

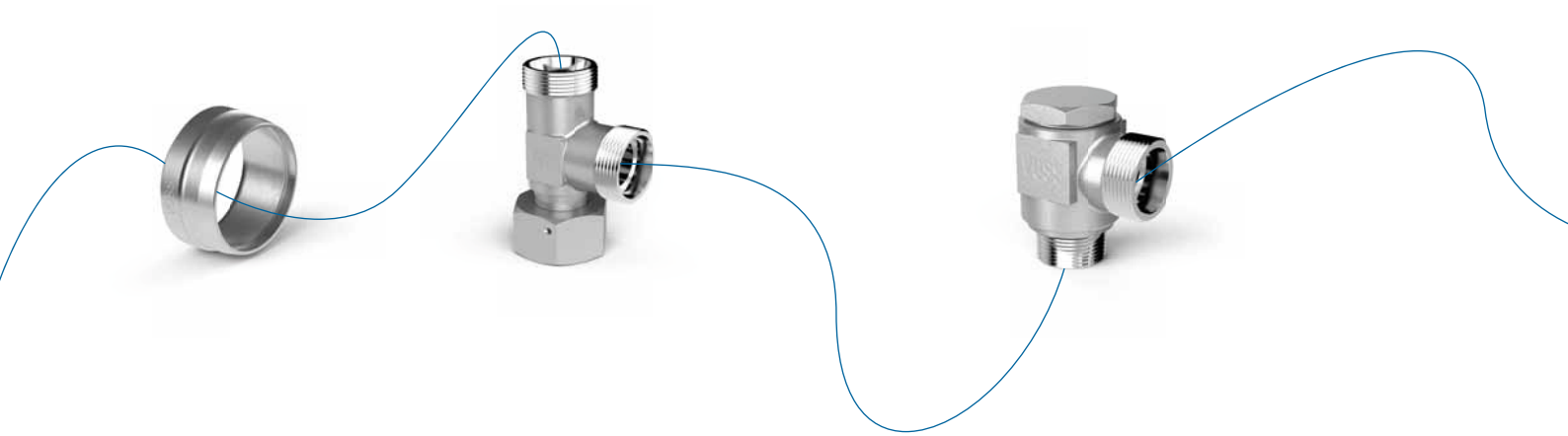
VOSS

Intrinsic Value.



VOSS Fluid

High-Performance Hydraulic Couplings for Machinery



VOSS

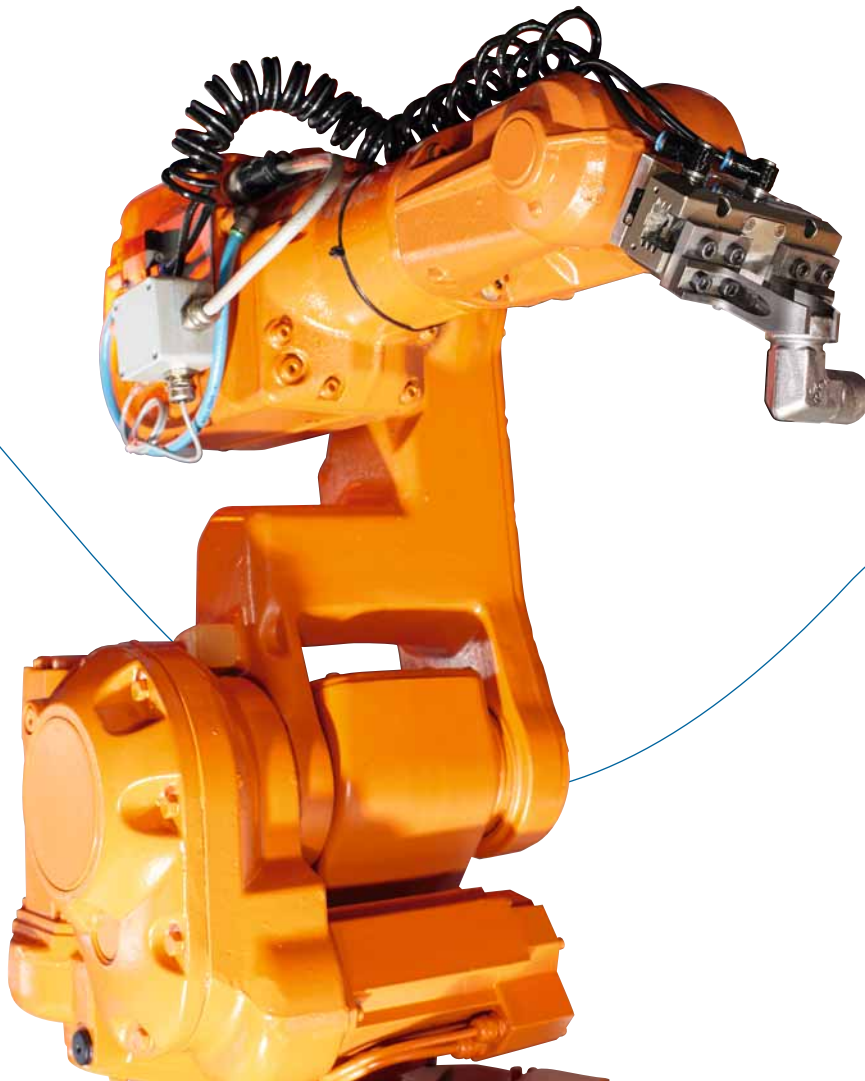
# Passionately connected.

The choice is yours. Either sell your customers a product or provide them with a valued friend. The difference? VOSS hydraulic couplings. VOSS hydraulic couplings change how your customers' workers go about their work, turning routine work into spending the day with a trusted friend. A friend who reacts exactly as your worker expects, in every situation. Being a leader in precision hydraulic systems, VOSS Fluid has the expertise and passion to design and provide customers with hydraulic systems that turn their machines into highly responsive workmates. At VOSS Fluid, we can't rest until we know a machine has all it needs to make it your customer's best friend, while adding just a little bit more luster to your image.



## Systematic to an end.

Getting everything out of fluidic power, means ensuring the transmission and control of that power is optimal. Since every system is only as strong as its weakest member is, we endow even the smallest, seemingly insignificant parts, like cutting ring fittings, with the strength to perform herculean tasks. How? By regarding your hydraulic system as a functioning organism in which all the components work together. Consequently, we carefully select parts manufactured from materials that ideally suit your specific system requirements and provide you with preassembling equipment to ensure our parts fit seamlessly into your system. Our approach is comprehensive and you'll notice the difference – from the beginning through to the end.



## When duty becomes pleasure.

Compare the actual performance of your machines with their potential and you'll know why we can't be happy when you're just satisfied. We want to amaze you with the exploitation of your machinery and systems' potential. That's our goal and that's the VOSS advantage, which has forged our reputation across the globe as the go-to hydraulic system partner and technology leader. We understand all the intricacies of inter-componenial

play. And for VOSS Fluid, not just leading-edge products and custom solutions, but peerless service is vital to our success.

Being a forerunner is for us, by no means, solely a matter of quality management and first-rate engineering. Rather, it includes a bar-none standard of customer service, encompassing consulting and assistance, training, 3D-design modeling, how-to films and much more. When it comes to giving you a competitive edge, we'll find a way.



## A valued partner adds value.



Since we design and build hydraulic parts and systems, you expect us to provide you with products and services that keep your machinery running profitably, safely, and smoothly day in, day out. However, you can expect more from VOSS Fluid. Our promise is to make your work more rewarding than you ever imagined. We give you the means to improve your products' quality, cut costs and, most importantly, turn machines into loyal dependable friends. We call these our Value Added Solutions. You'll agree.

### Promises with measurable substance.

Instead of offering you insubstantial claims, we deliver couplings, valves, and flanged connections whose presence transforms an inanimate machine into a real, valued friend. You can take our word at face value that:

- **Your product quality will significantly improve**
- **Your manufacturing costs will fall**
- **Your corrosion protection will exhibit increased durability**
- **Your customers' satisfaction will increase**
- **Your supply chain will become more manageable – even automatic**
- **Your materials management costs will decrease**

VOSS

*"Every day, we see the fruits of our partnering with VOSS Fluid, especially in terms of increased customer satisfaction."*



Machines with character.



*„When I sit up there in  
my cabin on my boy,  
I often forget that  
I agreed to meet the  
guys at the pub.“*



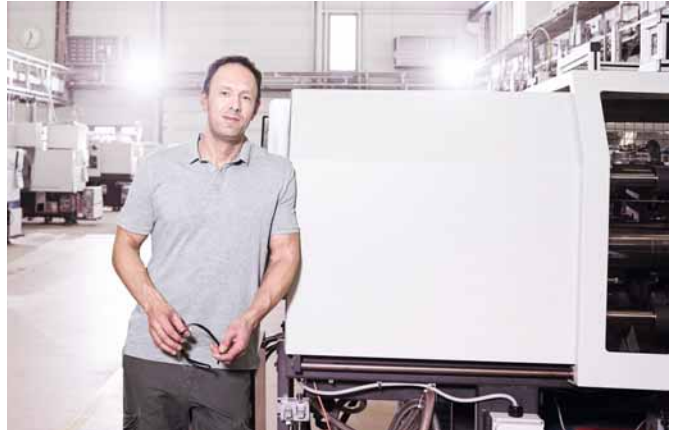
Hoisting and earthmoving machinery, road construction and maintenance vehicles, cargo-moving machinery, or architectural machinery and vehicles – hydraulics find application in many different vehicular applications. But regardless of where they're used, their users invariably expect them to perform the unimaginable. And that usually means increased failure. But not with VOSS Fluid products. Our engineers design hydraulic parts and systems to stand up in the face of adversity. No matter how tough it is.

## High tech – trimmed to an apex.

Heavy-duty construction vehicles brim with power. But who would think that such enormous strength is the product of tiny, perfectly matched and precision-engineered parts working in accord deep in the heart of the machinery? But that's exactly the case. In the end, the smallest members are decisive to getting every drop of performance reliability your system or machine can give you. And that requires quality, skill, and attention to detail in both the manufacturing of your hydraulic fittings and their integration in their applications. Exactly that is what you can expect from us. Everything else falls and fits perfectly into place through our close cooperation with you, yielding solutions that exceed the hundred percent you expect.



## Long-standing high performance.



No less under pressure to perform are hydraulic-powered stationary machines and equipment, particularly machinery used in manufacturing. For example, an injection molding machine that operates with 280 bar every four seconds four million times a year represents a formidable challenge for a hydraulic system. Or the manufacture of high-precision prefabricated building elements is another example, where VOSS hydraulic systems deliver micrometer precision and the 100-percent process reliability that is required for your machinery to perform as you envision.

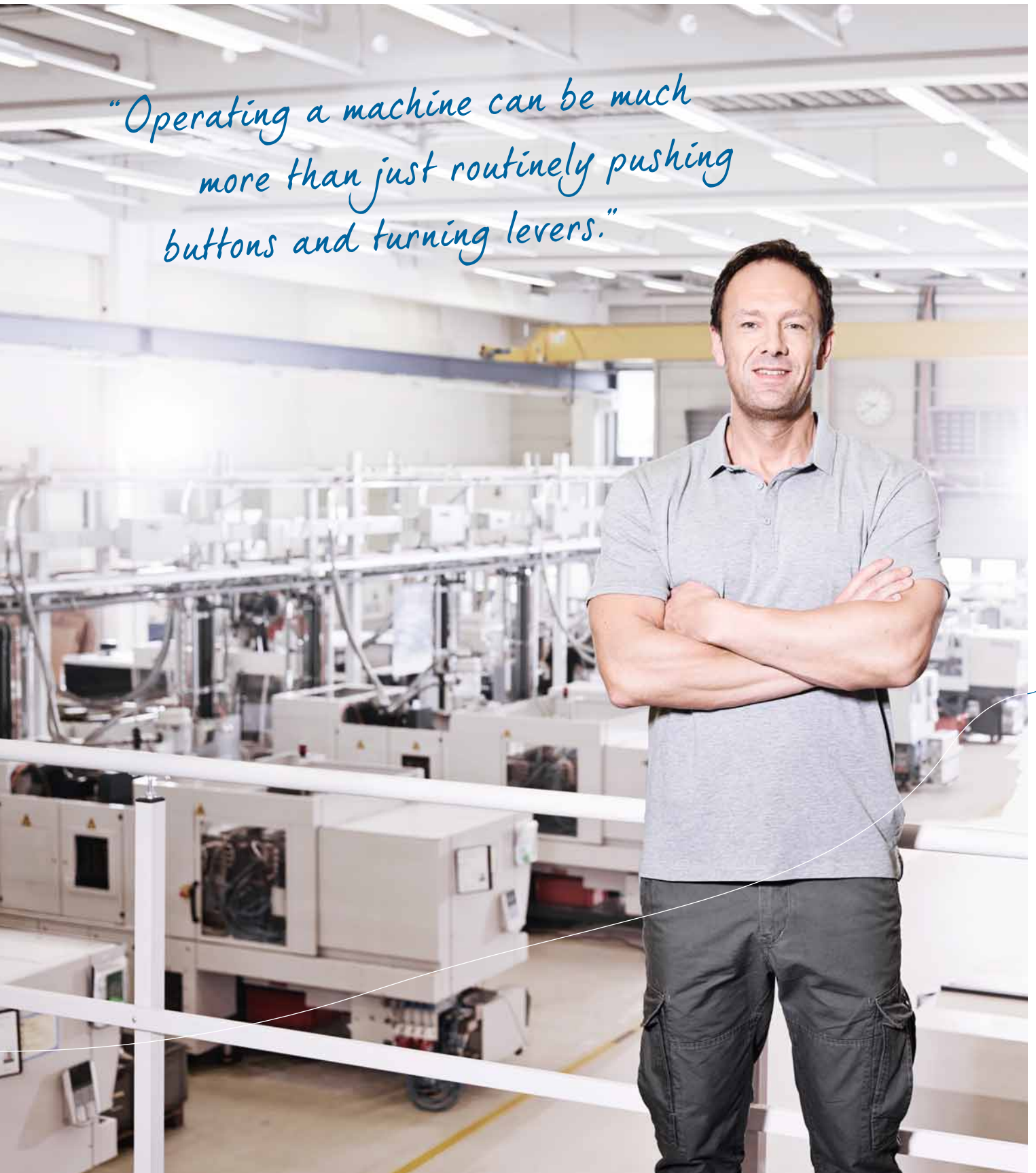
### Your machines become heroes – you an expert.

Your machines are only as good as what you put into them. It all begins with your engineering and the skill with which you execute your design plans. VOSS Fluid has put together a unique range of services for our customers and partners in addition to our top-quality products. We'll stay on-site with you as long as it takes to integrate our system into your application, making any necessary modifications, consulting you and training your personnel until every question has been resolved.



VOSS

*“Operating a machine can be much more than just routinely pushing buttons and turning levers.”*



## Logistics that actually flow.

Anyone who aspires to redefine the quality and longevity of hydraulics unquestionably requires dynamic process expertise. It begins with our procurement of materials and, by no means, ends at the doors of our customers' receiving dock. Having smooth, efficient workflows means everything to us. And not just in our fully automated high-bay warehouse. After all, we require 80 million individual parts with 780,000 movements, which we manage annually with passionate dedication.

### Kanban can do a lot – our full service even more.

Time is a commodity you'll probably never have enough of – unless you let us shoulder some of your load with our highly sophisticated logistics system. Then you'd have time to concentrate on your work. We'll transform an effective Kanban into a Kanban full-service system with a breadth of benefits you'll find only with VOSS Fluid, including:

- **Design and on-site implementation of racks, containers, and bins**
- **Determining of ideal batch sizes**
- **Tracking and tracing (e.g. scan, cards, labels)**
- **Delivery scheduling with bin sorting**
- **Reduced inventory levels and replenishment cycles**
- **Increased inventory turnover**
- **One-stop management of the entire supply chain**
- **Analysis and documentation of material consumption**
- **Controlling**



## True friendship is incorruptible.

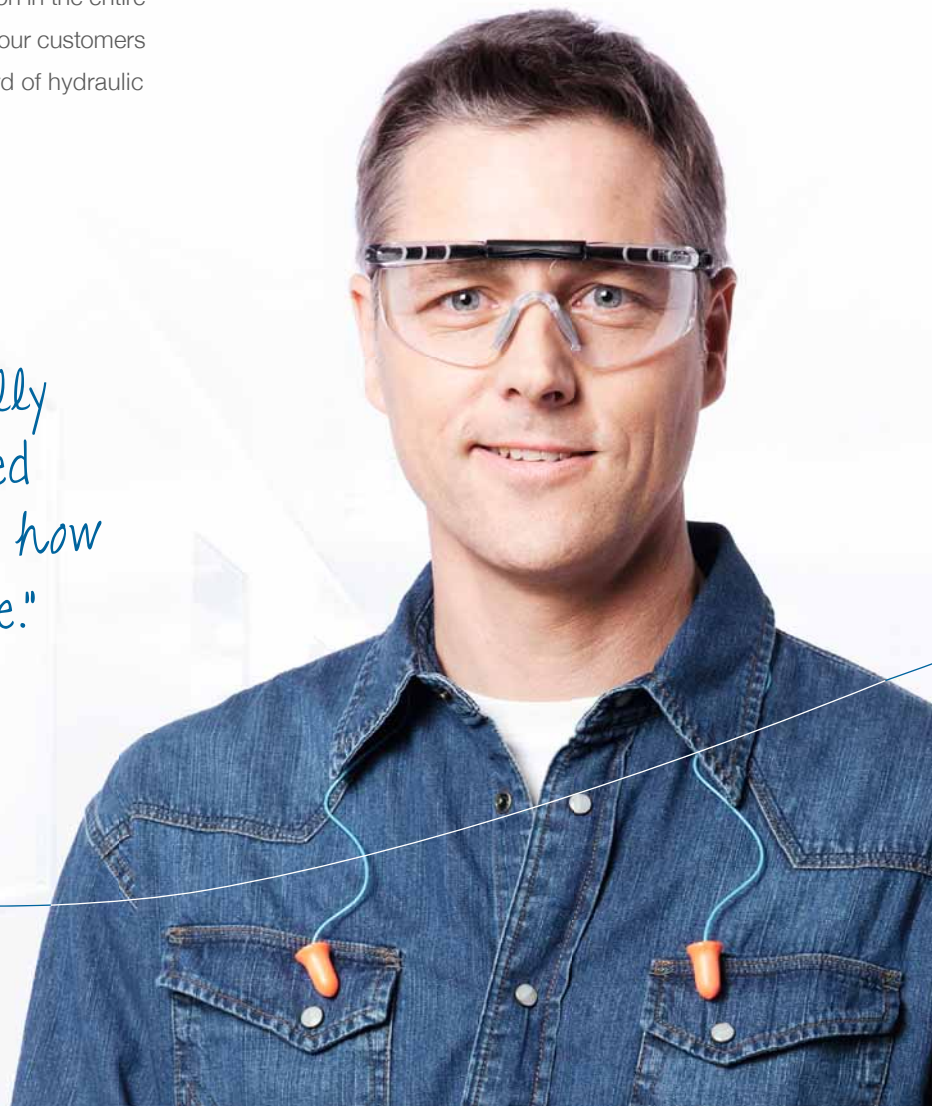
When you consider that your customers develop relationships of dependence with their machines through daily exchange and experience, you'll understand trust in a different light. As does VOSS Fluid, which is why we apply a revolutionary anticorrosion coating to our hydraulic couplings, making them virtually incorruptible. Compared to conventional galvanizing, which is more susceptible to corrosion and the effects of jolting and impact, VOSS anticorrosion coating delivers ten times the protection. And the coating and coating processes are both environment-friendly. In addition, VOSS coating offers you a decisive advantage in process reliability, particularly assembly.

### Coating with a future.

The components with the best corrosion protection in the entire system. That's not just a sales pitch. Since 2007, our customers have profited from VOSS' measure and standard of hydraulic fitting excellence thanks to:

- **Significantly greater corrosion resistance compared to other coatings available on the market**
- **Extremely high material durability following handling and assembly**
- **Very high process reliability**
- **Consistent quality control of every production run**
- **Best resistance against aggressive substances**
- **Guaranteed environmental compatibility through compliance with EU REACH regulations**
- **Chromium IV and cobalt-free composition**
- **Standard use of special coating with all VOSS Fluid fittings**

*"Our introducing a specially designed and formulated corrosion coating shows how detail-oriented we are."*



Having the right connections is everything.



Superior products and services are the fruit of know-how and skill. Only those who are at the pinnacle of their trade in theory and in practice have the capability to provide their customers and trade partners with tangible progress. Our objective is to give you stand-out performance across the board, from new product development and optimization right on through to how our products perform in your hands. Partial success doesn't measure up to our standards. It simply doesn't fit our mindset.

## Expertise points the way.

Product improvement means starting with one's top achievement in order to exceed a customer's greatest expectations. We design and build our products to the highest standards:

- **Exclusive use of EU standard compliant materials and substances**
- **100-percent crack-tested materials**
- **Long-term ongoing cooperation with regularly audited specialists**
- **Collaboration with customers on product development**
- **Ongoing machine capability checks**
- **Monitoring of tool wear**
- **Increased automation**

## User-friendly is too little for us.

It's just our nature. We're always tinkering on something or thinking about how we can use our know-how to your advantage with practical ideas, modifications, tools, and other things that can make your life easier, such as:

- **Highly advanced and practical tools and equipment**
- **Custom solutions**
- **Checking of the entire assembly process via installation audits**
- **Comprehensive customer support with training programs**



## Unbounded availability – worldwide locality.

Along with its fellow subsidiary VOSS Automotive, VOSS Fluid shares VOSS Holding as its parent company. The VOSS Group features 16 plants and offices as well as an extensive sales organization strategically positioned across the globe. Staying connected, after all, is our specialty.

### Small niches – our realm.

Wherever you are – even the most remote corner of the world – you can draw on our range of hydraulic fittings and systems. Thanks to our uninterrupted international networks, VOSS Fluid products are at your service everywhere. With our headquarters and chief manufacturing operations in Wipperfürth, Germany, another production facility in China and the global presence of the VOSS Group, we're always just around the corner with your trusted VOSS sales staff, logistics, service, and products.



**1995**

1995

Commissioning of our fully automated VOSS high-bay warehouse for around 12,000 storage pallets and 45,000 containers, which makes 15,000 items immediately available.

**1998**

1998

Introduction of our ES-4 soft sealing cutting ring.

**2003**

2003

Launch of the VOSSForm<sup>SQR</sup> and VOSSForm<sup>SQRVA</sup> tube-forming systems.



## Real progress means sustainable outcomes.

We have only one environment, but many possibilities of preserving it. Thus, we do more than pay lip service to this idea, making it the guiding principle in all we do:

- **Active reduction of environment-impacting factors and emissions**
- **VOSS in-house galvanizing operations with state-of-the-art ventilation and exhaust systems as well as ultra advanced waste-water treatment**
- **Regular training and integration of all our employees in our environmental protection policies and actions**
- **Regular monitoring of the effects our activities have on our local environment and surroundings**
- **Implementation of energy-efficient corrective measures throughout our entire company**
- **Environment-friendly technologies**



**2007**

2007

Introduction of VOSS zinc-nickel corrosion protection.

**2009**

2009

Commissioning of the VOSS in-house galvanizing facility, the most advanced of its kind in Europe.

**2012**

2012

Opening of a manufacturing plant for the Asian market in Xiamen, China.

Products of intrinsic value you can count on.

over **40%** of VOSS Fluid employees have degrees as engineers or engineer technologist

**56** sales partners

represented in **74** countries

over **99%** delivery reliability

**75%** of VOSS OEM customers receive deliveries via different Kanban systems

VOSS' galvanizing system saves **490 MWh** annually thanks to galvanizing facility's heat recovery ventilation

**1,500** and **2,000** ordered items delivered daily

**2003**

launch of the VOSSForm<sup>SQR</sup> and VOSSForm<sup>SQR</sup>VA tube forming systems

**2007**

implementation of a highly advanced corrosion protection system

three shifts work every day to make **4,000** picks filling 900 orders

**12,000** storage pallets and 45,000 bins are available  
in our fully automated high-bay warehouse

over **15,000** articles available to order

the ventilation system circulates **45,000** cubic meters  
of fresh air every hour in the galvanizing shop

**80,000,000**  
movements of individual parts annually

**780,000**  
individual movements of materials from the six  
different aisles in our fully automated warehouse

more than *100 million* parts  
pass through the VOSS galvanizing facility annually

**1/2 billion**  
cutting rings sold



# VOSS

VOSS Fluid GmbH  
Lüdenscheider Straße 52 – 54  
51688 Wipperfürth  
Germany  
Phone +49 2267 63-0  
Fax +49 2267 63-5621  
[www.voss.net](http://www.voss.net)  
[fluid@voss.net](mailto:fluid@voss.net)