



High-Efficiency Cooling

Mokon's high-efficiency Iceman SM Series portable chillers are available in air-cooled and water-cooled condensing models utilizing Copeland's digital scroll compressors. This scroll compressor design is capable of providing variable capacity output from 10% to 100%. A controlled amount of discharge gas is bypassed for a varying amount of time, resulting in a reduction of compressor output that conserves energy while maintaining temperature stability.

The Iceman SM chiller series offers increased control of the refrigeration circuit and compressor operation that can result in longer compressor life and accurate process fluid temperatures. Higher energy-efficiency savings can be achieved when integrated with electronic refrigeration components.

All Mokon chillers come standard with a UL 508A (Underwriters Laboratories) labeled electrical sub-panel and meet NFPA 79 (National Fire Protection Association) electrical safety standards. The overall design provides for long-life, durability and accurate process control with traditional Mokon quality and craftsmanship found throughout.



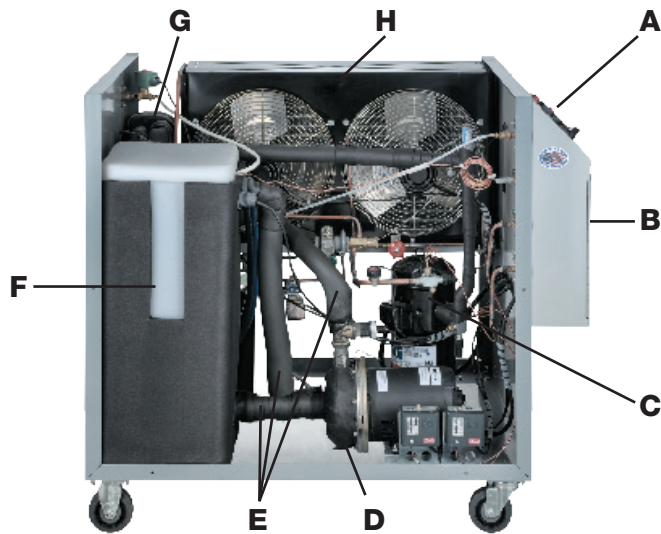
Designed to Perform. Built to Last.

ICEMAN SM SERIES

Modulating Portable Chiller
20°F to 65°F (-7°C to 18°C)

- **5, 10 and 15 Nominal Tons of cooling**
- **20 to 65°F (-7 to 18°C)**
- **Copeland digital scroll compressor**
- **Air-cooled and water-cooled condensing**
- **R-407C green friendly refrigerant**
- **Nonferrous components**
- **Efficient brazed plate evaporator**
- **Microprocessor-based controller**
- **UL 508A labeled electrical sub-panel**
- **Meets NFPA 79 electrical safety standards**

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Standard Features

- A** Microprocessor-based controller mounted in operator-friendly orientation
 - B** NEMA rated electrical enclosure with safety door disconnect switch
 - C** Scroll compressor
 - D** Stainless steel centrifugal supply pump
 - E** Insulated nonferrous plumbing and components
 - F** Heavy-duty insulated plastic tank
 - G** Highly efficient brazed plate evaporator
 - H** Air-cooled condenser (shown) or water-cooled condenser
- System standard with NFPA 79 and UL 508A labeled electrical sub-panel

Specifications – Air-Cooled

Model	Cooling Capacities (Tons) ¹		Process Pump			Process Connection (FNPT)	Tank Size (Gallons)	Dimensions (L x W x H)	Shipping Weight (Approx. lbs.)
	50°F Fluid Temperature	65°F Fluid Temperature	Pump (Hp)	Min/Max Flow Rate (GPM)	Nominal Pressure (PSI)				
ASM-5	4.9	6.8	1	12/30	Up to 37	1 1/2"	20	58" x 37" x 45"	665
ASM-10	9.6	13.6	1.5	24/35	Up to 37	1 1/2"	20	58" x 37" x 45"	960
ASM-15	12.2	16.9	3	36/50	Up to 55	1 1/2"	68	80" x 52" x 65"	1,765

Specifications – Water-Cooled

Model	Cooling Capacities (Tons) ²		Process Pump			Connections		Tank Size (Gallons)	Dimensions (L x W x H)	Shipping Weight (Approx. lbs.)
	50°F Fluid Temperature	65°F Fluid Temperature	Pump (Hp)	Min/Max Flow Rate (GPM)	Nominal Pressure (PSI)	Process (FNPT)	Condenser (FNPT)			
WSM-5	5.0	7.0	1	12/30	Up to 37	1 1/2"	1"	20	50" x 28" x 39"	615
WSM-10	9.9	14.0	1.5	24/35	Up to 37	1 1/2"	1 1/2"	20	58" x 37" x 45"	910
WSM-15	12.6	17.3	3	36/50	Up to 55	1 1/2"	1 1/2"	68	80" x 52" x 65"	1,715

¹ Air-cooled based on 50°F and 65°F chilled water at 2.4 GPM/Ton and 90°F ambient air.

² Water-cooled based on 50°F and 65°F chilled water at 3 GPM/Ton and 85°F condensing water. Standard compressor is scroll type.

Fluid temperature range is 20 to 65°F for scroll compressors. Fluid range up to 75°F is available as an option.

1 Ton = 12,000 BTUs per hour / 1 kW = 1000 Watt = 3,412 BTU

Iceman SM Chillers are available in a variety of voltages, capacities and process fluid temperatures. Heating circuits with expanded temperature ranges are also available.

For more information on any of the above or our line of Iceman Chillers, please contact Mokon.

Compressor Function

The scroll compressor operates in one of two phases, depending on load demand requirements: **Loaded Phase** – The bypass solenoid valve is closed and the compressor operates like a standard scroll and delivers full capacity. **Unloaded Phase** – The bypass solenoid valve is opened, resulting in minimal or no capacity through the compressor. Reduced compression in the unloaded phase consumes significantly less energy when compared to traditional portable chillers that use hot gas bypass for capacity modulation.

Controls

A microprocessor-based controller provides dual LCD indication of your process fluid setpoint and actual temperature to ensure process control accuracy. Control options include serial communications, SPI protocol, brand name control or host interface capabilities.

Options

Mokon offers a variety of options and accessories to meet specific customer needs. Please contact Mokon for more information.

Product Testing & Warranty

All Mokon chillers are qualified for service by rigid, simulated field tests, and are 100% factory calibrated and run tested. Mokon offers a one-year warranty as standard.

Technical data shown is subject to change without notice. The company will endeavor to supply the equipment as illustrated but reserves the right to make dimensional and other design changes as required.



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