

HIGH PERFORMANCE MEDIA SUPPLY SOLUTIONS MADE IN GERMANY

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Professional Engineering

SEMPA)®

SEMPA SYSTEMS develops, manufactures and distributes high purity media supply systems and turn-key solutions to the semiconductor, photovoltaic, glass fiber and printed electronics industry. From our sites in Dresden and Erfurt and in conjunction with our cooperation partners we serve a global customer base.

Our team consists out of 80 professionals which are dedicated to serve our customers needs.

Our aim is not only to satisfy a customer demand, but to work cooperatively together with our clients identifying challenges and opportunities in advance, hence being an active partner reaching process excellence at our clients. SEMPA's main mission is our commitment to quality and to realize solutions for tomorrow's challenges today.

SEMPA is Engineering Partnership



Bulk and Special Gas Distribution Systems

We offer full solutions: From design, engineering, manufacturing to commissioning and operation of equipment:

- Filter stations and piping systems in stainless steel
- Consumption monitoring for gases and liquids
- Quality control for humidity, foreign matter and particles
- Installations for generation of forming gas and other gas mixtures
- Gas bottle stations, VMB, VMP for special gas solutions
- Gas trailer and bundle stations
- Fluorine systems
- Container solutions, "stand alone application"
- Dosing and mixing of gases
- Hook up installations
- Full automatic control and monitoring of distribution systems
- State of the art welding and testing procedures
- Quality audits with advanced metrology
- Gas detection
- Gas supplies for lab, test and calibration application
- Design, engineering and manufacturing of customized solutions







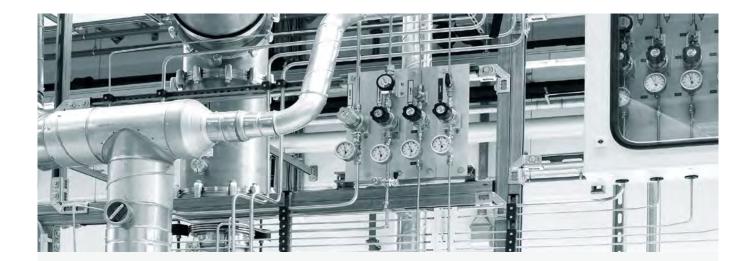
Chemical Supply Systems in Stainless Steel



- Central supply for DEZn, TMAI, TMGa, TBAs, TBP, TEOS, TCS, ${\rm SiCl}_{\rm 4}, {\rm POCl}_{\rm 3}$ and others
- Vaporizer systems for DEZn, TMAI, TMGa and others
- Chemical distribution cabinets and manifold boxes
- Recipe preparation, mixing and central supply of slurry
- Piping systems in stainless steel
- Implementation of process technology cycles
- Fluid flow control
- Water and wastewater systems for the photovoltaics industry are realized with cooperation partners
- Customized solutions
- Quality audits and FDA-compliant documentation
- Hook up installations







Process Vacuum and Exhaust Systems

- Piping and customized designs up to 800 mm diameter
- Process pump and abatement hook up
- Prefabrication of entire component groups
- Pressure testing and leak detection
- Fuel gas systems for abatements
- Lifting stations and abatement wastewater treatment
- Solutions for particle and moisture precipitates

Attention to detail will pay dividends





Service and Operation of Equipment

- 24h on-call duty
- Exchange of cylinders and bundles for gases and chemicals
- System check-up and operation
- Maintenance and inspection
- Repair and service
- Maintenance of gas detection systems including pumps and peripherals
- Safety concepts and audits
- Compilation if operating procedures
- Quality inspection using advanced metrology



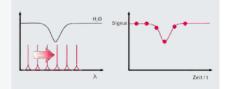




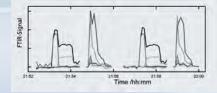
Engineering and Design

- Solutions for process optimization through advanced process technology
- Development of FTIR and laser spectroscopy based sensor systems for process optimization in cooperation with research institutes and universities
- HiBarSens: Water Vapor Permeation measurement of ultra barrier materials in the range of (WVTR) ~ 10⁶ g [H₂O] m⁻² d⁻¹
- Safety concepts and system analysis
- Dimensioning and optimization of systems
- Design and technical documentation based on Auto CAD and Solid Works
- Development of operation manuals









Our products and services aim to achieve the highest levels of quality and reliability.



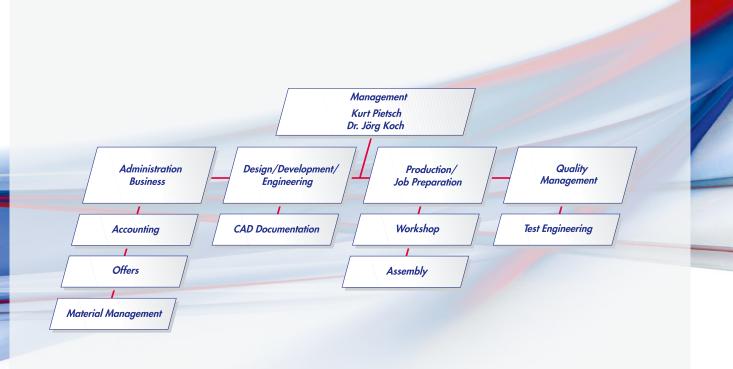
Company



Dresden is not only famous as a centre of art, culture and history, but also as area for industry and technology. Strategically located in the heart of Europe with excellent infrastructure Dresden provides an ideal ground for us as high-tech company.

We do serve a global customer base through our loactions in Dresden and Erfurt and via our cooperation partners in Asia.

Our mission is to continuously introduce innovative solutions for tomorrow's challenges today and our stringent commitment to quality. Our clear customer focus leads to a fast, reliable and commercially attractive project execution.





Certification

Our total quality management is a prerequisite to meet all of our clients requirements and to ensure full alignement with the technical specifications.

We hold the following certificates:

- Certification according ISO 9001-2011
- Certification as manufacturer to AD-Merkblatt HP 0 / HP 100R
- Certification according DIN EN ISO 3834-3 to fulfil the quality requirements of welding technology
- Certification according Wasserhaushaltsgesetz (WHG)
- Certification according DVGW-TRGI 2008
- Certification according DVGW-drinking water

We are totally committed to satisfy our customer's needs through our products and services.



Highest Purity Media Supply Systems - worldwide Made in Germany

Competence obliges - continuity connects



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