# MINI-SPLIT SYSTEMS



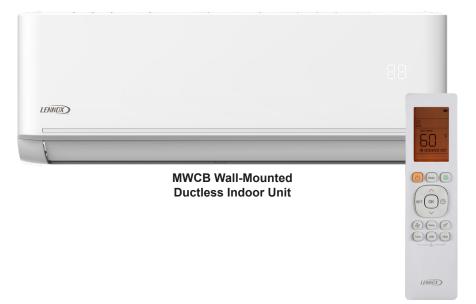
# **MCB**

**Mini-Split** 

# Single Zone Ductless Air Conditioning Systems - R-410A - 60 Hz

RESIDENTIAL / COMMERCIAL PRODUCT SPECIFICATIONS

Bulletin No. 210962 July 2023 Supersedes June 2023



Wireless Remote Control (furnished with Wall-Mount Model)

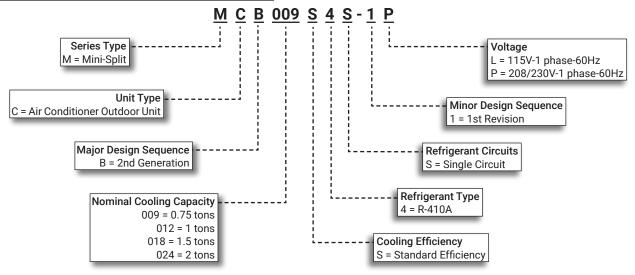


MCB Outdoor Air Conditioning Unit

SEER2 up to 21.0 / SEER - Up to 21.0 0.75 to 2 Tons Cooling Capacity - 9,000 to 22,000 Btuh

# MODEL NUMBER IDENTIFICATION

# **OUTDOOR SINGLE ZONE AIR CONDITIONING UNITS**



### **WALL-MOUNTED INDOOR UNITS** M WC B 012 S 4-1 Series Type L = 115V-1 phase-60Hz M = Mini-Split P = 208/230V-1 phase-60Hz**Unit Type** WC = Wall-Mounted Ductless Unit Minor Design Sequence 1 = 1st Revision 2 = 2nd Revision Major Design Sequence 3 = 3rd Revision B = 2nd Generation Refrigerant Type Nominal Cooling Capacity 4 = R-410A 009 = .75 tons012 = 1 tons**Cooling Efficiency** 018 = 1.5 tons024 = 2 tonsS = Standard Efficiency

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# **APPROVALS AND WARRANTY**

# **APPROVALS**

- · AHRI Standard 210/240 certified with Addenda 1 and 2
- ENERGY STAR® certified (certain models)
- · Rated According to U.S. Department of Energy (DOE) test procedures
- · Indoor and outdoor units and components UL and CEC bonded for grounding to meet safety standards for servicing
- · ETL certified for the U.S. and Canada
- Meets 2014 Florida Building Code Wind Design Criteria
  - Ultimate Wind Speed 186 miles per hour
  - Risk Categories III and IV
  - Wind Exposures C and D
  - · Mean Roof Heights Up to 60 feet above ground

# **WARRANTY**

- · Compressor Limited seven years
- · All other covered components Limited five years

**NOTE** - Refer to Lennox Basic Limited Warranty at <a href="www.Lennox.com">www.Lennox.com</a> for additional details.

FEATURES OUTDOOR UNITS

# **APPLICATIONS**

- SEER Up to 21.00
- 0.75 through 2 ton
- · Single phase power supply
- 115V (012 model only)
- 208/230V (all models)
- · Outdoor unit sound levels as low as 53.5 dBA
- Indoor unit sound levels as low as 22.5 dBA
- Ductless mini-split systems provide a wide range of capacities and applications and provide an alternative when a ducted system is impractical or cost prohibitive
- Units shipped completely factory assembled, internally piped, and wired.

**NOTE** - Outdoor unit is designed for outdoor location only.

# **REFRIGERATION SYSTEM**

# R-410A Refrigerant

- Non-chlorine, ozone friendly
- · Unit is factory pre-charged

# Outdoor Coil

- Aluminum fins fitted to copper tubes
- · Wire grille guard provided

### Outdoor Fan

- Direct drive fan moves large air volumes uniformly through entire outdoor coil for high refrigeration capacity
- Fan guard provided

# Refrigerant Line Connections, Service Valve

- Flare connection lines are located on side of unit cabinet
- Fully serviceable brass service valve prevents corrosion and provides access to refrigerant system

# **COMPRESSOR**

# Variable Frequency Rotary Compressor

- · Compressor features high efficiency operation
- Balanced for reduced vibration and quiet operation
- Brushless DC motor uses powerful Neodymium magnets, which are approximately 15-20 times stronger than ferrite magnets used in conventional AC compressors

## Compressor Crankcase Heater

 Protects against liquid refrigerant migration that can occur during low ambient operation

# **CONTROLS**

### DC Inverter Control

- Provides continuous operation, while adjusting capacity according to room temperature
- The accurate sensing of cooling loads prevents frequent changes in capacity and ensures efficient, economical operation

# **Inverter Module Protection**

- Protects against differences in current, voltage and temperature
- Displays code on the indoor unit indicating a need for servicing

### **Outdoor Unit Microprocessor**

- Electronic expansion valve control
- Automatic compressor timed-off protection (3 minutes)
- Temperature sensor
- LEDs on control display error codes and assist in troubleshooting

FEATURES OUTDOOR UNITS

# **CONTROLS** (continued)

# Capillary Tube Refrigerant Metering

- Refrigerant metering device consisting of small diameter tubes feeding liquid refrigerant into the evaporator coil
- · Furnished on all units

# **Compressor Overcurrent Protection**

- Overcurrent protection can result due to any of the following:
  - · Ambient temperature is too high
  - · Locked rotor on the compressor
  - Outdoor air is blocked or restricted

# Condenser High Temperature Protection

- Condenser high temperature can occur due to any of the following conditions:
  - · High outdoor ambient
  - Outdoor fan blocked
  - · Outdoor coil blocked
- The outdoor coil thermistor continuously monitors the temperature and communicates with the microprocessor
- Depending on the temperature measured, the compressor will be allowed to increase the frequency if needed to meet the load or is forced to run at the current or reduced frequency
- If the temperature becomes excessively high the compressor will be de-energized

# Compressor Discharge Temperature Protection

- The compressor discharge line thermistor continuously monitors the temperature and communicates with the microprocessor
- Depending on the temperature measured, the compressor will be allowed to increase the frequency to meet the load or is forced to run at the current or reduced frequency
- If the temperature becomes excessively high, the compressor will be de-energized

# Voltage Protection

• Protects unit from low or high voltage fluctuations

# **Terminal Strip**

· Furnished for easy wiring connections

# **CABINET**

- · Constructed of heavy gauge steel
- · Tabs on unit base allow secure mounting to slab
- · Condensate drain outlets furnished on unit base

# NOTE - Drain must be field furnished.

- Access cover for power and control wiring connections
- Access cover for service valves

FEATURES INDOOR UNITS

# **WALL-MOUNTED INDOOR UNITS**

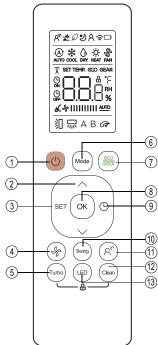


- Low-sound, three-speed Wall Mount with LED display offers three access points for refrigerant outlet pipes: left, right or rear
- The front panel can be raised for accessible wiring and maintenance
- Swing louver angles to 90°
- Unit installs horizontally on a vertical wall
- LED Readout Mounted on unit. LED displays unit operation status, and codes for maintenance and servicing
- Auto Restart Automatically restores the previous function setting if power is interrupted
- Cooling Override Button on the indoor unit allows a temporary 30 minute override of the system for forced "AUTO" or "COOLING" operation
- Flare Connections Equipped with liquid and gas flare fittings for quick and secure piping
- Multi-Refrigerant Outlet Allows left, right, or rear access for refrigeration line connection
- Three Speed Fan Fan functions at three speeds: low, medium and high
- · Air Filter Cleanable air filter is furnished as standard
- Wireless Remote Controller Furnished as standard, see Page 6

# **REMOTE CONTROLLER - FURNISHED**

# **WIRELESS REMOTE CONTROLLER (RG10A2-WMCO)**

- · Complete remote control of system
- · Maximum operating range is 25 ft.
- Operates on two AAA 1.5V batteries (furnished)
- · Wireless remote controller holder furnished
- · Holder can be mounted on a wall for easy access
- · Mounting screws furnished



# 1 ON/OFF Button

Turns system on and off

# 2 UP/DOWN Buttons AV

 Increase or decrease the indoor temperature in one degree increments (maximum 86°F, minimum 60°F)

**NOTE** - Temperature cannot be adjusted in FAN mode.

**NOTE** - Press and hold and buttons together for 3 seconds to alternate the temperature display between the °F and °C scale.

# 3 SET Button

- · Scrolls through unit operations in this order:
  - 1. Sleep 🕙
- 2. Follow Me A

**NOTE** - The selected symbol will flash on the display area. Press the OK button to confirm.

# A FAN Button

- · Cycles fan speeds in the following order:
  - AUTO  $\rightarrow$  20%  $\rightarrow$  40%  $\rightarrow$  60%  $\rightarrow$  80%  $\rightarrow$  100%

**NOTE** - Holding Fan button down for 2 seconds will activate **Silence** feature.

# TURBO Button

• Enables the unit to reach the preset temperature during cooling operation in the shortest time

# 6 MODE Button

- Select system operation modes
- Press button to cycle through each setting:
  - AUTO  $\rightarrow$  COOL  $\rightarrow$  DRY  $\rightarrow$  HEAT  $\rightarrow$  FAN

**NOTE** - HEAT is not available on cooling only models.

# 7 ECO/GEAR Button

· Controls temperature/energy efficiency of the unit

NOTE - Only available in cooling mode.

# **ECO Operation**

- Sets unit to 75°F unit operation if setpoint is lower
- Sets fan to Auto operation if setpoint is over 75°F

**NOTE** - If setpoint is manually changed to less than 75°F, ECO operation is canceled.

# **GEAR Operation**

Reduces electrical consumption to 75% or 50%

# 8 OK Button

Confirms selected function

# 9 TIMER Button

- Initiates an auto-on or auto-off time sequence
- Press TIMER button to initiate the ON time sequence
- Press Temp. up or down button for multiple times to set the desired time to turn on the unit
- Press TIMER button to initiate the OFF time sequence.

**NOTE** - Each press of the button increases or decreases the time (depending on function) in 30 minute increments up to 10 hours.

Above 10 hours each press of the button will increase or decrease the auto-timed setting by 60 minutes up to 24 hours.

To cancel, set timer to 0.0 or turn remote off and on.

# SWING Button

Used to stop or start louver auto swing feature

# **11** BREEZE AWAY Button

• Prevents unit from blowing air directly on a person

**NOTE** - Only available in COOL, FAN or DRY modes.

# 12 CLEAN Button

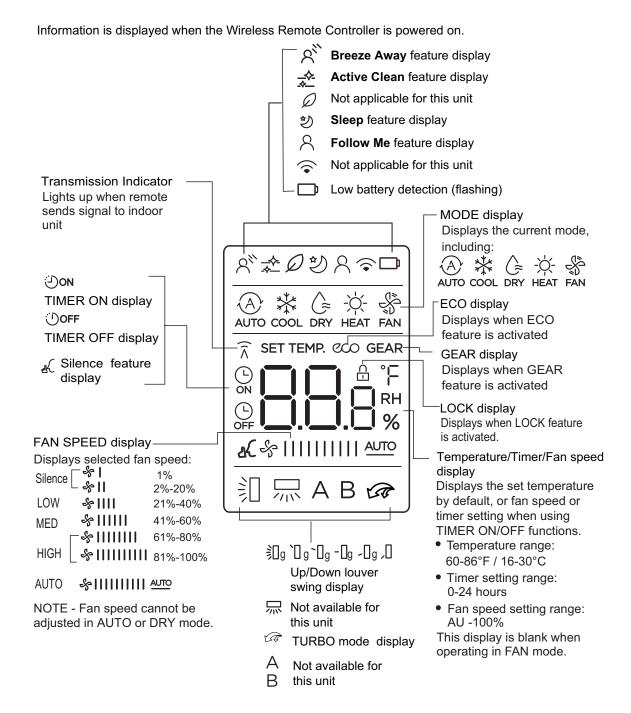
 Start/stop the Active Clean function (see description on Page 8)

# 13 LED Button

Turns the LCD display backlight on the indoor unit on or off

**NOTE** - Press and hold the button for 5 seconds to display the actual room temperature. Press more than 5 seconds to revert back to display set temperature.

# WIRELESS REMOTE CONTROLLER INDICATORS (RG10A2-WMCO)



Note: All icons are shown for display purposes only.

During actual unit operation, only active icons are displayed.

### REMOTE CONTROLLER - FURNISHED

# WIRELESS REMOTE CONTROLLER OPERATION (RG10A2-WMCO)

# **Auto Operation**

- 1. Press the MODE button to select AUTO.
- 2. Press the **UP/DOWN** button to set the desired temperature.
- 3. Press the **ON/OFF** button to start the system.

# Cooling /Fan Operation

- Press the MODE button to select COOL or FAN mode
- 2. Press the **UP/DOWN** buttons to set the desired temperature.
- 3. Press the **FAN** button to select the fan speed in four steps- Auto, Low, Med or High.
- 4. Press the **ON/OFF** button to start the system.

# Dehumidifying (DRY) Operation

- 1. Press the MODE button to select DRY mode.
- 2. Press the **UP/DOWN** buttons to set the desired temperature.
- 3. Press the **ON/OFF** button to start the system.

**NOTE** - Fan speed selection is disabled.

# Timer ON/OFF Operation

- 1. Press the **TIMER** button. The remote controller shows TIMER ON or TIMER OFF icon
- 2. Press the **TIMER** button again to set desired time. Each time the button is pressed the time increases by 30 minutes between 0 and 10 hours and then by 60 minutes between 10 and 24 hours.
- After setting the TIMER ON or TIMER OFF there
  will be a one second delay before the remote
  controller transmits the signal to the unit. After
  approximately 2 seconds the set temperature will
  re-appear on the LCD display window.

### Silence Operation

1. Press the **FAN** button for more than 2 seconds to activate or disable the Silence function

# Lock Function

- Press the TURBO and CLEAN buttons together two times in less than one second to lock the Controller to prevent tampering
- 2. Press the TURBO and CLEAN together buttons again for two seconds to unlock the Controller

# Swing Function

 Press the Swing button to activate up/down louver operation. Louvers oscillate up and down automatically. Press and hold the Swing button again to disable.

**NOTE** - Pressing the Swing button multiple times will set the louvers at five different fixed airflow angles.

# **SET BUTTON FUNCTIONS**

## Sleep

- Enables the system to automatically increase cooling (in 2°F increments) per hour for the first 2 hours, then maintain a steady temperature for 8 hours
- System returns to the previous operating mode after 8 total hours of operation
- **NOTE** To cancel, push the "MODE", "FAN SPEED" or "ON/OFF" buttons.
  - SLEEP mode is only available when the unit is in COOL or AUTO mode

### Follow Me

 Allows remote temperature sensing of the room at the remote controller location

# **CLEAN FUNCTION**

# **Active Clean**

- Washes away dust, mold, and grease that may cause odors when it adheres to the indoor coil by automatically freezing and then rapidly thawing the coil
- · Indoor unit displays "CL"
- After 20 to 45 minutes the unit will automatically cancel the operation

NOTE - Only available in COOL or DRY modes.

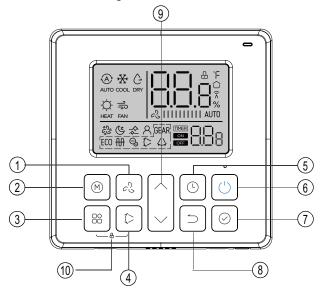
# **REMOTE CONTROLLERS - OPTIONAL**

# WIRED REMOTE CONTROLLER (MOSTAT120L-1)



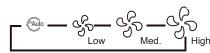
# **FEATURES**

- Built-In Memory Maintains clock, fan speed and mode of operation settings following power outages
- Dimensions (H x W x D) 4-3/4 x 4-3/4 x 7/8 in.
- · Additional hardware is furnished for installation
- 3-1/2 in. back-lit LCD display screen
- Wiring Controller uses 5-wire shielded 20 ft. cable (furnished) for easy low voltage connection to the indoor unit
- · Maximum cable length is 59 ft.



# 1 FAN SPEED Button

 Selects fan speed. Each button press cycles through the following settings on display



# 2 MODE Button

 Select system operation modes. Push button to cycle through each setting

# 3 FUNCTION Button

- · Scrolls through unit operations in this order:
- 1. Turbo కోస్ట్
- 2. Sleep 🗷
- 3. Active Clean 🕏
- 4. Follow Me A

# 4 SWING Button

- Used to stop or start louver auto swing feature (certain models)
- Louvers oscillate up and down automatically. Press and hold the Swing button again to disable.
- Pressing the Swing button multiple times will set the louvers at five different fixed airflow angles.
- Press and hold Swing button for 2 seconds to activate left/right louver operation. Louvers swing left and right automatically.

# 5 TIMER Button

- TIMER ON (initiates an auto-on time sequence)
- TIMER OFF (initiates an auto-off time sequence) can be used separately or together
- Each press of the button increases the time in 30 minute increments up to 10 hours
- Above 10 hours each press of the button will increase the auto-timed setting by 60 minutes up to 24 hours

# 6 POWER Button

· Turns system on and off

# CONFIRM Button

· Confirms selected function

**NOTE** - Press and hold and **Arrow Up** Button and the **Arrow Down** button together for 3 seconds to alternate the temperature display between the °F and °C scale.

# 8 BACK Button

· Returns to the previous step

# 9 UP/DOWN Buttons

• Increase or decrease the indoor temperature in two degree increments (maximum 86°F, minimum 60°F).

**NOTE** - Temperature cannot be adjusted in FAN mode.

# 10 LOCK

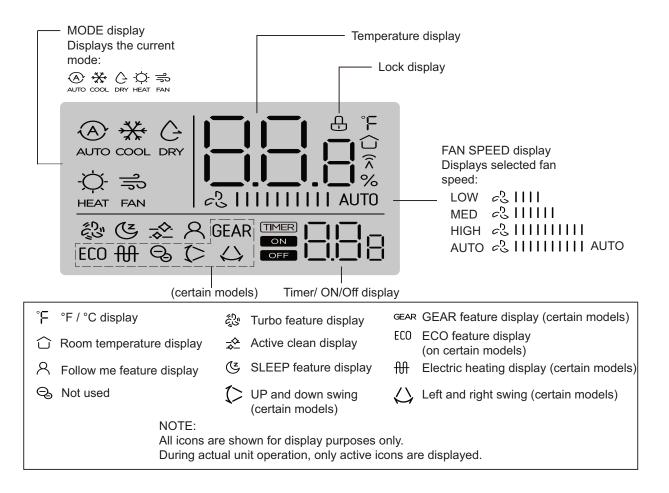
 Press the Function and Swing buttons simultaneously to lock or unlock the Controller to prevent tampering with settings

### **OPTIONAL ACCESSORIES**

# Extension Cable for Wired Remote Controller

- 20 ft. cable for easy low voltage connection to the indoor unit
- Extends cable to maximum 65 ft. length

# WIRED REMOTE CONTROLLER INDICATORS (MOSTAT120L-1)



# **REMOTE CONTROLLERS - OPTIONAL**

# WIRED PROGRAMMABLE CONTROLLER (M0STAT120N-1)



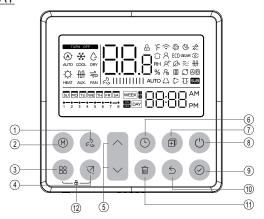
# **FEATURES**

- Wired programmable local controller for mini-split indoor units with convenient timed schedules for daily operation
- Weekly timers (2), all days of the week timer, up to 8 scheduled events per day
- Schedule start time, mode, setpoint, and fan speed
- · Compatible with all indoor units
- Copy/paste function for easy duplication of events to other days
- · Built-in system diagnostics
- 3-1/2 in. back-lit LCD display screen
- Controller uses 4-wire shielded 20 ft. cable (furnished) for easy low voltage connection to the indoor unit
- Adaptor cables are furnished for various indoor unit connections
- **NOTE** Cable for longer lengths must be ordered separately.

**NOTE** - Maximum cable length is 164 ft..

- · Hardware for mounting furnished
- Mounts to standard electrical junction box (not furnished)
- Lithium battery furnished: CR2032
- Power Supply: 12 VDC
- Dimensions (H x W x D): 4-3/4 x 4-3/4 x 7/8 in.
- Audible tone when a button is pressed (can be disabled)
- Lock function disables buttons to prevents tampering

# DISPLAY



# **BUTTONS AND FUNCTIONS**

- FAN SPEED Button
  - · Scroll through fan speeds (Auto Low Med High)
- 2 MODE Button
  - Use + and buttons to scroll through available operation modes (Auto / Cool / Dry / Heat / Fan)
- 3 FUNCTION Button
  - · Scrolls through unit operations in this order:
  - 1. Turbo కోస్తు
  - 2. Sleep 🗷
  - 3. Follow Me A
- 4 SWING Button
  - Used to stop or start louver auto swing feature (certain models)
  - Louvers oscillate up and down automatically. Press and hold the Swing button again to disable.
  - Pressing the Swing button multiple times will set the louvers at five different fixed airflow angles.
  - Press and hold Swing button for 2 seconds to activate left/right louver operation. Louvers swing left and right automatically.
- UP/DOWN Buttons
  - Increase or decrease the indoor temperature in one degree increments (maximum 86°F, minimum 60°F).

**NOTE** - Temperature cannot be adjusted in FAN mode.

- **6** TIMER Button
  - Sets unit for daily or weekly on/off operation
- 7 COPY Button
  - · Copy schedules from one day to another
- 8 POWER Button
  - Turn system on and off
- 9 CONFIRM Button
  - · Confirms each step when managing schedules
  - NOTE Press and hold and Confirm Button and the Arrow Down button together for 3 seconds to alternate the temperature display between the °F and °C scale.
- 10 BACK Button
  - · Returns to the previous step
- **11** DAY OFF/DELAY BUTTON
  - Disable specific days/schedules of the week
  - Delete a specific event
- 12 LOCK
  - Press the Function and Swing buttons simultaneously to lock the Controller to prevent tampering with settings

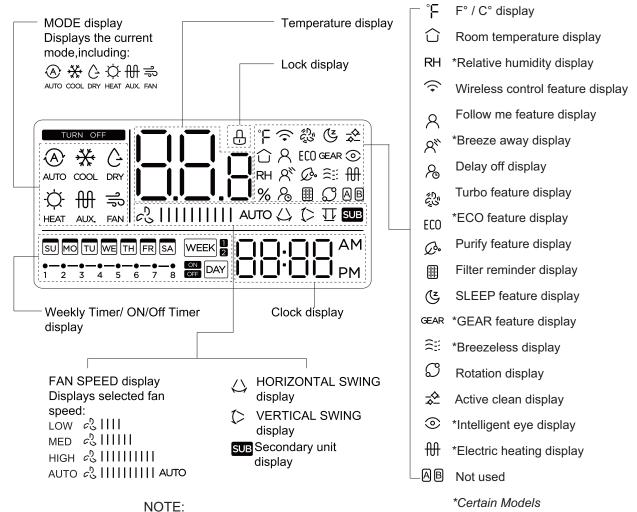
# **OPTIONAL ACCESSORIES**

# Extension Cable for Wired Programmable Controller

- 20 ft. cable for easy low voltage connection to the indoor
- Extends cable to 40 ft. (12 m) length

### **REMOTE CONTROLLERS - OPTIONAL**

# WIRED PROGRAMMABLE REMOTE CONTROLLER INDICATORS (MOSTAT120N-1)



All icons are shown for display purposes only.

During actual unit operation, only active icons are displayed.

# **OPTIONAL ACCESSORIES - ORDER SEPARATELY**

# **OUTDOOR UNITS**

### Condenser Pad

- · Provides permanent foundation for outdoor units
- One-piece lightweight structural foam and molded from high-density polyethylene (HDPE)
- · Lightweight, easy to carry and install
- Textured finish provides a non-skid surface so outdoor unit sits securely in one place
- UV stable

## Disconnects

- · Positive unit disconnect
- Single door enclosure
- · Fused and non-fused models available

### **Fuses**

• 30 and 60 amp fuses available

### Hail Guards

- Protects outdoor coils on all sides without inhibiting airflow or performance
- Self-tapping screws provided for installation
- Flat shape allows for outdoor units to be placed close together
- · Each kit contains all required guards
- Order one hail guard kit per outdoor unit

# Indoor/Outdoor Wiring Cable

- 14-gauge, 4-conductor wire
- THHN (Thermoplastic High Heat-resistant Nylon-coated) wire
- Suitable for wet or dry locations
- Rated up to 600V

### Refrigerant Line Sets

- · Refrigerant lines are shipped refrigeration clean
- Lines are cleaned, dried, pressurized and sealed at factory

# Wall Brackets

- Heavy duty 1/8 in. thick steel brackets for supporting outdoor units
- Mount at any height to allow for easy maintenance under units
- · Pre-punched holes for easy installation
- Powder coated gray finish
- · Load rating 600 lbs. per pair

### Whips

- Heavy duty electrical whips are available in 8 and 10 gauge sizes
- 6 ft. lengths
- · Weatherproof metal conduit

# **INDOOR UNITS**

# Condensate Pumps

- · Quietly and efficiently removes condensate
- · See Optional Accessories Table for available pumps

# A/C Easy Tee® Condensate Cleanout

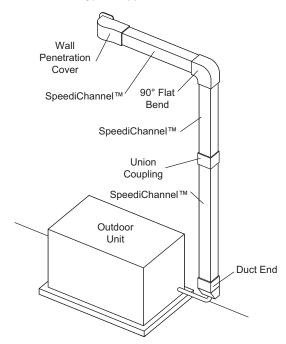
- · Condensate drain service port
- · Flexible and easy to use with nitrogen, water or shop vac
- Screw cap on top allows easy access to condensate drain line

# **SPEEDICHANNEL™ SYSTEM**



- SpeediChannel™ is a channel system covers system line sets
- Two-part system has a base and a cover
- Base is fastened to a wall or ceiling with plastic clips (SpeediClip™) that snap into a channel already molded into the base
- · Cover fits on top of the base
- Manufactured from rigid PVC, which is UL rated and resistant to UV light
- System is a natural color that closely matches typical mini-split outdoor units
- · Can be painted as desired to match any wall color

### **Typical Application**



# **OPTIONAL ACCESSORIES - ORDER SEPARATELY**

# **SPEEDICHANNEL™ SYSTEM (continued)**

# SpeediChannel™ Starter Kit

 The starter kit includes (1) Coupling, (1) Wall Penetration, (1) Inside Elbow, (1) Long Radius Flat Bend, (10) SpeediclipsTM, (10) 11 in. Cable Ties, and (1) SpeediChannel Instruction Booklet

### Duct End

 Duct Ends are used to terminate a run of SpeediChannel<sup>™</sup> to a small opening just large enough for the line set and condensate drain line to pass through



### Flat Wall Escutcheon

 Flat Wall Escutcheons are used to cover a rough opening in a soffit, wall, or ceiling penetration





- One side of the escutcheon is flat to allow for a SpeediChannel<sup>™</sup> to run along a wall and to penetrate through an adjacent wall or ceiling
- This is the most common type of wall penetration
- Furnished in two parts, the escutcheon easily snaps onto the SpeediChannel™

### Flex Joint

- A Flex Joint is an accordion-style piece of SpeediChannel™
- The flex joint can be extremely flexible when routing a SpeediChannel™ system around an obstacle
- Each joint is 20 in. long and can be combined together for longer flex runs
- The flex joint does not require the use of a union coupling
- The flex joint slides tightly inside the SpeediChannel™ system

# T-Joint

- T-Joints are used for creating a tee connection between three pieces of SpeediChannel™
- Each tee is individually packed and furnished with stainless steel screws



# **Union Coupling**

- Union Couplings are used for joining two pieces of SpeediChannel™
- Each coupling is individually packed and furnished with stainless steel screws





### Wall Penetration Cover

 Wall penetration covers are used to transition from the SpeediChannel™ system to a through wall penetration



- Wall covers are designed to allow for easy installation, even after the line set has been installed
- A hooking and fastening arrangement allows for quick installation
- Each wall cover is individually packed, and furnished with stainless steel screws to attach the wall cover to the base
- Three screws are necessary to fasten the wall cover to the wall construction, regardless of the type of installed system

### 45° and 90° Flat Bend Elbows

- 45° Flat Bends are used to route the SpeediChannel™ around obstacles
- Each bend is individually packed and furnished with stainless steel screws







# 90° Inside Elbow

- 90° Inside Elbows are used to route the SpeediChannel™ around an inside corner
- Each elbow is individually packed and furnished with stainless steel screws





# Mount Block White Qty. (2) 14 in. and (2) 36 in.

- Mount Blocks are used as mounting bases when outdoor units must be bolted down
- End caps (for aesthetics) come furnished with mounting bolts
- Maximum load capacity is 900 pounds per mounting block
- Installation temperatures range from -4°F to 140°F
- Mount blocks fit all mini-split outdoor units with a sliding rail feature

SPECIFICATION	S				OUTD	OOR UNITS
Outdoor Unit Model No	0.	MCB009S4S	мсво	12S4S	MCB018S4S	MCB024S4S
Nominal Size - Tons		0.75		1	1.5	2
Ambient Temperature	Operating Range - °F	5 - 122	5 - 122		5 - 122	5 - 122
Sound Data (dBA)		53.5		115V) 08/230V)	54.5	55.5
Refrigerant (R-410A)	Charge furnished	1 lb. 5 oz.	1 lb.	7 oz.	2 lbs. 0 oz.	2 lbs. 6 oz.
Maximum line length	with furnished charge - ft.	25	2	25	25	25
Additional ch	narge required per ft oz.	0.16	0.	16	0.16	0.32
Compressor	No. and Type	(1) Rotary	(1) R	Rotary	(1) Rotary	(1) Rotary
	Refrigerant oil type	VG74	VG	674	VG74	VG74
R	Refrigerant oil charge - oz.	10.5	10	).5	14.9	14.9
Connections - in.	Liquid/Gas pipe (flare)	1/4 / 3/8	1/4	/ 1/2	1/4 / 1/2	3/8 / 5/8
Maximum refrigerant pipe length - ft.		82	82		98	98
Max. difference in level of indoor unit - ft.		33	33		66	66
Outdoor Fan (No.) Diameter - in.		(1) 16-5/8	(1) 1	6-5/8	(1) 16-1/2	(1) 17
	Total air volume - cfm	1059	1059		1235	1253
	rpm	850/500	850/600		810/700/600	710/700/550
Outdoor Coil	Number of rows	1	1		2	2
	Fins per inch	21	2	21	21	21
	Fin type	Hydrophilic aluminum				
Т	ube outside diameter - in.	3/16	3/	16	3/16	3/16
	Tube type		R	ifled copper tubir	ng	
	Net face area - ft.2	3.63	3.	73	4.17	4.78 + 4.00
Design Pressure	PSIG	550/340	550	/340	550/340	550/340
0	pping weight (lbs.) (115V)		51	/ 55		
Data	(208/230V)	48 / 51	49	/ 53	62 / 67	68/73
ELECTRICAL DATA					'	
Electrical Characterist	tics - 60 Hz - 1 Phase	208/230V	115V	208/230V	208/230V	208/230V
<sup>1</sup> Maximum Overcurrent	Protection (MOCP) amps	15	30	15	20	20
<sup>2</sup> Minimu	m circuit ampacity (MCA)	11	18	11	16	16
Outdoor Fan	Rated load amps	0.4	0.4	0.4	0.4	0.4
Motor	Output - W	34	34	34	34	34

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

<sup>&</sup>lt;sup>1</sup> HACR type circuit breaker or fuse.

<sup>&</sup>lt;sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

SPECIFICATIONS WALL-MOUNTED INDOOR UNI							
Indoor Unit Model No.	MWCB009S4	CB009S4 MWCB012S4			MWCB024S4		
Nominal Size - Tons	0.75		1	1.5	2		
Power Supply - 60 Hz - 1 phase	208/230V	115V	208/230V	208/230V	208/230V		
Rated load amps	3.13	8.5	4.2	6.8	9.3		
Output (W)	13	20	13	30	58		
Room Temperature Range (°F) Cooling	60 - 90	60 - 90	60 - 90	60 - 90	60 - 90		
Air Volume - cfm (High/Medium/Low)	246 / 205 / 147	333 / 253 / 211	324 / 232 / 194	471 / 353 / 306	588 / 471 / 400		
Sound Data (dBA) - Low/Medium/High	22.5 / 31 / 35	33 / 35.5 / 40.5	30.5 / 35.5 / 40	31.5 / 38.5 / 46	36 / 39.5 / 47.5		
Piping Connections - Liquid/Gas - o.d flare - in.	1/4 / 3/8	1/4 / 1/2	1/4 / 1/2	1/4 / 1/2	3/8 / 5/8		
Drain connection o.d in.	1	1	1	1	1		
Net/Shipping weights - lbs.	18 / 23	20 / 25	19 / 25	25 / 32	30 / 38		

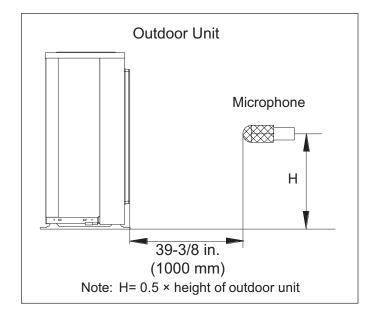
AHRI SYSTEM MATCHES										
Outdoor	Indoor	2017			2023			AHRI		
Unit	Unit	Cooling Capacity	SEER	EER	Cooling Capacity	SEER2	EER2	Reference Number		
MCB009S4S-1P	MWCB009S4-*P	9000	20.5	12.5	9000	20.5	12.5	211034598		
MCB012S4S-1L	MWCB012S4-*L	11500	21	12	11500	21	11.9	211034597		
MCB012S4S-1P	MWCB012S4-*P	11500	21	12	11500	21	11.95	211034599		
MCB018S4S-1P	MWCB018S4-*P	17500	21	11.3	17400	21	11.25	211034600		
MCB024S4S-1P	MWCB024S4-*P	22000	20	10.2	22000	20	10.2	211034601		

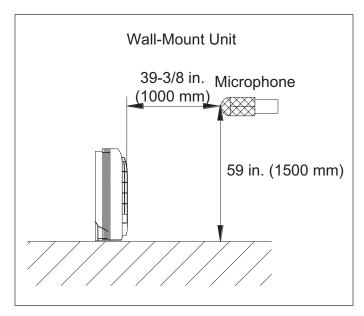
Ratings are AHRI certified to AHRI Standard 210/240 with Addenda 1 and 2 (with 25 ft. of connecting refrigerant lines); 95°F outdoor air temperature, 80°F db / 67°F wb entering evaporator air.

OPTIONAL A	CCESSORIES - ORDER SEPARATELY					
Description		Catalog		1	ze	1
Becomption		No.	009	012	018	024
	OUTDOOR UNIT					
Condenser Pad (1		Y5014	•	•	•	•
Disconnects	30 amp, fused, 1 ph	27P37	•	•	•	•
	60 amp, non-fused, 1 ph	27P39	•	•	•	•
Fuses	30A	83P75	•	•	•	•
Hail Cuanda	(1) 17-1/8 x 23-5/8 in. + (1) 17-1/8 x 8-1/4 in.	83P77	•	•	•	•
Hail Guards (H x W)	( )	24S70 24M82	•	•	•	
(11,7,11)	(1) 18-7/8 x 27-1/2 in. + (1) 18 x 9-1/8 in. (1) 18-7/8 x 29-1/2 in + (1) 18 x 10-1/4 in.	24M81			•	
Line Sets	1/4 in. x 3/8 in. x 25 ft.	90X53	•		N/A	
Line Sets	1/4 in. x 3/8 in. x 50 ft.	X0258	•		N/A	
	1/4 in. x 1/2 in. x 25 ft.	90X52	N/A		• IN/A	N/A
	1/4 in. x 1/2 in. x 20 it. 1/4 in. x 1/2 in. x 50 ft.	X0259	N/A		•	N/A
	3/8 in. x 5/8 in. x 25 ft.	X8406	IN/A	N/A		•
	3/8 in. x 5/8 in. x 50 ft.	X8407		N/A		•
Wall Brackets	30 inch	X1727	•	•		•
Whips	10 Gauge - 1/2 in. x 6 ft.	29P54	•	•		
vviiip3	8 Gauge - 3/4 in. x 6 ft.	27P44	•	•	•	•
	INDOOR UNIT	211 44				
<sup>1</sup> Diversitech	Mini-Split Pump - 4 US gallons per hour, 20 ft. lift - 230V	Y7949	•	•	•	•
Condensate	ClearVue Mini™ - 7.9 US gallons per hour, 35 ft. lift - 120/240V	Y5170	•	•	•	•
Pumps with Reservoir	Clear vac itimii 7.0 00 gaileile per ricar, co ia int 120/2 iov					
<sup>1</sup> Blue Diamond®	MicroBlue® - 1.3 US gallons per hour, 6 ft. lift - 110v-230V	14T74	•	•	•	N/A
Condensate	MaxiBlue® - 3.7 US gallons per hour, 16.5 ft. lift - 208-230V	14T69		N/A		•
Pumps with Reservoir	MultiTank Kit	14T75		N/A		•
	Sensor Cable Extension - 16 ft.	14T76	•	•	•	•
Little Giant	Mini-Split Pump Kit - 2.5 US gallons per hour, 3 ft. lift - 100-240V	Y8794	•	•	•	•
Condensate	(includes pump, reservoir, multi-size hose drain adaptor,					
Pump Kit with Reservoir	7 ft. detachable power cord, pump enclosure/cover, line set cover and mounting trim brackets)					
A/C Easy Tee® Cor		Y7947	•	•	•	•
	CONTROLS					
Wired Remote Co	ntroller M0STAT120L-1	24X02	•	•	•	•
Extension Cable for	or Wired Remote Controller - 20 ft.	Y8008	•	•	•	•
Wired Programma	ble Controller M0STAT120N-1	24X03	•	•	•	•
Extension Cable for	or Wired Programmable Controller - 20 ft. M0CTRL64Q-1	Y8738	•	•	•	•
Indoor/Outdoor Wi	ring Cable - 14 Gauge, 4 conductor wire, THHN, 250 ft.	Y2067	•	•	•	•
	SPEEDICHANNEL™ SYSTEM					
SpeediChannel™	Starter Kit - 4 in.	Y3387	•	•	•	•
SpeediChannel - 4	in. x 6-1/2 ft. (qty. 6)	Y3388	•	•	•	•
Union Coupling - 4	in.	Y3389	•	•	•	•
90° Flat Bend Elbo	ow - 4 in.	Y3390	•	•	•	•
90° Inside Elbow -	4 in.	Y3391	•	•	•	•
45° Flat Bend Elbo	ow - 4 in.	Y3392	•	•	•	•
Flex Joint - 4 in.		Y3393	•	•	•	•
T-Joint - 4 in.		Y3394	•	•	•	•
Duct End - 4 in.		Y3395	•	•	•	•
Flat Wall Escutche	on - 4 in.	Y3396	•	•	•	•
Wall Penetration C	Cover - 4 in.	Y3399	•	•	•	•
Mount Block (Whit	e) Qty, 2 - 14 in.	Y3397	•	•	•	•
Mount Block (Whit	e) Qty, 2 - 36 in.	Y3398	•	•	•	•

<sup>1</sup> Y7949 and 14T74 condensate pumps can be installed inside the indoor units. All other pumps must be installed external to the indoor unit.

# **SOUND LEVELS - TEST CONDITIONS**





COOLING CAPACITY									
Indoor Temperature - °F (Dry Bulb / Wet Bulb)									
65°F / 54°F		70°F	70°F / 59°F		75°F / 63°F		80°F / 67°F		
Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh		
8.54	5.93	8.97	6.18	9.54	6.54	9.99	6.81		
8.89	6.30	9.30	6.56	9.77	6.86	10.32	7.20		
8.90	6.42	9.46	6.79	10.02	7.16	10.57	7.50		
9.36	6.70	9.78	6.96	10.41	7.37	10.86	7.65		
9.51	6.87	10.01	7.19	10.62	7.58	11.12	7.90		
9.90	7.76	10.34	8.05	10.78	8.35	11.23	8.64		
9.74	7.58	10.19	7.89	10.77	8.29	11.34	8.68		
	65°F A Total mBtuh 8.54 8.89 8.90 9.36 9.51 9.90	65°F / 54°F       Total mBtuh     Sensible mBtuh       8.54     5.93       8.89     6.30       8.90     6.42       9.36     6.70       9.51     6.87       9.90     7.76	Indoor Term           65°F / 54°F         70°F           Total mBtuh         Sensible mBtuh mBtuh         Total mBtuh           8.54         5.93         8.97           8.89         6.30         9.30           8.90         6.42         9.46           9.36         6.70         9.78           9.51         6.87         10.01           9.90         7.76         10.34	Indoor Temperature - °	Indoor Temperature - °F (Dry Bulb / 65°F / 54°F	Indoor Temperature - °F (Dry Bulb / Wet Bulb)   65°F / 54°F   70°F / 59°F   75°F / 63°F   Total Bulth Bult	Indoor Temperature - °F (Dry Bulb / Wet Bulb)   65°F / 54°F   70°F / 59°F   75°F / 63°F   80°F / Total   Sensible   mBtuh   mBtuh		

8.15

7.17

6.97

6.71

6.84

6.53

6.45

10.89

9.91

8.86

8.35

7.96

7.39

6.76

8.45

7.58

7.24

7.07

7.17

6.89

6.72

11.46

10.43

9.28

8.88

8.47

7.82

7.06

8.83

7.94 7.54

7.48

7.59

7.24

6.98

10.45

9.31

8.47

7.88

7.54

6.97

6.47

75

85

95

105

110

115

122

9.97

8.90

8.03

7.42

7.12

6.69

6.17

7.82

6.89

6.65

6.35

6.49

6.29

6.17

COOLING CAPACITY 012 (											
Outdoor		Indoor Temperature - °F (Dry Bulb / Wet Bulb)									
Temperature - °F	65°F	65°F / 54°F		/ 59°F	75°F	/ 63°F	80°F / 67°F				
(Dry Bulb)	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh			
5	10.06	7.01	10.49	7.27	11.03	7.61	11.60	7.96			
17	10.15	7.22	10.71	7.57	11.31	7.95	11.94	8.34			
25	10.51	7.74	11.03	8.07	11.49	8.35	12.08	8.74			
35	10.50	7.87	11.01	8.20	11.55	8.56	12.23	9.00			
47	10.51	7.93	10.96	8.22	11.64	8.69	12.37	9.19			
55	10.88	8.34	11.39	8.70	12.00	9.11	12.50	9.44			
65	10.76	8.30	11.38	8.73	11.96	9.12	12.63	9.58			
75	11.11	8.70	11.59	9.03	12.15	9.42	12.75	9.83			
85	10.65	8.64	11.27	9.09	11.95	9.59	12.66	10.10			
95	10.69	8.79	11.17	9.14	11.69	9.53	12.41	10.07			
105	9.97	8.60	10.45	8.97	10.89	9.29	11.47	9.73			
110	8.90	7.81	9.29	8.11	9.85	8.56	10.43	9.02			
115	7.74	7.29	8.16	7.65	8.64	8.05	9.17	8.50			
122	6.61	6.56	7.03	6.95	7.46	7.34	7.88	7.73			

# COOLING CAPACITY 012 (208/230V)

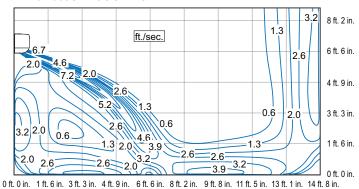
Outdoor	Indoor Temperature - °F (Dry Bulb / Wet Bulb)									
Temperature - °F	65°F / 54°F		70°F	/ 59°F	75°F / 63°F		80°F	/ 67°F		
(Dry Bulb)	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh		
5	10.30	7.18	10.73	7.44	11.29	7.79	11.86	8.14		
17	10.44	7.36	10.94	7.67	11.56	8.06	12.13	8.42		
25	10.56	7.73	11.22	8.17	11.87	8.59	12.47	8.98		
35	10.95	7.87	11.63	8.32	12.13	8.63	12.78	9.05		
47	11.10	8.22	11.62	8.56	12.27	8.99	12.90	9.40		
55	11.20	8.64	11.87	9.11	12.54	9.58	13.09	9.95		
65	11.42	8.76	11.95	9.11	12.48	9.46	13.28	10.01		
75	11.51	9.20	12.14	9.66	12.81	10.13	13.48	10.61		
85	11.02	8.74	11.58	9.12	12.06	9.45	12.82	10.00		
95	10.41	8.53	10.85	8.85	11.34	9.20	12.02	9.70		
105	9.71	8.40	10.27	8.84	10.76	9.20	11.31	9.61		
110	8.93	7.93	9.44	8.34	10.01	8.80	10.65	9.31		
115	8.51	7.96	8.88	8.26	9.31	8.60	9.82	9.03		
122	7.41	7.35	7.77	7.68	8.23	8.11	8.76	8.58		

COOLING CAPAC	COOLING CAPACITY										
Outdoor		Indoor Temperature - °F (Dry Bulb / Wet Bulb)									
Temperature - °F (Dry Bulb)	65°F / 54°F		70°F	/ 59°F	75°F	/ 63°F	80°F	80°F / 67°F			
(Bry Build)	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh			
5	16.28	11.06	17.15	11.60	18.03	12.13	19.14	12.81			
17	16.50	11.61	17.54	12.26	18.56	12.90	19.47	13.46			
25	17.34	12.38	18.38	13.07	19.25	13.60	20.48	14.40			
35	18.72	14.06	19.65	14.68	20.46	15.22	21.41	15.84			
47	16.29	12.42	17.13	12.98	17.91	13.51	18.90	14.17			
55	16.05	12.11	16.76	12.56	17.77	13.24	18.84	13.96			
65	15.99	12.25	16.98	12.92	17.98	13.61	18.79	14.15			
75	16.27	12.62	17.22	13.27	17.97	13.78	18.74	14.30			
85	15.90	12.73	16.73	13.33	17.43	13.81	18.31	14.45			
95	15.28	12.44	16.07	13.01	16.81	13.52	17.88	14.31			
105	14.08	11.94	14.71	12.41	15.55	13.04	16.37	13.65			
110	12.71	11.61	13.26	12.07	13.89	12.57	14.76	13.28			
115	11.15	10.19	11.64	10.58	12.35	11.18	12.87	11.59			
122	9.33	9.34	9.86	9.83	10.32	10.25	10.96	10.83			

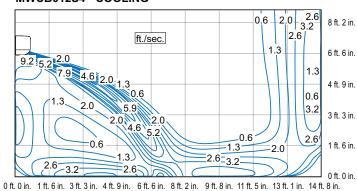
# COOLING CAPACITY 024 (208/230V)

Outdoor	Indoor Temperature - °F (Dry Bulb / Wet Bulb)									
Temperature - °F	65°F / 54°F		70°F	70°F / 59°F		75°F / 63°F		80°F / 67°F		
(Dry Bulb)	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh	Total mBtuh	Sensible mBtuh		
5	19.87	14.01	20.87	14.63	21.90	15.27	22.91	15.90		
17	20.41	14.35	21.33	14.91	22.62	15.73	23.89	16.53		
25	20.79	14.71	21.93	15.41	22.98	16.07	24.45	17.02		
35	21.88	15.85	22.82	16.43	23.92	17.13	24.99	17.79		
47	20.96	15.18	22.14	15.93	23.45	16.80	24.87	17.71		
55	21.22	16.15	22.29	16.88	23.69	17.84	24.67	18.48		
65	20.93	15.75	21.81	16.31	23.08	17.18	24.50	18.15		
75	20.81	16.09	21.95	16.87	23.11	17.67	24.32	18.48		
85	20.05	15.53	21.02	16.18	22.15	16.95	23.44	17.86		
95	19.73	15.81	20.57	16.39	21.50	17.04	22.68	17.87		
105	17.79	15.23	18.61	15.85	19.72	16.70	20.86	17.59		
110	16.07	14.43	16.86	15.05	17.88	15.87	18.78	16.58		
115	14.16	13.53	14.79	14.08	15.60	14.75	16.34	15.36		
122	11.75	11.76	12.47	12.43	13.08	12.99	13.89	13.72		

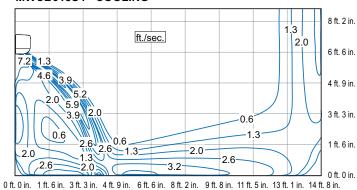
# MWCB009S4 - COOLING



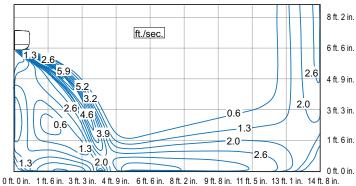
### **MWCB012S4 - COOLING**



# MWCB018S4 - COOLING

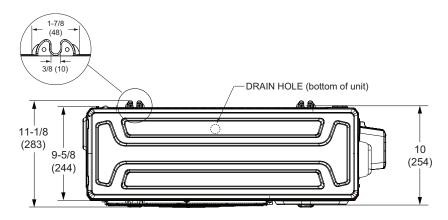


# MWCB024S4 - COOLING

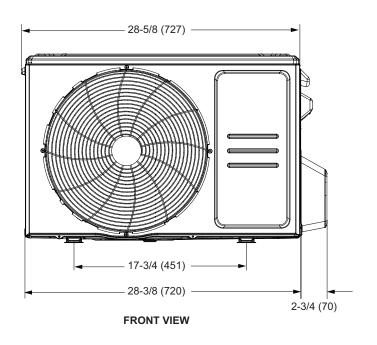


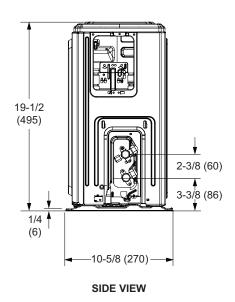
DIMENSIONS OUTDOOR UNITS

# MCB009S4, MCB012S4



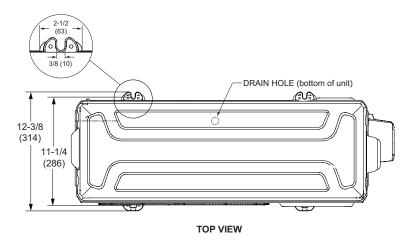
**TOP VIEW** 

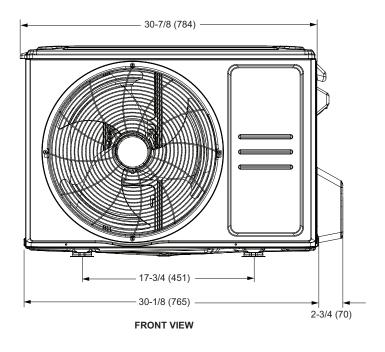


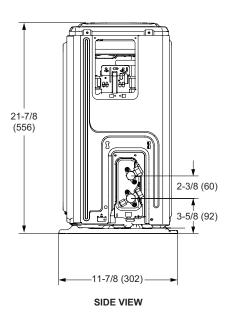


DIMENSIONS OUTDOOR UNITS

# MCB018S4

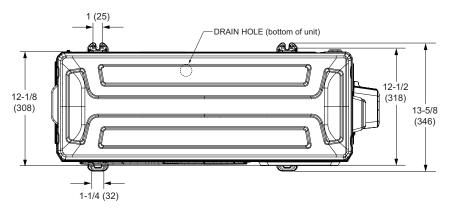




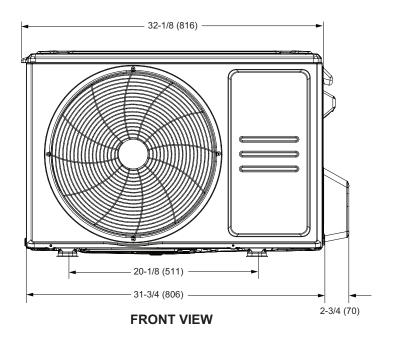


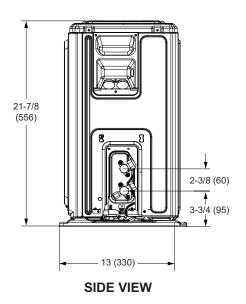
DIMENSIONS OUTDOOR UNITS

# MCB024S4



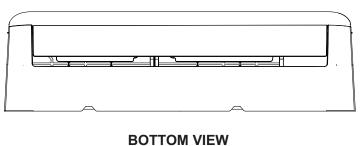
**TOP VIEW** 

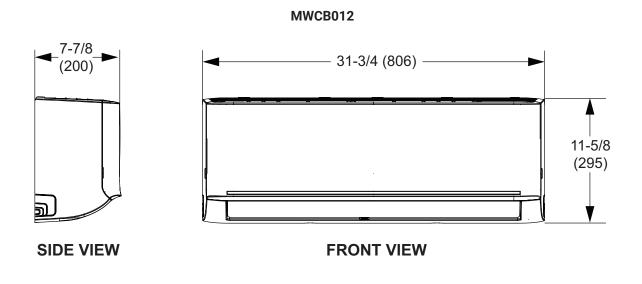


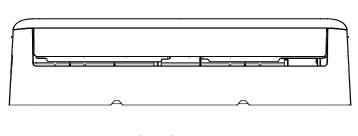


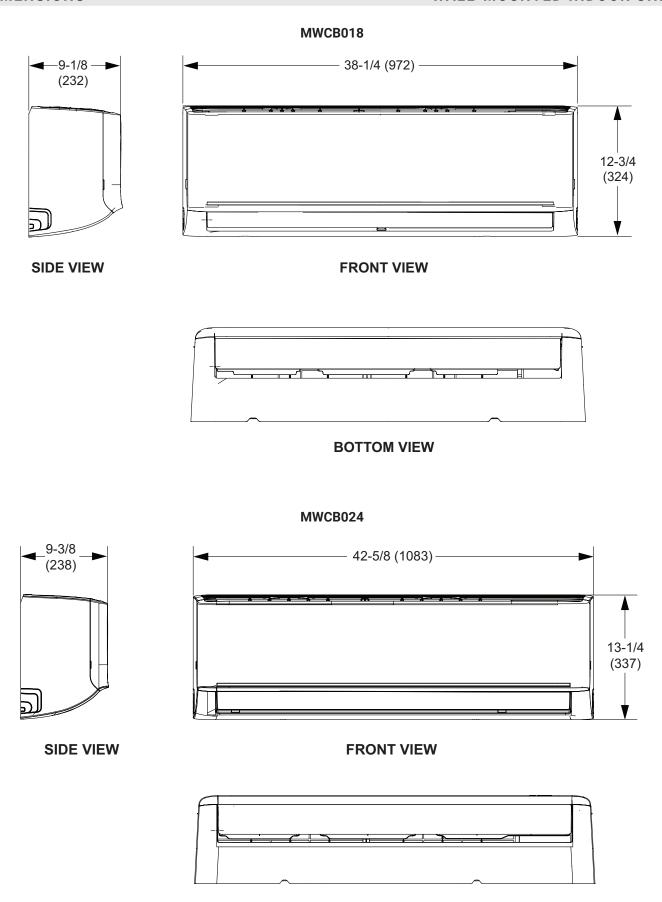
11-1/2 (292)

# 8-1/8 (207) 28-3/4 (730) SIDE VIEW FRONT VIEW



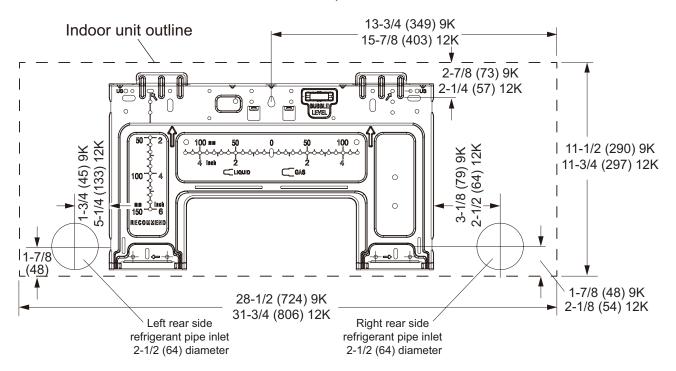




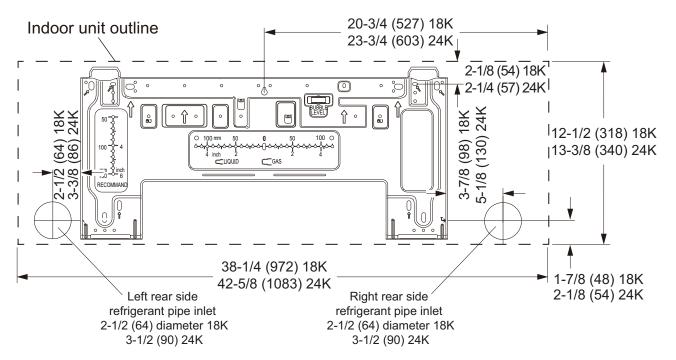


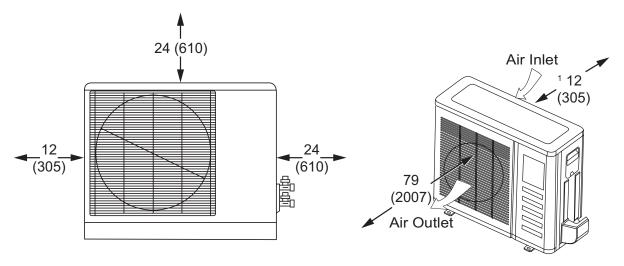
**BOTTOM VIEW** 

# MWCB009, MWCB012

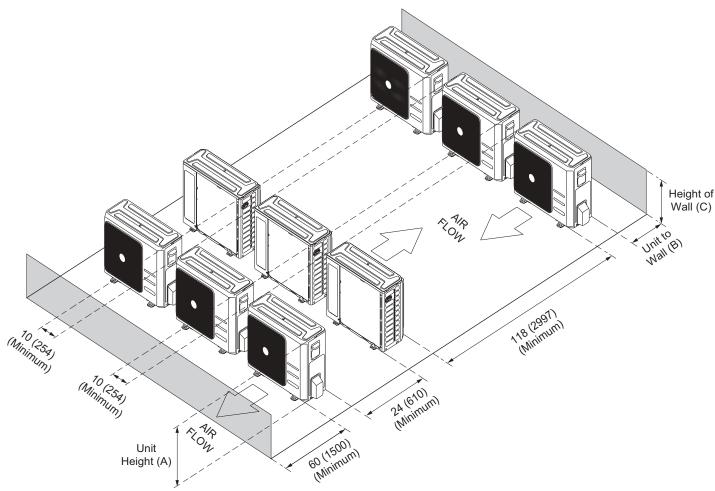


# **MWCB018, MWCB024**





<sup>1</sup> Minimum rear clearance can be 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides.

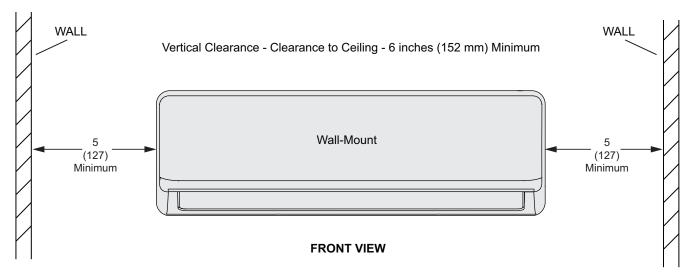


# **CLEARANCE NOTES FOR MULTIPLE UNITS:**

If the height of the wall (C) is less than or equal to the height of the smallest unit (A), the distance from the unit to the wall (B) must be a minimum of 10 inches (254 mm).

If 1/2 the height of the unit (A) is less than the height of the wall (C), the distance from the unit to the wall (B) must be a minimum of 12 inches (305 mm).

If the height of the wall (C) is greater than the height of the unit (A), the distance from the unit to the wall (B) must be a minimum of 20 inches (508 mm).

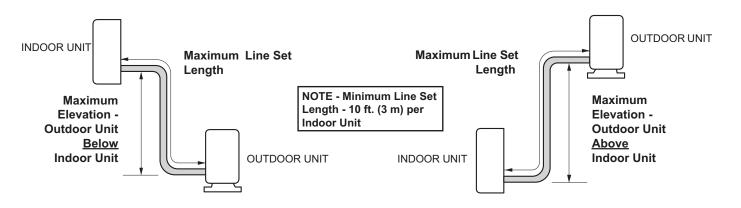


Vertical Clearance - Clearance to Floor - 72 inches (1829 mm) Minimum NOTE - Provide 96 inches (2438) clearance to floor for best performance

# LINE SET AND ELEVATION GUIDELINES

# **Outdoor Unit BELOW Indoor Unit**

# **Outdoor Unit ABOVE Indoor Unit**



	Line Set Dia	ameters (in.)	Maximum	Maximum	Maximum	
Size	Liquid	Gas	Elevation - Elevation - Outdoor Unit Below Indoor Unit ft. (m) Elevation - Outdoor Unit Above Indoor Unit ft. (m)		Line Set Length ft. (m)	
009	1/4	3/8	33 ft. (10 m)	33 ft. (10 m)	82 ft. (25 m)	
012	1/4	1/2	33 ft. (10 m)	33 ft. (10 m)	82 ft. (25 m)	
018	1/4	1/2	66 ft. (20 m)	66 ft. (20 m)	98 ft. (30 m)	
024	3/8	5/8	66 ft. (20 m)	66 ft. (20 m)	98 ft. (30 m)	

REVISIONS	
Sections	Description of Change
Optional Accessories	Condensate Pump selection updated.









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