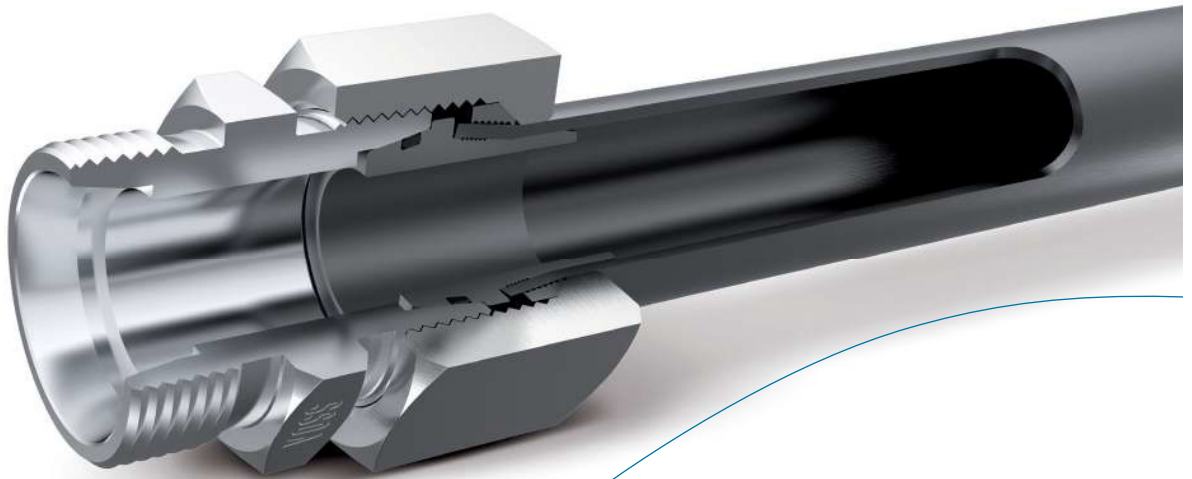
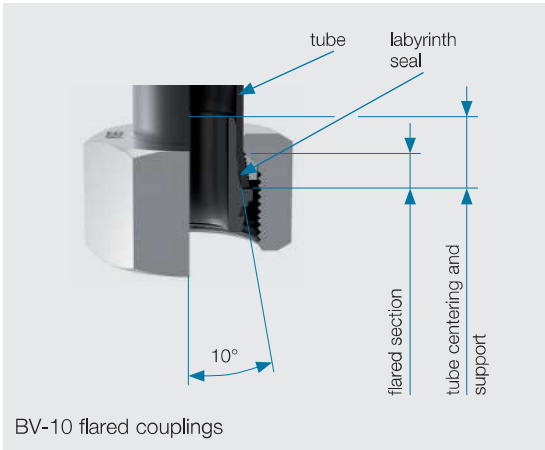


BV-10 flared couplings

For extreme load conditions



Product information, 10° flared coupling system



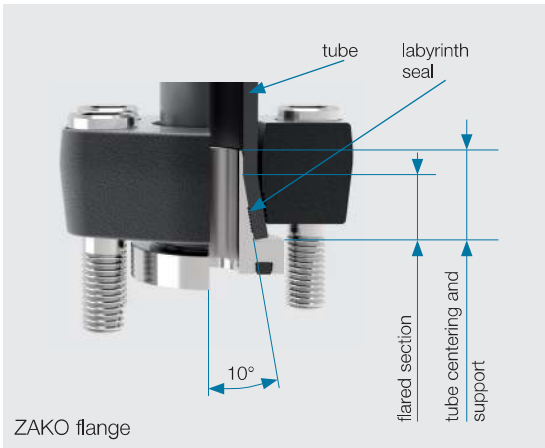
BV-10 flared couplings

The VOSS 10° flared coupling system complements the tried and tested VOSS cutting ring programme for heavy-duty and extreme load applications (see application diagram). BV-10 flared couplings are the ideal solution for applications exceeding the capacity of cutting ring couplings, since the 10° flared coupling systems have sustained ability to cope with alternating bending stresses, sudden pressure increases, pressure peaks, vibrations and temperature fluctuation.

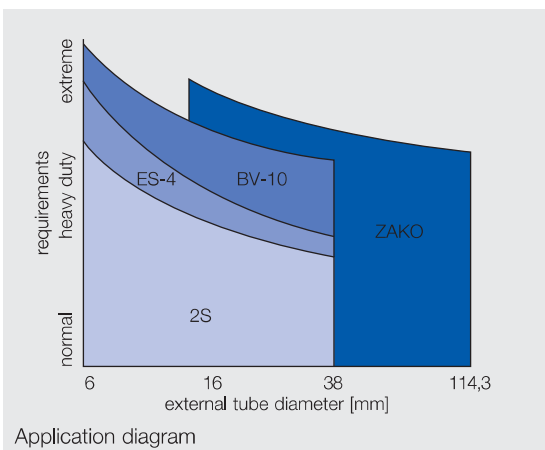
At the tube end, this system – as opposed to standard systems – applies a flare angle of 10°.

The connection end toward the device – either directly or via a connecting piece – is designed to fit off-the-shelf or standardized connections. The combination of a flared cone and clamping ring or a ZAKO ring and flange provides excellent hold, ensuring maximum operational safety even under extreme loads.

Both the BV-10 coupling and the ZAKO flange system are based on the 10° flared coupling principle.



ZAKO flange



Application diagram

BV-10 flared couplings

Users are offered a complete range of couplings comprising both a light-weight and a heavy-duty series. The BV-10 flared coupling is based on the use of DIN/ISO coupling pieces with 24° cones, making it easily interchangeable with cutting ring and weld nipple systems.

As shown in the diagrams below, the tube clamp – in conjunction with the 10° flared cone of BV-10 flared couplings – provides the pre-loading required for a secure connection to the tube. The sealing effect on the connecting piece is ensured by the time-proven DKO head of the flared cone with a metal sealing effect and by a completely enclosed soft-seal packing.

On the tube connection side, the sealing effect is achieved by surface pressure on the flared section and by the labyrinth seal effect of the small “teeth” on the cone surface. The clamping ring presses on a large area of the tube end and the flared cone, ensuring extremely high holding forces. As a result, the system remains leak-tight even when exposed to vibrations or alternating bending moments.

The pressure ratings of VOSS BV-10 flared couplings correspond to those of 24° taper couplings or 24° cutting-ring couplings.

Advantages of the 10° flared coupling system

Hydraulic engineers will appreciate the following characteristics of BV-10 tube couplings:

- Particularly suitable for extreme loads and stresses.
- The 10° flared cone principle ensures that tubing is held without notching and incision effects.
- Suitable for use with standard coupling hole diameters and connecting pieces.
- Easy assembly, even with thick-walled tubes.
- Elimination of assembly errors, as the flared cone ring has to be pre-assembled in a special assembly tool.
- Suitable for stainless-steel tubes with tolerances as specified in DIN 10305-1.
- Complete range of couplings in the L and S series.

Note on safety:

Widely differing operating conditions often subject tube connections to loads with unforeseeable parameters. To ensure safe operation, please observe the following:

- Always take the tube wall thickness into consideration as well as the external diameter of the tube.
- VOSS 10° flared couplings may only be pre-assembled with VOSS pre-assembly machines especially designed for this purpose.
- Always observe the assembly instructions of the device being used!

