



Optimized flare connections Greater safety and flexibility with Nexus Connect®

In the semiconductor industry, flare connections are an established standard in the area of media distribution. However, this connection type reaches its limits in applications with extreme pressure and temperature requirements. GEMÜ now has a solution: The Nexus Connect® connection, an innovative solution that not only provides higher safety and reliability, but also ensures seamless compatibility with existing fitting system.

One of the most widespread connection types in the semiconductor market is the flare connection. This is a tube-clamp connection. The flared tube is placed on the flare connection of the valve or fitting and fixed in place with a union nut. The seal is created at the precise point where the tube is pressed together with the fitting body via the tightened union nut.

The flare connection has become an established standard among many customers over the years, and is primarily used in the supply area of semiconductor plants. In the modules used in this area, media are transferred in huge quantities and the correct ratio to the actual manufacturing processes – into the process area. This is where the process steps required to create a microchip are performed.

The requirements for the connections vary depending on the area of application. For the supply area, the primary requirement alongside resistance and purity is the Kv value, whereas in the process area, small size and precise dosing of the media are the crucial factors. However, the pressure and temperature conditions are different between these two areas, as they are substantially higher in the process area. The conventional flare connection is not designed for this

temperature/pressure ratio in most cases. For this reason, components referred to as optimized flare connections, also known as insert-style connections, have been developed in recent years. In these components, an additional insert/sleeve is pressed into the tube. This design achieves a higher pressure/temperature rating.

GEMÜ already offers the optimized flare connections that are currently available on the market for GEMÜ CleanStar and GEMÜ iComLine valves. However, until now, it was not possible to offer these connections consistently throughout the entire HP product range and supply suitable fittings for them to customers.

This possibility has now been achieved with the Nexus Connect® connection. This optimized flare connection has been developed by Fit-Line Global®. This fitting manufacturer, with whom GEMÜ has successfully collaborated for many years already, is now offering high-quality fittings as a supplement to the GEMÜ FlareStar fitting range.

Fit-Line Global® has more than 30 years of experience in designing and manufacturing fittings, which underlines their specialisation and expertise in this sector. Thanks to the

well-established collaboration and excellent test results of the Nexus Connect® connection, GEMÜ has decided to integrate this component into its product range. By doing so, the company is taking an extra step to expand its product range and optimally prepare it for use in the process area. Together with FitLine Global®, GEMÜ intends to establish Nexus Connect® on the market and introduce it to customers.

One excellent feature of the Nexus Connect® connection is its compatibility with the most widely used optimized flare connection at present. This means that customers can integrate GEMÜ valves or fittings into their existing systems without needed to replace other components. The two connection types can be combined easily and smoothly, as has been proven by test data from Fit-Line Global®.

In parallel with the complete fitting range offered by GEMÜ, the entire product range will now be gradually equipped with the Nexus Connect® connection. The introduction of this connection begins with the GEMÜ CleanStar series, which will initially be available with welded on adapters as well as in the compact SpaceSaver version. In the future, the Nexus Connect® connection will also be available in a machined version on the GEMÜ iComLine series as well as the GEMÜ PC50 blocks.

The goal in future is to introduce this connection type across the entire GEMÜ product range in order to be able to consistently offer a single optimized flare connection with the Nexus Connect® with fittings suitable for all GEMÜ products. This step promises to substantially improve potential and market share, particularly in the process area.

