

## CIP-capable pipe connections for GMP

Pipe connection systems from LINNEMANN GmbH in Tübingen give the plant builder support to comply with specifications according to GMP or „Good-Manufacturing-Practice“. An important part of this is the „cleaning in process“ (CIP) in connection with efficient maintenance with regard to the production process technology. Thanks to their hygienic design, the CIP-capable LINNEMANN pipe connections are suitable for industrial plant building in the chemical, food and pharmaceutical industry. The flange connections are almost „gap-free“ and media contact in the area of the flange seal is largely ruled out. The product portfolio also includes suitable seals and stainless steel parts the material and surface qualities of which have excellent resistance to the high cleaning stresses from acids and high temperatures even under extreme medium pressure.

The flange clamping rings come with a TÜV part test certificate. Appropriate FDA and USP conformity certificates are also available such as factory certificates „2.1“ and „2.2“ as well as acceptance test certificates „3.1“ in accordance with EN 10204:2004. LINNEMANN offers the following products as a possible solution:

- Aseptic and hygiene clamp connections according to DIN11864-3 or DIN11853-3. These standards were created based on the recommendations of EHEDGE.
- FLY clamp connection – developed by LINNEMANN GmbH – is designed as an almost „dead room-free“ flange connection. Use in overpressure and underpressure area for media such as gases, liquids and also bulk materials.
- KF small flange connection DIN28403 or ISO2861 for vacuum and overpressure application up to 1.5 bar. The necessary use of a centring ring for this enables sealing without medium contact. (Block end, see fig.) The flange is available in stainless steel and glass. Appropriate flange clamping rings made of aluminium, stainless steel and plastic complete the pipe connection.

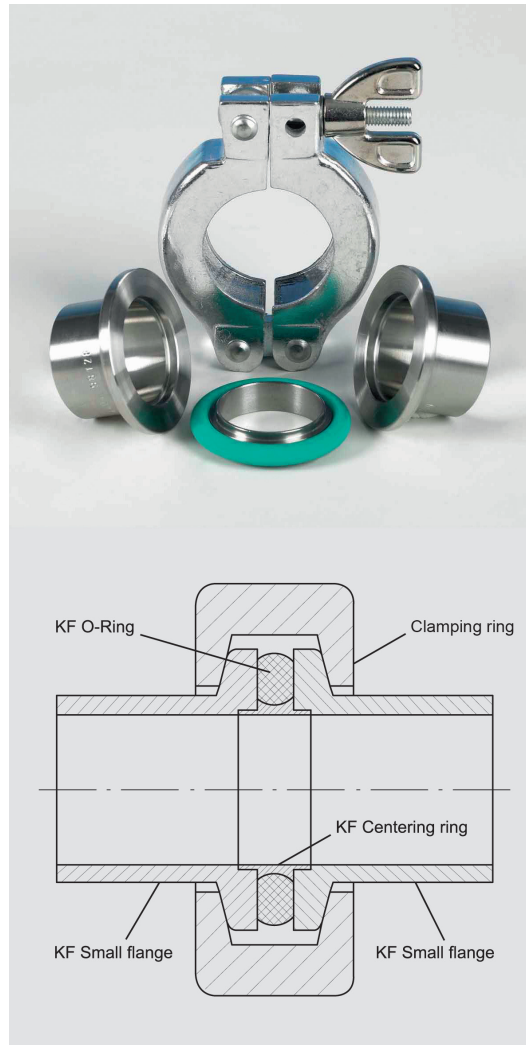


Fig: Small flange connection with stainless steel centring and O-ring seal

Source: LINNEMANN

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