



Specializing
in bringing
innovative ideas
to life.

OUR MISSION

To bring to market high quality, innovative and affordable aerosol instrumentation for your applications in basic and applied research, environmental monitoring, process and quality control, and occupational health and safety.

WE OFFER

Successful partnering with inventors and technology leaders

Skilled senior-level engineering team with over 60 years combined experience developing aerosol-based instrumentation

In-house expertise in electronics, optics, mechanical design, firmware, software, modeling, and cost-effective manufacturing

Creative, innovative designs using the latest development tools including CFD and 3D mechanical modeling CAD

Focused project management to rapidly bring new concepts to market realization

Commitment to designs that are high performing, yet simple and affordable

Special attention to anticipating customer's unspoken and future needs

Well-equipped engineering development and aerosol test laboratory

Quality principles that promote defect free manufacturing and long product life

We bring engineering to the science.

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Quant Technologies LLC Capabilities

Founded in 2003, Quant Technologies LLC is a Minnesota-based manufacturing company that designs, manufactures and services specialized scientific instrumentation to measure physical, chemical and biological properties of airborne particles. Corporate headquarters are located in Blaine, Minnesota. The company is a subsidiary of Power Engineering and Manufacturing, Inc. (PEM), a Minnesota manufacturing company with headquarters located at the same facility.

Quant Technologies has a skilled senior-level engineering team with over 60 years of combined experience developing aerosol instruments. In-house expertise includes electronics, optics, mechanical design, firmware, software, modeling and cost-effective manufacturing. With focused project management, the engineering team is capable of rapidly bringing new concepts to market realization.

The well-equipped Quant Technologies engineering development and test laboratory includes equipment for electronic design, optics testing, 3D mechanical modeling, CFD, aerosol measurement, analytical chemistry, firmware and software development. Aerosol generation equipment include differential mobility analyzers, electrospray and various atomizers. Aerosol testing equipment include an aerodynamic particle sizer, condensation particle counters, a scanning differential mobility particle sizer and an aerosol electrometer. Analytical chemistry instrumentation includes an Agilent HPLC system and various detectors including UV, ELSD, charged aerosol and CNLSD. Electronics equipment include a pulse generator, digital storage oscilloscopes, and various power supplies and meters. Laboratory facilities are equipped with house air, house vacuum, an exhaust ventilation system, and inspection microscopes.

Quant Technologies' parent company, located in the same facility, offers abundant additional resources. The 16,000 sq. ft. building includes large state-of-the-art production areas, raw material storage space, a prototype machine shop, and design and test laboratories. The facility houses an ISO 14644, Class 5 clean room used for critical manufacturing and packaging. Also available are ultrasonic cleaners, metering pumps, precision weight and volume measuring devices, lyophilization, an autoclave, ultrasonic cleaners, a deep freezer and refrigerator, ultrapure nitrogen, and an ASTM D1193, Type 1 Microbiological Grade A water system.

Quant Technologies has a tradition of successful partnerships with inventors, technology leaders, and commercial enterprises. In 2003 the company licensed a new technology from Aerosol Dynamics, Inc. to develop a laminar-flow water-based condensation particle counter (WCPC). In just three years, the company successfully introduced four instruments based on this technology, with more developments on the way. The WCPCs are marketed through TSI Incorporated, a world leader in aerosol instrumentation. In 2006 Quant Technologies developed a Nonvolatile Residue Monitor (NRM) for measuring impurity levels in ultrapure water systems for the microelectronics industry. The LiquiTrak® NRM is marketed exclusively by Fluid Measurement Technologies, Inc. (FMT). In 2006 Quant Technologies teamed up with FMT and Southern Illinois University Carbondale to develop the new Condensation Nucleation Light Scattering Detector (CNLSD) for HPLC analysis. Quant Technologies aims to pursue licensing opportunities and partnerships with Universities and other research organizations to further develop innovative, affordable aerosol instrumentation.