

Vacuum & Analysis Division



AUTOMATION & CONTROL SOLUTIONS

MKS provides advanced control solutions including distributed I/O devices, multi-zone temperature control, programmable automation control (PAC), EtherCAT® enabled controllers, and Industrial PCs. ACS platforms provide seamless integration with most MKS products such as Baratron® manometers, mass flow controllers (MFC), and vacuum gauges and facilitate communication for advanced process control.



FLOW SOLUTIONS

MKS provides gas flow and delivery products including mass flow controllers and in-situ mass flow verifiers to precisely measure and control gas flow. Upstream pressure controllers with integrated mass flow meters provide pressure measurement and control while monitoring mass flow rates for critical process applications. MKS flow ratio controllers accurately and repeatedly divide gas flows into precise flow streams. EtherCAT is available on select products.



GAS ANALYSIS

MKS provides gas analysis solutions for real-time vacuum quality control, contamination detection, process monitoring, and compositional analysis. Products offered include residual gas analyzers (RGAs), process RGA systems, atmospheric pressure mass spectrometers, and optical gas analyzers. MKS also offers flexible and scalable software platforms to leverage sensor data and enable powerful process optimization and monitoring capabilities for advanced manufacturing environments.



PLASMA & REACTIVE GAS SOLUTIONS

MKS provides plasma systems that deliver fluorine, oxygen and hydrogen radicals. MKS manufactures ozone generators that produce ultra-pure, high concentration ozone gas. Our dissolved gas delivery systems supply high concentration ozonated water and dissolved CO₂ and NH₃. In addition, MKS designs and manufactures high power microwave subsystems that generate power levels from 1 to 75kW. EtherCAT is available on select products.



POWER SOLUTIONS

MKS develops and manufactures RF generators that deliver solid state power from low to very high frequencies (VHF) and control plasma. Combined with MKS' Impedance Matching Network and V/I Probe, we provide a complete RF delivery system.



PRESSURE & VACUUM MEASUREMENT SOLUTIONS

MKS provides pressure and vacuum measurement products. MKS Baratron capacitance manometers provide highly accurate and repeatable direct pressure measurement and are insensitive to gas composition. In addition, MKS has a wide range of indirect pressure sensors, transducers and modules that use hot and cold cathode, piezo and Pirani gauge technologies. These products measure pressure in corrosive and noncorrosive environments over 14 decades of range from above atmospheric to ultra-high vacuum. EtherCAT is available on select products.



VALVES & INTEGRATED PROCESS SOLUTIONS

MKS provides a variety of vacuum valves including butterfly valves for pressure control, isolation valves and gate valves. Heated and unheated configurations are available as well as specialty valves for high cycle count and highly corrosive environments. In addition, MKS provides integrated vacuum solutions including complete turn-key solutions for foreline effluent management with heater jackets and controllers, process traps, virtual walls, and integrated vacuum measurement and control assemblies. EtherCAT is available on select products.

Light & Motion Division



INSTRUMENTS, MOTION, COMPONENTS & VIBRATION CONTROL

MKS provides a wide range of high precision motion control products including linear and rotation stages, actuators and hexapods, vibration control and vibration isolation solutions, specialized light sources, and other instruments used in photonics applications. In addition, MKS manufactures products used to mount, position, or support optical components and systems.



LASERS

MKS develops and manufactures advanced continuous wave and pulsed lasers that produce infrared, visible and ultraviolet light. Pulse frequencies include nanosecond, femtosecond and picosecond.



LASER & LED MEASUREMENT, INFRARED & LASER OPTICS

MKS provides laser power measurement and beam diagnostic instruments, LED characterization equipment, infrared optics, and lens assemblies. Photonics products include optical meters and sensors, photo-receivers and spectroscopy, and beam characterization devices. Optics products include optical components for CO₂ and 1 micron industrial lasers, infrared optics for thermal imaging systems including optical components with single FOV to long-range continuous zoom.



OPTICAL COMPONENTS & INTEGRATED SOLUTIONS

MKS provides custom optical systems and components. Products include optical filters, thin film coatings, high performance gratings, replicated mirrors, windows, spherical, aspherical and cylindrical lenses, and refractive, reflective, catadioptric optical assemblies on a build-to-print or build-to-spec basis.

Equipment & Solutions Division



PCB MANUFACTURING SOLUTIONS

MKS provides laser via drilling systems for processing flexible and rigid printed circuit boards (PCBs) and interconnects. Our PCB laser drilling system offers superior throughput and yield. For HDI PCB manufacturing and substrate processing, MKS provides a range of CO₂ laser-based high-throughput systems.



SEMICONDUCTOR MANUFACTURING SOLUTIONS

MKS manufactures laser-based systems for high-throughput wafer processing applications such as wafer marking, wafer trimming and memory repair. These systems use a variety of laser technologies to optimize application performance.



HIGH-SPEED MLCC TESTING SOLUTIONS

MKS provides systems for high-volume, multi-layer ceramic capacitor (MLCC) testing and custom replacement tooling for MLCC test and termination processing equipment.