

FIGURE 10: Cooling Models with Electric Heat Wiring

1. "Y" Terminal on Air Handler Control Board must be connected for full CFM and applications requiring 60 second blower off delay for SEER enhancement.
2. Optional humidity switch - contacts open on humidity rise.
3. Remove HUM STAT Jumper on AH Control Board
4. MODE Jumper on AH control board should be set to A/C for air conditioners and HP for heat pumps.
5. To change quantity of heat during HP defrost cycle - Reverse connections at W1 & W2 on Air Handler Control Board

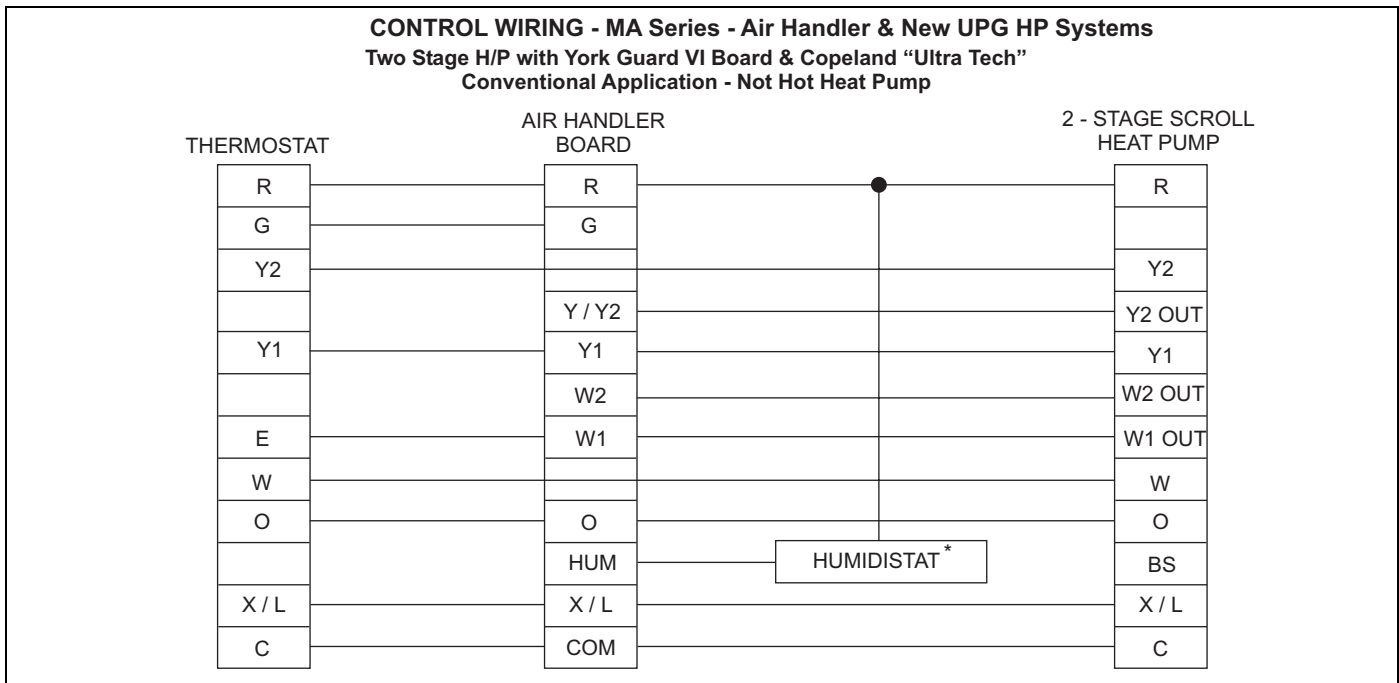


FIGURE 11: Two-Stage Cooling Wiring

1. "Y" Terminal on Air Handler Control Board must be connected for full CFM and applications requiring 60 second blower off delay for SEER enhancement.
2. Optional humidity switch - contacts open on humidity rise.
3. Remove HUM STAT Jumper on AH Control Board
4. MODE Jumper on AH control board should be set to A/C for air conditioners and HP for heat pumps.
5. To change quantity of heat during HP defrost cycle - Reverse connections at W1 & W2 on Air Handler Control Board

SECTION X: MAINTENANCE

Filters must be cleaned or replaced when they become dirty. Inspect at least once per month. The frequency of cleaning depends upon the hours of operation and the local atmospheric conditions. Clean filters keep unit efficiency high.

LUBRICATION

The bearings of the blower motor are permanently lubricated.

NOTES

USER'S INFORMATION MANUAL

AIR HANDLERS
MODELS: ALL



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CONTACT INFORMATION

- Go to website at www.york.com click on "contact", then click on "contact form" and follow the instructions.
- Contact us by mail:

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This high efficiency Air Handling system has been precision engineered, manufactured of high quality materials, and passed many rigorous tests and inspections to ensure years of satisfactory service. That's why you can rely on efficient, trouble-free operation. Your system is fully automatic. Set the thermostat and forget it. And it's automatically protected from damage by voltage fluctuations or excessive heating or cooling demands. Your Air Handler is actually two units – the indoor air blower and the indoor refrigeration coil, part of the outdoor AC or Heat Pump system installed with this Air Handler. You may also have an Electric Resistance Heater kit installed in this air handler.

WARNING

FIRE OR ELECTRICAL HAZARD

Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

A fire or electrical hazard may result causing property damage, personal injury or loss of life.

SECTION I: HOW YOUR AIR HANDLER WORKS

If your hand is wet and you blow on it, it feels cool because some of the moisture is evaporating and becoming a vapor. This process requires heat. The heat is being taken from your hand, so your hand feels cool. That's what happens with a heat pump. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air. During the heating cycle, your system will remove heat and humidity from the outdoor air and will transfer this heat to your home. This is possible because even 0°F outdoor air contains a great deal of heat.

Remember that your heat pump doesn't generate much heat, it merely transfers it from one place to another.

SECTION II: SYSTEM OPERATION

Your thermostat puts full control of the comfort level in your home at your fingertips. DO NOT switch your thermostat rapidly "On" and "Off" or between "Heat" to "Cool" This could damage your equipment. Always allow at least 5 minutes between changes.

SETTING THE THERMOSTAT

Although thermostats may vary widely in appearance, they are all designed to perform the same basic function: to control the operation of your air conditioning or heat pump system. Regardless of size or shape, each thermostat will feature a temperature indicator; a dial, arm, or push button for selection of the desired temperature; a fan switch to choose the indoor fan operation; and a comfort switch for you to select the system mode of operation.

Only approved thermostats have been tested and are fully compatible with this equipment. *Please be aware that many different thermostats operate on batteries or "power stealing" principals. These types of thermostats can not be supported as trouble free when used with this product.*

A complete operating instruction is provided by the manufacturer for each thermostat. Familiarize yourself with its proper operation to obtain the maximum comfort with minimum energy consumption.

If your system has been designed to allow both cooling and heating operation, you may have either a manual change-over type, or a programmable electronic type thermostat.

Manual change-over simply means that the comfort switch must be manually positioned every time you wish to switch from the cooling to heating or heating to cooling modes of operation.

The computerized electronic thermostat is actually a sophisticated electronic version of a manual change-over type. This thermostat includes features which allow "set-back" temperature variations for periods of sleep, or while you are away during the day, and means energy savings for you. The thermostat also features a digital clock.

Fan Operation Selection

A multi-position fan switch allows you to choose the type of fan operation of the indoor fan.

AUTO - With the thermostat fan switch set to "AUTO", the fan will run intermittently as required for either heating or cooling. This position will provide the lowest operating cost. If you purchased one of our thermostats, they have an Intelligent fan mode which continually circulates the air during occupied modes or when you are at home, and can cycle the fan during unoccupied mode or during the night while you sleep to further conserve energy.

ON - If the fan switch is set to "ON", the indoor fan will not shut off. However, the system will still operate as required by room temperatures. This provides continuous air filtering and more even temperature distribution throughout the house, which is especially useful in houses with basements.

Usually during spring and fall, when neither heating nor cooling is required, you may want to run only the fan to ventilate, circulate, and filter the air in your home or building. Set the comfort control switch to "OFF" and the fan switch to "ON". Be sure to return the switches to their original positions for normal operation.

Heating Cycle

With the thermostat in the heating position, and the outdoor temperature in the range of 20 to 30° or below, the outdoor unit will generally run 100% of the time.

All systems can be equipped with balance point control to provide even more efficient operation. This control will prevent the electric heater from being energized when the outdoor air is above some predetermined temperature setting (0 to 45°F). At higher temperatures, your system will provide all the heat your home will ever need. At lower temperatures, the auxiliary heat will be energized to keep your home comfortable.

When the outdoor air is cool and moist, frost may form on the surface of your outdoor coil. When this frost builds to a certain point, your system will switch to a defrost cycle. Although you may feel cooler air coming from your registers, DO NOT adjust your thermostat. The frost will melt quickly, and your system will return to normal operation automatically.

Cooling Cycle

Switch your thermostat to cool. Select a comfortable thermostat temperature setting, typically between 75 and 80°. Comfort sensations vary with individuals. The lower the indoor temperature desired, the greater will be the number of hours your unit must operate.

Set your thermostat 2 or 3°F below normal several hours before entertaining large groups during hot weather. People give off considerable heat and moisture.

On an extremely hot day, the indoor temperature may rise 3 to 6°F above the thermostat setting. Properly selected equipment does not have the capacity to maintain a constant indoor temperature during the peak load. Over-sizing your system to handle this peak load is not practical because the oversized system would operate much less efficiently at all other conditions.

MANUAL CHANGE-OVER THERMOSTAT

COOLING YOUR HOME: With the comfort control switch in the "COOL" position, the system will operate as follows: When the indoor temperature rises above the level indicated by the temperature adjustment setting, the system will start. The outdoor unit will operate and the indoor fan will circulate cool, filtered air. When the room temperature is lowered to the setting selected, the system will shut off.

HEATING YOUR HOME: If your system includes a heating unit and the comfort control switch is in the "HEAT" position, the system will operate as follows: When the indoor temperature drops below the level indicated by the temperature adjustment setting, the system will start. The heating system will operate and the indoor fan will circulate warm, filtered air. When the room temperature rises to the setting selected, the system will shut off.

Whether heating or cooling, the fan will continue to operate if the fan switch was set in the "ON or Intelligent" position. The "AUTO" setting on the fan switch will allow the fan to shut off when your system does.

ELECTRONIC THERMOSTAT

The computerized electronic thermostat, when programmed, will function automatically to operate the system as follows: When the indoor temperature rises above the higher (COOL) setting, the outdoor unit will operate and the indoor fan will circulate cool, filtered air. When the room temperature is lowered to the selected level, the system will shut off. When the indoor temperature drops below the lower (HEAT) setting, the heating system will operate, and the indoor fan will circulate the warm, filtered air. When the indoor temperature rises to the selected setting, the system will shut off. The indoor fan will either shut off or run continuously, depending upon your choice of fan switch setting.

SECTION III: TO MAXIMIZE OPERATING EFFICIENCY

HEATING CONSERVATION

For the most efficient operation, keep storm windows and doors closed all year long. They not only help insulate against heat and cold, but they also keep out dirt, pollen, and noise.

Closing drapes at night, keeping fireplace dampers closed when not in use, and running exhaust fans only when necessary will help you to retain the air you have already paid to heat.

Keep lamps, televisions, or other heat producing sources away from the thermostat. The thermostat will sense this extra heat and will not be able to maintain the inside temperature to the desired comfort level.

COOLING CONSERVATION

To comfortably cool your home, your air conditioner must remove both heat and humidity. Don't turn your system off even though you will be away all day. On a hot day, your system may have to operate between 8 to 12 hours to reduce the temperature in your home to a normal comfort level.

Keep windows closed after sundown. While the outdoor temperature at night may be lower than indoors, the air is generally loaded with moisture which is soaked up by furniture, carpets, and fabrics. This moisture must be removed when you restart your system.

The hotter the outside temperature, the greater the load on your system. Therefore do not be alarmed when your system continues to run after the sun has set on a hot day. Heat is stored in your outside walls during the day and will continue to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on "HIGH" requires one ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity. However, exhaust fans should not be run excessively. It would decrease efficiency by removing conditioned air.

You can also help your system in the summer by closing drapes or blinds and by lowering awnings on windows that get direct sunlight.

SECTION IV: CARE OF SYSTEM

IMPORTANT: The owner/user should not attempt to disassemble the equipment nor perform periodic maintenance unless they are experienced and qualified to do so.

A periodic inspection, cleaning, lubrication, and adjustment of your heat pump is available from your dealer. Be sure to ask him about this service.

For those who prefer to do-it-yourself, follow the instructions below to care for your system.

MOTOR LUBRICATION

The motors in these Air Handlers are permanently lubricated, and do not require periodic oiling.

PERIODIC INSPECTION

Periodic Inspection

▲ WARNING

Electric Shock and Moving Parts Hazards are present behind the Blower & Coil access panels. Presenting risk of Personal Injury and/or Fire or Electric Shock, potentially causing property damage, personal injury, and/or loss of life. The only owner serviceable part is the filter behind the bottom filter access panel

Every time the filters are changed, the following items should be visually inspected:

- Check unit exterior to be sure it is in good condition and that there are no obvious signs of deterioration.
- Check the drain lines to make sure there are no cracks, leaks or blockages.
- Check the area around the unit and all registers and grilles – to maintain good air flow.

Periodic inspection by a qualified service technician is highly recommended.

Cleaning & maintenance of the Air Handler interior and its components must only be done by a qualified service professional.

For more information, or if you have questions about the operation of your Air Handler, Or if you suspect your unit is malfunctioning or in need of service or repair

- Call a certified dealer or servicing contractor to check and/or clean your Air Handler.

AIR FILTERS

Air filters maybe internally or externally mounted. Dirty filters greatly restrict the flow of air and may cause damage to the moving parts. If the filters become clogged the Electric Heaters and blower motor could overheat resulting in a potentially dangerous situation. The filters should be checked every month. On new construction, check the filters every week for the first four weeks and every three weeks after that, especially if the indoor fan is running continuously. When replacing the filter(s) you must use filters that are the same size as those recommended in Table 1. Never operate your Air Handler without a suitable air filter.

Filter Care

Inspect the air filter every month. If dirty, wash reusable filters with a mild detergent per manufacturer's recommendations. Replace disposable filters with new filters. Filters should be clean to assure maximum efficiency and adequate air circulation. Drapes, furniture or other obstructions blocking your supply and return air grilles will also decrease efficiency.

An air filter was supplied by your dealer with you new Air Handler. A 1" filter rack compartment was built-in on your new Air Handler and may use either a 1" disposable filter or a permanent washable filter media per Table 1.

TABLE 1:

Cabinet Size	Disposable Filter Size for Built-in Filter Compartment
B	16"x20"x1"
C	20"x20"x1"
D	22"x20"x1"
Cabinet Size	Permanent Washable Filter Part Numbers for Built-in Filter Compartment
B	S1-1PF0601
C	S1-1PF0602
D	S1-1PF0603

▲ CAUTION

Equipment should never to operated without filters

Removing Internally Mounted Air Filters

This Air Handler may have a filter located on bottom of the unit behind the filter access panel.

1. Remove filter access panel by flipping the levers on each side of the cabinet outward, to release the panel.
2. Install the clean filters with "air flow" arrow in the same direction as the air flow in your duct.
3. Replace the panel and push levers in to secure the panel.

For Externally Mounted Air Filters

This air filter should be located in a rack attached to the casing of the Air Handler or placed in the return air duct, or wall mounted filter grille.

Replace throw away filter(s) with the same size new filter(s).

Throw away filter(s) may be replaced with cleanable filter(s) at this time.

Cleanable filter(s) may be cleaned as described in the Manufacturer instructions

How to Clean your Filter

Permanent type, washable, High-velocity filters may be cleaned with a vacuum cleaner or taken away from the unit & washed with a garden hose. Be sure to shake off excess water and allow filter to completely dry before re-installing the filter.

CONDENSATE DRAIN LINES

Coils maybe included in the air handler or separately mounted. During the cooling season check the condensate drain lines to be sure that condensate is flowing from the primary drain but not from the secondary drain. If condensate ever flows from the secondary drain the unit should be promptly shut off and the condensate pan and drains cleaned by a qualified service technician to insure a free flowing primary drain.

COIL CLEANING

If an inspection by a qualified service technician indicates the coil needs to be cleaned, it should be washed with Calgon Coilclean (mix one part Coilclean to seven parts water). Allow solution to remain on coil for 30 minutes before rinsing with clean water. Solution should not be permitted to come in contact with painted surfaces.

▲ CAUTION

*Coil cleaning solutions must be diluted according to the manufacturer's instructions. The use of undiluted coil cleaning solutions on the coil **WILL** damage the coil coating.*

BLOWER CARE

Even with good filters properly in place, blower wheels and motors will become dust laden after long months of operation. The entire blower assembly should be inspected annually. If the motor and wheel are heavily coated with dust, they can be brushed and cleaned with a vacuum cleaner. If the blower cannot be properly cleaned without removing it from the furnace, then this service must be performed by a qualified service agency.

WARNING

*Make sure you **DO NOT** move the clip on weight on the indoor fan wheel when cleaning the wheel. This weight is used to balance the wheel. Moving the weight will cause the fan wheel to vibrate.*

TROUBLESHOOTING GUIDE			
PROBLEM	CHECK	ACTION TO TAKE	FAULT CODE
No Heat or Cooling	1. Thermostat for proper settings.	Set thermostat to proper setting.	-
	2. Circuit breakers and fuses.	Reset circuit breakers - Replace blown fuses.	-
	3. Check outdoor unit for dirty coil (Cooling).	Clean coil, see "COIL CARE" section.	2
	4. Outdoor unit for snow accumulation. (Heating).	Remove loose snow only.	3
	5. Indoor unit for dirty filter (Heating).	Clean or replace, see "FILTER CARE" section.	2
	6. Emergency heat light status on thermostat.	Check 1 - 5, call qualified service person.	2
	Light on = Malfunction	Check 1 - 5, call qualified service person.	-
	Light flashing = Malfunction	Check 1 - 5, call qualified service person with fault code.	-
Wet on Floor or in Furnace	Condensate drain and "P" trap	Remove blockage, usually mold or fungus.	-

TECHNICAL GUIDE

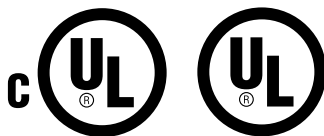
MODELS: MA

MODULAR AIR HANDLERS FOR USE WITH SPLIT SYSTEM COOLING & HEAT PUMP

600 - 2000 CFM BLOWERS

2 - 5 TON COILS

OPTIONAL 1 & 3 ϕ ELECTRIC HEATERS



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

Visit us on the web at www.york.com

Additional rating information can be found at www.ari.org/aridirectory

DESCRIPTION

This unique modular system allows the flexibility to handle any application. These versatile coils and blowers may be used for upflow, down-flow, or horizontal left or right applications. They may be combined to function as a cooling only unit or with a heat pump including electric heat for 1 and 3 phase applications. The blower and electric heater could be used as stand alone electric furnaces.

FEATURES

BLOWERS - Models to match any air flow or voltage requirement. The compact size allows easy installation. Blowers are sized to deliver design air quantity both efficiently and quietly. The direct-drive, multi-speed blower motors provide a selection of air quantities to match any application. All models include a one-minute blower off delay as standard to enhance system efficiency ratings. The durable, pre-painted steel protects the unit against rust and corrosion. All models have 1 inch foil face fiber glass insulation, providing a thermal insulation value of R-4.2.

COILS - Staggered rows of rifled copper tubes are mechanically expanded into enhanced surface aluminum fins to provide high heat transfer and long-lasting quality. The MC multi-position coils may be used for upflow, downflow, and horizontal left or right applications. Coil cabinets are insulated with 3/4" foil face insulation to prevent sweating.

ELECTRIC HEATERS - Both single and three phase electric heater models are available to match any requirement. All heaters include nickel-chromium elements with a 5-year limited warranty on 1 \emptyset heating elements and 1 year limited warranty on 3 \emptyset heating elements. Sequential operation is provided to control heaters in all models. Circuit breakers are used in 208/230 volt, single-phase heaters of 15 KW and larger.

Models equipped with circuit breakers may be altered in the field to use multi-source power supply. Over-temperature limit switches provide protection from airflow loss with fusible link backup protection.

ACCESSORIES - A full line of matching accessories available for use with the blower and coils to allow any type application.

LIMITATIONS - These units must be wired and installed in accordance with all national and local safety codes.

Voltage limits are as follows:

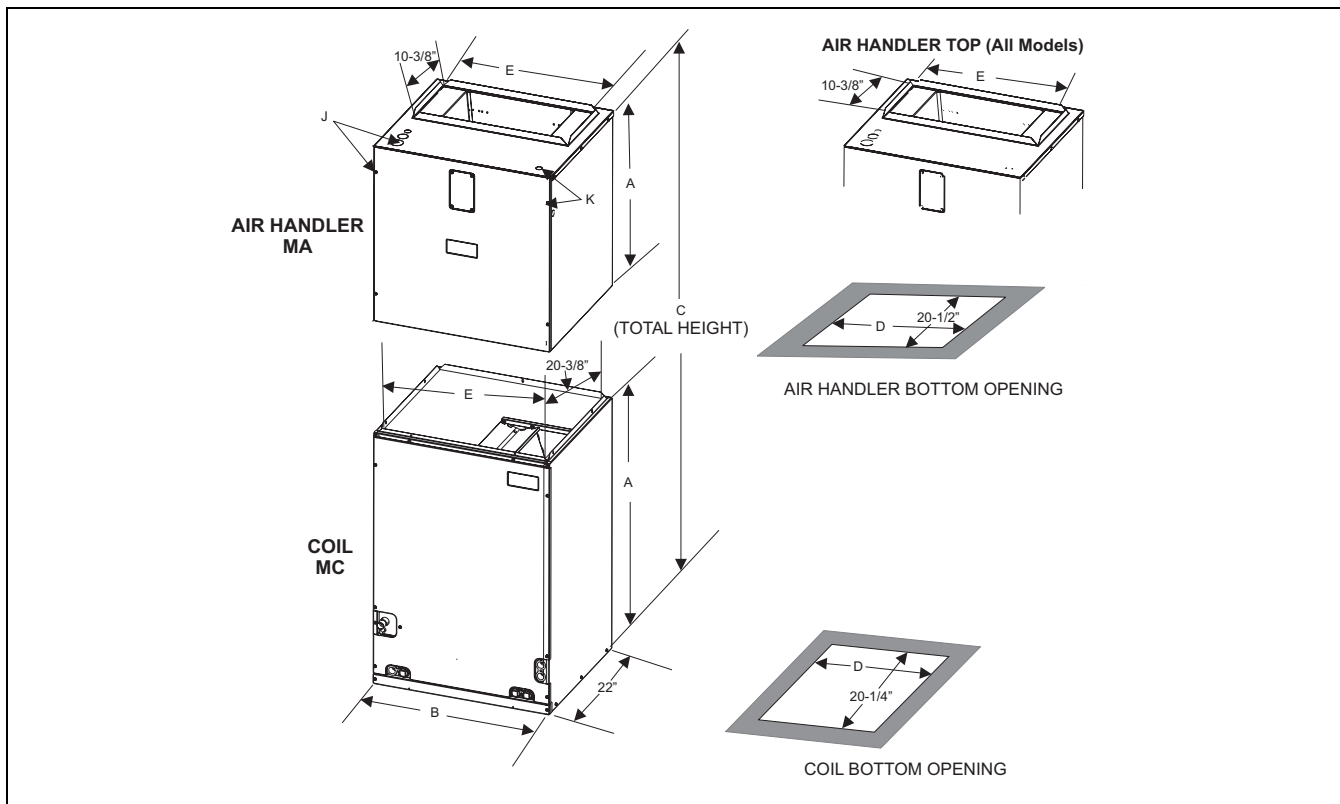
BLOWER VOLTAGE	VOLTAGE CODE	NORMAL OPERATING VOLTAGE RANGE*
208/230-1-60	21	187-253
460-3-60	41	432-504

* Rated in accordance with ARI Standard 110, utilization range "A".

Air flow must be within the minimum and maximum limits approved for electric heat, evaporator coils and outdoor units.

DIMENSIONS - (BLOWER WITH MC COILS)

NOTE: Power wiring may be brought into the unit through one of the knockouts in either the top or the left side panel. Multiple knockouts are provided to accommodate all of the electric heat and transformer accessories that are available. Use the knockouts that provide the best wire routing for the accessory being used.



DIMENSIONS

Models	Dimensions					Wiring K.O.'s ¹		Refrigerant Connections	
	A	B	C	D	E	J	K	Line Size	
	Height	Width	Total Height			Power	Control	Liquid	Vapor
MA08B	25	17-1/2	48 or 53 Depending on combination.	16-1/2	14-1/2	7/8 (1/2), 1-3/8(1)	7/8 (1/2)	—	—
MA12B ²	25	17-1/2		16-1/2	14-1/2	7/8 (1/2), 1-3/8(1)		—	—
MA14D	25	24-1/2		23-1/2	21-1/2	7/8 (1/2), 1-3/8(1)		—	—
MA16C ²	25	21		20	18	1-23/32, (1-1/4)		—	—
MA20D ²	25	24-1/2		23-1/2	21-1/2	1-31/32, (1-1/2)		—	—
MC24B**H	23	17-1/2		16-1/2	16-3/8	—	—	3/8	3/4
MC30B**H	23	17-1/2		16-1/2	16-3/8	—	—		
MC35B**H	22	17-1/2		16-1/2	16-3/8	—	—		
MC35C**H	26-1/2	21		20	19-7/8	—	—		
MC36B**H	28	17-1/2		16-1/2	16-3/8	—	—		
MC36C**H	23	21		20	19-7/8	—	—		7/8
MC42B**H	28	17-1/2		16-1/2	16-3/8	—	—		
MC42C**H	23	21		20	19-7/8	—	—		
MC48C**H	28	21		20	19-7/8	—	—		
MC48D**H	28	24-1/2		23-1/2	23-3/8	—	—		
MC60D**H	28	24-1/2		23-1/2	23-3/8	—	—	—	—
MC61D**H	33	24-1/2	58	23-1/2	23-3/8	—	—	—	—

1. Parenthesis indicate conduit size.

2. May be either 208/230-1-60 or 460-3-60.

** - 2A, 2C indicates TXV, 3X indicates TXV must be field supplied. See Outdoor Unit.

H models are available with a factory installed horizontal drain pan.

COOLING CAPACITY - COIL ONLY

Blower Models	Coil Models	Rated CFM	Entering Air °F (Dry / Wet Bulb)	MBH @ Evaporator Temperature and Corresponding Pressure °F / PSIG			
				35 / 61.5	40 / 68.5	45 / 76.0	50 / 84.0
Multi-Position - Upflow / Downflow / Horizontal							
MA08B	MC18B**H	650	85 / 72	28.7	26.1	23.3	20.2
			80 / 67	26.4	23.9	21.1	18.2
			75 / 62	21.6	19.2	16.6	14.0
			70 / 57	17.5	15.2	12.8	10.0
	MC24B**H	850	85 / 72	36.3	33.0	29.5	25.6
			80 / 67	33.4	30.2	26.7	23.1
			75 / 62	27.4	24.3	21.0	17.7
			70 / 57	22.2	19.3	16.2	12.6
MA12B	MC30B**H	1025	85 / 72	41.5	37.8	33.7	29.5
			80 / 67	36.2	32.4	28.6	24.5
			75 / 62	29.1	25.3	24.0	19.2
			70 / 57	24.1	21.5	18.7	15.8
	MC36B**H	1250	85 / 72	52.0	47.3	42.3	37.3
			80 / 67	41.7	36.8	32.3	27.4
			75 / 62	32.5	27.3	29.8	22.2
			70 / 57	27.9	25.8	23.8	22.2
MA14D	MC48D**H	1125	85 / 72	46.8	42.4	37.6	33.0
			80 / 67	37.4	33.3	29.4	24.3
			75 / 62	28.9	24.6	21.7	19.6
			70 / 57	25.1	23.3	21.7	19.6
	MC60D**H	1275	85 / 72	53.7	48.4	43.5	37.5
			80 / 67	43.0	38.0	33.3	27.7
			75 / 62	33.1	28.1	24.5	22.4
			70 / 57	28.8	26.5	24.5	22.4
	MC61D**H	1450	85 / 72	91.7	78.4	68.1	52.3
			80 / 67	73.4	61.5	52.0	38.6
			75 / 62	57.3	45.6	38.4	31.2
			70 / 57	49.2	43.0	38.4	31.2
MA16C	MC42C**H	1400	85 / 72	88.4	76.0	63.3	50.0
			80 / 67	70.8	59.4	48.4	37.0
			75 / 62	55.2	43.9	35.8	29.9
			70 / 57	47.4	41.5	35.8	29.9
	MC48C**H	1650	85 / 72	100.5	86.4	72.0	56.8
			80 / 67	80.4	67.5	55.0	42.1
			75 / 62	62.7	49.9	40.7	34.0
			70 / 57	53.9	47.2	40.7	34.0
MA20D	MC48D**H	1725	85 / 72	119.9	101.0	80.0	62.2
			80 / 67	96.0	79.2	62.6	45.8
			75 / 62	74.0	58.6	46.2	37.0
			70 / 57	64.3	55.4	46.2	37
	MC60D**H	2000	85 / 72	124.8	105.2	85.3	64.7
			80 / 67	99.9	82.5	65.2	47.7
			75 / 62	77	61.1	48.1	38.6
			70 / 57	66.9	57.7	48.1	38.6
	MC61D**H	2200	85 / 72	131.0	110.5	89.6	67.9
			80 / 67	104.9	86.6	68.5	50.1
			75 / 62	81.8	64.2	50.5	40.5
			70 / 57	70.2	60.6	50.5	40.5

PHYSICAL & ELECTRICAL DATA

MA Models		MA08B21	MA12B21	MA12B41	MA14D21
Blower - Diameter x Width		10 x 9	10 x 9	10 x 9	10 x 10
Motor	HP	1/4 HP	3/4 HP	3/4 HP	1/2 HP
	Nominal RPM	1075	1075	1075	1075
Voltage		208 / 230	208 / 230	460	208 / 230
Amps	Full Load	1.5	3.5	2.3	2.4
	Type	DISPOSABLE OR PERMANENT			
Filter	Size	16 x 20 x 1	16 x 20 x 1	16 x 20 x 1	22 x 20 x 1
	Permanent Type Kit	1PF0601BK	1PF0601BK	1PF0601BK	1PF0603BK
Filter Rack		1FR0717	1FR0717	1FR0717	1FR0724
Shipping / Operating Weight (lbs.)		128 / 122	132 / 126	132 / 126	162 / 156
MA Models		MA16C21	MA16C41	MA20D21	MA20D41
Blower - Diameter x Width		10 x 10	10 x 10	11 x 10	11 x 10
Motor	HP	1 HP	1 HP	1 HP	1 HP
	Nominal RPM	1075	1075	1075	1075
Voltage		208 / 230	460	208 / 230	460
Amps	Full Load	4.0	2.6	7.4	3.7
	Type	DISPOSABLE OR PERMANENT			
Filter ¹	Size	20 x 20 x 1	20 x 20 x 1	22 x 20 x 1	22 x 20 x 1
	Permanent Type Kit	1PF0602BK	1PF0602BK	1PF0603BK	1PF0603BK
Filter Rack		1FR0721	1FR0721	1FR0724	1FR0724
Shipping / Operating Weight (lbs.)		139 / 133	139 / 133	162 / 156	162 / 156

1. Field Supplied.

COILS

MC Model	Application	Refrig. Conn. Types	Face Area (Sq. Ft.)	Rows Deep	Fin Per In.	Coil Size	Tube Geometry	Tube Dia.	Fin Type	TXV	Operating Weight (Lbs.)
MC18A3XH1	Cooling / Heat Pump	Sweat	3.40	2	14	(2) 14 x 17.5	1 x 0.866	3/8	Enhanced	None	53
MC18A2AH1										2A	
MC18B3XH1			3.40	2	14	(2) 14 x 17.5				None	53
MC18B2AH1										2A	
MC24A3XH1			4.38	2	14	(2) 18 x 17.5				None	56
MC24A2AH1										2A	
MC24B3XH1			4.38	2	14	(2) 18 x 17.5				None	56
MC24B2AH1										2A	
MC30A3XH1			4.38	2	14	(2) 18 x 17.5				None	56
MC30A2AH1										2A	
MC30B3XH1			4.38	2	14	(2) 18 x 17.5				None	56
MC30B2AH1										2A	
MC35B3XH1			3.90	3	12	(2) 16 x 17.5				None	65
MC35C3XH1										None	
MC36A3XH1			4.86	2	14	(2) 20 x 17.5				None	64
MC36A2AH1										2A	
MC36B3XH1			4.86	2	14	(2) 20 x 17.5				None	65
MC36B2AH1										2A	
MC36C3XH1			4.86	2	14	(2) 20 x 17.5				None	65
MC36C2AH1										2A	
MC42B3XH1			5.83	2	14	(2) 24 x 17.5				None	72
MC42B2CH1										2C	
MC42C3XH1			5.83	2	14	(2) 24 x 17.5				None	72
MC42C2CH1										2C	
MC48C3XH1			5.35	3	12	(2) 22 x 17.5				None	82
MC48C2CH1										2C	
MC48D3XH1			5.35	3	12	(2) 22 x 17.5				None	82
MC48D2CH1										2C	
MC60D3XH1			5.83	3	12	(2) 24 x 17.5				None	86
MC60D2CH1										2C	
MC61D3XH1			6.80	3	12	(2) 28 x 17.5				None	98
MC61D2CH1										2C	

ELECTRICAL DATA - 208/230-1-60

MA Models	Heater Models*	MAX. STATIC & MIN. CFM		Total Heat ¹				KW Staging					
				KW		MBH		W1 Only		W2 Only		W1 + W2	
		Static	Tap	208V	240V	208V	240V	208V	240V	208V	240V	208V	240V
MA08BN2	4HK*6500206	0.5	Lo	1.9	2.5	6.4	8.5	1.9	2.5	1.9	2.5	1.9	2.5
	4HK*6500506	0.5	Lo	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Med	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Hi	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
MA12BN2	4HK*6500506	0.5	Lo	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Med	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Med	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK165N1506	0.5	Med	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
MA14DN2	4HK*6500506	0.5	Lo	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Lo	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Med	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK16501506	0.5	Med	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
	4HK16501806	0.5	Hi	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK16502006	0.5	Hi	14.4	19.2	49.2	65.5	3.6	4.8	7.2	9.6	14.4	19.2
MA16CN2	4HK*6500506	0.5	Lo	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Lo	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Med	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK16501506	0.5	Med	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
	4HK16501806	0.5	Hi	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK16502006	0.5	Hi	14.4	19.2	49.2	65.5	3.6	4.8	7.2	9.6	14.4	19.2
MA20DN2	4HK*6500806	0.5	Lo	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Lo	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK16501506	0.5	Med	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
	4HK16501806	0.5	Med	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK16502006	0.5	Med	14.4	19.2	49.2	65.5	3.6	4.8	7.2	9.6	14.4	19.2
	4HK16502506	0.5	Med	18.0	24.0	61.5	81.9	3.6	4.8	10.8	14.4	18.0	24.0

1. See conversion Page 7.

* May be 0 (no breaker) or 1 (with breaker).

ELECTRICAL DATA - 208/230-3-60

MA Models	Heat Kit - Three Phase	Max. Static	Min. Speed Tap	Total Heat ¹				KW Staging					
				KW		MBH		W1 Only		W2 Only		W1 + W2	
				208V	240V	208V	240V	208V	240V	208V	240V	208V	240V
MA08BN2	4HK06501025	0.5	Hi	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
MA12BN2	4HK06501025	0.5	Med	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
MA14DN2	4HK06501025	0.5	Med	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
	4HK06501525	0.5	Med	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
	4HK06501825	0.5	Hi	12.9	17.2	44.7	58.7	12.9	17.2	12.9	17.2	12.9	17.2
MA16CN2	4HK06501025	0.5	Med	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
	4HK06501525	0.5	Med	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
	4HK06501825	0.5	Hi	12.9	17.2	44.7	58.7	12.9	17.2	12.9	17.2	12.9	17.2
MA20D	4HK06501025	0.5	Lo	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
	4HK06501525	0.5	Med	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
	4HK16502525	0.5	Med	18.0	24.0	61.4	81.4	9.0	12.0	18.0	24.0	18.0	24.0

1. See conversion Page 7.

ELECTRICAL DATA - 460-3-60

MA Models	Heater Models	MAX. STATIC & MIN. CFM		Total Heat ¹		KW Staging		
				KW	MBH	W1 Only	W2 Only	W1 + W2
		Static	Taps	480V	480V	480V	480V	480V
MA12BN41	4HK06501046	0.5"	Med	9.6	3.28	9.6	9.6	9.6
MA16CN41	4HK06501046	0.5"	Med	9.6	3.28	9.6	9.6	9.6
	4HK06501546	0.5"	Med	14.4	4.92	14.4	14.4	14.4
MA20DN41	4HK06501046	0.5"	Med	9.6	3.28	9.6	9.6	9.6
	4HK06501546	0.5"	Med	14.4	4.92	14.4	14.4	14.4
	4HK06502946	0.5"	Med	28.8	9.84	14.4	28.8	28.8

ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) - COPPER WIRE 208/230-1-60

MA Models	Heater Models*	Field Wiring							
		Heater Amps	Ampacity Min. Circuit			Max. O.C.P. ¹ Amps/Type		Wire Size - AWG 75°C	
		240V	208V	240V	208V	240V	208V	240V	
MA08B	4HK*6500206	10.4	13.03	14.88	15	15	14	14	
	4HK*6500506	20.0	23.42	26.88	30	30	10	10	
	4HK*6500806	31.3	35.60	41.00	40	45	8	8	
	4HK*6501006	40.0	45.08	51.88	50	60	8	6	
MA12B	4HK*6500506	20.0	25.79	29.38	30	30	10	10	
	4HK*6500806	31.3	37.98	43.50	40	45	8	8	
	4HK*6501006	40.0	47.46	54.38	50	60	8	6	
	4HK165N1506	60.0	69.13	79.38	70	90	4	3	
MA14D	4HK*6500506	20.0	24.29	28.00	30	30	8	8	
	4HK*6500806	31.3	36.48	42.13	40	45	8	8	
	4HK*6501006	40.0	45.96	53.00	50	60	8	6	
	4HK16501506	60.0	67.63	78.00	70	90	4	3	
	4HK16501806	73.3	82.07	94.63	90	100	4	3	
	4HK16502006	80.0	89.29	103.00	100	110	3	2	
MA16C	4HK*6500506	20.0	26.17	30.00	30	30	8	10	
	4HK*6500806	31.3	38.35	44.13	40	45	8	8	
	4HK*6501006	40.0	47.83	55.00	50	60	8	6	
	4HK16501506	60.0	69.50	80.00	70	90	4	3	
	4HK16501806	73.3	83.94	96.63	90	100	4	3	
	4HK16502006	80.0	91.17	105.00	100	110	3	2	
MA20D	4HK*6500806	31.3	42.60	48.38	45	50	8	8	
	4HK*6501006	40.0	52.08	59.25	60	60	8	6	
	4HK16501506	60.0	73.75	84.25	90	90	3	3	
	4HK16501806	73.3	88.19	100.88	90	110	3	2	
	4HK16502006	80.0	95.42	109.25	100	125	3	2	
	4HK16502506	100.0	117.08	134.25	125	150	1	1/0	

1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

* May be 0 (no breaker) or 1 (with breaker).

ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) - COPPER WIRE 208/230-3-60

MA Models	Heat Kit - Three Phase	Heater Amps 240V	Field Wiring					
			Min. Circuit Ampacity		Max. O.C.P. ¹ Amps/Type		75°C Wire Size - AWG	
			208V	240V	208V	240V	208V	240V
MA08B	4HK06501025	23.1	26.8	30.8	30	35	10	8
MA12B	4HK06501025	23.1	27.6	31.9	30	35	10	8
MA14D	4HK06501025	23.1	29.1	33.3	30	35	10	8
	4HK06501525	34.7	41.6	46.4	45	50	8	8
	4HK06501825	41.4	48.9	56.1	50	60	8	6
MA16C	4HK06501025	23.1	29.5	33.9	30	35	10	8
	4HK06501525	34.7	42.0	48.4	45	50	8	8
	4HK06501825	41.4	49.3	56.8	50	60	6	6
MA20D	4HK06501025	23.1	33.8	38.1	35	40	8	8
	4HK06501525	34.7	43.5	52.6	45	60	8	6

1. O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

2. Heaters are 3 Phase.

ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) - COPPER WIRE 460-3-60

MA Models	Heater Models	Field Wiring		
		Min. Circuit Ampacity		Wire Size - AWG 75°C
		480V		480V
MA12BN41	4HK06501046	17.4		12
MA16CN41	4HK06501046	17.8		10
	4HK06501546	24.9		10
MA20DN41	4HK06501046	19.1		10
	4HK06501546	26.3		8
	4HK06502946	48.0		8

1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

ELECTRICAL DATA (FOR MULTI SOURCE POWER SUPPLY) - COPPER WIRE 208/230-1-60

MA Models	Heater Models	Min. Circuit Ampacity			Max. O.C.P. ¹ Amps/Type			75°C Wire Size - AWG		
		Circuit			Circuit			Circuit		
		1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
		208 / 240	208 / 240	208 / 240	208 / 240	208 / 240	208 / 240	208 / 240	208 / 240	208 / 240
MA12BN2	4HK16501506	47.5 / 54.4	21.7 / 25.0	–	50 / 60	25 / 25	–	8 / 6	10 / 10	–
MA16CN2	4HK16501506	47.8 / 55.0	21.7 / 25.0	–	50 / 60	25 / 25	–	8 / 6	10 / 10	–
	4HK16501806	44.2 / 50.8	39.7 / 45.8	–	50 / 60	40 / 50	–	8 / 6	8 / 8	–
	4HK16502006	47.8 / 55.0	43.3 / 50.0	–	50 / 60	45 / 50	–	8 / 6	8 / 8	–
MA14DN2	4HK16501506	46.0 / 53.0	21.7 / 25.0	–	50 / 60	25 / 25	–	8 / 6	10 / 10	–
	4HK16501806	42.3 / 48.8	39.7 / 45.7	–	45 / 50	40 / 50	–	8 / 8	8 / 8	–
	4HK16502006	46.0 / 53.0	43.3 / 50.0	–	50 / 60	45 / 50	–	8 / 6	8 / 8	–
MA20DN2	4HK16501506	49.3 / 56.5	21.7 / 25.0	–	50 / 60	25 / 25	–	8 / 6	10 / 10	–
	4HK16501806	45.7 / 52.3	39.7 / 45.8	–	50 / 60	40 / 50	–	8 / 6	8 / 8	–
	4HK16502006	49.3 / 56.5	43.3 / 50.0	–	50 / 60	45 / 50	–	8 / 6	8 / 8	–
	4HK16502506	49.3 / 56.5	43.3 / 50.0	21.7 / 25.0	50 / 60	45 / 50	25 / 25	8 / 6	8 / 8	10 / 10

1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

ELECTRICAL DATA (FOR MULTI SOURCE POWER SUPPLY) - COPPER WIRE 208/230-3-60

MA Models	Heater Model	Minimum Circuit Ampacity			Max OCP ¹ Amps/Type			75°C Wire Size - AWG		
		Circuit			Circuit			Circuit		
		1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
		208/240	208/240	208/240	208/240	208/240	208/240	208/240	208/240	208/240
MA20DN2	4HK16502525	40.0 / 45.4	31.3 / 36.1	- / -	40 / 50	35 / 40	- / -	8 / 8	8 / 8	- / -

1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

KW & MBH CONVERSIONS

FOR	208-VOLT	OPERATION MULTIPLY	240-VOLT	TABULATED KW & MBH BY	.751
	230-VOLT		240-VOLT		.918
	220-VOLT		240-VOLT		.840

ELECTRICAL DATA - COOLING ONLY (60 Hz) - 208/230 - (COPPER WIRE)

Models MA	Total Motor Amps		Minimum Circuit Ampacity		Max. O.C.P. ¹ Amps/Type	Minimum Wire Size A.W.G.
	60 Hertz		60 Hertz			
	208V	230V	208V	230V		
MA08BN21	1.4	1.5	1.8	1.9	15	14
MA12BN21	2.1	3.5	2.6	3.0	15	14
MA14DN21	3.3	2.4	4.1	4.4	15	14
MA16CN21	3.6	4.0	4.5	5.0	15	14
MA20DN21	4.8	7.4	6.0	6.5	15	14

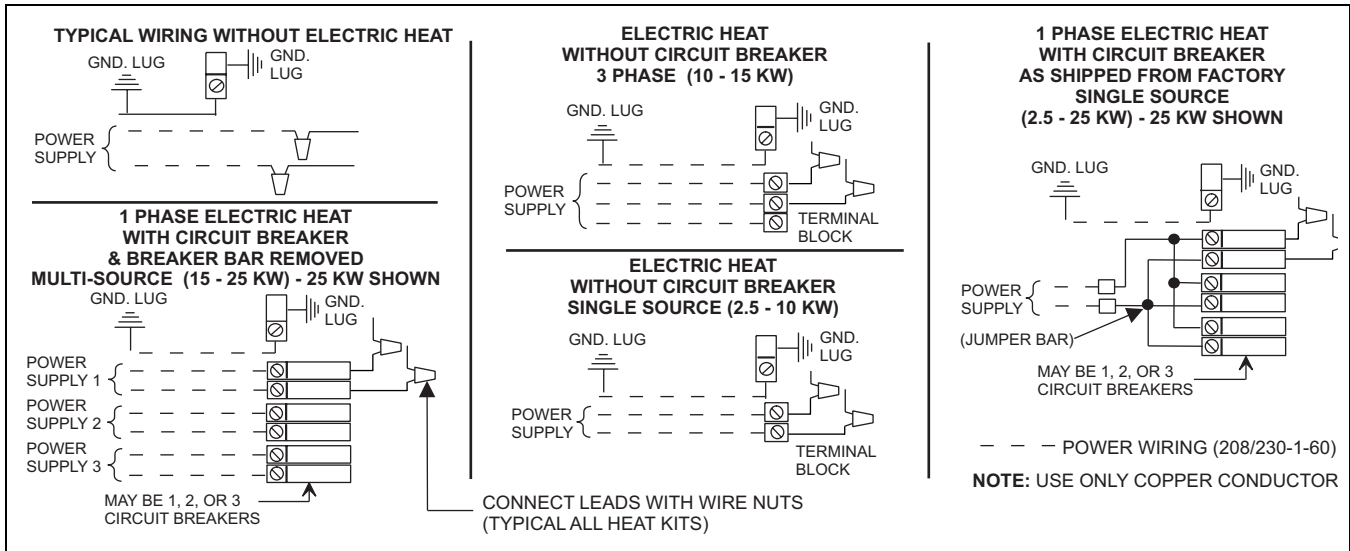
1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

ELECTRICAL DATA - COOLING ONLY (60 Hz) - 460 - (COPPER WIRE)

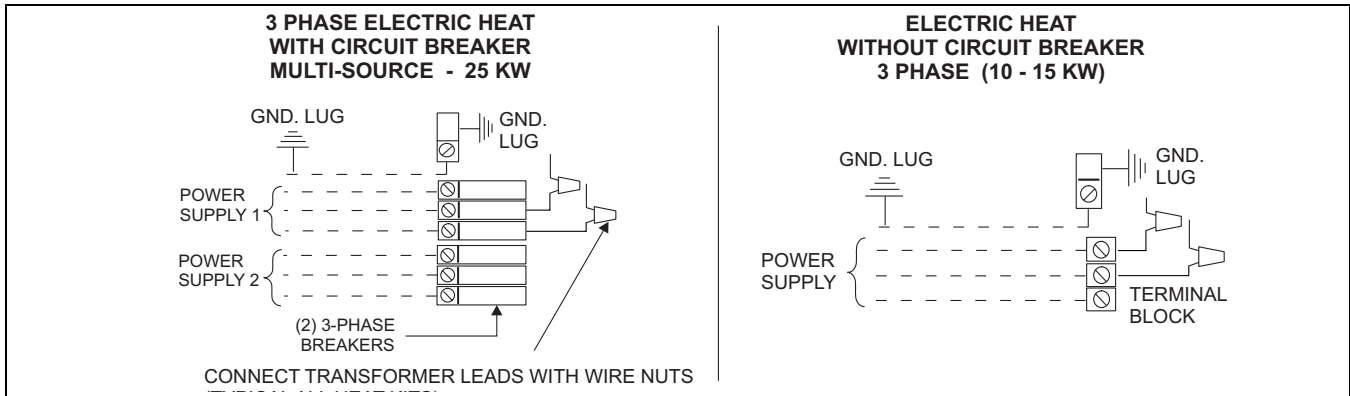
Models MA	Total Motor Amps	Minimum Circuit Ampacity	Max. O.C.P. ¹ Amps/Type	Minimum Wire Size A.W.G.
	60 Hertz	60 Hertz		
MA12BN41	2.3	3.5	15	14
MA16CN41	2.6	3.9	15	14
MA20DN41	3.7	5.6	15	14

1. OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

POWER WIRING



Line Power Connections



460V - Line Power Connections

ACCESSORIES

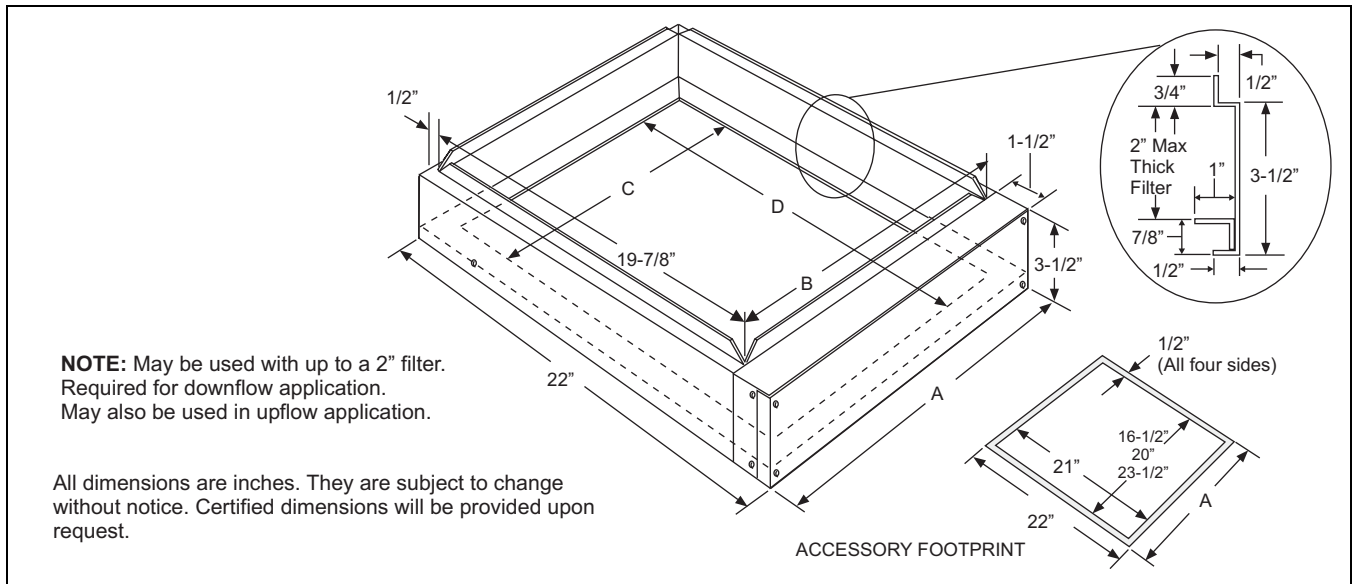
Refer to Price Manual for specific model numbers.

Electric Heaters - Models shown under Electrical Data include sequencers and temperature limit switches and fusible links for safe, efficient operation. Circuit breakers are provided where shown.

Suspension Kit - Suspension Kit Model 1BH0601 is designed specifically for upflow application of the units contained in this technical guide. For suspension of these units in horizontal applications, it is recommended to use angle support brackets with threaded rods at locations shown in air handler installation instructions.

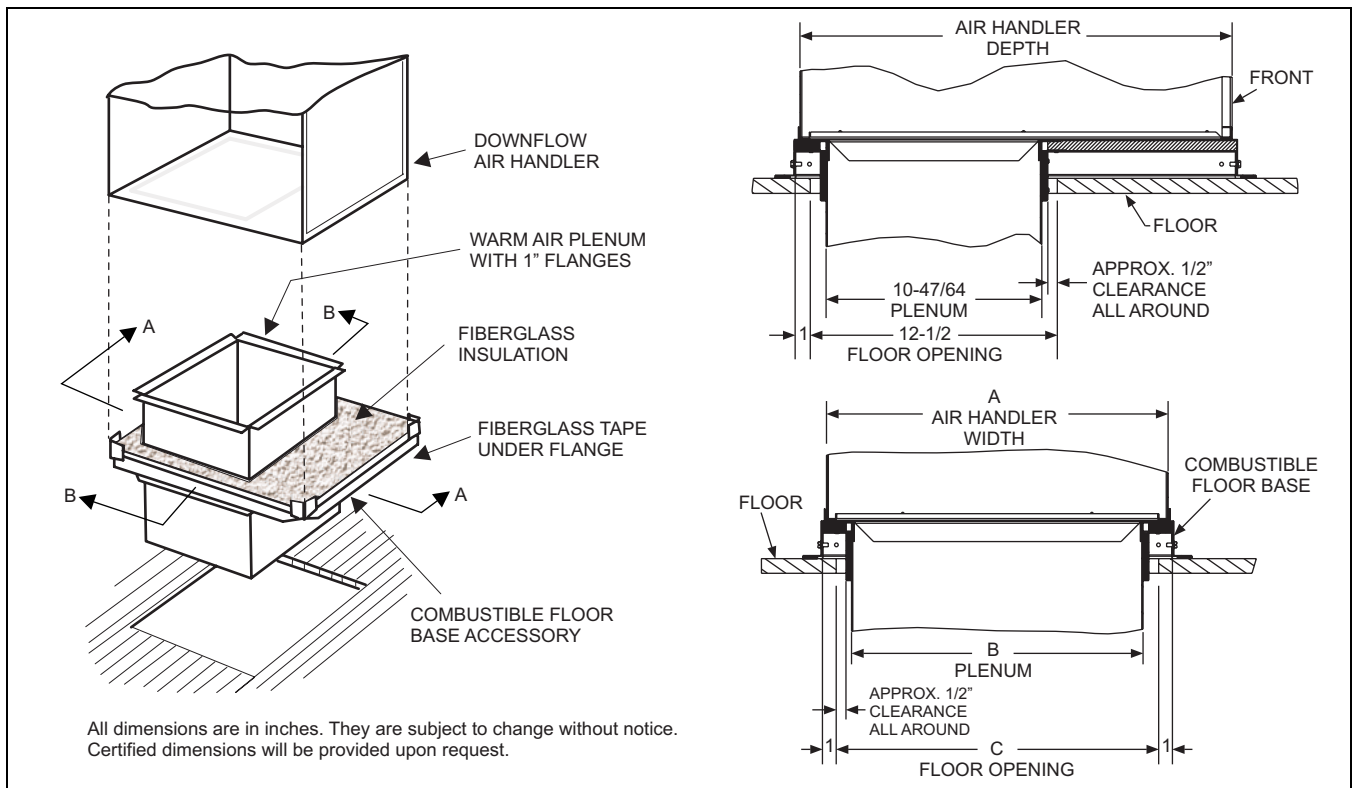
Filter Rack - One of the following external filter rack accessories; 1FR0717, 1FR0721, 1FR0724 must be used when unit is installed in a downflow application.

Combustible Floor Base - If an electric heat accessory which is rated for greater than zero clearance to combustible surfaces is installed in these air handlers in the downflow operating positions on a combustible floor, one of the following combustible floor base accessories is required: 1FB1817, 1FB1821, or 1FB1824.



FILTER RACK ACCESSORY

Filter Rack Models	Used With	Rack Dimensions Inches				Filter Dimensions Inches		
		A	B	C	D	Width	Length	Thickness
1FR0717	MA08B, MA12B	17-1/2	16-3/8	15-1/2	21	17-1/2	22	1
1FR0721	MA16C	21	19-7/8	19	21	21	22	1
1FR0724	MA14D, MA20D	24-1/2	23-3/8	22-1/2	21	24-1/2	22	1



COMBUSTIBLE FLOOR BASE ACCESSORY

Floor Base Models	Used with	Dimensions			
		A	B	C	D
1FB1817	MA08B, MA12B	19.9	18.0	14.9	16.9
1FB1821	MA16C	23.4	21.5	18.4	20.4
1FB1824	MA14D, MA20D	26.9	25.0	21.9	23.9

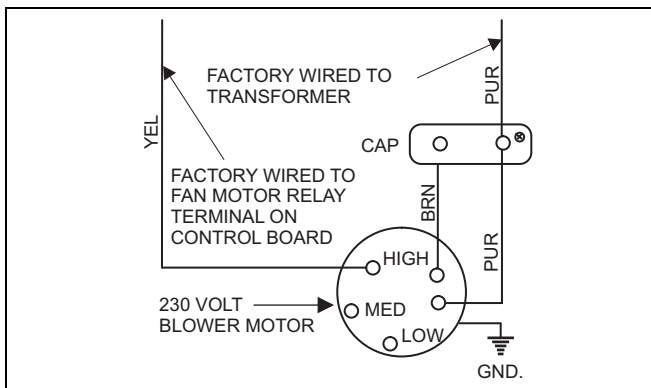
NOTE: Air flow data shown above 0.50" W.C. external static pressure is for REFERENCE ONLY. Maximum allowable external static when electric heat is used is limited to 0.50" W.C. Maximum allowable external static pressure may also be limited by minimum CFM requirements for proper Heat Pump operation.

EXTENDED AIRFLOW DATA¹ - MA MODELS

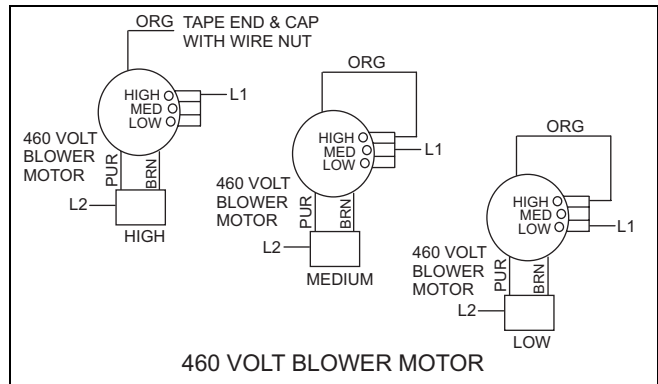
MA Models	MC Models	Blower Motor Speed	230 / 460 Volt - 60 Hz									
			CFM ¹ @ External Static Pressure - IWC									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
MA08B	MC18B**H	High	1102	986	870	754	638	521	405	289	173	57
		Med.	831	737	644	551	457	364	271	178	84	N/A
		Low	615	537	458	379	300	221	142	63	N/A	N/A
	MC24B**H	High	1112	1001	890	780	669	558	447	336	225	114
		Med.	851	759	667	576	484	392	300	208	116	25
		Low	643	562	480	399	317	236	154	73	N/A	N/A
MA12B	MC30B**H	High	1511	1355	1199	1043	887	731	576	420	264	108
		Med.	1241	1107	973	839	705	572	438	304	170	36
		Low	1100	980	861	741	622	502	383	263	144	24
	MC36B**H	High	1464	1286	1108	929	751	573	394	216	38	N/A
		Med.	1195	1050	905	761	616	471	326	181	37	N/A
		Low	1073	944	815	687	558	429	300	172	43	N/A
MA14D	MC48D**H	High	1715	1671	1608	1547	1460	1338	1232	1003	727	508
		Med.	1471	1438	1367	1318	1263	1180	920	824	587	503
		Low	1379	1330	1276	1227	1157	1047	866	681	567	392
	MC60D**H	High	1763	1713	1649	1581	1511	1407	1276	995	852	N/A
		Med.	1487	1462	1412	1356	1280	1210	1087	795	726	N/A
		Low	1381	1353	1292	1225	1186	1057	863	780	669	N/A
	MC61D**H	High	1746	1699	1655	1579	1486	1399	1264	1093	796	581
		Med.	1486	1442	1393	1333	1270	1189	1081	776	628	450
		Low	1392	1336	1285	1226	1158	1061	882	740	680	445
MA16C	MC42C**H	High	1959	1874	1802	1708	1606	1486	1408	1264	953	810
		Med.	1631	1587	1542	1473	1395	1315	1218	967	821	533
		Low	1447	1431	1401	1363	1304	1241	1098	844	751	712
	MC48C**H	High	2018	1895	1772	1649	1525	1402	1279	1156	1033	910
		Med.	1684	1595	1506	1417	1328	1240	1151	1062	973	884
		Low	1561	1476	1392	1308	1223	1139	1055	970	896	801
MA20D	MC48D**H	High	2226	2190	2103	2035	1931	1845	1683	1541	1465	1328
		Med.	2115	2087	2017	1951	1851	1744	1542	1466	1406	1254
		Low	N/A	N/A	N/A	1716	1643	1554	1451	1379	1292	1151
	MC60D**H	High	2326	2235	2192	2107	2027	1906	1786	1538	1469	1368
		Med.	2150	2089	2036	2008	1944	1852	1692	1499	1416	1295
		Low	1737	1752	1745	1718	1676	1600	1447	1389	1311	1200
	MC61D**H	High	2357	2321	2254	2191	2139	1951	1859	1656	1556	1472
		Med.	2212	2144	2111	2069	1986	1862	1727	1566	1498	1369
		Low	1765	1783	1803	1779	1723	1646	1514	1442	1381	1245

1. Includes Return Air Filter and Largest Electric Heater.

All AH, AV, MA, MV, SHP, SV series air handler units are UL Listed up to 0.50" w.c. external static pressure, including air filter, wet coil, and largest KW size heater.



Blower Speed Connections



460V - Blower Speed Connections

NOTE: Air flow data shown above 0.50" W.C. external static pressure is for REFERENCE ONLY. Maximum allowable external static when electric heat is used is limited to 0.50" W.C. Maximum allowable external static pressure may also be limited by minimum CFM requirements for proper Heat Pump operation.

EXTENDED AIRFLOW DATA¹ - MA MODELS

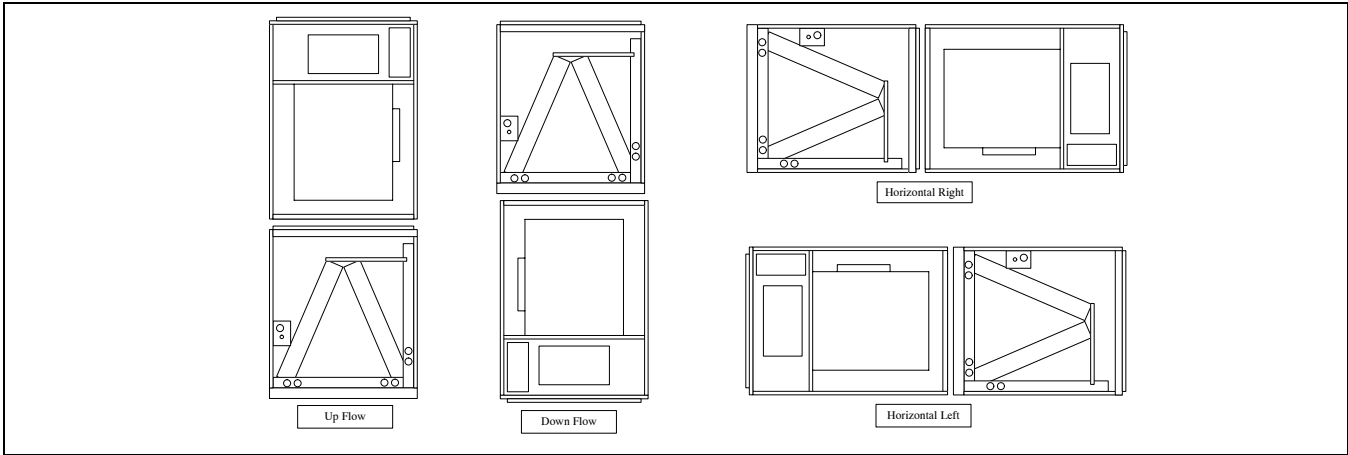
MA Models	MC Models	Blower Motor Speed	208 Volt - 60 Hz									
			CFM ¹ @ External Static Pressure - IWC									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
MA08B	MC18B**H	High	1080	964	848	732	615	499	383	267	150	34
		Med.	712	628	544	461	377	293	210	126	42	N/A
		Low	529	452	376	299	223	146	70	N/A	N/A	N/A
	MC24B**H	High	1039	932	825	717	610	502	395	288	180	73
		Med.	743	659	575	491	407	323	239	156	72	N/A
		Low	532	460	387	315	242	169	97	24	N/A	N/A
MA12B	MC30B**H	High	1444	1271	1099	927	755	582	410	238	65	N/A
		Med.	1101	967	833	699	565	431	297	163	29	N/A
		Low	937	824	711	598	485	372	260	147	34	N/A
	MC36B**H	High	1434	1267	1099	932	764	597	430	262	95	N/A
		Med.	1083	955	827	699	571	443	315	187	59	N/A
		Low	933	818	703	588	473	359	244	129	14	N/A
MA14D	MC48D**H	High	1549	1498	1448	1383	1325	1235	1125	936	658	548
		Med.	1275	1269	1225	1181	1115	997	811	684	548	392
		Low	1190	1162	1112	1074	975	817	737	625	493	358
	MC60D**H	High	1545	1490	1463	1378	1337	1231	1115	850	739	572
		Med.	1266	1248	1207	1140	1101	1005	839	687	564	469
		Low	1192	1186	1126	1067	992	842	740	638	507	347
	MC61D**H	High	1564	1520	1455	1400	1336	1257	1154	813	755	549
		Med.	1303	1262	1225	1165	1117	1028	827	744	590	398
		Low	1204	1161	1104	1060	1001	870	745	554	532	462
MA16C	MC42C**H	High	1782	1712	1619	1524	1435	1323	1213	985	798	557
		Med.	1468	1415	1355	1298	1233	1144	1005	791	669	493
		Low	1310	1278	1239	1185	1125	1045	934	725	561	424
	MC48C**H	High	1983	1865	1747	1629	1511	1393	1275	1157	1039	921
		Med.	1529	1446	1363	1280	1197	1114	1031	948	865	782
		Low	1312	1249	1185	1122	1059	995	932	868	805	742
MA20D	MC48D**H	High	2250	2180	2139	2062	1971	1855	1683	1553	1461	1342
		Med.	1953	1956	1905	1858	1755	1649	1528	1440	1355	1245
		Low	N/A	N/A	1544	1538	1455	1401	1346	1285	1195	1081
	MC60D**H	High	2251	2186	2144	2073	2003	1921	1809	1574	1478	1370
		Med.	1987	1945	1926	1887	1836	1761	1643	1472	1387	1213
		Low	1492	1517	1521	1523	1507	1436	1379	1308	1213	1128
	MC61D**H	High	2208	2123	2092	2054	1910	1762	1595	1496	1435	1298
		Med.	1959	1945	1913	1862	1766	1661	1513	1420	1315	1182
		Low	N/A	N/A	N/A	1546	1491	1407	1354	1258	1184	1088

1. Includes Return Air Filter and Largest Electric Heater.

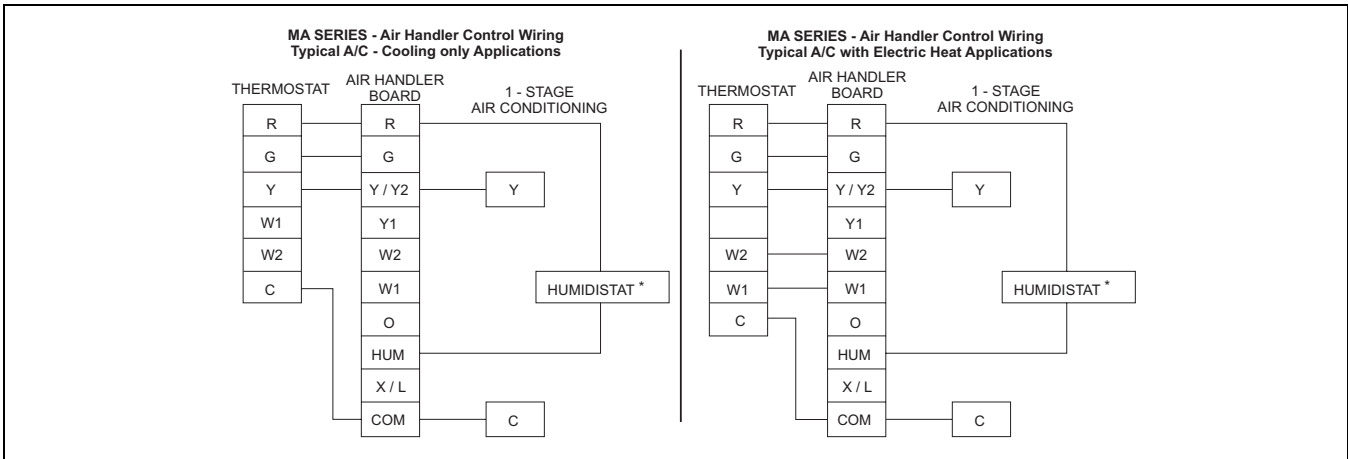
All AH, AV, MA, MV, SHP, SV series air handler units are UL Listed up to 0.50" w.c. external static pressure, including air filter, wet coil, and largest KW size heater.

APPLICATION FACTORS - RATED CFM VS. ACTUAL CFM

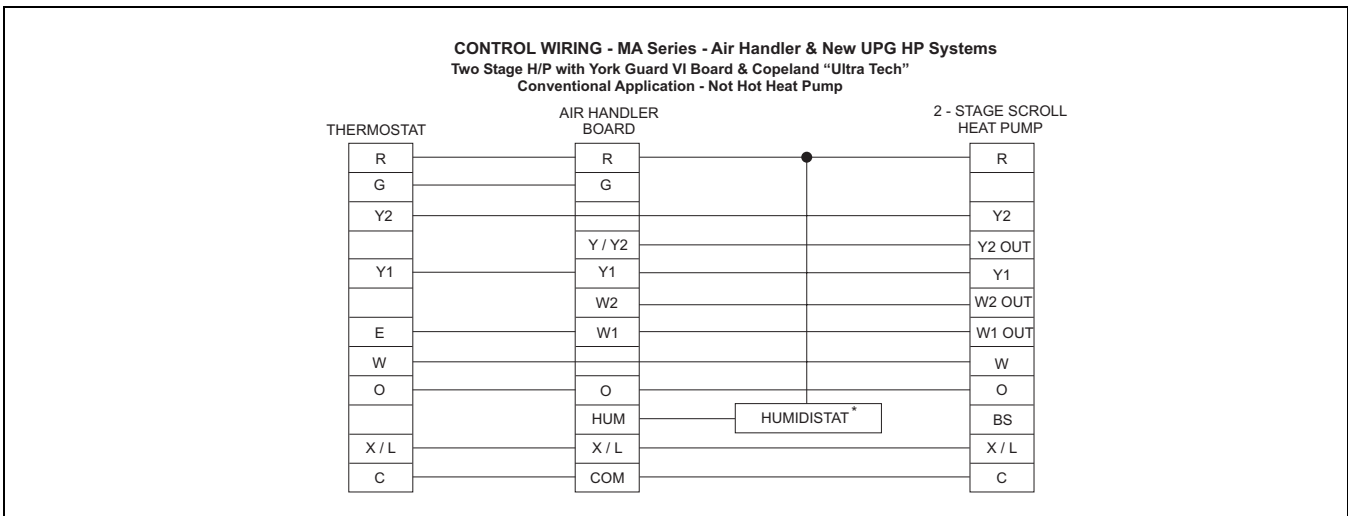
% OF RATED AIR FLOW	80%	90%	RATED CFM	110%	120%
CAPACITY FACTOR	0.96	0.98	1.00	1.02	1.03



Typical Applications with MC Multi-Position Coils



COOLING MODELS WITH ELECTRIC HEAT



CONTROL WIRING - MA SERIES

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253462-BTG-D-0806
 Supersedes: 253462-BTG-C-0806



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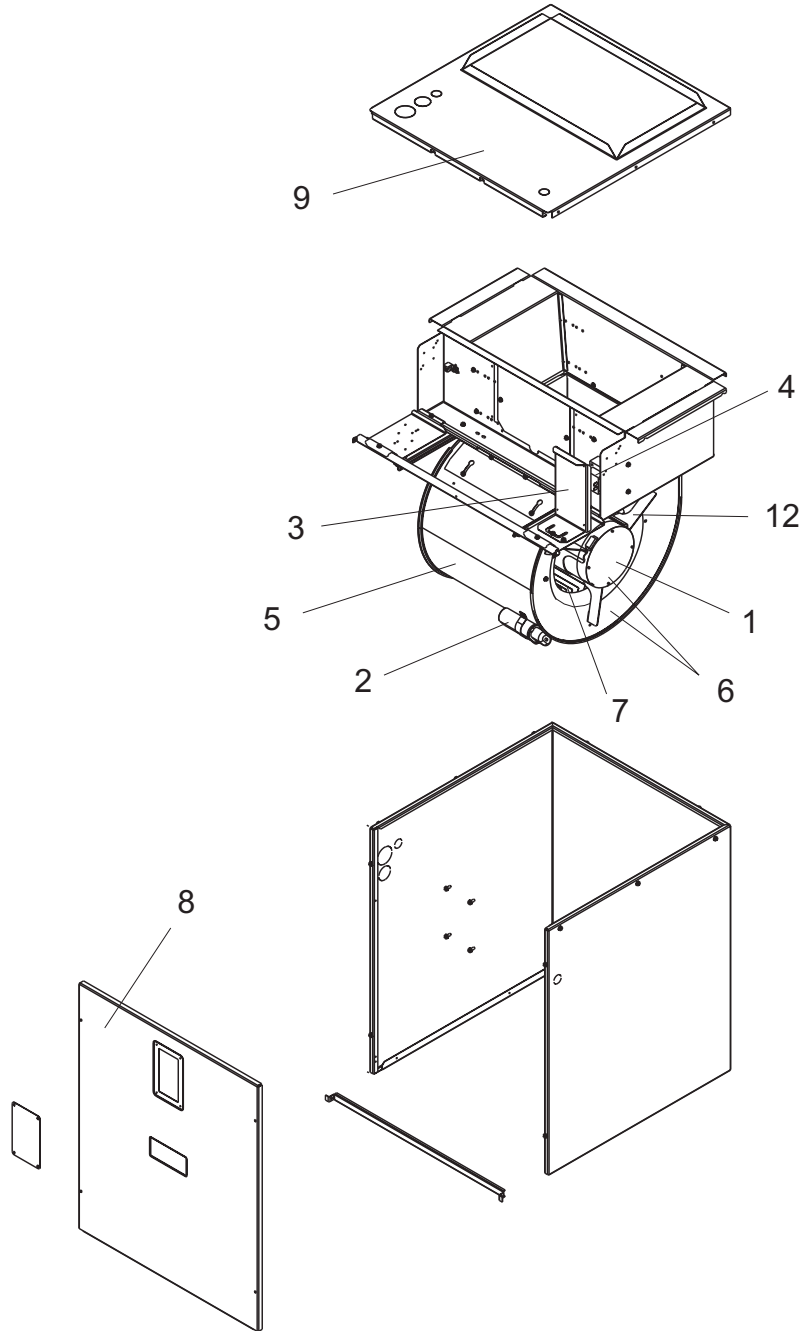
HVAC SERVICE PARTS

MA SERIES MODULAR AIR HANDLERS (STYLE A)

Supersedes: Nothing

035-21133-001 Rev. A (0706)

1 of 4



MODULAR AIR HANDLER - PSC

ITEM	DESCRIPTION	MA08BN21A	MA12BN21A	MA14DN21A	MA16CN21A	MA20DN21A	<
1	Motor, Blower	S1-02435597000	S1-02435598000	S1-02435599000	S1-02435600000	S1-02435601000	
2	Capacitor, Run (10 MFD) [RC]	S1-02420046000	S1-02420046000	S1-02420046000	---	---	
	Capacitor, Run (15 MFD) [RC]	---	---	---	S1-02425900000	S1-02425900000	
3	Control, Fan/Elec Heat	S1-03109156000	S1-03109156000	S1-03109156000	S1-03109156000	S1-03109156000	
4	Transformer	S1-02518452000	S1-02518452000	S1-02518452000	S1-02518452000	S1-02518452000	
5	Housing, Blower (w/Wheel)	S1-02642367000	S1-02642367000	S1-02642412000	S1-02642412000	S1-02642413000	
6*	Assembly, Complete Blower	S1-02642361000	S1-02642362000	S1-02642363000	S1-02642364000	S1-02642365000	
7	Wheel, Blower	S1-02642198000	S1-02642198000	S1-02642199000	S1-02642199000	S1-02642196000	
8	Panel, Access (Front)	S1-37323843003	S1-37323843003	S1-37323843001	S1-37323843002	S1-37323843001	
9	Panel, Top	S1-37323831023	S1-37323831023	S1-37323831004	S1-37323831013	S1-37323831004	
10*	Grommet, Motor (3 Req'd)	S1-02814760000	S1-02814760000	S1-02814760000	S1-02814760000	S1-02814760000	
11*	Ferrule, Motor (3 Req'd)	S1-02320541000	S1-02320541000	S1-02320541000	S1-02320541000	S1-02320541000	
12	Mount, Motor	S1-07319831001	S1-07319831001	S1-07319831001	S1-07319831001	S1-07319831001	
13*	Harness, PSC Motor	S1-02539873000	S1-02539873000	S1-02539873000	S1-02539873000	S1-02539873000	
14	Diagram, Wiring	160633	160633	160633	160633	160633	

MODULAR AIR HANDLER - 120 Volt Single Phase

ITEM	DESCRIPTION	MA12BN11A	MA16CN11A	MA20DN11A	<
1	Motor, Blower	S1-02435623000	S1-02435624000	S1-02435625000	
2	Capacitor, Run (10 MFD) [RC]	S1-02420046000	---	---	
	Capacitor, Run (15 MFD) [RC]	---	S1-02425900000	S1-02425900000	
3	Control, Fan/Elec Heat	---	---	---	
4	Transformer	S1-02518452000	S1-02518452000	S1-02518452000	
5	Housing, Blower (w/Wheel)	S1-02642367000	S1-02642412000	S1-02642413000	
6*	Assembly, Complete Blower	S1-02642362000	S1-02642364000	S1-02642365000	
7	Wheel, Blower	S1-02642198000	S1-02642199000	S1-02642196000	
8	Panel, Access (Front)	S1-37323843001	S1-37323843002	S1-37323843001	
9	Panel, Top	S1-37323831023	S1-37323831013	S1-37323831004	
10*	Grommet, Motor (3 Req'd)	S1-02814760000	S1-02814760000	S1-02814760000	
11*	Ferrule, Motor (3 Req'd)	S1-02320541000	S1-02320541000	S1-02320541000	
12	Mount, Motor	S1-07319831001	S1-07319831001	S1-07319831001	
13*	Harness, PSC Motor	S1-02539873000	S1-02539873000	S1-02539873000	
14	Diagram, Wiring	160633	160633	160633	
15*	Relay, Delay (Blower)	S1-02458000000	S1-02425800000	S1-02425800000	

NOTE: *Not ShownNew replacement parts shown in **bold** face type at the first printing of parts list dated 7/06.

Major components and suggested stocking items are shown with shaded item number.

“<” Across from row indicates a change in that row.

--- Not applicable to specified model.

MODULAR AIR HANDLER - 460 Volt Three Phase

ITEM	DESCRIPTION	MA12B41A	MA16C41A	MA20D41A
1	Motor, Blower	S1-02435326000	S1-02435327000	S1-02435328000
2	Capacitor, Run (10 MFD) [RC]	S1-02420046000	---	---
	Capacitor, Run (15 MFD) [RC]	---	S1-02425900000	S1-02425900000
3	Control, Fan/Elec Heat	S1-03109156000	S1-03109156000	S1-03109156000
4	Transformer	S1-02518452000	S1-02518452000	S1-02518452000
5	Housing, Blower (w/Wheel)	S1-02642367000	S1-02642412000	S1-02642413000
6*	Assembly, Complete Blower	S1-02642362000	S1-02642364000	S1-02642365000
7	Wheel, Blower	S1-02642198000	S1-02642199000	S1-02642196000
8	Panel, Access (Front)	S1-37323843001	S1-37323843002	S1-37323843001
9	Panel, Top	S1-37323831023	S1-37323831013	S1-37323831004
10*	Grommet, Motor (3 Req'd)	S1-02814760000	S1-02814760000	S1-02814760000
11*	Ferrule, Motor (3 Req'd)	S1-02320541000	S1-02320541000	S1-02320541000
12	Mount, Motor	S1-07319831001	S1-07319831001	S1-07319831001
13*	Harness, PSC Motor	S1-02539873000	S1-02539873000	S1-02539873000
14	Diagram, Wiring	160633	160633	160633
15*	Relay, Delay (Blower)	S1-02458000000	S1-02425800000	S1-02425800000

NOTE: *Not Shown

New replacement parts shown in **bold** face type at the first printing of parts list dated 7/06.

Major components and suggested stocking items are shown with shaded item number.

"<" Across from row indicates a change in that row.

--- Not applicable to specified model.

This document Appends 035-14384-000 Rev. E (0303).

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