

MC Compact Series



The (MC) Compact Single-Stage Series raises the bar for water-source heat pump efficiencies, features, and application flexibility. Not only does the MC exceed ASHRAE 90.1 efficiency standards, but it also uses R-454B low Global Warming Potential (GWP) refrigerant, making it an extremely environmentally friendly space conditioning product solution.

FEATURES

- Sizes 006 (1/2 ton, 1.8 kW) through 060 (5 tons, 17.6 kW)
- Exceeds ASHRAE 90.1 efficiency standards
- Environmentally-friendly R-454B low-GWP refrigerant
- Refrigerant Detection System (RDS) (mandatory on size 060, optional feature for sizes 006-048)
- Coaxial heat exchanger
- Galvanized-steel cabinet construction
- Sound-absorbing glass-fiber insulation
- Unique double-isolation compressor mounting for quiet operation
- Insulated divider and separate compressor/air handler compartments
- TXV metering device
- Microprocessor controls with on-board fuse and emergency shutdown
- Field-convertible discharge-air arrangement for horizontal units
- PSC three-speed fan motor (two-speed for 575V)
- Unit Performance Sentinel performance-monitoring system
- Eight standard safety features
- Non-corrosive polymer drain pan
- External Connecting Port on front-left corner post facilitates service tool connectivity, thereby reducing startup, commissioning, and service time
- CXM2 Communicating Controls:
 - Connect directly to the system with a handheld service tool
 - Provides real-time unit operating conditions
 - Reduces startup, commissioning, and service time by providing key system temperatures electronically
 - Captures operating conditions in the event of a safety shutdown

Comfort-Aire®

WATER SOURCE HEAT PUMPS

*.5 to 5 Tons
Energy Efficient Heating & Cooling
for Commercial Applications*



UNIT SIZE

Horizontal Model		W	D	H
006 - 012	in.	19.1	34.1	11.0
	cm	48.5	86.6	28.2
015 - 018	in.	20.1	43.0	17.0
	cm	51.1	109.5	43.2
024 - 030	in.	20.1	43.0	18.3
	cm	51.1	109.5	46.5
036 - 042	in.	20.1	47.1	21.0
	cm	51.1	119.6	53.3
048 - 060	in.	24.1	54.1	21.0
	cm	61.2	137.4	53.3

Vertical Upflow Model		W	D	H
006 - 012	in.	19.1	19.0	22.0
	cm	48.5	48.5	55.9
015 - 030, 041	in.	21.6	21.5	40.0
	cm	54.6	54.6	101.6
036 - 042	in.	21.6	26.0	45.0
	cm	54.6	66.0	114.3
048 - 060	in.	25.5	29.3	50.5
	cm	61.0	82.6	116.8

Warranty—5 years on compressor, 1 years on parts
(Some limitations apply; see printed warranty for details.)

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PHYSICAL DATA

Number of refrigerant circuits	1	1	1	1	1	1	1	1	1	1	1	1
Factory Charge R-454B (oz)	17	18	21	29	37	40	39	46	53	56	56	69
Refrigerant Leak Detection System	0	0	0	0	0	0	0	0	0	0	0	R
Number of Sensors	2	2	2	2	2	2	2	2	2	2	2	2
FPT	1/2"		1/2"		1/2"		3/4"		3/4"		1"	
Coax Volume (gallons)	0.143		0.167		0.45		0.323		0.89		0.89	
Filter Standard - 1" Throwaway	10x18		10x18		20x20		20x20		20x20		28x28	
Weight - Operating (lbs.)	103		114		158		197		210		315	
Weight - Packaged (lbs.)	113		124		163		202		217		322	
Filter Standard - 1" Throwaway	10x18		10x18		16x25		18x24				1-20x24 1-14x20	
Weight - Operating (lbs.)	103		114		158		182				263	
Weight - Packaged (lbs.)	113		124		163		187				270	

Notes:

All dimensions displayed above are in inches unless otherwise marked.

All units have a TXV and 1/2-inch and 3/4-inch electrical knockouts.

The standard Condensate Drain Connection is a rubber coupling that couples to 3/4-inch schedule 40/80 PVC.

The optional Stainless Steel Condensate Drain Connection is 3/4-inch FPT. FPT = Female Pipe Thread

575V fan motors are two speed.

0 = Optional, R = Required

Unit Maximum Water Working Pressure	Max Pressure PSIG [kPa]
Base Unit	300 [2,068]

TESTED TO ASHRAE/AHRI/ISO 13256-1 ENGLISH (I-P) UNITS

Model	Fan Motor	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		Cooling 77°F		Heating 32°F	
		Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
MC006	PSC	5,900	13.4	8,400	4.8	7,200	22.8	6,600	3.9	6,300	15.5	4,900	3.1
	EC	6,100	15.0	8,300	5.1	7,300	26.6	6,500	4.0	6,400	17.7	4,800	3.3
MC009	PSC	8,500	13.8	11,700	4.4	10,000	22.0	9,500	3.9	8,900	15.7	7,200	3.3
	EC	8,600	14.3	11,600	4.5	10,000	23.4	9,500	4.0	9,000	16.7	7,200	3.3
MC012	PSC	10,500	12.7	14,400	4.5	12,800	19.0	11,700	3.9	11,400	14.1	9,300	3.2
	EC	10,700	13.4	14,400	4.6	13,000	21.0	11,700	4.0	11,500	14.9	9,300	3.3
MC015	PSC	14,500	15.2	16,000	4.8	16,700	23.5	13,800	4.3	15,000	16.5	11,000	3.5
	EC	14,700	16.4	15,900	4.9	16,900	26.2	13,800	4.5	15,200	17.3	10,700	3.6
MC018	PSC	17,900	14.3	21,500	4.9	20,700	23.0	17,900	4.2	19,000	16.1	14,000	3.4
	EC	18,000	15.0	21,500	5.1	20,900	25.0	17,700	4.4	19,400	17.3	13,800	3.6
MC024	PSC	24,700	14.7	28,800	5.0	27,500	23.3	24,200	4.4	25,600	17.3	19,000	3.6
	EC	24,900	15.4	28,500	5.1	27,800	24.0	24,000	4.5	25,800	18.0	19,000	3.7
MC030	PSC	28,800	13.7	35,400	4.6	32,400	21.0	29,200	4.1	30,100	16.0	23,300	3.5
	EC	29,200	14.5	35,000	4.8	32,800	23.5	28,800	4.3	30,500	17.3	23,000	3.6
MC036	PSC	34,800	14.6	43,900	4.6	38,800	23.3	36,200	4.0	36,100	16.7	28,500	3.4
	EC	35,200	15.3	43,500	4.8	39,200	25.2	35,800	4.2	36,400	17.4	27,900	3.6
MC042	PSC	41,100	14.0	49,500	4.6	45,200	21.0	40,900	4.0	42,700	16.0	32,700	3.4
	EC	41,800	15.2	48,500	4.9	46,000	22.9	39,900	4.3	43,400	17.4	31,700	3.5
MC048	PSC	48,000	14.3	57,900	4.7	53,000	21.5	48,000	4.1	50,400	16.5	38,000	3.5
	EC	48,900	15.2	57,500	4.8	53,500	22.8	47,700	4.2	50,800	17.6	38,100	3.5
MC060	PSC	59,400	13.2	70,000	4.4	65,800	18.2	59,200	3.9	61,300	15.0	45,400	3.3
	EC	60,200	14.7	68,000	4.7	67,000	21.5	57,100	4.2	62,200	17.4	44,300	3.5
MC041	PSC	36,000	14.0	43,300	4.3	40,300	22.0	35,500	3.8	37,500	16.5	28,000	3.3

Notes:

- Where dual voltages are available, ratings are based on the lower voltage setting.
- Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature.
- Heating capacities based upon 68°F DB, 59°F WB entering air temperature.
- Ground Loop Heat Pump ratings based on 15% antifreeze solution.

Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice or incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product before beginning any installation preparations. All products meet applicable regulations in effect on date of manufacture; however, certifications aren't necessarily granted for life of the product. It is the responsibility of the applicant to determine whether a specific model qualifies for third party incentive/rebate programs (Federal, state, utilities, etc.).