MOKON®

Designed to Perform. Built to Last.

Navigating the Highs and Lows of the **Semiconductor Industry** with Mokon

The semiconductor industry is ever-changing with demanding requirements. Navigating this landscape and maintaining precise temperature control over process fluids, molds, vessels, heat exchangers, and packaging equipment requires having an experienced application and design team on your side.

More than a product manufacturer, Mokon provides tailored solutions to the challenges of the semiconductor industry. Our practical approach to these applications and adherence to SEMI S2 and S8 standards results in optimized process heating and cooling solutions. Dedication to quality and superior knowledge of a wide variety of application designs is what sets us apart. For over 65 years, Mokon has been a dependable, collaborative partner, ready to answer your questions and build your custom solutions.

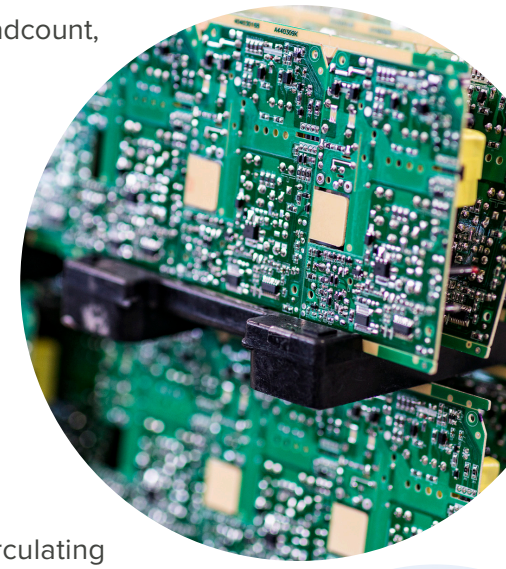
Combination heating & chilling system all in one package

The Global Industry

As the global semiconductor industry faces both shortage and oversupply issues, how do companies move forward? Let's take a look at some major trends in the industry and determine where opportunities lie for the industry to reset and refocus.

Looking ahead, global macroeconomic and geopolitical factors are revealing themselves as dominant forces affecting the semiconductor industry. Rising interest rates, high inflation, lower consumer confidence, and tech-led stock market retreats have led to a huge loss in market capitalization. According to a 2023 report by Deloitte, the top 10 global chip companies' combined market cap is down 34% from US $2.9 trillion in November 2021 to US $1.9 trillion in November 2022.

In response, many chip companies are cutting costs, reducing employee headcount, and pushing out capital expenditures for additional capacity.



Conversely, despite the recent slump in the electronics industry, electronics companies are in the midst of an onshoring boom, announcing new or expanded plants in the U.S. to meet future demand for semiconductors and other parts. Companies like Mokon that supply these electronics companies with equipment for manufacturing are joining the onshoring trend. This in turn is creating a more robust electronics manufacturing ecosystem that will be better equipped to meet future supply-chain challenges and circumvent geopolitical challenges that hamper trade and threaten supplies.

Product Solutions

Since 1955, Mokon has been the manufacturer of choice for high-quality circulating liquid temperature control systems for thousands of customers all over the world. For over 65 years, we have challenged ourselves to meet the evolving needs of industries like plastics, die casting, food processing, pharmaceutical, chemical processing, rubber, printing, converting, semiconductor, and more. Our experienced team of engineering, sales, and service professionals is dedicated to designing and supplying the safest, highest quality products available. We are a quality-driven manufacturer that delivers practical engineering solutions through our superior customer focus and support.

Water Systems

Mokon's line of compact water systems provide accurate and reliable temperature control for process heating requirements up to 380°F (193°C). Standard systems are available with up to 96 kW of heating capacity and up to 10 Hp with flow rates from 9 to 120 GPM. Single or dual zone, positive or negative pressure flow, heating/chilling designs and custom engineered systems are also available.

Oil Systems

Mokon's circulating oil temperature control systems meet process heating requirements up to 700°F (371°C). Our durable and high-quality oil systems are available with heating capacities up to 600 kW; flow rates of 5 to 120 GPM; single, dual and triple zone configurations; and portable or stationary designs. Custom engineered systems are also available.

Chiller Systems

Mokon's energy-efficient line of portable chillers and centralized cooling systems provide accurate and reliable process control. Portable chiller systems down to -20°F (-29°C), air-cooled or water-cooled condensing, up to 60 Tons, combination heating/chilling designs, single and dual circuit configurations, modulating chillers, outdoor designs, and custom engineered systems. Central chiller systems up to 120 Tons, pump tank systems, outdoor centrals, blown film coolers, cold climate coolers, cooling towers, and engineered systems.

Combination Heating and Chilling Systems

Mokon's Full Range temperature control systems offer a combination heating and chilling system all in one package. A Mokon water or oil-based system, combined with an Iceman chiller, integrates the benefits and features of both products into one compact, self-supporting unit. The Full Range water-based system is available with a temperature range of -20°F to 380°F (-29°C to 193°C). The Full Range heat transfer fluid oil-based system maximizes performance with temperatures up to 650°F (343°C).

Mokon's Expertise and Features

- Custom Designed/Engineered Systems
- Closed and open loop circuitry
- Single and multi-zone circuits
- Stainless steel cabinets and components
- TEFC motors and magnetic drive sealless pumps
- Welded or silver brazed piping
- Tri-clamp and flanged connections
- Heat exchangers and heat remover designs
- Non-marring casters and leveling legs
- Audible and visual alarms
- SCR and solid-state relays
- Remote set point and re-transmission controllers and communication capabilities
- Remote interface electrical enclosures
- NEMA/Type 4, 4X, 12 rated panels and wash down designs
- Cleanroom environments
- cULus 508A Control Panels
- UL, CSA, CE and EAC certifications

Mokon is available to help you navigate the semiconductor industry and create the custom temperature solution that's right for you. Reach out to us at any time using our website, www.mokon.com/contact/.

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ISO 9001:2015

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