Comfort-Aire®

MC COMPACT SERIES

WATER SOURCE HEAT PUMPS

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

The (MC) Compact Singe-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



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 year on parts
(Some limitations apply; see printed warranty for details.)
www.comfort-aire.com

R454B

PHYSICAL DATA

MC Series	006	009	012	015	018	024	030	036	041	042	048	060
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	O	O	O	O	O	O	O	O	O	O	O	R
Number of Sensors	2	2	2	2	2	2	2	2	2	2	2	2
Water Connection Size												
FPT	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"
Coax Volume (gallons)	0.143	0.143	0.167	0.286	0.45	0.323	0.323	0.738	0.89	0.89	0.89	0.939
Vertical												
Filter Standard - 1" Throwaway	10x18	10x18	10x18	20x20	20x20	20x20	20x20	24x24	20x20	24x24	28x28	28x28
Weight - Operating (lbs.)	103	105	114	153	158	189	197	203	210	218	315	330
Weight - Packaged (lbs.)	113	115	124	158	163	194	202	209	217	224	322	337
Horizontal												
Filter Standard - 1" Throwaway	10x18	10x18	10x18	16x25	16x25	18x24	18x24	2-14x20		2-14x20	1-20x24 1-14x20	1-20x24 1-14x20
Weight - Operating (lbs.)	103	105	114	153	158	174	182	203		218	263	278
Weight - Packaged (lbs.)	113	115	124	158	163	179	187	209		224	270	285

Notes:
All dimensions displayed above are in inches unless otherwise marked.
All units have a TXV and ½-inch and ¾-inch electrical knockouts.
The standard Condensate Drain Connection is a rubber coupling that couples to ¾-inch schedule 40/80 PVC.
The optional Stainless Steel Condensate Drain Connection is ¾-inch FPT. FPT = Female Pipe Thread
575V fan motors are two speed.
O = 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.

"This product complies with all California product labeling laws including, but not limited to, the Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65."

Design, specifications, and performance data subject to change without notice.

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HEAT CONTROLLER
Confidence in any climate
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