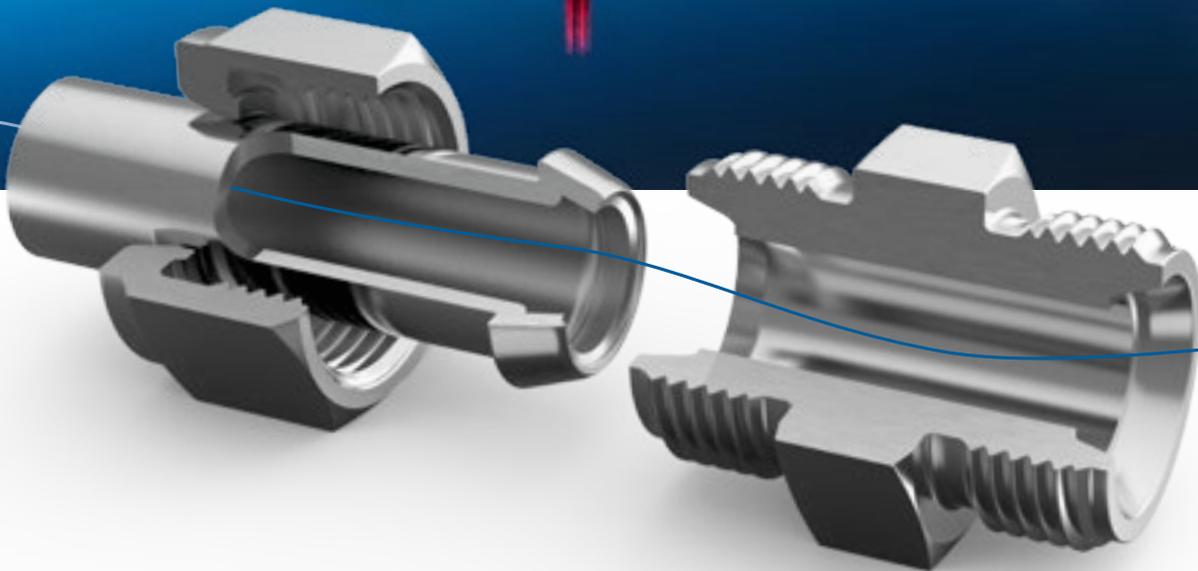
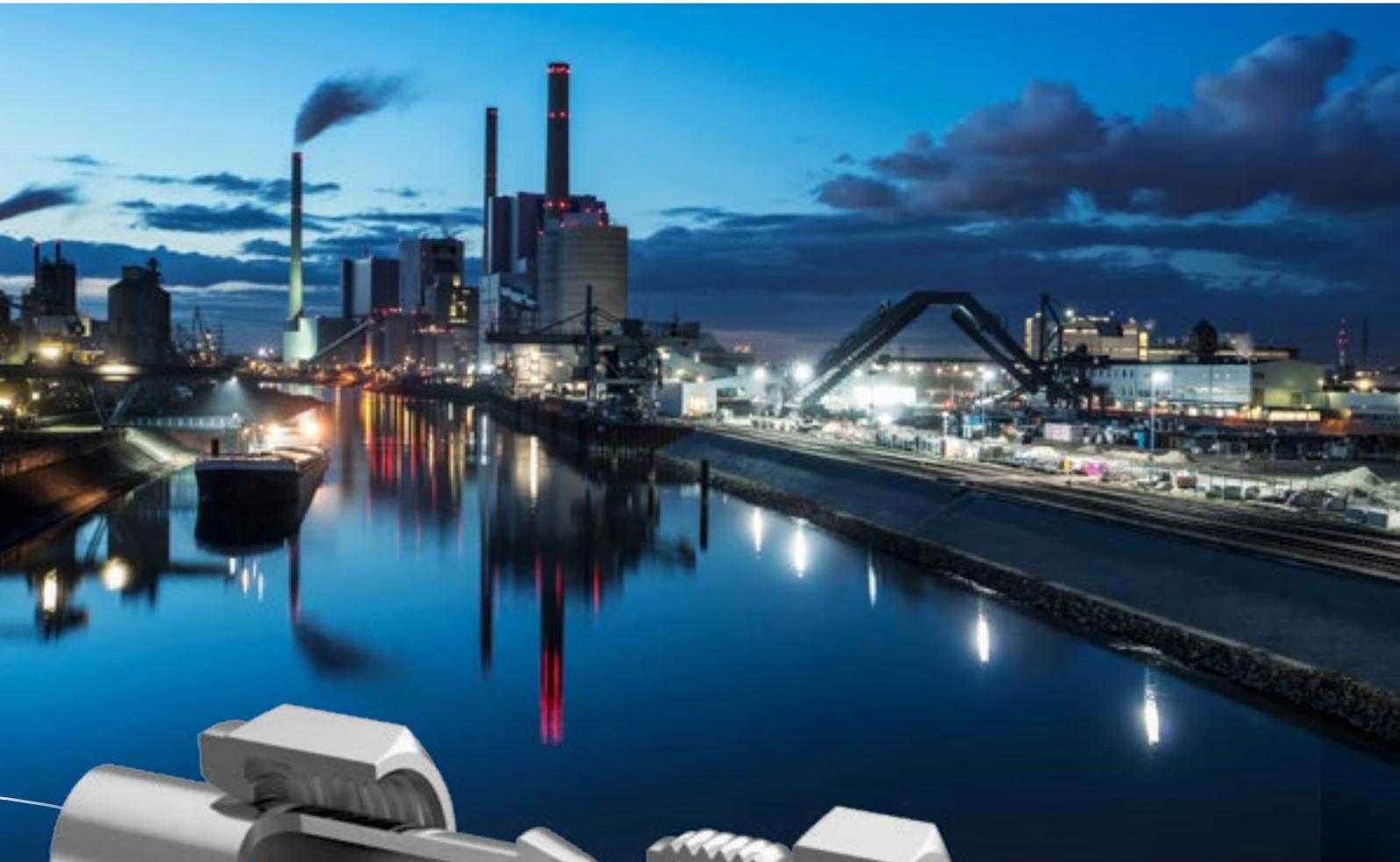


VOSS

VOSSLok⁴⁰ –

The superior alternative to clamping ring systems

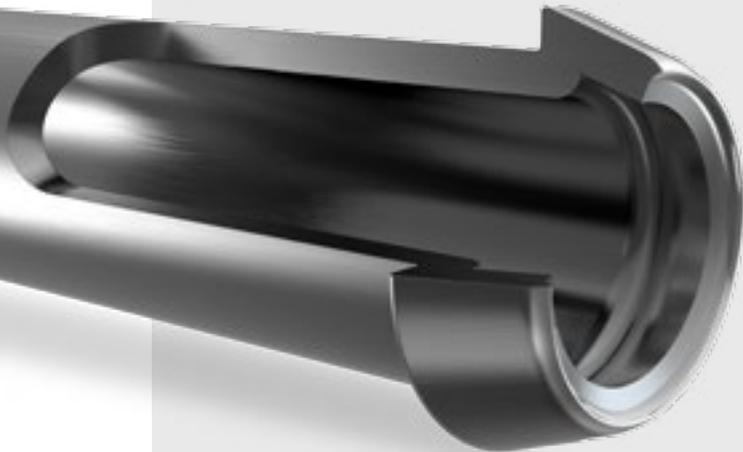


www.voss-fluid.net

VOSSLok⁴⁰ – The innovative and economical tube connection

We are renowned worldwide for our expertise as a manufacturer of tube connections in the field of high pressure hydraulics. And also because we are always working to improve our solutions. Our development engineers have justified for years the trend in hydraulics of moving away from cutting ring systems and toward forming systems. The advantages can also be transferred to applications with clamping ring systems. The result: VOSSLok⁴⁰ – our innovative and cost-effective tube forming solution.

A sealing and holding contour is formed on the end of the tube, with the VOSSLok⁴⁰ forming machine, so that clamping rings are no longer required.



Process reliability by design

- The mechanical forming process eliminates errors and enables simple pre-assembly.
- VOSSLok⁴⁰ protects against assembly errors with a noticeable increase in force at the end of assembly.
- VOSSLok⁴⁰ enables simple and secure torque assembly.

High leakage safety

- VOSSLok⁴⁰ ensures a high level of leakage safety at nominal pressures of up to 700 bar.
- VOSSLok⁴⁰ is also exceptionally suitable for use in gas applications.
- The high surface quality of the forming reduces the possibilities of leakage paths.

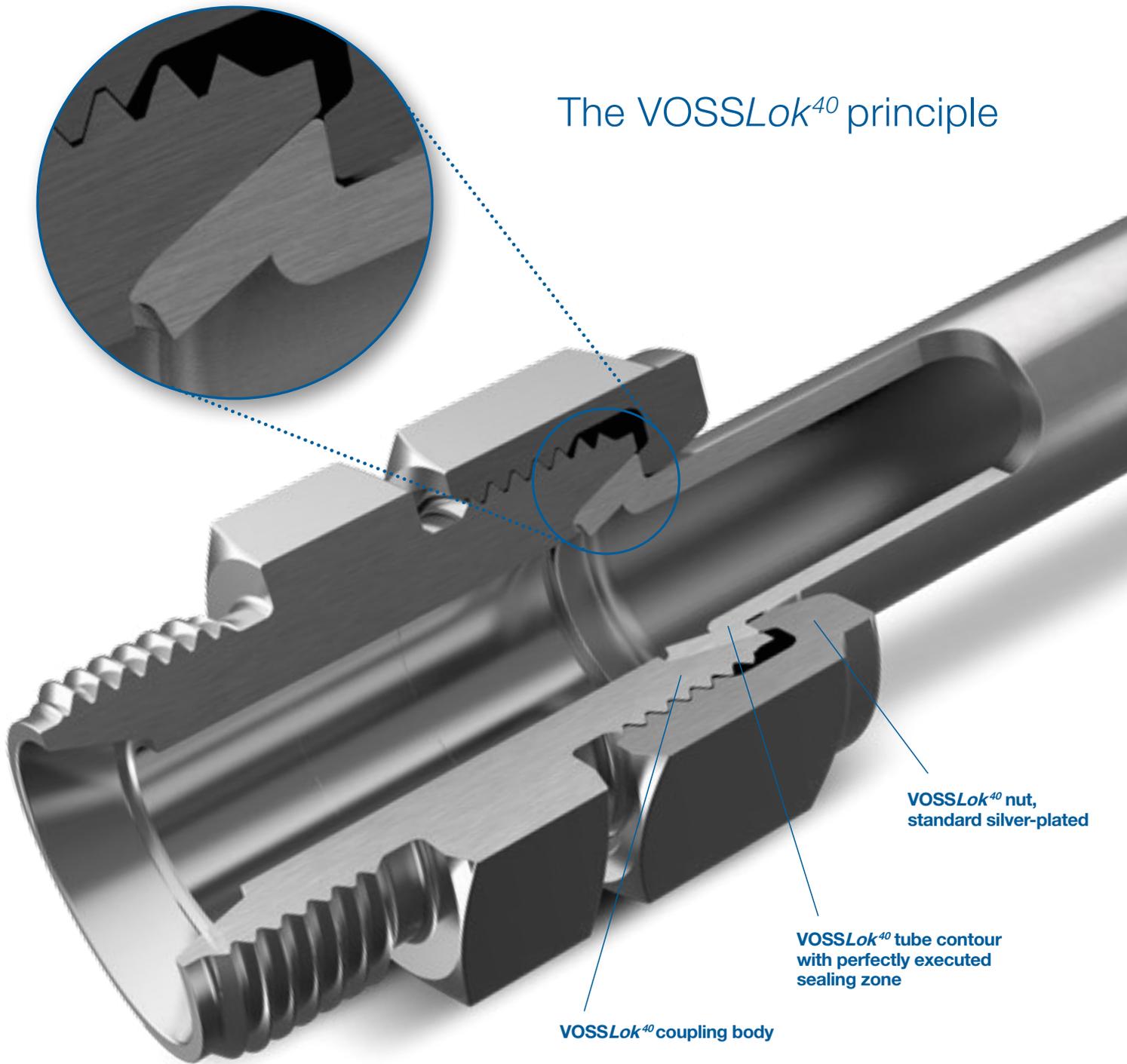
High cost-effectiveness

- Avoidance of leaks and claims
- Reduction of material and warehousing costs by saving on components
- Faster and more reliable forming process



**Chemical &
Petrochemical**

The VOSSLok⁴⁰ principle



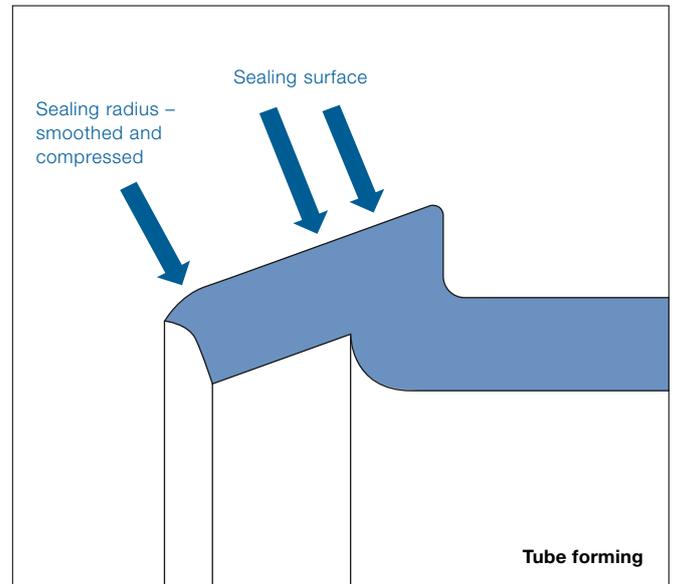
Energy



VOSSLok⁴⁰ – The perfect contour for an optimum seal

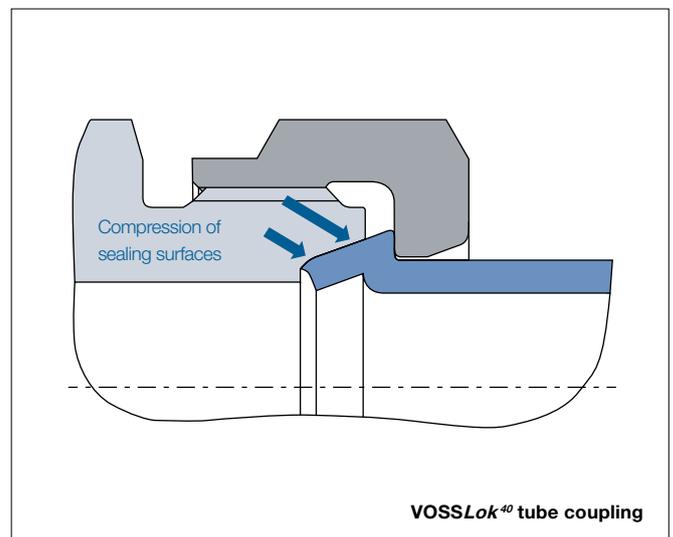
The VOSSLok⁴⁰ tube contour

The 40° tube contour is formed at the end of the tube with the VOSSLok⁴⁰ forming machine. The material on the tube surface is compressed and smoothed on the sealing radius by the mechanical forming process. This eliminates surface defects on the tube and achieves maximum leakage safety.



The VOSSLok⁴⁰ coupling system

The screw socket and tube contour are coordinated with each other so that maximum compression of the sealing surfaces is achieved, resulting in optimum sealing of the only possible leakage path.



Water Supply

VOSSLok⁴⁰ – An abundance of process reliability

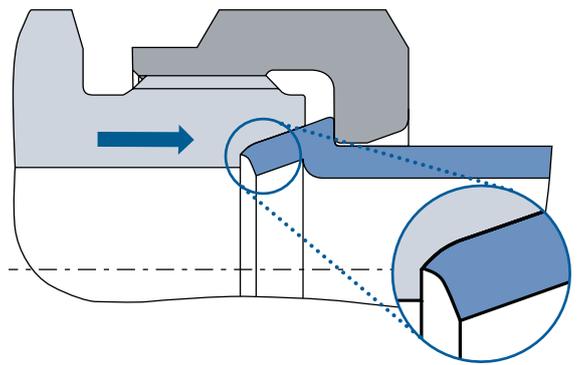
Assembly made easy

- Assembly is performed in just a few steps.
- A controlled increase in force occurs at the end of the assembly process.
- The possibility for re-tightening the coupling remains.

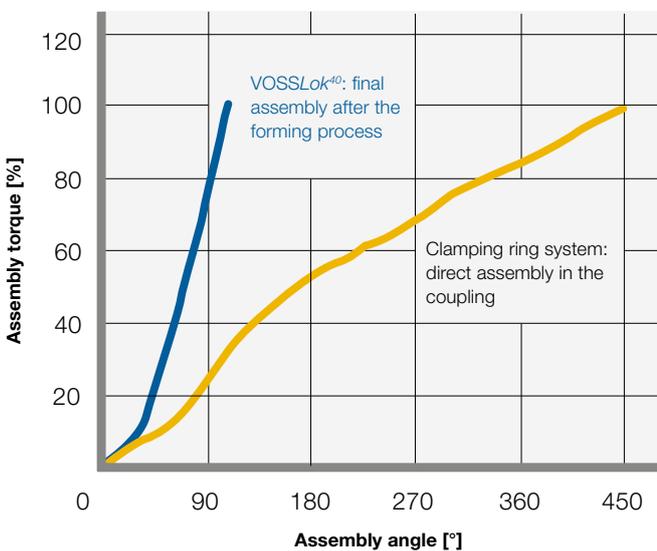
Assembly advantages over clamping ring systems

- The assembly travel path is significantly reduced (tightening 120° instead of 450°)
- VOSSLok⁴⁰ also enables torque assembly.
- The noticeable increase in force at the end of assembly protects against over-tightening.

The nose formed on the sealing radius, combined with the stop surface on the screw connector, results in a "soft" block stop.



VOSSLok⁴⁰ over-tightening protection



Cellulose & Paper



VOSSLok⁴⁰ – Simple, fast and precise forming

The VOSSLok⁴⁰ forming machine enables fast and precise forming. Its simple operating concept guarantees flawless pre-assemblies, and its compact design increases the scope of applications.

The VOSSLok⁴⁰ forming machine

- Specially designed for tight tube bends and short tube lengths
- Flawless pre-assembly process through mechanical forming
- Short cycle times
- Compact design
- Automatic machine adjustment of forming parameters
- Automatic tool recognition
- For tubes from 6 – 22 mm outside tube diameter
- For tubes made of steel, stainless steel or special materials
- For metric and imperial tube dimensions



Oil & Gas

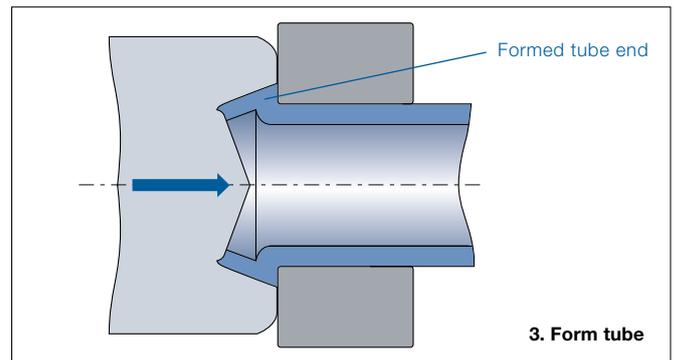
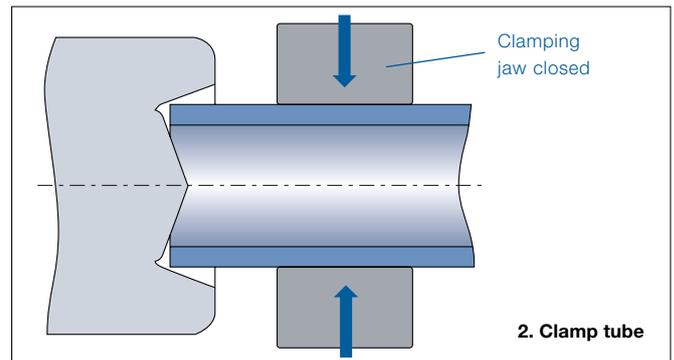
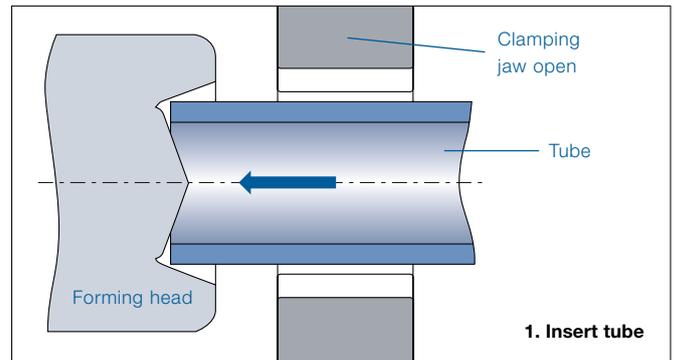
The forming process

The forming process can be carried out quickly and securely in just three steps, thanks to the newly developed tool unit with double function.



One tool unit for steel and stainless steel tubes

Forming tool and clamping elements are integrated in one unit, reducing pre-assembly errors and allowing for faster and simpler tool change without risk of confusion.



Industry

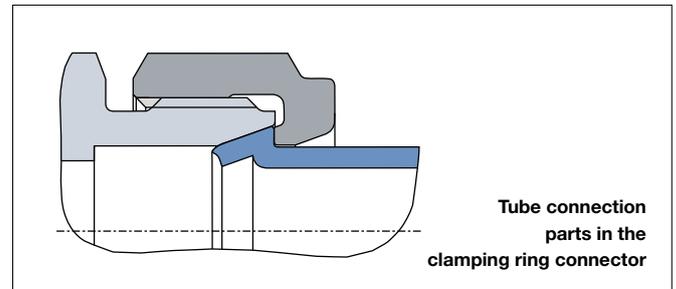
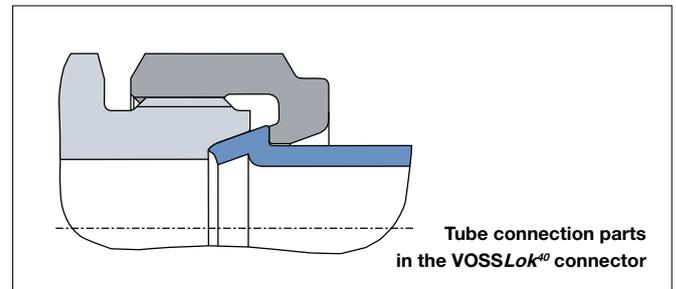


VOSSLok⁴⁰ – The versatile and flexibly applicable system

VOSSLok⁴⁰ is compatible with clamping ring coupling bodies.

The VOSSLok⁴⁰ system can also be used in combination with conventional clamping ring coupling connectors.

They retain their cost advantages and reduce leakage paths; only the assembly advantage of the "soft" block stop cannot be used in this combination.

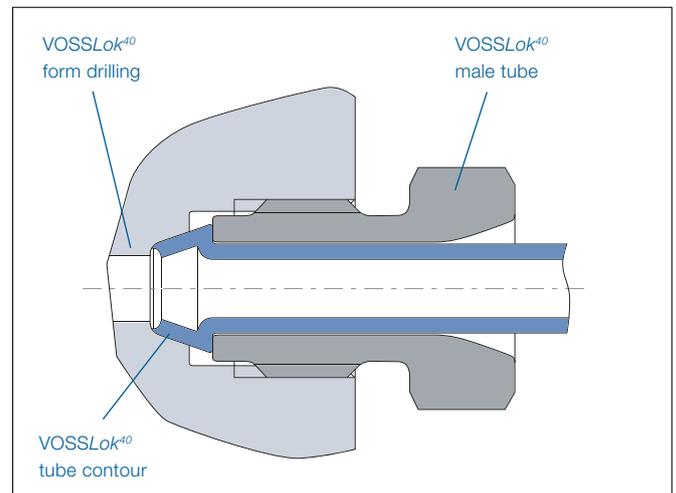


The VOSSLok⁴⁰ male tube for vehicle manufacturing – maximum cost and space savings

In addition to the extensive variety of coupling bodies and screw-in bosses, we have also designed the VOSSLok⁴⁰ male tube. In connection with a form drilling, this represents a cost and space-saving solution for crash-proof block integration.

Advantages of block integration

- Screw-in boss eliminated
- Reduction of leakage paths
- Increased safety in case of crash
- Space-saving installation area



Automotive

VOSSLok⁴⁰ – Certified, maximum leak protection

Sealed in all areas

- VOSSLok⁴⁰ ensures maximum leakage safety, even at low temperatures.
- VOSSLok⁴⁰ confirms its advantages over clamping ring systems from renowned manufacturers in various comparative tests.
- VOSSLok⁴⁰ corresponds to leakage safety requirements in the area of CNG application ECE R110
- VOSSLok⁴⁰ passes all relevant tests according to DIN EN ISO 19879.

Test type	Medium	Parameter	Result
Leak test	He/N	-40°C / RT / +120°C	Leakage rates up to 1·10 ⁻⁶ mbar · l/sec 
Burst pressure test	Hydraulic oil	RT	Bursting pressures up to 3,000 bar 
Pressure impulse test	Hydraulic oil	5 bar – 260 bar	Without leaks 
Pressure impulse test	He/N	5 bar – 300 bar -40°C / RT / +105°C	Leakage rates up to 1·10 ⁻⁶ mbar · l/sec 
Repeat assembly test	He/N	20 assemblies	Leakage rates up to 1·10 ⁻⁶ mbar · l/sec 
Hydro pulse/rough road	Air	200 bar	No pressure drop / no release 

Medical
Technology



VOSSLok⁴⁰ – cost-effective added value

The cost-effectiveness of a connector system in high pressure applications is influenced by many factors. With VOSSLok⁴⁰, leaks are successfully avoided and thus the associated expensive claims are reduced. The simple assembly increases product quality, while removal of the clamping and wedge ring eliminates costs for materials planning and warehousing space.

Especially cost-efficient in serial production

- Increased leak protection
- Elimination of clamping and wedge ring
- Reliable and simple assembly process

VOSSLok⁴⁰ – the product line

The extensive VOSSLok⁴⁰ system comprises a wide variety of structural shapes, such as angle, T or L-couplings. The system components are available in steel, stainless steel and various special materials with differing outside diameters.

- The VOSSLok⁴⁰ forming machine processes tubes with an outside diameter from 6 – 22 mm, as well as imperial dimensions.
- Stainless steel 1.4571 and steel E235/E355, as well as special materials, are suitable as tube materials.
- Coupling components made of stainless steel (1.4404) or special materials available upon request.



Food Industry



Pharmaceutical



Locations and Sales Network

VOSS Fluid is represented by branch offices around the world. In addition, regional demands are covered by an international, comprehensive network of renowned sales partners. These specialized dealers assemble and install VOSS Fluid products in flexible lot sizes and act as an extended arm of our company. As a result, you can count on the high availability of VOSS Fluid products and services everywhere.



VOSS Fluid system components are produced in Europe at the following locations:

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fluid@voss.net
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