

MPCA – Mini Portable Air Cooled Chillers



	MPCA-1.5	MPCA-02	MPCA-03	MPCA-04	MPCA-05	MPCA-07	MPCA-09	MPCA-10	MPCA-13	MPCA-15	MPCA-20
Refrigeration Capacity (Btu/Hr.)											
Capacity @ 20°F LFT	6,815	10,378	19,578	23,832	31,093	38,614	48,240	62,334	76,302	n/a	n/a
Capacity @ 30°F LFT	9,255	13,705	24,871	30,409	39,016	48,630	62,451	79,895	97,121	n/a	n/a
Capacity @ 40°F LWT	12,160	17,444	30,783	37,730	47,990	60,024	79,127	100,109	121,108	n/a	n/a
Capacity @ 50°F LWT	15,518	21,581	37,316	45,823	57,998	72,610	98,310	123,041	148,062	186,500	240,000
Compressor	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	Danfoss Reciprocating	(2) Copeland Scroll	(2) Copeland Scroll
Compressor HP	1 ½	2	3	4	5	7	9	10	13½	(2) 7½	(2) 10
Pump HP	1	1	1	1	1 ½	1 ½	1 ½	2	2	3	3
MDPE Tank Size (gallons)	16	16	16	16	16	26	26	26	26	26	26
Chilled Water Flow Rate @ 50°F LWT (gpm@ psi)	6 @ 43	7.3 @ 43	10.4 @ 42	12 @ 40	14.5 @ 42	17.5 @ 41	22 @ 40	27.6 @ 55	32 @ 53	32 @ 46	51 @ 44
Dimensions (in.)											
Length	41"	41"	46"	58"	62"	62"	74"	74"	74"	69"	69"
Width	31"	31"	32"	33"	37"	37"	37"	37"	37"	67"	67"
Height	50"	50"	53"	59"	59"	59"	69"	69"	69"	94"	94"
Shipping Weight (lbs.)	580	580	625	700	785	1,140	1,250	1,360	1,500	1,600	1,700
Electrical Rating											
FLA @ 230-3-60	12	14	26	28.3	36.3	40	44.3	66.2	81.2	76.8	86.8
FLA @ 460-3-60	7.5	7.5	13.5	14.2	18.2	17	19.2	33.1	41.1	38.4	43.4
Connection Sizes											
Chilled Water Conn. (in.)	¾"	¾"	1"	1"	1"	1"	1 ¼"	1 ¼"	1 ½"	1 ½"	2"
Hot Gas By-Pass	optional	optional	optional	standard	standard	standard	standard	standard	standard	standard	standard
Options											
25 gal. stainless steel tank	n/a	n/a	n/a	optional	optional	optional	optional	optional	optional	option	option
Auto. Water Make-Up Valve	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Nema 4 Control Panel	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Low Water Level Alarm	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
High Temperature Alarm	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Low Temperature Alarm	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional

1 ton = 12,000 btu/hr.

Specifications based on 90°F ambient temperature @ ARI condition

Note: Cooling Technology, Inc. reserves the right to change manufacturers of components as found necessary. Copeland Compressors may be substituted for Danfoss on Models MPCA-03, 04 and 05 only.



Basic Construction

CONSTRUCTION

Frame	Heavy gauge carbon steel base. Bolted frame construction.
Finish	Primed & Painted with Acrylic Enamel
Features	Heavy gauge steel panels

CONDENSING UNIT

Compressor Type	MPCA (1-13) Danfoss Hermetic Reciprocating with crankcase heater. MPCA (15 & 20) Copeland Scroll
Unloading	Hot gas by-pass (MPCA-04-20)
Features	Integral force feed lubrication system Motor winding protection
Design Air Temp	90°F
Condenser Construction	Copper tubes with aluminum fins
Pressure Control	Fan cycling
Features	Receiver tank with liquid shut-off
Electronics	Danfoss - UL listed unit

EVAPORATOR

Type	Direct expansion – Brazen plate design
Construction	AISI 316L Stainless Steel plate with copper brazing
Insulation	Closed cell foam
Fluid Pressure Drop	<6 psig (typical)

INLINE WATER FILTER WITH STAINLESS STEEL MESH

Construction	AISI 304 Stainless Steel filter element with bronze or ABS body
Filter Size	18 mesh

TANK

Construction	MDPE - Medium Density Polyethylene
Insulation	½" foam insulation
Features	Sight glass Drain Make-up connection

ELECTRICAL CONTROLS

Microprocessor Controller	Motor overload protection
Low-flow cutout	High pressure cut-out
Freeze stat protection	Motor starters
	Time delay low pressure cutout

REFRIGERATION SPECIALTIES

Thermal expansion valve
Liquid line solenoid valve
High pressure relief valve
Sight glass / moisture indicator
Filter Dryer

MPCA TYPICAL PIPING LAYOUT

