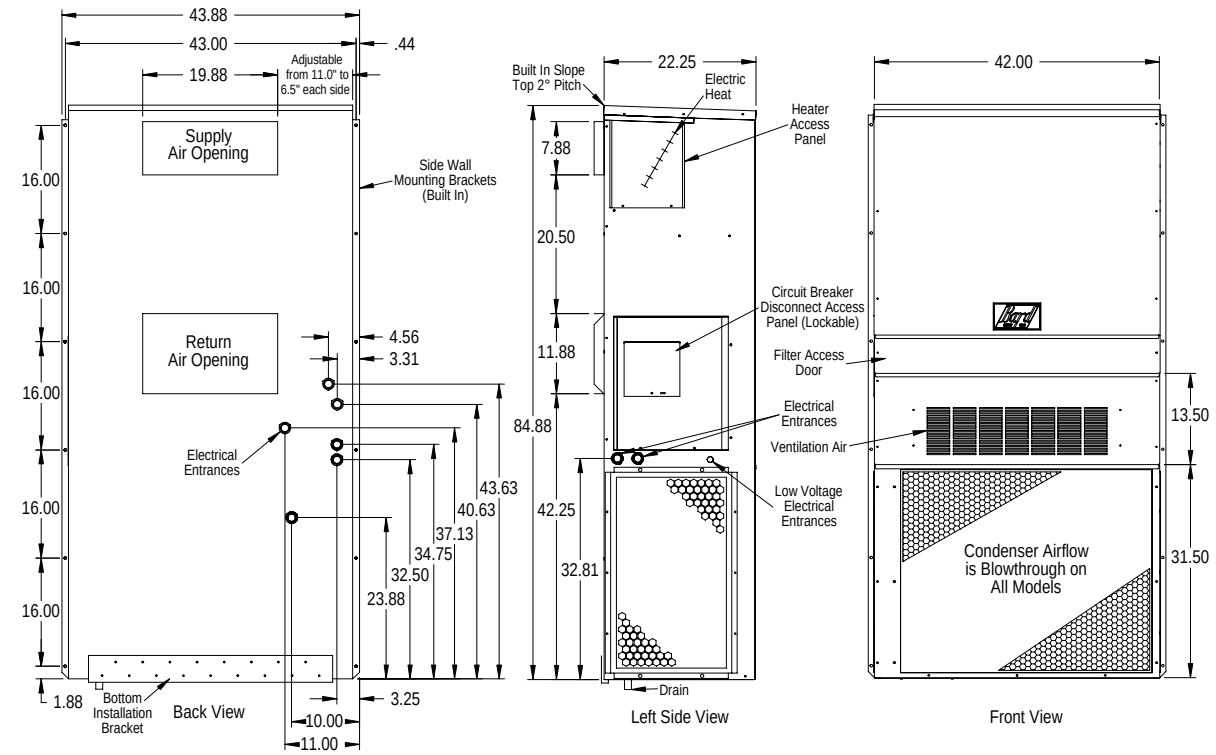
DIMENSIONS - Models W48L12 and W60L12 Only

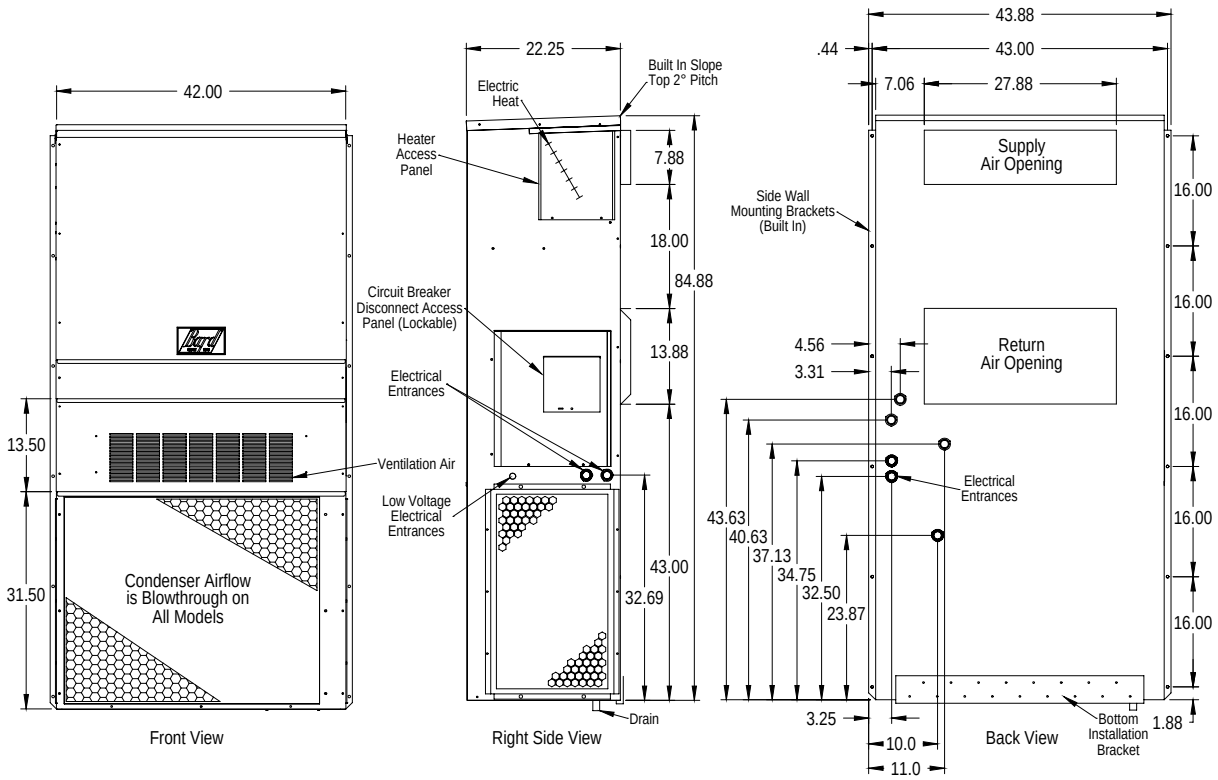
BACK VIEW LEFT SIDE VIEW FRONT VIEW



MIS-2612

DIMENSIONS - Models W48A13 and W60A13 Only

FRONT VIEW RIGHT SIDE VIEW BACK VIEW



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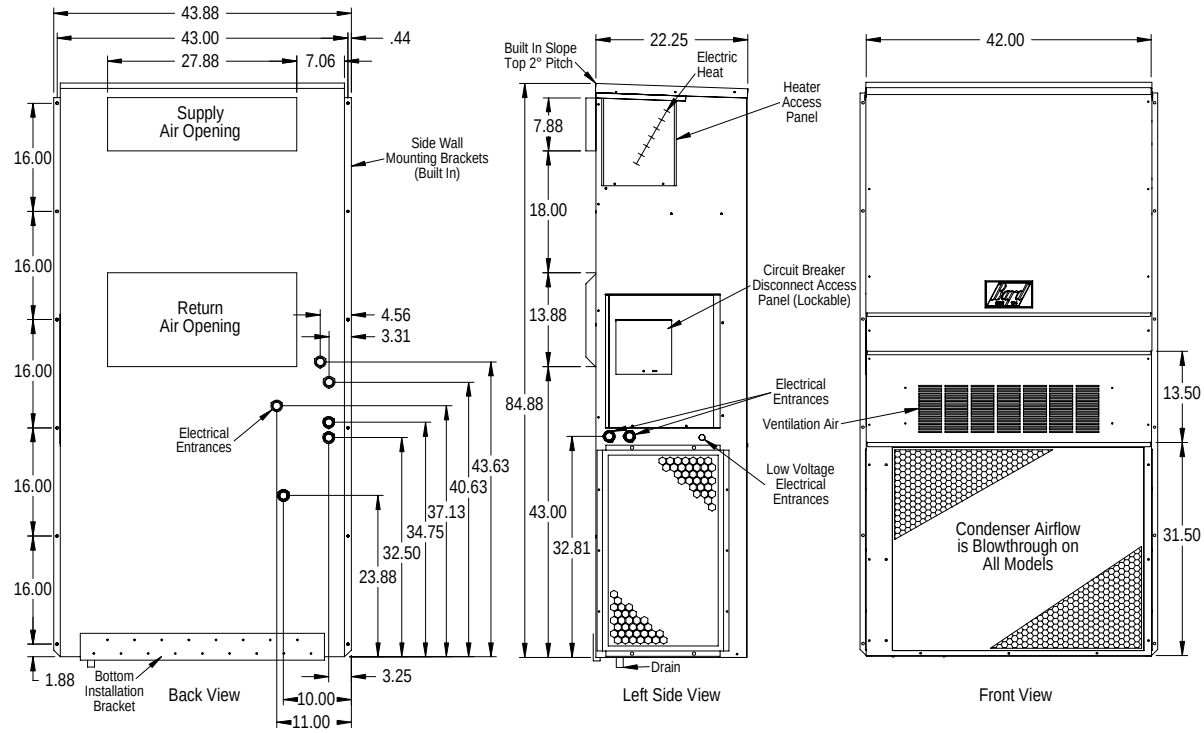
DIMENSIONS - Models W48L13 and W60L13 Only

BACK VIEW LEFT SIDE VIEW FRONT VIEW



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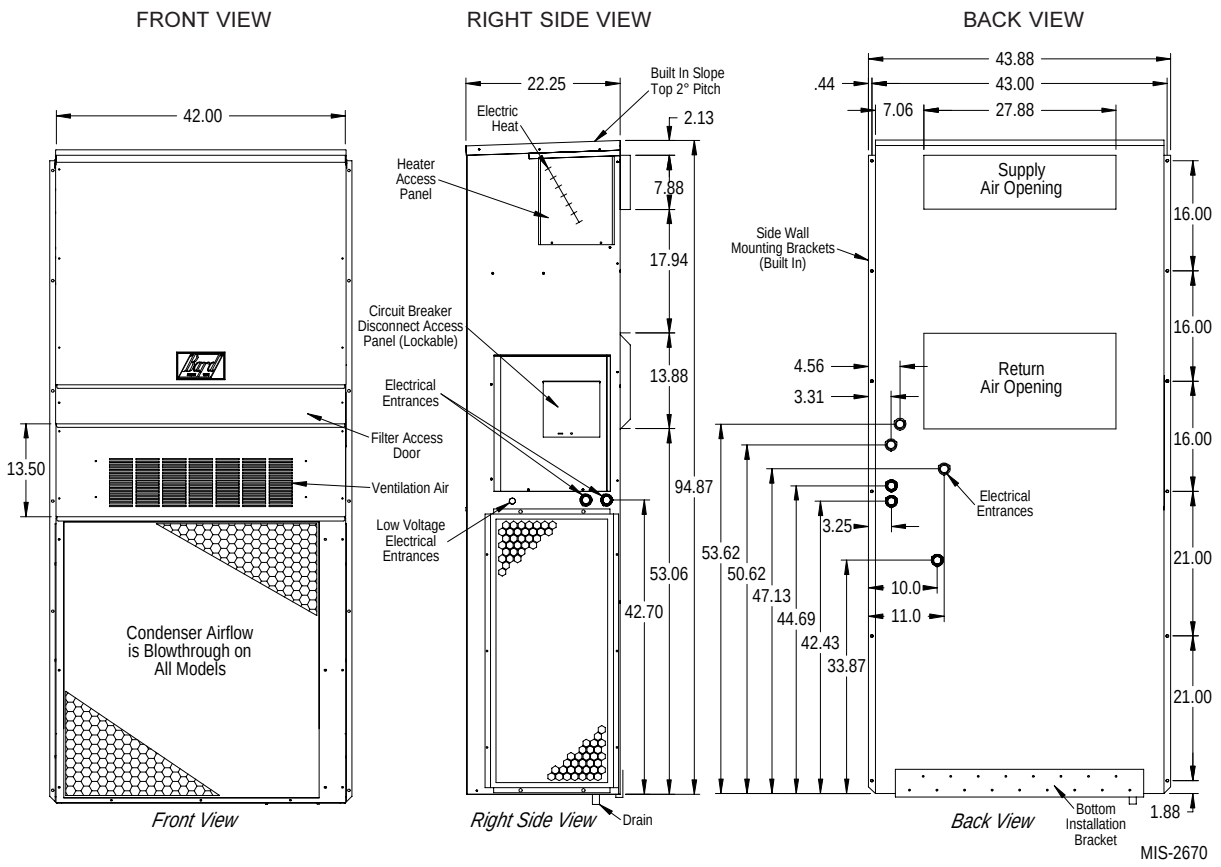
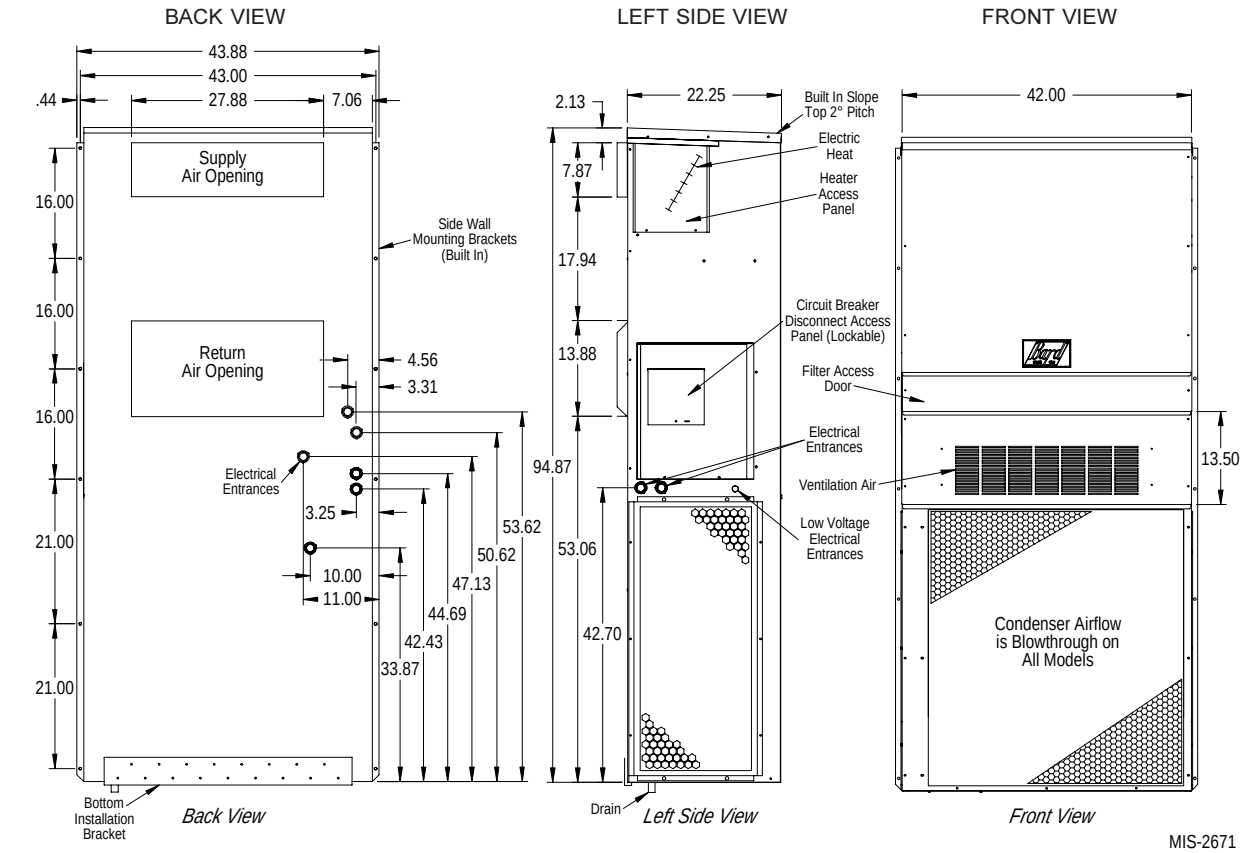
DIMENSIONS - Model W70A13



DIMENSIONS - Model W70L13



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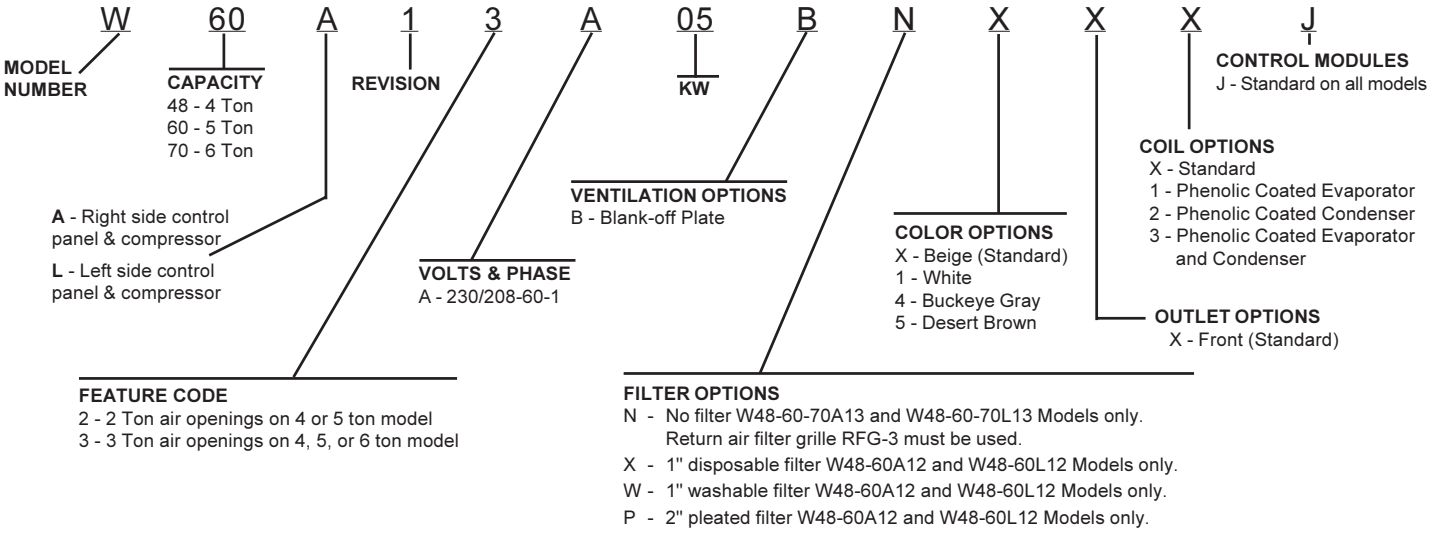
Air Conditioning Wall-Mount Model Nomenclature



Air Conditioning Control Modules

HPC ①	LPC ②	CCM ③	LAC ④	ALR ⑤	SK ⑥	SK ⑦	DDC ⑧	Factory Installed Code	Field Installed Part
STD	STD	STD	STD	STD				J	N/A
STD	STD	STD	STD	STD	●			M	CMC-15
STD	STD	STD	STD	STD			●	V ⑨	CMA-24
STD	STD	STD	STD	STD		●		Field Installed Only	SK111 for W48 & W60 SK117 for W70

STD = Standard equipment for these specified models.

① HPC. High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.

② LPC. Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.

③ CCM. Compressor control module has adjustable 30-second to 5-minute delay-on-break timer. On initial power-up, or any time the power is interrupted, the delay-on-make will be 2-minutes plus 10% of the delay-on-break setting. There is no delay-on-make during routine operation of the unit. The module also provides the lockout feature (with 1 retry) for high and/or low-pressure controls, and a 2-minute timed bypass for low-pressure control.

④ LAC. Low ambient control permits cooling operation down to 0°F

⑤ ALR. The alarm relay has a set of normally open and normally closed dry contacts to provide the ability to signal a condition of shutdown on either high or low pressure controls.

⑥ SK. PTCR start kit can be used with all -A single phase models. Increases starting torque 2-3x. Not used for -B or -C three phase models. Do not use if SK111 or SK117 is used.

⑦ SK. Start capacitor and potential relay start kit can be used with all -A single phase models. Increases starting torque 9x. Not used for -B or -C three phase models. Do not use if CMC-15 is used.

⑧ DDC. Incorporates 4 additional sensors: discharge air temperature, indoor blower airflow, compressor current, and dirty filter. These sensing devices function to input analog data such as temperature, as well as digital data such as airflow, compressor status or filter status.

⑨ "V" control module should be ordered in conjunction with direct digital controller (DDC) model TCS23. Refer to DDC specification sheet S3280 for more information.

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

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

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