

STAINLESS STEEL COMPONENTS FOR THE SEMICONDUCTOR INDUSTRY

GEMÜ VCR CONNECTION AS STANDARD

The Business Unit Semiconductor has made it their central objective to offer customers comprehensive solutions for all areas of semiconductor manufacturing. Depending on the medium used, different materials are used.

For most process media, valves made of ultra pure plastics are used, as there is a risk with other materials that particles will be flushed out that could then contaminate the process.

Solvents have a special feature. They are used for removing special photoresists, for dissolving substrates or for cleaning. At the same time, however, they are slightly flammable and highly corrosive with some plastics. In addition to the purity of the components and the connections, care must therefore also be taken regarding explosion protection when handling the solvents. As valves made of ultra pure plastic do not comply with these requirements for explosion protection, stainless steel valves are used for solvent handling in most cases.

Only a few connections are suitable for the high purity requirements. In the past, many users therefore used valves with butt weld spigots, which were then either firmly encapsulated in the system or equipped with the corresponding connections on-site. GEMÜ already had experience with these connections established on the market as part of various special projects. GEMÜ is now introducing the VCR connection as standard so that customers can directly order the corresponding configuration in the future.

No compromises when it comes to purity

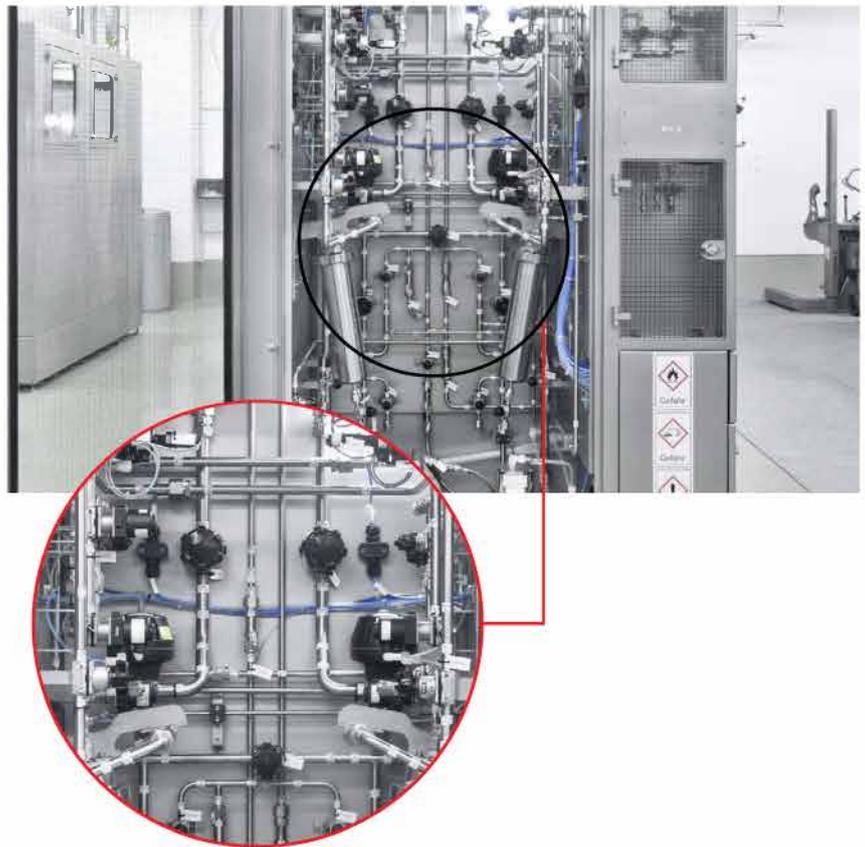
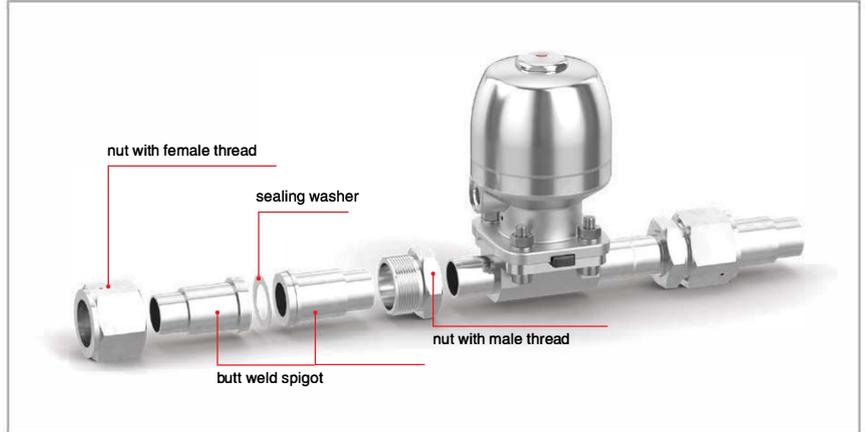
The connection with the special metal-face-to-face seal system originates from gas applications. Sealing with a compressed stainless steel disc is also suitable for applications with high purity requirements, which prevail in semiconductor manufacturing. The connection consequently offers the option of also flexibly replacing stainless steel components, without accepting compromises in purity.

As described, the connection is detachable. The component is installed in the system by positioning the sealing washer between the welded on connections and bolting the nut with male thread together with the nut with female thread according to the instructions, which compresses the sealing washer.

GEMÜ offers the connection options MV (nut with male thread) and FV (nut with female thread). The connection is available for the valves of nominal sizes DN 8 to DN 25 typically used in the solvents sector.

Thanks to the new connections, the connections no longer need to be welded on on-site. Users therefore save themselves an extra work step on-site and benefit from faster availability of final components of the usual high GEMÜ quality.

The newly introduced connections represent a further step towards the GEMÜ system construction strategy, which aims to offer simple tandem welded configurations for VMB stick manufacturing plants and complex welding assemblies in addition to single components in order to support customers in as many areas as possible.



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Welded on VCR joint

- ⇒ Common connection type for simple installation and replacement of components
- ⇒ Flexible installation and assembly in the supply systems
- ⇒ Laborious welding work becomes redundant



Simple welding configurations

- ⇒ Different configurations possible
- ⇒ Savings on fittings
- ⇒ Maximum functionality in minimum space



Stick welding

- ⇒ Stick configurations are designed according to customer requirements
- ⇒ Various valve types, connection types and pipe diameters are possible



Sub-assemblies/ welding assemblies

- ⇒ Complex sub-assemblies designed and constructed according to customer requirements
- ⇒ Integration of measurement and control systems possible



INCREASED COMPLEXITY

