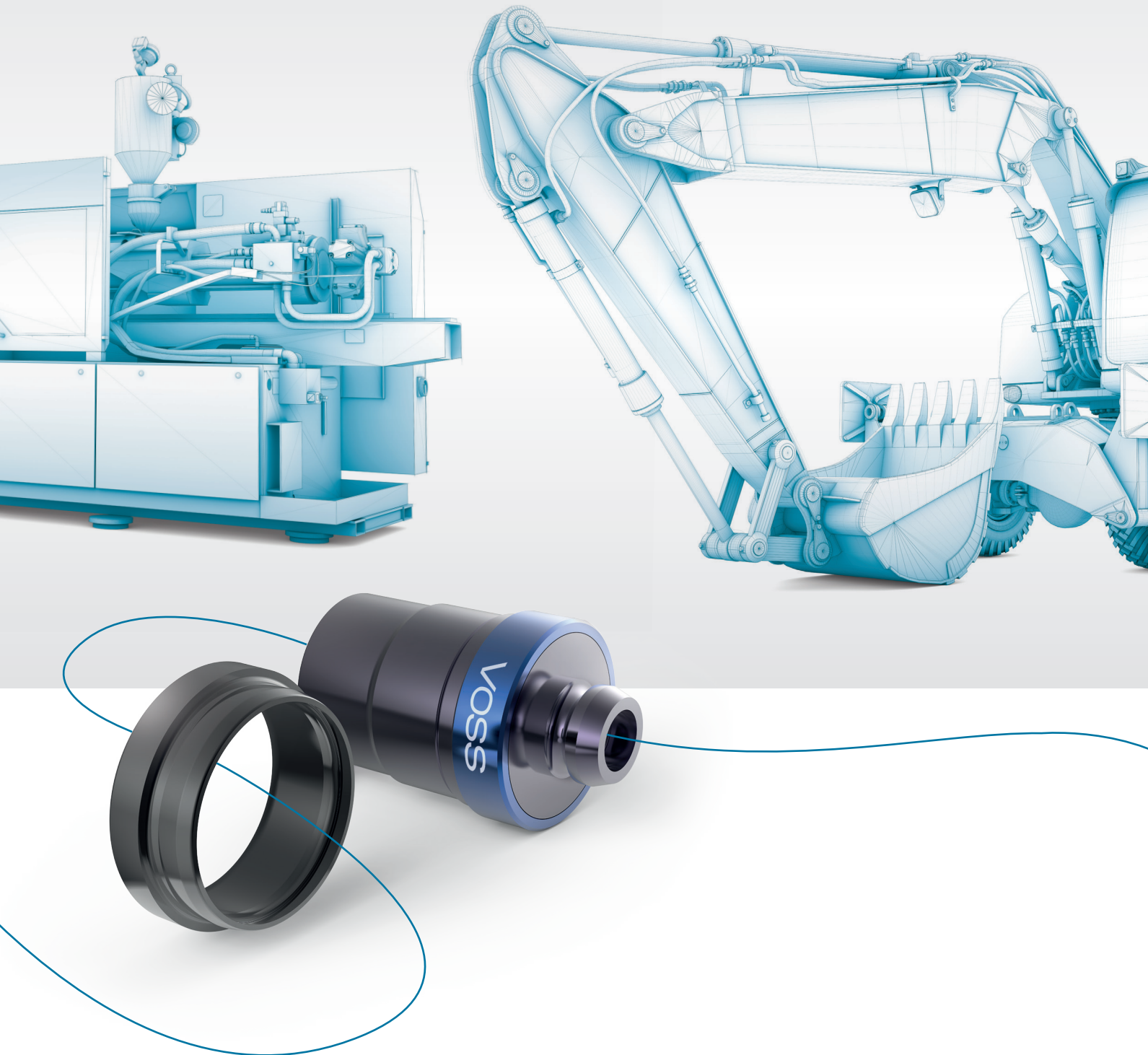


# VOSS

A cut above the rest – The VOSSRing<sup>M</sup> cutting ring system



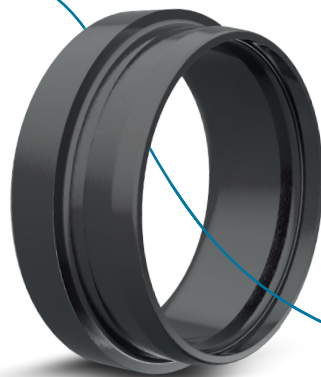
[www.voss-fluid.net](http://www.voss-fluid.net)

## Our claim: Making what's good even better

### VOSS cutting ring systems – a reliable way to control high pressures

A cutting ring as connecting system is the first choice for many applications with high system pressures today. There are good reasons for this. Tube connections can be made easily using a cutting ring, plus they can be assembled and disassembled multiple times. By establishing the 24° system, VOSS Fluid has made an important contribution to ensuring that cutting ring systems are now a worldwide standard widespread in Europe, Asia, and South America. This system is leakproof at system pressures up to 800 bar and resistant to the highest dynamic loads in the system.

Best  
assembly results



## The new VOSSRing<sup>M</sup> cutting ring system

Our new VOSSRing<sup>M</sup> cutting ring system offers you all the advantages familiar from previous 24° cutting ring systems while improving these to a new level of quality and reliability. Special focus was placed during development on an easily and process-reliable assembly, dependable safety against leaks and the use of extremely durable materials. The result is an all-together reliable cutting ring system from VOSS, in both assembly and application.

### The most important features at a glance

- Maximum leak-tightness ... thanks to optimum tube indentation
- Maximum pressure resistance ... thanks to geometrical reinforcements
- Very good dynamic loadability ... thanks to specified cutting ring material by VOSS
- Greater process reliability in assembly ... thanks to patented stop concept
- Reduced workload ... thanks to reduced tightening routes
- Reduced effect of incorrect assemblies ... thanks to non-wearing tools
- Maximum corrosion protection ... thanks to VOSScoat – BLACK



## VOSScoat – now also in “BLACK”

Since as early as 2007, VOSS has been setting standards with VOSScoat, the zinc-nickel based surface, and the same is true for the VOSSRing<sup>M</sup> cutting ring system. To prevent mix-ups and make the assembly process more reliable, the new VOSSRing<sup>M</sup> is provided with a black coating. Unmistakable design – same quality – equal advantages – easy handling.

### VOSScoat guarantees a very long service life

- 1000 hours corrosion resistance in salt spray tests under practical conditions
- More than 2000 hours corrosion resistance in salt spray tests under laboratory conditions when not installed
- Much higher resistance to damage affecting the base coat
- Sustainable production in the company's state-of-the-art electroplating plant

## Perfection in every detail

### A unique form of superiority

Our development engineers have rethought and optimized every angle and the entire shape of the *VOSSRing<sup>M</sup>* in their pursuit of perfection. The improved cutting geometry ensures maximum leak-tightness. Geometrical reinforcement in all areas exposed to pressure enhance the stability and pressure resistance, while the patented block limit stop makes correct pre-assembly easier.

Improved cutting geometry  
for optimal tube indentation

### Simple pre-assembly

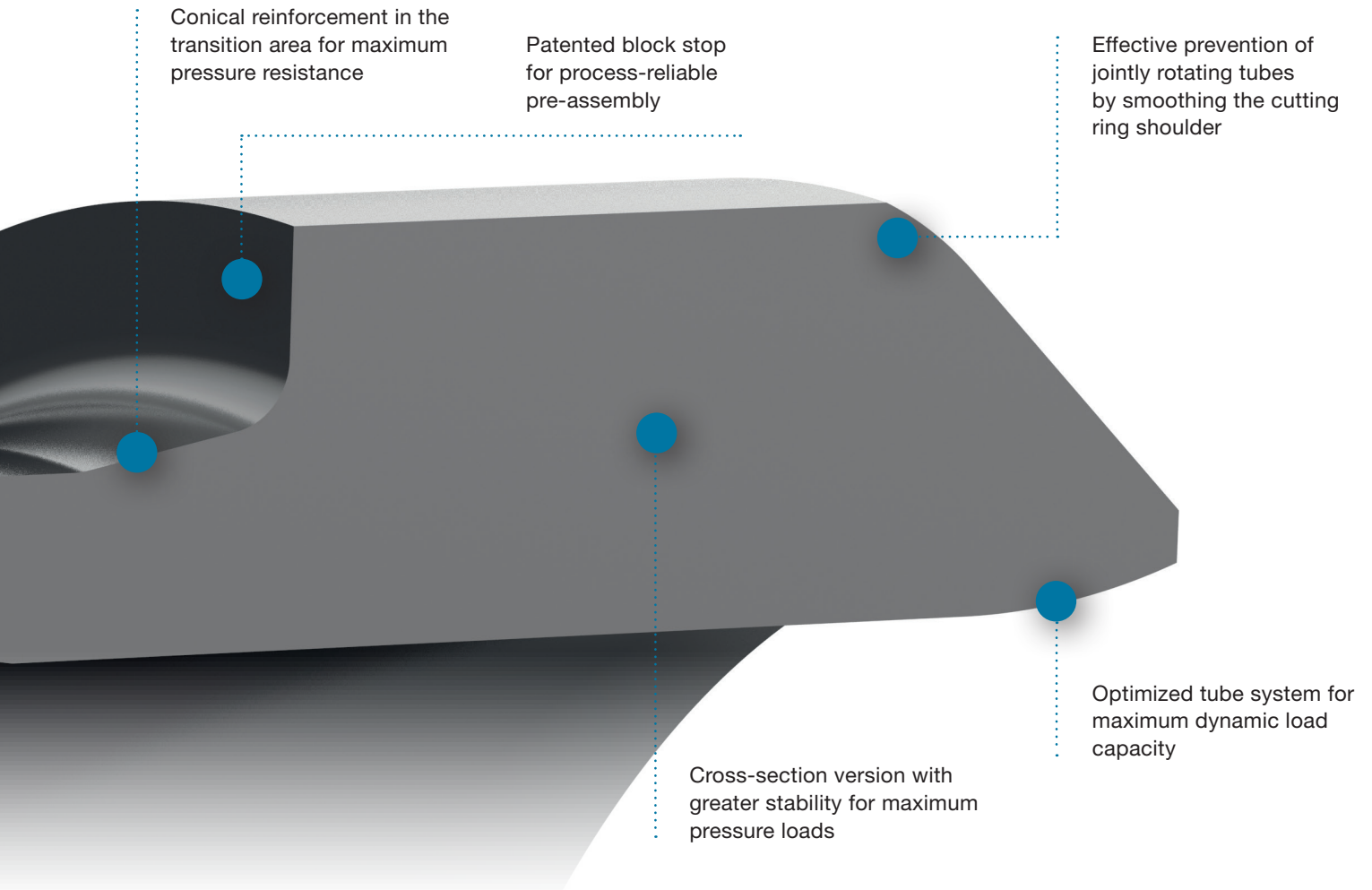
#### Feedback through “intelligent” material

Both machine and manual assembly studs are available for pre-assembly of the *VOSSRing<sup>M</sup>* cutting ring system. Both are made from non-wearing high-performance steel and offer a tool service life that is 20 times longer. We prevent the cone contour from widening with a specially developed material. That does away with the need for regular functionality tests. Upon reaching the application limit, the stud breaks, thereby effectively preventing assembly errors due to tool wear.



#### The advantages:

- Machine and manual assembly studs made from high-performance steel
- Tool service life up to 20 times longer
- Processes free of error without regular functional inspections



## High-tech materials

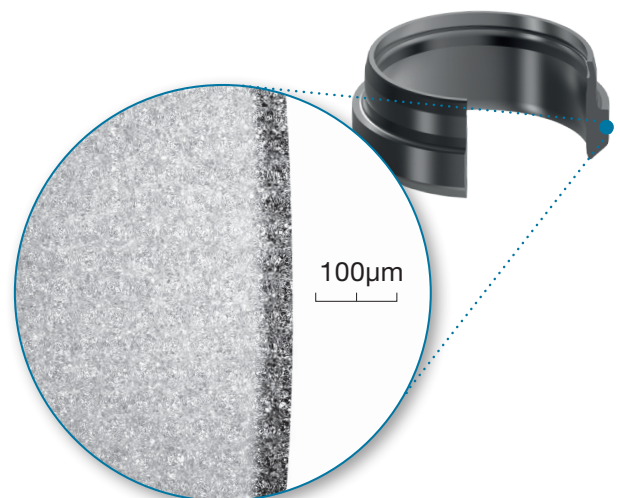
### Special material with unique hardness

**VOSS specific special material:** We use our specially developed material with very close tolerances in the alloy components for our cutting rings. This ensures a high strength of the extremely homogeneous, fine-grained structure with high toughness and insensitivity to breakage.

**Optimized hardening process:** Our refined hardening process creates a very thin and extremely hard edge layer. This ensures a precise and optimum indentation in steel and stainless steel tubes.

#### The advantages:

- High strength for optimum tube indentation
- High dynamic load-bearing capacity
- Low spring recovery after assembly
- Suitable for use in steel and stainless steel tube

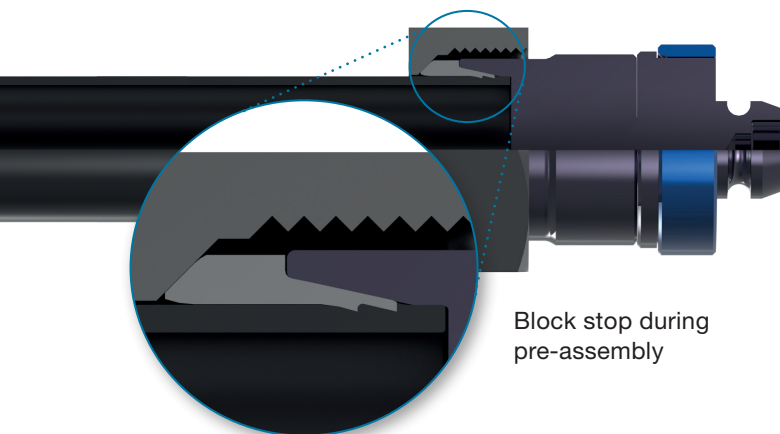
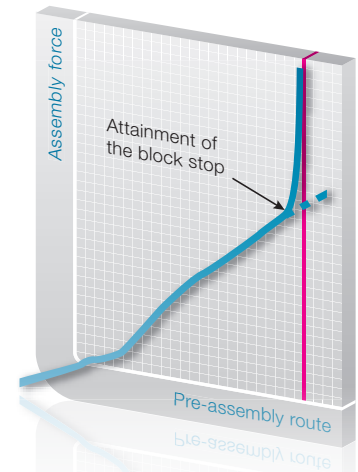




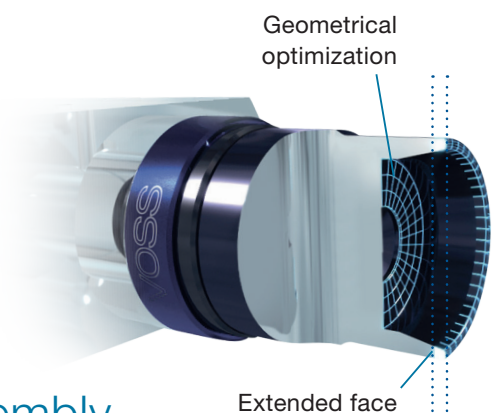
## Precise pre-assemblies thanks to patented limit stop concept

As early as the design stage of the pre-assembly stud, we have ensured that errors during assembly are prevented as extensively as possible. This results in a permanently leakproof tube connection at the end. The integral stop function means that the pre-assembly stud comes into contact with the cutting ring with a definite locating surface at the end point of the pre-assembly. The design allows the pre-assembly to be observed precisely and finished at the optimum point – effectively preventing excess assembly.

- Clearly discernible increase in force when using the manual assembly stud
- Pre-assembly devices automatically stop when reaching this block stop



Block stop during pre-assembly

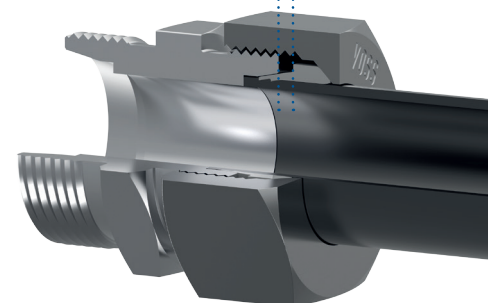


Extended face

## Process-reliable final assembly thanks to extended tools

The extended face of the tool allows an additional clearance to be defined, enabling subsequent cutting of the cutting ring during the later final assembly and providing space for process-reliable repeat assemblies.

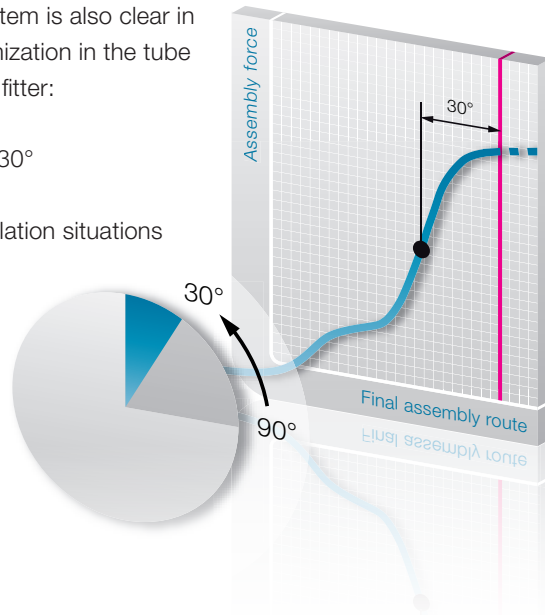
- Optimum indentation and fit thanks to additional clearance for subsequent cutting
- Problem-free and standardized repeat assembly capability
- Protection against over-tightening thanks to patented stop concept



## Reduced final assembly route thanks to geometrical optimization

The quality of the VOSSRing<sup>M</sup> cutting ring system is also clear in the efficient final assembly. Geometrical optimization in the tube stop area provides a range of benefits for the fitter:

- Reduced final assembly route from 90° to 30°
- Significantly lower workload
- Simplified final assembly in restricted installation situations



## A system for optimum connection

We have perfectly coordinated all components to one another for the full functional scope of the VOSSRing<sup>M</sup> cutting ring system. The complete system gives you all the advantages:

- ✓ Limit stop function during pre-assembly
- ✓ Short final assembly route
- ✓ Less effort
- ✓ Protection against over-tightening
- ✓ Reproducible repeat assemblies



# VOSS



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