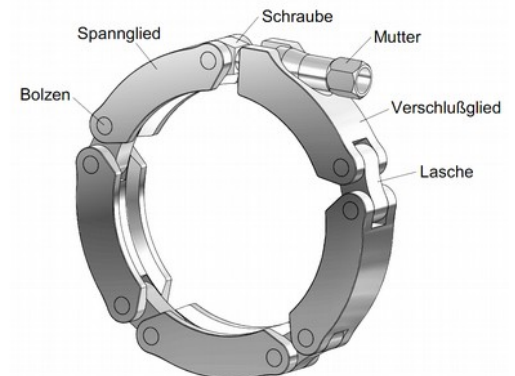


Installation and Usage manual for Chain Clamps and Fast Coupling Devices

Usage

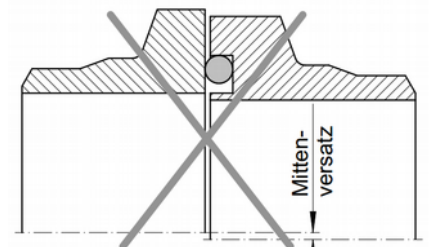
Quick connections normally consist of two flanges, a seal and a chain clamp. The flanges can also be worked directly on the parts to be connected. Tensioning chains are only suitable for static applications. They may not be used to connect rotating components.



Installation and Demounting

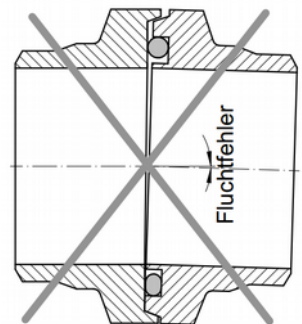
Centricity

The flanges must be centered with each other before the chain clamp is applied. This may be done e.g. through a support ring. If the flanges have a radial offset when the chain is applied, they will be clamped in this position. This can lead to high, selective surface pressures with permanent deformations.



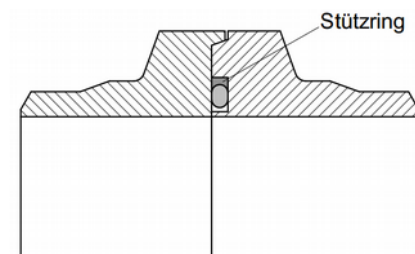
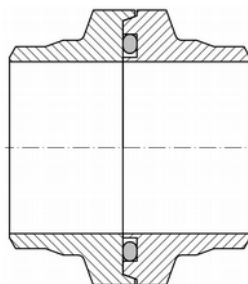
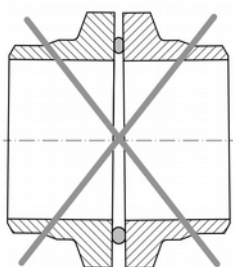
Alignment

The flanges to be connected must be aligned with each other before the chain is applied. The chain can not compensate for alignment errors. Misaligned flanges do not touch on the entire circumference, which can lead to leaks.



Stable Rest

The flanges must rest firmly after clamping, a deformable seal is not a stable support in this sense. In the case of elastomer seals, this can be a metallic support ring. Exceptions are aluminum edge seals for KF / ISO flanges.



Securing

Depending on the operating situation and risk potential, a protection must be installed which prevents the following errors:

- Loss of load, if the connection is not or not fully assembled
- Open the connection under load

Pressure Vessels

If the overpressure regulations are to be observed for a connection, only those parts which are marked according to the design test and whose material properties are documented by material certificates may be used.

Surfaces

Before assembly, all following surfaces must be undamaged and clean: Seals and their counterparts on the flanges Conical surfaces of the flanges and cheek surfaces of the limbs Thread on screw and nut Contact surface of the nut and counter surface on the closure member

Weld flanges

The welding of the flanges must not lead to warping of the conical flange areas and sealing surfaces. The welded ends of the flanges are generally designed according to DIN 2559 or according to customer requirements. The customer must specify a sufficiently large flange length according to his welding method, or check the length suggested in our drawings.

Sealing gaps

The construction and dimensioning of the chain parts and conical flanges is designed in such a way that the loads indicated in the drawings, such as tightening torque, pressure, temperature, axial force, bending moment and torque, can be recorded with clear safety reserves. For the components to be connected, it must be noted that, under load, the elastic deformation of the link cheeks and the cone flange regions can lead to a gap in the region of the seal. The seal used must be suitably pressure-stable / extrusion-resistant. For low-pressure-resistant seals, such as elastomer O-rings, a gaping support ring made of a rigid plastic is necessary. For connections without seals, in which the two customer-side flanges seal directly to one another on the metal side, it is necessary to clarify for the media to be sealed by preliminary tests whether the sealing effect is sufficient. Otherwise suitable seals must be provided.

Assembly

If a seal is provided, insert it into the sealing groove or mount it in / on the centering ring. Fold the flanges over the centering. The seal must not fall out of the groove. Place the tensioning chain on the flanges. Screw the eye bolt with the nut screwed into the lock member until the nut is fully seated in the countersunk hole. Tighten the nut with the specified tightening torque according to the drawing. On chains with two closures, the gap between the two chain halves should be as wide as possible.

Disassembly

Before disassembling, the connection must be load-free. Depending on the medium and the operating situation, the danger of leakage media must be considered. Unscrew the nut from the counterbore and swing it together with the screw from the lock link. Remove the chain.

Operating

Allowed loads

The permissible loads such as tightening torque, pressure, axial force, bending moment, torsion and temperature must be complied with. If nothing further specified, the data are for room temperature without bending moments, torsion. Corresponding to the operating situation and potential hazards, protections may have to be made against unsuitable or improperly mounted chains, if necessary, protections must be made against opening under load.

Re-tightening

After some load changes, the locking screw has to be re-tightened to compensate for settlements.

Seals

All gaskets which are suitable for installation in force shunts, i.e. in inserted grooves, can be used. After clamping, the flanges must lie stably on each other. If the seal is specified on the customer's side, the tightening torque can be specified for the required sealing force.

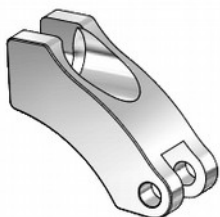
Maintenance and Repair

Lubrication

At the chains all sliding surfaces are provided with a very durable lubrication. After frequent opening and closing, the following contact surfaces must be lubricated with a lubricant suitable for the application: screw thread, nut support surface and link cheeks. The conical surfaces on the flanges do not need to be lubricated.

Spare parts

Our quick connection chains are very sturdy constructions without parts that are prone to malfunctions. When used according specification, no spare parts are required. However, all parts of a tensioning chain clamp can be supplied individually as a spare part. For identification we need the specification of the article number or the drawing number of the chain or the connection. For safety reasons, only original spare parts may be used by us with the required properties. The spare parts supplied by us are coated and lubricated.



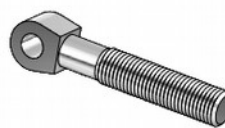
Verschlussglied



Spannnglied



Lasche



Schraube



Mutter



Bolzen

Repairs

The parts can be exchanged by us or by the customer. If permanently connected parts such as links, tabs, bolts and bolts are to be replaced by the customer, the following must be observed. The bolts are held in the bores of the limbs by the clamping action of a knurl. When pressing the bolts, the pressing direction must therefore be observed. The knurled side can be seen visually on most pressed-in bolts. All bolts on all chains are always mounted in the same direction as shown in the picture. If the bolts are to be reused, the knurl must be re-knurled. Before the bolt is inserted, the hole in the part may have to be reworked with a reamer $\varnothing XX H7$ on the side where the knurl has been seated. The hole in the tab and screw must be lubricated with a suitable lubricant.

