Shenzhen Jewellok Technology Launches Ultra High Purity Laboratory Specialty Gas Delivery System Solution

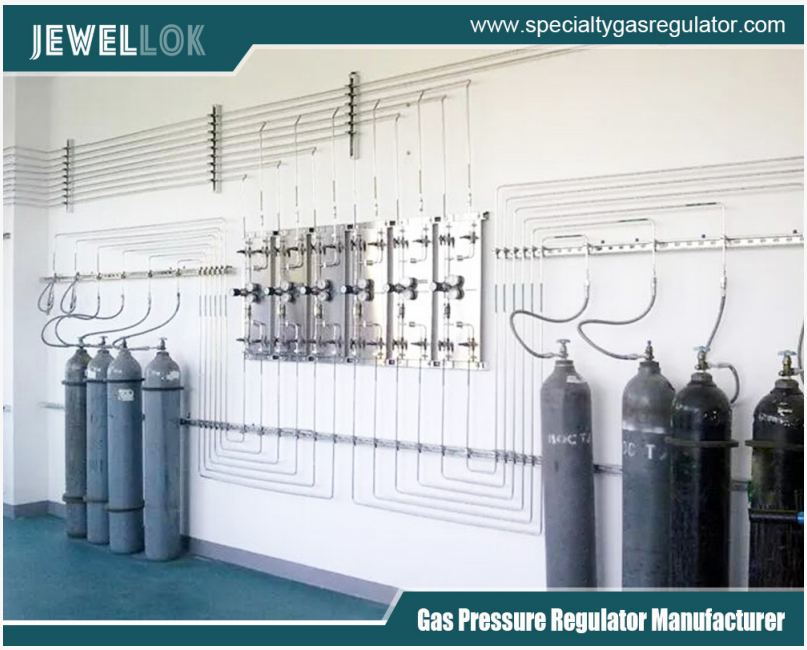
Jewellok Is Ultra High Purity Laboratory Specialty Gas And Chemical Delivery System Solution Provider

SHENZHEN, GUANGDONG, CHINA, July 29, 2026 /EINPresswire.com/ -- Shenzhen Jewellok Technology Co., Ltd., a globally recognized pioneer in ultra-clean fluid handling infrastructure, today announced the official global release of its advanced Ultra High Purity Laboratory specialty gas delivery system solution. Engineered specifically for the world's most demanding scientific environments, this newly optimized turnkey ecosystem provides contamination-free, reliable, and completely automated fluid management for semiconductor research fabs, state-of-the-art biotechnology centers, and university R&D facilities.

Modern high-tech laboratories face escalating challenges as analytical instruments become increasingly sensitive. From gas chromatography-mass spectrometry (GC-MS) to advanced thin-film deposition tools, trace impurities measured in parts-per-billion (ppb) or parts-per-trillion (ppt) can completely compromise experimental results, alter chemical synthesis, or cause catastrophic tool downtime. Jewellok’s latest Ultra High Purity Laboratory specialty gas delivery system solution eliminates these operational vulnerabilities by maintaining absolute gas stream integrity from the high-pressure source all the way to the point of use.

The foundation of Jewellok's new laboratory solution rests on a proprietary, multi-stage pressure reduction and distribution framework. At the primary stage, Jewellok's automated gas cabinets and semi-automatic changeover manifolds safely manage cylinder pressures up to 3,000 psig. As

the gas flows through the system, it passes through specialized line regulators and custom-engineered gas stick assemblies that provide ultra-stable, micro-adjusted flow profiles to individual lab benches. This layout ensures zero pressure spikes and a continuous supply, even during high-pressure cylinder changeovers.



To achieve certified gas purity levels of Grade 6.0 (99.9999% pure) and higher, Jewellok utilizes premium materials and advanced metallurgy across all wetted system parts. Components like the flagship DPR1 gas regulator series are precision-machined from double-vacuum melted 316L VIM-VAR stainless steel. The internal flow paths undergo intensive electropolishing to achieve an ultra-smooth internal surface finish of Ra 5 µin. This extreme smoothness prevents the internal outgassing, moisture entrapment, and micro-particle shedding that frequently plague standard industrial fluid lines.

Safety remains the core priority of Jewellok's architectural design. Because research laboratories routinely handle highly toxic, pyrophoric, corrosive, and flammable process chemicals—such as Silane (SiH□), Nitrogen Trifluoride (NF□), and anhydrous Hydrogen Chloride (HCl)—the delivery loop incorporates a tied-diaphragm mechanical construction. This design guarantees an absolute positive shutoff, preventing process gases from leaking or venting into the ambient laboratory environment.

Additionally, the entire network is fully integrated with digital automation controls. Every gas cabinet, gas panel, and Valve Manifold Box (VMB) in the system is equipped with continuous pressure transducers, pneumatic emergency shutoff valves (ESOVs), and active purging loops. These smart nodes interface natively with central facility SCADA or building management systems. This connectivity provides laboratory managers with real-time remote monitoring, active gas consumption tracking, automatic leak detection, and instant facility-wide safety

isolation capabilities.

"Precision at the lab bench dictates the speed of innovation in the global marketplace," stated the Director of Global Engineering at Shenzhen Jewellok Technology. "Our role with this comprehensive Ultra High Purity Laboratory specialty gas delivery system solution is to assume all the risks associated with hazardous and ultra-clean fluid management. By blending pristine component manufacturing with intelligent automation, we give researchers the peace of mind to focus purely on their experiments, confident that their process chemistry remains pristine and their workplace remains completely safe."

Every component featured in the delivery solution is manufactured, ultrasonically cleaned, and assembled inside Jewellok's certified ISO cleanrooms. Prior to deployment, every system undergoes rigorous inboard helium mass spectrometer leak testing to certify leak integrity down to 1×10^{-9} cc/sec, ensuring maximum compliance with international semiconductor and laboratory safety standards.

About Shenzhen Jewellok Technology Co., Ltd.
Shenzhen Jewellok Technology Co., Ltd. is an ISO-certified, high-tech engineering and manufacturing enterprise specializing in ultra-high purity gas and chemical delivery systems. Serving the global semiconductor, medical, and scientific sectors, Jewellok designs, builds, and commissions custom fluid distribution equipment worldwide. For technical product catalogs, engineering consultations, or project quotes, please visit the official company website or contact the technical sales division directly.

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