

High purity PFA diaphragm valves for reliable and efficient chemical supply systems

Process description

The Diversified Fluid Solutions (DFS) on-demand blending system produces high purity ammonium hydroxide (NH4OH), which is a combination of ammonia gas (NH3) and high purity water.

 $NH_3 + H_2O \rightleftharpoons NH_4 + OH-$

DFS systems produce ultra high purity (UHP) chemical blends with impurity levels below the 10 ppt detection limit, which leads to a high level of process reliability. The system blends ammonium hydroxide NH4OH by combining an incoming source of ammonia gas (NH3) with a customer or factories´ ultra high purity (UPW) supply. Blending is accomplished by in-situ measurement technology and ultra high purity filtration which prevents undesired chemical contamination in the later production process of microchips.



GEMÜ is proud to have a strong relationship with DFS as a leading plant manufacturer in the field of semiconductor manufacturing.

Diversified Fluid Solutions specializes in ultra-pure chemical delivery, precision blending of slurry, aqueous chemical and gas systems. DFS offers equipment, field support services, controls integration and technical expertise to meet stringent process needs in the semiconductor industry.

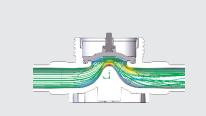
DFS has in excess of 750 installations of high-purity fluid management systems with state-of-the-art instrumentation, integration and control. DFS serves semiconductor manufacturing, solar, life science, advanced research laboratory and other markets.

Suitable GEMÜ products

Our feature

Your benefit









High-flow-body

- High Kv/Cv values
- · Long service life
- · Gentle media handling

Various body and connection options

- V-body
- 2-way-body
- T-body
- · SpaceSaver-connection
- Different connection types (Super 300 Type Pillar, flare, PrimeLock®*, butt weld spigot, tube stub)

Metal-free design

- Minimal contamination
- · High chemical resistance
- * PrimeLock® is a registered trademark of Entegris

Why GEMÜ

Through continuous innovative design and a focus on quality and proximity to our customers, GEMÜ is one of today's leading worldwide manufacturers of valves, measurement and control systems.

GEMÜ has excellent references for the use of valves in areas of application that have high purity requirements. Our products are used specifically for process equipment, ultrapure chemical supply systems, ultra-pure water treatment plants and ultra-pure water distribution installations. The application spectrum covers the fields of electronics/microelectronics, semiconductor manufacturing to battery cell production.

The described process sets high demands on the used valve, measurement and control technology. Chemical resistance and high-purity materials are basic requirements as well as gentle media handling and a long service life. GEMÜ meets all these requirements with its CleanStar diaphragm valve series.

Next to a reliable and strong product portfolio customers of GEMÜ benefit from the excellent experience of the GEMÜ employees in the semiconductor industry. That is the reason why GEMÜ is not only a supplier of valve components but a solution provider who masters the challenges of tomorrow together with customers.