THERMAL MANAGEMENT

MPC-W Water-Cooled Chillers

15-136 Tons

motivair™
by Schneider Electric

In your business, every second counts

Motivair's MPC-W product line is designed for simplicity and ease of use

The MPC-W range of chillers is manufactured using the highest quality components. All components must pass a rigorous test cycle before being selected for production use. All MPC-W chillers are certified by ETL to be in compliance with UL and CSA standards and are CE certified.

The combination of innovative design, premium components, and universal certification yields a final product worthy of the most demanding cooling applications.

FLEXIBILITY

Process cooling and HVAC heat loads are dynamic and sometimes unpredictable.

The MPC-W range offers capacity control models with one, two, and four compressors allow for staging in conjunction with cycling.

COMPACT FOOTPRINT

Motivair's MPC-W chillers have the most compact foot print available in today's market. The chiller range fits through standard width doors and is able to fit in a standard freight elevator to add to the ease of installation.

The Motivair MPC-W chillers contain one or multiple scroll compressors, an electronic expansion valve, brazed plate evaporator(s), brazed plate condenser(s), filter dryer (per circuit), and a full charge of R-32 refrigerant.
Market demand for optimum efficiency and space optimization makes the MPC-W the ideal choice for your water cooled chiller application. Motivair's extensive list of available options makes a tailored selection easier than ever Include a storage, tank and circulation pump combined with chiller single point power to significantly reduce your cost of installation while maximizing available space.

To further enhance system efficiency, explore the 100% series heat recovery option to provide simultaneous heating and cooling for your HVAC system. Heat recovery can be utilized for VAV re-heat as well as boiler pre heat.Hot water temperatures are available up to 140*F.

SCROLL COMPRESSORS

Multiple high efficiency scroll compressors with R-32 refrigerant. They are designed to operate at high efficiency across the entire operating range with lower sound and vibration than traditional compressors. This unique scroll compressor design allows for resistance to liquid slugging. VFD options are also available on select models.

RANGE OF APPLICATIONS

The MPC-W chillers can be applied to a wide range of commercial and industrial applications. Some common applications for MPC-W chillers include:

- Welding Machines
- Lasers
- Metal Spraying
- Food Processing
- MRI Machines
- CT Scan Machines
- Plastics Processing
- Printing Processes
- Hydraulic Cooling
- Multipurpose HVAC
- IT Rooms
- Pharmaceutical Mfg.
- Oncology Machines
- Surgical Suites

Additional Features

- R-410A environmental friendly refrigerant
- High efficiency, stainless steel, brazed plate evaporator
- High efficiency, stainless steel, brazed plate condensers
- Condenser water regulating valve
- Robust industrial mainframe
- Standard high-pressure and low-pressure refrigeration gauges 5 tons and above
- Total Series Heat Recovery
- Water Source Heat Pump
- Desuperheater
- Low leaving fluid (20°F) n Laser (+/- 1°F) temperature controls
- Simplex or Duplex pump package
- Castors for portability
- Optional shell and tube evaporator
- Optional shell and tube condenser
- Optional thermal storage reservoir
- Optional remote air cooled condenser

Gain Speed to Insight with Advanced Controls

THE MICROPROCESSOR

The standard Motivair microprocessor controller is a very powerful, yet user-friendly device. It offers a wide range of standard controls and alarms to suit any chiller application. It can control up to 4 stages of cooling in the chiller.

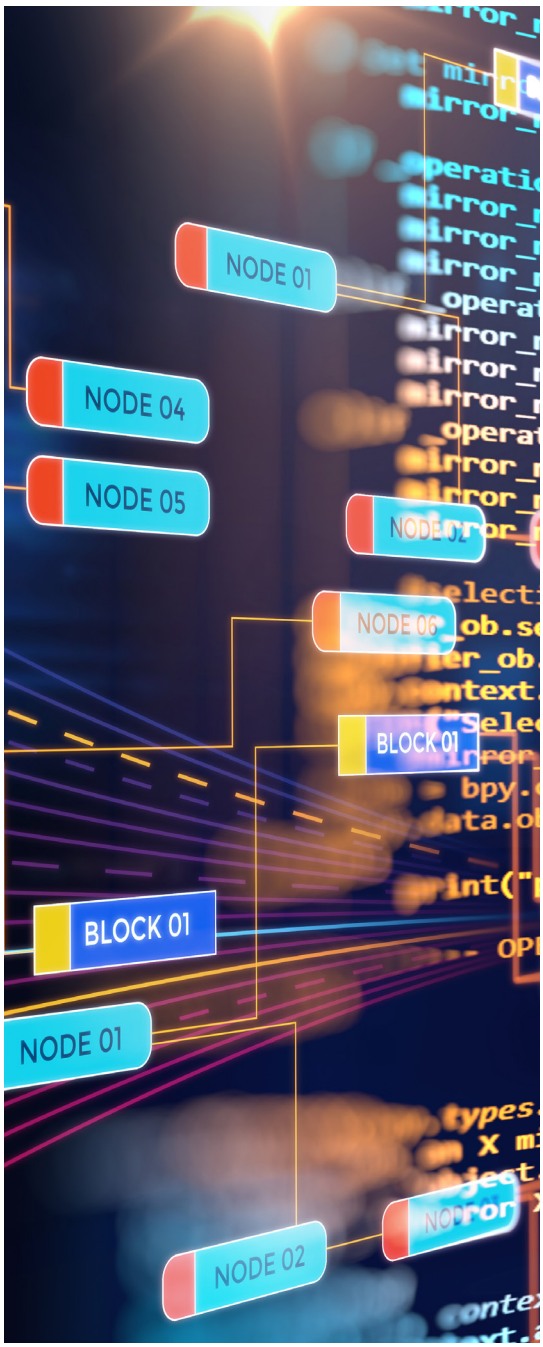
Optional communication features include:

- a serial card connection to a remote PC and a full-feature
- Remote wall-mounting controller, connected via an RS485 cable up to 500 feet away.

For those applications requiring up to 8 cooling stages, and/or a higher level of remote communication, the PC05 advanced PLC system is available from the MPC 2200 and above.

MPC model	Standard	Optional
MPC 0005-0010	XR-30C	N/A
MPC 0150-0300	XR-30C	Micro Chiller 2SE
MPC 0500-1500	Micro Chiller 2SE	N/A
MPC 2200-9000	Micro Chiller 2SE	PC05

Standard Features & Alarms	XR-30C	Micro Chiller 2SE	PC05
Highly visible digital display	x	x	x
Multi-character LCD display			x
Remote start/stop relay		x	x
General alarm relay		x	x
Supply water temp. display	x	x	x
Return water temp. display		x	x
Adjustable water set point	x	x	x
Adjustable alarm set points	x	x	x
°F/°C adjustable	x	x	x
Manual alarm reset	x	x	x
High refrigeration pressure alarm		x	x
Low refrigeration pressure alarm		x	x
Freeze alarm	x	x	x
Phase/Voltage alarm		x	x
High water temperature alarm	x	x	x
Low water temperature alarm	x	x	x
Adjustable anti-compressor short cycle feature		x	x
Low water/glycol flow alarm		x	x
Compressor overload alarm		x	x
RS 232/RS 485 communication		consult factory	x
Ethernet communication			x
LON, BACNET, MODBUS communication		consult factory	x
Optional remote wall mount controller		x	x



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Technical Specifications

UNIT MODEL SCROLL COMPRESSOR	MPCW	2200	2800	3000	3500	4000	4500	5000	5500	5800	6000	6500	6800	8000	8500	9000	9200	9500	9800
Cooling Capacity*	Tons	16.2	18.7	22.0	24.1	27.9	32.7	37.4	42.5	47.5	53.9	62.1	65.8	74.9	83.7	93.3	103.2	120.6	136.5
Refrigerating Circuit	Qty	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Scroll Compressor	Qty	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4
Capacity Steps Per Compressor	Qty	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4
EVAPORATOR TYPE	Type	Brazed Plate																	
Evaporator Quantity	Qty.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pressure Drop	PSI	7.4	6.2	3.8	4.5	5.9	4.6	5.9	5.1	6.4	6.5	6.7	3.0	3.9	4.9	5.9	7.4	7.4	7.4
Water Flow	GPM	43.1	49.3	58.6	63.8	74.0	86.7	99.5	112.7	125.9	143.1	165.1	175.7	199.4	222.8	247.4	273.9	320.1	362.8
CONDENSER TYPE	Type	Brazed Plate																	
Condenser Quantity	Qty.	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Pressure Drop	PSI	6.2	2.2	2.9	3.5	3.2	4.5	4.5	5.8	7.4	5.8	6.7	2.8	3.6	4.5	5.7	7.0	6.2	8.0
Water Flow	GPM	51.1	58.6	68.7	76.2	88.1	103.0	118.9	134.7	151.0	170.4	195.9	103.5	118.0	132.5	148.8	164.2	191.1	216.2
SERIES HR TYPE	Type	Brazed Plate																	
Series HR Quantity	Qty.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Capacity Heat recovery in series	Tons	15.6	17.9	21.0	23.2	26.8	31.5	36.2	41.2	46.1	52.0	59.9	63.1	72.2	81.1	90.6	100.5	116.7	132.2
In/out Water Temperature	°F	104°/115°																	
Water Flow	GPM	40.4	46.3	54.4	60.0	69.2	81.5	85.2	105.7	118.9	134.8	155.0	136.9	156.7	176.1	198.1	218.8	255.4	287.1
Pressure Drop	PSI	3.9	1.3	1.9	2.2	2.3	2.8	2.8	3.6	4.6	3.6	4.2	4.6	6.1	7.5	3.6	4.4	5.9	6.2
Cooling capacity active recovery	Tons	14.4	16.5	19.4	21.2	24.6	29.0	33.1	37.5	42.0	48.0	55.2	58.4	66.2	73.9	82.5	91.7	107.3	121.2
"MPC-W Noise Data (No Pump) Sound Pressure Level @ 3ft"	dB(A)	64	63	65	65	66	72	72	71	74	74	74	75	75	74	77	77	77	81
Electrical supply	V/Ph/Hz	460/3/60																	
Max abs. Current	Amps	40	49	51	57	69	75	81	87	95	103	120	143	155	167	183	183	233	267
Max LRC	Amps	123	139	147	150	178	215	266	272	319	327	365	282	340	352	407	407	478	512
OPTIONAL PUMP (EVAPORATOR)																			
Available Pump Pressure (external to chiller) PSI		28.9	27.1	24.7	24.2	23.2	21.8	27.8	26.7	23.1	27.4	24.2	28.3	24.7	21.2	27.1	26.3	22.9	28.9
Pump Power	HP	2	2	2	3	3	3	4	4	4	5	5	5	5	5	7	10	10	12
Pump Current	Amps	2.9	2.9	2.9	4.1	4.1	4.1	5.7	5.7	5.7	6.8	6.8	6.8	6.8	6.8	9.8	12.8	12.8	15.7
MPC-W SERIES HR-DIMENSIONS & WEIGHTS																			
MPC-W Length	in	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
MPC-W Width	in	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	34.6	34.6	34.6	34.6	34.6	34.6	34.6
MPC-W Height	in	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	72.8	72.8	72.8	72.8	72.8	72.8	72.8
Weight (Transport)	lbs	882	992	1,091	1,168	1,433	1,543	1,687	1,863	2,094	2,425	2,756	3,263	3,373	3,704	3,792	4,145	4,365	4,740
MPC-W WITH PUMP -DIMENSIONS & WEIGHTS																			
MPC-W Length	in	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
MPC-W Width	in	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	34.6	34.6	34.6	34.6	34.6	34.6	34.6
MPC-W Height	in	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	72.8	72.8	72.8	72.8	72.8	72.8	72.8
Weight (Transport)	lbs	1,124	1,279	1,323	1,499	1,896	2,006	2,337	2,513	2,668	2,910	3,086	3,638	3,924	4,189	4,519	4,696	4,850	5,247

*Nominal Cooling Capacity based on EWT 54F LWT 44F condenser EWT 85F LWT95F Remote Air-Cooled Condenser AMB 95F

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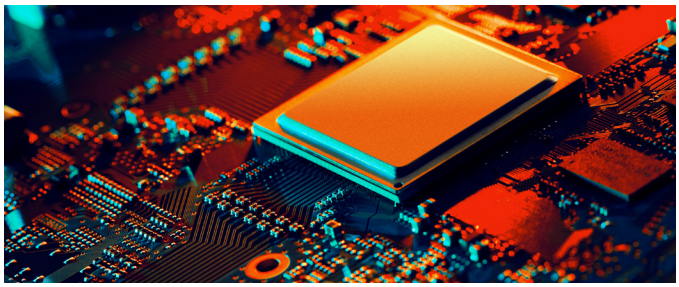
We cool the most advanced technology on the planet

We discover, design, and develop resilient thermal technologies and strategies, and convert that into actionable insights and unparalleled value for our clients.

From climate research to finance, cloud to artificial intelligence, customers trust Motivair's cooling technologies so they can break new boundaries and help deliver tomorrow's innovations faster.

We're helping our clients discover cures for diseases, combat climate change, and make tomorrow's data-driven services more reliable and accessible.

We are touching millions of lives each day by providing the critical cooling technology to support productivity and innovation that is changing our world.



DIRECT-TO-CHIP COOLING

Supercomputing isn't just in the lab anymore.
The power of high-performance computing is scaling out as more enterprises and corporations look to utilize artificial intelligence for advanced decision-making and accelerate digital transformation.

DATA CENTER & IT COOLING

Designed for and used by the enterprise data center and supercomputer owners and operators, our cooling technology is engineered to help you leap forward in scale, quality, and speed.

THERMAL MANAGEMENT

When it comes to cooling your critical infrastructure, we work to customize specialty chiller technology for you, rather than selecting from a catalog

CLIENT SERVICES GROUP

Manage every aspect of your cooling infrastructure, from planning and design to start up, commissioning and post-sale performance. Your business depends not only on our products but also our ability to respond when you need us.

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