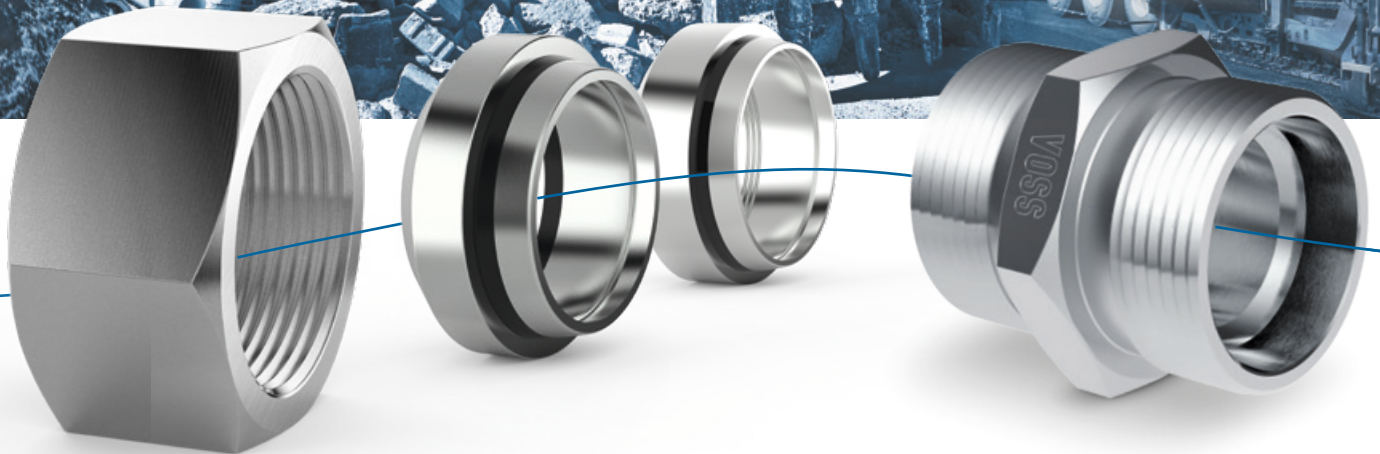


# VOSS

ES-4/ES-4VA cutting ring system:  
more safety – more cost-effectiveness



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

## Perfect match: Dual cutting technology and soft-sealing

Voss tube coupling systems are worldwide renown for their safety, pressure resistance, durability and cost-effectiveness. This reputation is especially seen in the soft-sealing cutting ring ES-4 / ES-VA. It offers several advantages thanks to the well-engineered technology. Through the combination of the proven dual cutting technology with additional soft-sealing elements, the product is the perfect solution for higher pressure applications where an increased leak protection is required. In the light "L" series the pressure can be up to 500 bar and in the heavy-duty "S" series up to 800 bar and this at a 4-fold safety.

### Two sealing forms combined optimally

The basis of the ES-4 cutting ring is the proven VOSS tube coupling acc. to ISO 8434-1. The primary metallic sealing cutting ring is supplemented by additional soft-seals made of FKM in the secondary area. Therefore the leak protection can be increased.

## The soft-sealing cutting ring with many advantages: ES-4

### Safety has top priority

With the ES-4 VOSS Fluid engineers developed an innovative soft-sealing cutting ring. It offers you, in comparison to conventional cutting rings, both safety-related as well as economic advantages.

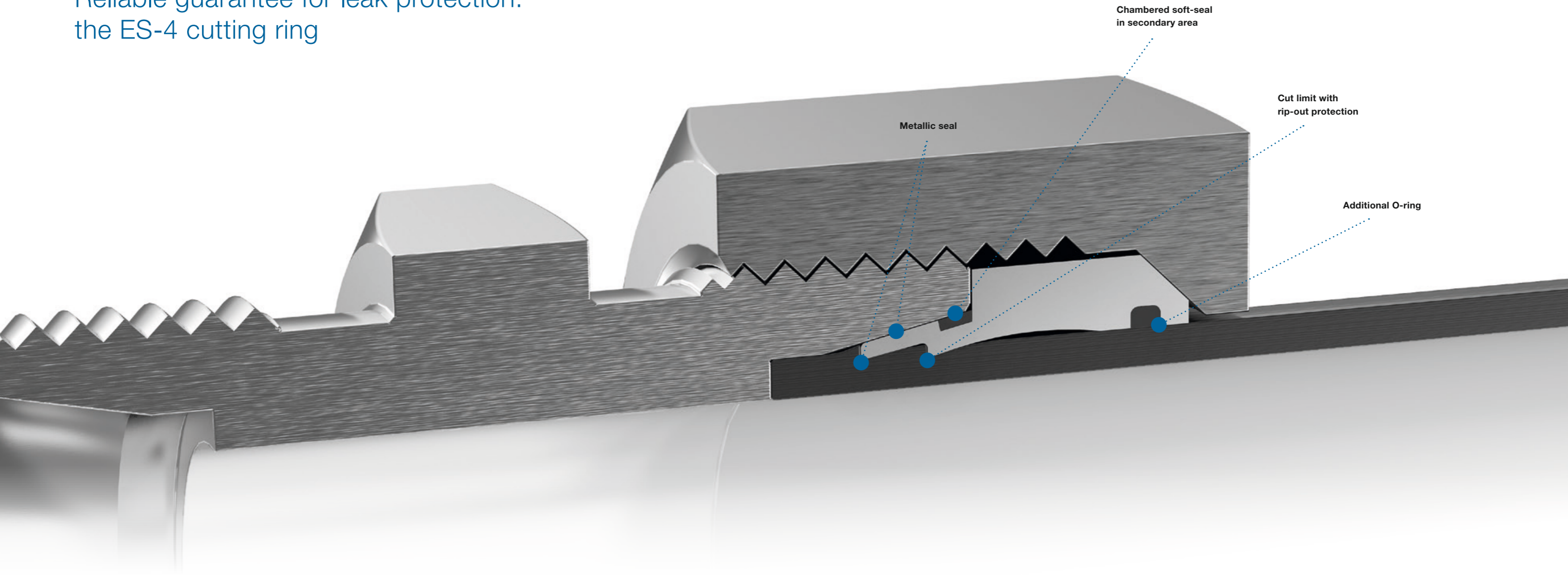
### These technical details ensure maximum leak protection

- Additional precision sealing by soft seal elements made of FKM
- Chambering of soft seals for reliable leak protection
- Prevention of improper installations thanks to over-tightening protection
- Increased safety through a combination of metallic sealing with additional soft-sealing
- Uniform sealing concept for use of also soft-sealing connection components





## Reliable guarantee for leak protection: the ES-4 cutting ring



### Leak tightness in detail: ES-4 under pressure

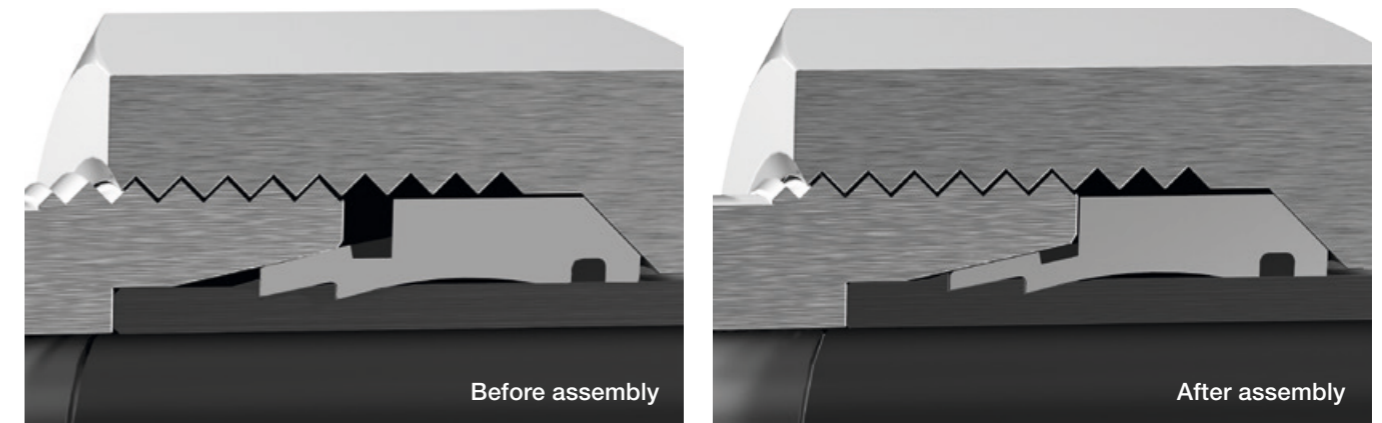
There are many aspects that show the high leak protection of VOSS ES-4 soft-sealing cutting rings.

- Avoidance of leaks from a weakening of metallic sealing, e.g. due to creep processes
- Damping of the alternating pressure loading on the soft-seal by preceded metallic sealing zone
- Reliable seal due to gap-free, extrusion protected chambering of the soft-seal elements
- Preventing leaking between cutting ring and tube with additional O-ring or labyrinth seal

### More safety due to over-tightening protection

The chambering of the soft-seal in stable, gap-free installation prevents rinsing out of the seal even with full system pressure and thus ensures additional prevention of leaks. This type of chambering is achieved through the stop function of the ES-4 cutting ring.

The cutting ring geometry is designed so that they remain highly elastic despite the block effect. In addition it prevents too deep cuts in the tube and especially counteracts constrictions in thin-walled tubes.



## Excellently equipped for every application



### Extremely high service lives – and 100% error-free processes

ES-4 cutting rings can be preassembled with various tools: The basic version is subject to natural wear. It must be checked after approximately 50 preassemblies for trueness to gauge. A process that costs time, presents a potential source of errors and requires a test plan.

Therefore as an alternative we developed a tool made of high-performance steel. Your advantage: no typical wear, no inspection intervals and up to 20 times longer service life. Reaching the use limit, the preassembly supports break in the front area. The result: An exchange is unavoidable – which guarantees you error-free processes.

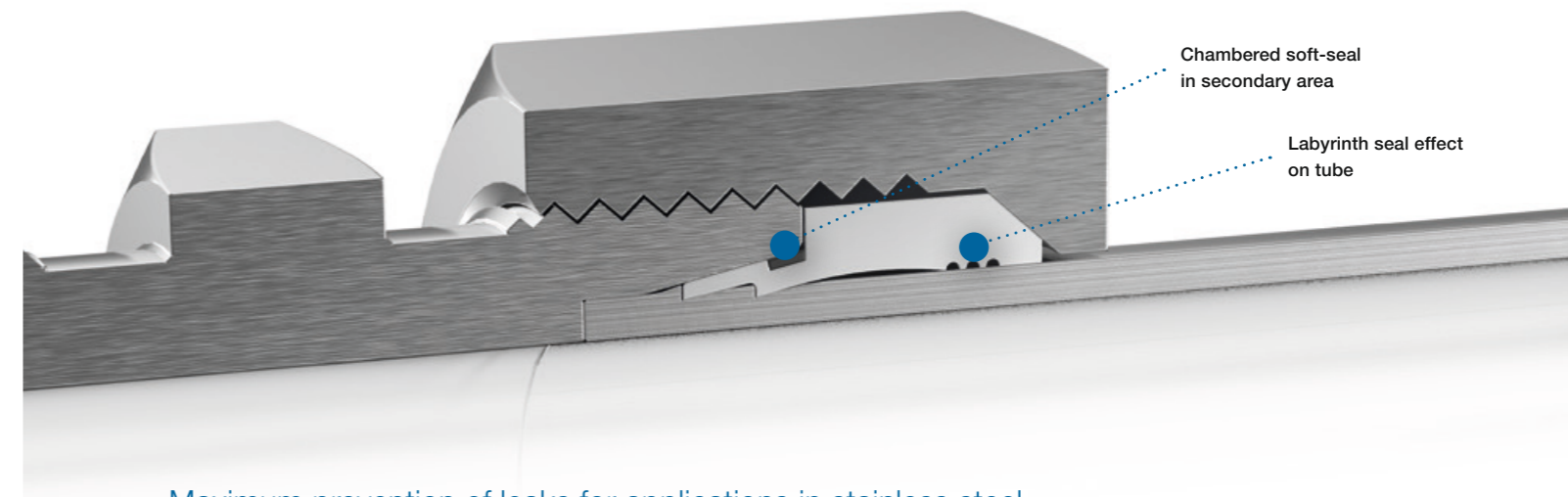
## Point for point convincing cost-effectiveness

In consideration of their high leak prevention, ES-4 cutting rings present an attractive cost-effective solution in a cost-use comparison.

- No cost intensive and time consuming rework
- Prevention of expensive repairs and production downtimes
- Long-term leak prevention ensures high product quality (no "sweating effect" of the coupling points)
- Flexible system design through large product selection
- Minimization of expenditure and increase of the functional reliability through process-reliable VOSS assembly concepts



## ES-4VA – the ideal solution for applications in stainless steel



### Maximum prevention of leaks for applications in stainless steel

Right when applications with stainless steel and use of sensitive media are concerned, a 100% seal is absolutely necessary. On the one hand to ensure cost-effective work processes. And on the other hand to protect the environment with ES-4VA cutting rings you are playing it safe.

- Reliable coupling based on the proven dual cutting technology
- Additional sealing between cutting ring and coupling with soft-seal on the cutting ring cone
- Additional avoidance of leaks between the cutting ring and tube by labyrinth seal
- Prevention of an extrusion of the elastomer at pressure impulse loads thanks to chambering of the soft-seal
- Over-tightening protection through mechanical block stop

## ES-4 / ES-4VA – The right cutting ring for every application



## Locations and sales network

VOSS Fluid is represented globally with their own subsidiaries. In addition regional requirements are covered by an international, comprehensive network of renowned sales parties. These specialized distributors pre-fabricate and assemble VOSS Fluid products in flexible lot sizes and act as an extended arm of our company. In this way you can assume high availability of VOSS Fluid products and services everywhere.



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

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