

Defining Mission Critical Cooling



Motivaire CTC Low Temperature chillers are designed to cool process fluids between +32F and -25F.

Each product is engineered and manufactured with industrial grade components to operate under the most demanding conditions at customer specified design points.

Capacities from 5 – 300 Tons.

FEATURES

- Customized options allow equipment to meet specified design criteria ensuring reliable option and lowest total cost of ownership
- Industrial grade components designed for low temperature refrigeration systems
- Multiple refrigerant options
- Air-Cooled or Water-Cooled condenser options
- Centurion Monitoring System provides optional 24x7 global remote monitoring and support

MPC/MPC-FC SPECIFICATIONS

AIR COOLED CHILLERS WITH SCROLL COMPRESSORS		MPC-A	0200	0300	0500	0800	1000	1200	1500	2200	3000	3500	4000	5000	6000	7200	8000	8500	9000
Cooling Capacity *	Tons	2.2	3.0	4.2	5.7	8.9	11.3	13.3	17.8	22.6	26.6	30.0	35.7	44.5	50.2	67.1	81.5	95.7	
Elevation	FT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refrigerant	Type	R-410A																	
Number of Compressors	Qty	1	1	1	1	1	1	1	2	2	2	2	4	4	4	4	4	4	4
Refrigerant Circuits	Qty	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Compressor Running Current	A	4.3	5.5	8.3	12.1	14.8	18.5	23.8	14.85	18.5	23.8	26.3	14.85	18.825	25.7	28.625	37.275	42.075	
Compressor Locked Rotor Amprage	A	35	46	62	95	125	150	179	125	150	179	225	125	150	179	225	272	310	
Max Absorbed working current per Compressor	A	8	11	15.2	23	28	35	41	28	35	41	47.5	28	35	41	47.5	65.4	85	
Evaporator Flow Rate	GPM	5	7	10	14	21	27	32	43	59	64	72	86	107	121	161	196	230	
Minimum Fluid Flow Rate	GPM	5	5	5	13	13	26	26	26	42	42	29	70	70	132	132	159	159	
Maximum Fluid Flow Rate	GPM	19	19	19	29	29	70	70	70	101	101	141	141	203	247	282	365		
Maximum Pump Absorbed Power	kW	0.75	0.75	0.75	1.1	1.1	2.2	2.2	2.2	3	3	3	4	4	5.5	5.5	7.5	11	
Maximum Pumps Absorbed Current	A	1.6	1.7	1.7	2.4	2.4	4.3	4.3	4.3	5.85	5.85	5.85	7.7	7.7	10	10	13.2	20	
Integrated Pump External Pressure	PSI	38.11	38.16	36.92	37.68	33.51	36.74	36.53	34.95	34.77	31.94	29.81	34.05	31.76	34.05	35.65	43.39	51.51	
Integrated Tank Volume	GAL	13	13	13	30	50	50	50	100	100	100	100	100	100	100	130	130	130	
Number of Condenser Coils	Qty	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Condenser Fan(s)	Qty	1	1	1	1	2	2	2	2	2	2	2	3	3	3	5	5	6	
Total Absorbed Power	kW	1.05	1.05	1.05	1.42	2.1	2.84	2.1	4.36	4.36	4.36	4.36	6.54	6.54	6.54	10.9	10.9	13.08	
Absorbed Current	A	1.57	1.57	1.57	2.54	3.14	5.08	3.14	7.6	7.6	7.6	7.6	11.4	11.4	11.4	19	19	22.8	
NOISE DATA																			
Distance measured in an open field at 33 Feet from Condenser																			
Sound Pressure Level at 32.8'	dBA	53.4	53.6	53.8	60.0	57.4	63.2	58.7	60.4	60.7	61.4	63.0	62.5	62.8	63.8	67.5	69.6	69.4	
ELECTRICAL DATA																			
Includes Integrated Pump																			
Nominal Power	kW	4.56	5.3	7.45	10.62	12.84	17.29	18.65	25.84	31.86	36.06	41.31	49.1	60.74	75.24	94.2	121.2	140.08	
Maximum Absorbed current (FLA) based on compressor MCC	A	11.27	14.27	18.47	27.94	33.54	44.38	48.44	67.9	83.45	95.45	101.95	131.1	159.1	185.4	219	293.8	343.6	
Electrical	V/PH/Hz	460/3/60																	
Full Load Current (FLA)	A	7.5	8.8	11.6	17.0	20.3	27.9	31.2	41.6	50.5	61.1	66.1	78.5	94.4	124.2	143.5	181.3	211.1	
Min Circuit Ampacity (MCA)	A	8.5	10.1	13.6	20.1	24.0	32.5	37.2	45.3	55.1	67.0	72.6	82.2	99.1	130.6	150.7	190.6	221.6	
Max Overcurrent Protection (MOP)	A	12.8	15.6	21.9	32.2	38.8	51.0	61.0	60.2	73.6	90.8	98.9	97.1	117.9	156.3	179.3	227.9	263.7	
Sound Pressure Level at 32.8' (Low Noise)	dBA	53.1	53.2	53.2	59.8	56.6	62.9	57.5	59.6	59.7	60.0	60.8	61.4	61.6	62.2	64.9	66.3	66.8	
EQUIPMENT DIMENSIONS & WEIGHTS																			
Length	IN	32.3	32.3	32.3	39.8	63.4	63.4	63.4	87.4	87.4	87.4	87.4	132.1	171.5	171.5	211	211	250	
Width	IN	24.2	24.2	24.2	28.3	33.9	33.9	33.9	43.3	43.3	43.3	43.3	43.5	43.5	43.5	43.5	43.5	43.5	
Height	IN	53.5	53.5	53.5	62.2	60.6	60.6	60.6	82.7	82.7	82.7	82.7	85.8	85.8	85.8	85.8	85.8	85.8	
In & Out Connection Size	IN	1"	1"	1"	1"	1.5"	1.5"	1.5"	2"	2"	2"	2"	2.5"	2.5"	2.5"	5"	5"	5"	
Estimated Shipping Weight	LBS	386	397	408	573	860	882	948	1,786	1,830	1,885	2,050	3,417	4,631	4,851	5,292	6,020	6,758	

Molvaire reserves the right to make changes to product specifications without notice.

FREE COOLING CHILLERS WITH SCROLL COMPRESSORS		MPC-FC	1000	1200	1500	2200	3000	3500	4000	5000	6000	7200	8000	8500	9000
Cooling Capacity	Tons	8.6	10.9	13.0	17.1	21.7	25.7	29.2	34.3	44.0	52.5	63.8	77.3	88.9	
100% Free Cooling Ambient	°F	32	34	33	33	33	34	33	33	32	30	31	28	21	
Refrigerant	Type	R-410A													
Number of Compressors	Qty	1	1	1	2	2	2	2	4	4	4	4	4	4	
Refrigerant Circuits	Qty	1	1	1	1	1	1	1	2	2	2	2	2	2	
Evaporator Flow Rate	GPM	21	26	31	41	52	62	70	83	106	126	153	186	214	
PSI Drops (Evap+Valves+Piping)	PSID	5.71	5.72	5.96	6.30	6.65	7.00	6.88	7.82	9.45	10.96	5.83	6.07		
F.C. PSI Drop (F.C.+Evap+Valve+Piping)	PSID	11.31	9.11	9.81	9.92	11.43	12.96	12.14	14.47	14.47	17.16	11.08	11.67		
Integrated Pump External Pressure	PSI	27.52	32.71	31.68	30.70	41.46	36.58	39.33	36.20	38.51	40.32	40.32	36.28	46.37	
Integrated Tank Volume	Gallons	50	50	50	100	100	100	100	130	130	130	130	130	130	
Condenser Fan(s)	Qty	2	2	2	2	2	3	3	4	5	5	6	6	6	
NOISE DATA															
Distance measured in an open field at 33 Feet from Condenser															
Sound Pressure Level at 32.8'	dBA	61.2	60	60.4	60.4	60.8	62.5	63.8	63.3	64.3	64.9	67.7	69.8	69.4	
ELECTRICAL DATA															
Includes Integrated Pump															
Electrical	V/PH/Hz	460/3/60													
Full Load Current (FLA)	A	23.2	32.0	37.0	43.7	55.7	69.7	73.9	86.5	111.8	131.4	156.4	193.2	224.8	
Min. Circuit Ampacity (MCA)	A	27.1	37.0	43.3	47.7	60.8	76.0	80.8	90.5	116.8	137.6	163.9	203.0	236.2	
Max. Overcurrent Protection (MOP)	A	42.9	57.1	68.4	63.6	81.0	101.3	108.2	106.4	136.7	162.4	194.0	242.3	281.7	
EQUIPMENT DIMENSIONS & WEIGHTS															
Length	IN	63.4	87.4	87.4	132.1	132.1	132.1	171.5	171.5	210.6	210.6	250.0	250.0	250.0	
Width	IN	33.9	43.3	43.3	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	
Height	IN	60.6	82.7	82.7	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	
In & Out Connection Size	IN	1.5"	1.5"	1.5"	2"	2"	2"	2"	2.5"	2.5"	2.5"	5"	5"	5"	
Estimated Shipping Weight	LBS	1,323	1,676	1,764	3,208	3,241	3,329	4,630	4,850	5,335	5,445	6,162	6,603	7,154	

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* Air Cooled Capacity Rated @ 44°F LWT / 54°F EWT / 95°F Ambient / 100% Water. ** Water Cooled Capacity Rated @ 44°F LWT / 54°F EWT / 85°F ECWT

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