

SOLUTIONS FOR  
**FLUID TECHNOLOGY**



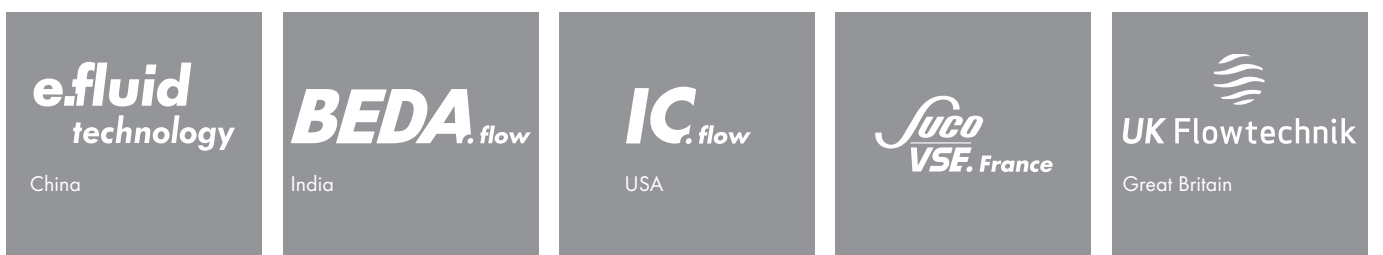
# e.holding

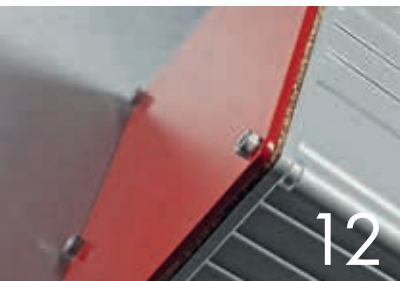
FLUID TECHNOLOGY GROUP

## PRODUCTION COMPANIES



## OWN SALES COMPANIES





12



20



16



24



28

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● NEUENRADE





***“In the centre of South Westphalia, one of the most powerful industrial regions in Germany, our market-leading companies are on a successful and sustainable course for growth.”***

As well as being a prime location for industry and technology, South Westphalia is a recreational area with a diverse natural landscape. We live and work where other people spend their holidays.

With five production companies, own subsidiaries in the key industrial countries and a global distribution network, Echterhage Holding is an owner-operated medium-sized enterprise from the heart of South Westphalia that combines an international character with values that are deeply rooted in tradition.



# GLOBAL NETWORK

3

PRODUCTION SITES  
IN GERMANY AND ITALY

50

SALES PARTNERS WORLDWIDE

4000

EMPLOYEES WORLDWIDE

5

PRODUCTION COMPANIES

6

OWN SUBSIDIARIES

## FIVE FLUID SPECIALISTS FOR INDIVIDUAL CUSTOMER REQUIREMENTS

**Hydraulic components, flow measurement technology, permanent magnetic systems and pump technology – the expansive Echterhage Holding group brings together a comprehensive product portfolio for fluid, drive, measurement and process technology. The companies that comprise e.holding develop and produce technically advanced products at three main sites: Neuenrade and Gevelsberg in Germany, and Cantello in Italy.**

Our companies work together very closely. As a system supplier, we can deliver special solutions as a complete package. With our own design departments, the extensive knowledge and application-specific experience of our employees, and our established cooperation with our long-standing customers, we have the basis for continuous optimisation and for the successful development of new products. Short decision-making paths within the group of companies mean that we are flexible in our actions, so that we can react quickly to customer needs and new market requirements.

From chemical, to plastics and pharmaceutical industries, in food production, in the aviation, automotive and ship-building industries, our designs are used wherever there are media with challenging specifications. Our products can be found in processing plants, in hydraulic systems, in dosing systems, and in sectors which require high-precision monitoring and measurement technology, to name just a few examples.

As a globally acting company, we never stop working to embed and implement sustainable corporate principles and ethical values in our business practice. We consider it our duty to create and maintain a corporate culture in which observing and complying with codes of conduct and ethical values represents an operational framework for all our business activity.





### DST magnetic coupling

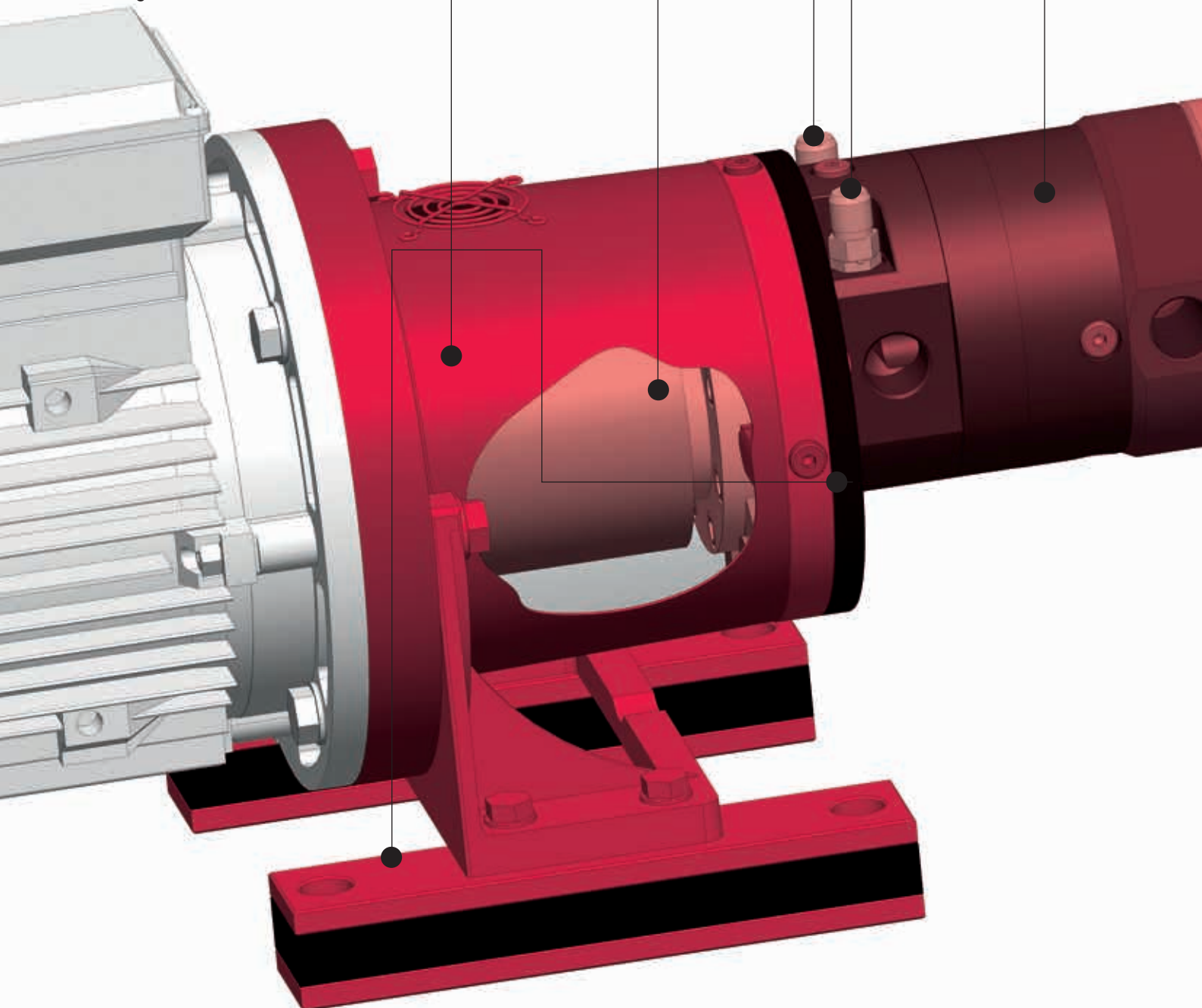
Permanent magnetic couplings from DST enable non-contact torque transmission from the motor to the pump. Leakage free, wear free, environmentally compliant.

### Oleotec test points

The check couplings from Oleotec provide safe and reliable measurement of the pressure at any desired point in the hydraulic system.

### HBE hydraulic components

HBE offers a large range of accessories that are used in our complete systems, from rigid or damped bell housings to foot brackets and damping rods.



## SOLUTIONS AS A SYSTEM

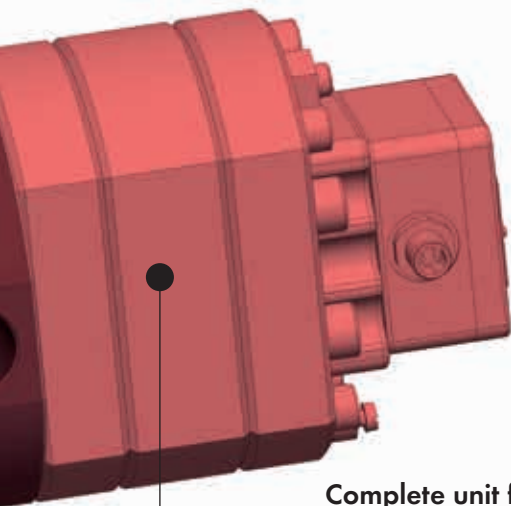
### Beinlich external gear pump

The external gear pumps from Beinlich are suitable for precise dosing of media – liquid or viscous, with or without solids content, in large or small quantities.

**Integrated solutions are a focal point of our product development, which is why we work closely together with our customers from the initial enquiry, through to the design and all the way to commissioning.**

As a system supplier, we can provide comprehensive complete systems from our own products to meet the customer's specific needs. In this respect, it is the close cooperation within our group of companies that forms the basis for our work. This is based on many years of experience, leading to synergies that enables us to resolve complex tasks – so we can always achieve a good outcome for our customers.

Our in-house development and design departments work constantly to optimise our products and to develop new systems and solutions. This is partly achieved through collaboration with long-standing customers, which enables us to respond promptly to market requirements and offer outstanding efficiency.



**Complete unit for a high precision dosing application**

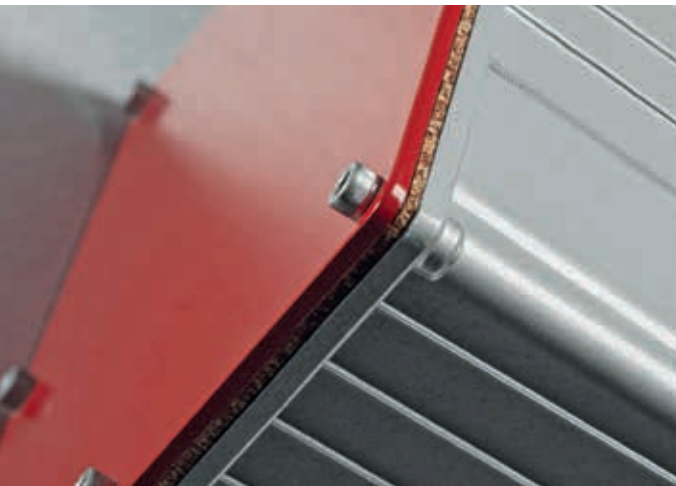
### VSE flow meter

The high-precision flow meters from VSE are used for precise measurement of the volume and flow of virtually any media that can be pumped. Optimised through various series and customer-specific solutions for a wide range of applications.



# **HBE** *hydraulic components*

HBE's success is based on high technical quality standards, comprehensive advice and reliable customer service. With a history of more than 30 years on the market, HBE has established itself as one of the leading manufacturers of components for fluid and drive technology. In addition to steel and aluminium oil tanks, the company's portfolio includes shaft and flange couplings as well as an extensive range of top quality hydraulic components.





#### Oil tanks

Steel, stainless steel and aluminium

#### Tank accessories

Cleaning covers, level oil gauges, filler and breather filter, level switches, desiccant breathers

#### Tank heaters

Cartridge heaters, tube screwed-in heaters and immersion heaters

#### Bell housings

And accessories like foot flanges and damping elements

#### Oil coolers

Oil-/air coolers, oil-/water coolers and bellhousings with oil cooler

#### SOFTEX®

Elastic and no backlash shaft couplings

#### STAREX®

Flexible couplings

#### Torsional couplings

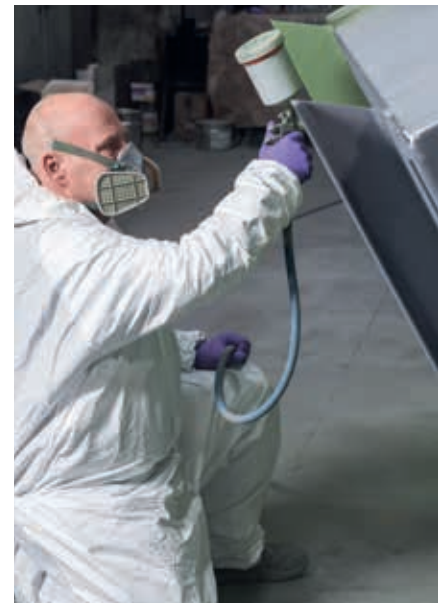
Flange couplings for Diesel engines and mounting plates

## **RUNS LIKE A WELL-OILED MACHINE – DRIVE TECHNOLOGY FOR OIL HYDRAULICS**

**Set up as a three-man operation, HBE has developed into an international supplier of hydraulic components and oil tanks since its foundation in 1984. The subsequent years saw specialists from fluid technology merge together around the company to form Echterhage Holding.**

Our love of craftsmanship binds things together. This applies not only to the manufacture of oil tanks in our in-house steel construction department, but also to our communication with our customers. In addition to an extensive selection of series-produced items that are always in stock, a large proportion of our products are manufactured to order. Customer-oriented flexibility when implementing special requests is a matter of course for us, and is a feature of HBE that our customers have come to depend on over many years. From accessories for all aspects of pump and motor use to a ready-to-fit hydraulic tank – we can supply the complete package thanks to our diverse product range.

Today, HBE products are used by well-known companies from all sectors of mechanical and plant engineering. They appreciate the short lead times that we can offer thanks to optimised warehousing, as well as the high quality.





**“True craftsmanship,  
top quality technology  
and a great love  
of detail. That’s HBE.”**



**VSE**.flow®

As one of the leading manufacturers in the field of flow measurement technology, VSE produces precise flow meters. The high-tech products deliver highly accurate measurement results for virtually all pumpable media. VSE flow meters work reliably and safely for conveying applications, whether for water or high-viscosity adhesive media containing fillers. The customer can select from various materials such as titanium or bronze to find the right solution for the particular application. The VSE product range is rounded off with corresponding evaluation electronics and a comprehensive selection of accessories. VSE also develops custom solutions for individual customer orders.







#### Gear flow meter VSE EF ecoflow

The lightweight, cost-effective gear flow meters are suitable for low-pressure hydraulics and lubrication systems.

Flow range 0.05 to 150 l/min

Viscosity 1 to 10,000 cSt

#### Gear flow meter VSI

High performance, linearity and resolution for the most accurate measurement of viscous fluids.

Flow range 0.002 to 525 l/min

Viscosity 1 to 1,000,000 cSt

#### Turbine flow meter VTR

Flow meters for extremely harsh application conditions in the oil, petrochemical and chemical industries.

Flow range 110 l/h to 4,500 m<sup>3</sup>/h

Viscosity 1 to 5 cSt

#### Gear flow meters VHM

Specifically for abrasive and poorly lubricating media. They are particularly suited to use in the paint industry owing to dead space optimisation.

Flow range 0.01 to 20 l/min

Viscosity 1 to 20,000 cSt

#### Helical screw flow meter RS

Low-resistance, pulsation-free, high-precision measurement with minimal shear, very low pressure losses and excellent functionality based on intelligent sensor technology.

Flow range 0 to 3,000 l/min

Viscosity 1 to 1,000,000 cSt

#### Special solutions

In close cooperation with the customer, VSE develops special solutions, using a wide range of materials and matched to the needs of the particular application.





## PRECISION, DROP BY DROP – WITH PINPOINT ACCURACY

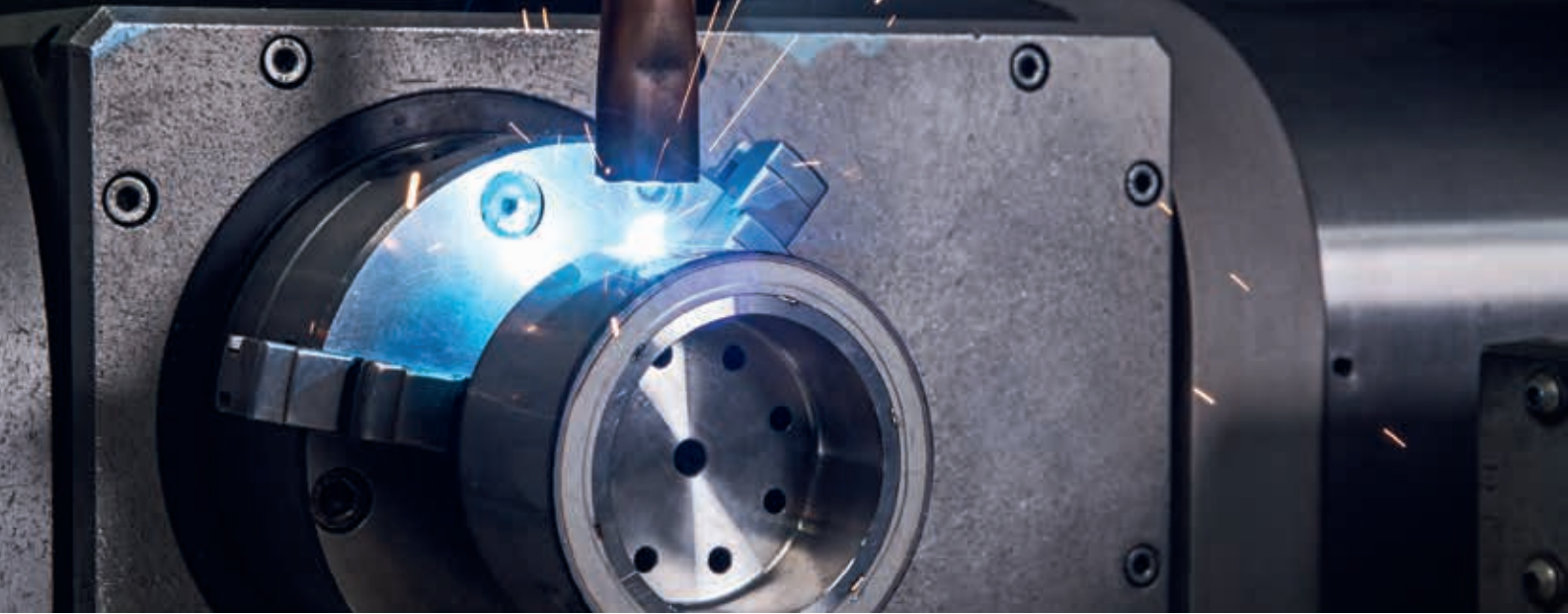
**VSE is your ideal partner for reliable and exact measurement of all types of media. Our application expertise and our wide range of different flow meters will ensure that your product is perfectly matched to your needs.**

To do this, we can make use of modular systems that are adapted by means of technical specifications to each individual order. This allows us to fulfil orders reliably in a short time frame. The majority of our output is tailored to customer requirements, thereby putting the handcraft back into industry. VSE won't sell you sensors "off the shelf" – precise craftsmanship is at the heart of our work. Each gearwheel and each electronic unit is fitted precisely by our employees. With our comprehensive service offering, we are always on hand to advise the customer well after delivery.





**“We manufacture high-precision measuring devices. Accuracy is everything in my job.”**



DST Dauermagnet-SystemTechnik was founded in 1991 on the basis of a simple but ingenious idea: by using magnets, the input and output sides can be hermetically separated owing to the non-contact transmission of torque, thereby eliminating leakage. The system is hermetically sealed from the environment by using the canister. This enables toxic, odorous or aggressive fluids to be conveyed safely. Today, the company is a market leader in the manufacture of permanent magnetic couplings. The product portfolio is rounded off by agitator drives and innovative canisters.





### Permanent magnetic couplings

With performances between 1 and 1,200 Nm, the various standard series from DST cover the use on all current centrifugal and displacement pumps; furthermore, the company is just as effective in the development of special custom solutions, with performances ranging from 0.1 to >10,000 Nm.

### Agitator drives

In addition to the permanent magnetic couplings, DST also offers stainless steel agitator drives, which are used primarily in pharmaceuticals, biotechnology and the food industry.

### Canisters

DST produces canisters of high standard. The large range of products is available in various materials and covers a broad spectrum of applications.

## MAGNETICALLY ATTRACTIVE – MOVEMENT VIA MAGNETIC TORQUE TRANSMISSION

**With our many years of experience in non-contact torque transmission, we are your first port of call for the design and development of customised solutions using magnetic couplings and agitator drives.**

Comprehensive advice is a top priority for us in this context. We make sure that every enquiry is technically feasible, then produce a calculation and simulation. This means that we work with concrete data and designs right from the planning phase. With well over 1,000 magnet configurations, we are able to find the perfect solution for the perfect solutions for the diverse applications of our customers. Our employees provide excellent support for your projects with their extensive knowledge of applications and materials. In close collaboration with you, we create products for varied fields of use.

In addition to the chemical, pharmaceutical and food industry our magnetic couplings and agitator drives are also used in sectors such as biotechnology, hydraulics and petrochemicals. A wide selection of canisters is an additional benefit for our clients. We have the right solution for almost any requirement.





**“Our work lays the foundation for diverse applications and end products.”**



## **beinlich**.*pump systems*

Over the course of more than 65 years, Beinlich Pumpen has developed from a traditional manufacturer of lubricant pumps to a supplier of highly specialised custom pumps. In addition to standard products that can be used flexibly, Beinlich relies on knowledge developed over many years from the handling of individual customer projects. Our flexibility allows us to react quickly to customer needs and new market requirements.







**VISCO.mini®**

#### Dosing pumps

The external gear pumps of series ZPD, ZPDA, DARTec® and ECO.pump, and the progressive cavity pump VISCO.pump® are suitable for dosing fluids and pastes having various viscosities, solids content, delivery amounts and environmental conditions.

#### Delivery pumps

The ZPA external gear pumps and the especially quiet ZPI internal gear pumps are used to convey media in hydraulic systems, in cooling or heating circuits, for lubricating machines and, in particular, for bottling in a very wide range of industries.

#### High-pressure pumps

The low-noise radial piston pumps TR, TRG, TRD and TRGD are used for a range of media, in particular in the areas of high-pressure hydraulics and high-pressure dosing.

#### Special solutions

Working directly with the customer, Beinlich develops needs-based solutions tailored to the specific application demands in a very short space of time – also making use of the products from the other Echterhage companies.

## KNOWLEDGE, EXPERIENCE AND SECTOR KNOW-HOW – EVERYTHING IN THE RIGHT DOSE

**Our pump expertise is based on experience from more than half a century on the market. We sell our customers much more than just a product.**

Employees of Beinlich understand their customers' systems and know how the individual components interact. That's how we are able to respond to the customer's specific requirements and select the right pump for their application.

An exact understanding of the demands of all the different sectors is a prerequisite for excellent collaboration – whether with traditional mechanical engineering companies, manufacturers of highly sensitive electronic components or a pharmaceutical company operating under strict conditions. Our employees contribute to the success of our customers with a precise dose of knowledge gained from projects over many years. We are familiar with the properties of our pumps in the majority of customer systems. We know how a broad selection of fluids will behave in a wide range of environmental conditions. This application expertise means we can offer our customers very good solutions.





**“How come I still enjoy my job after so many years? We can always find ways to improve a fundamentally simple technical principle.”**



Oleotec has been synonymous with reliable and safe pressure measurement in hydraulic systems for more than 40 years. The company distributes a comprehensive range of check couplings, hydraulic hoses and manometers under the name MCS, "Mini Control System". The hydraulic components from Oleotec are reliable and cost-effective, and can be used at any point in the hydraulic system in many different industry sectors.





#### Check couplings

Check couplings from Oleotec can be installed at any point in the hydraulic system where pressure needs to be measured.

#### Hoses and fittings

The micro hoses and fittings can withstand pressures of up to 630 bar and can be installed without tools.

#### Manometers

Oleotec glycerine-filled and digital manometers are ideal for pressure monitoring on hydraulic machines.

#### Test kits

The test kits include all Oleotec components: manometers, hoses and corresponding fittings - packed in a plastic or metal case.

**MCS**<sup>®</sup>  
Mini Control System



## **COPING WELL UNDER PRESSURE – HYDRAULIC COMPONENTS FOR PRESSURE MONITORING**

**Whenever pressure needs to be monitored and measured safely and reliably in a hydraulic system, Oleotec should be your first port of call. Thanks to our many years of experience, we understand the requirements of our customers and know exactly how much force our products need to withstand.**

In our fully automated production hall, hydraulic hoses, check couplings and manometers are manufactured quickly and in high quality. We are also fast and flexible when it comes to producing custom orders. We use our passion for invention to continuously improve the product characteristics of our check couplings, ensuring that our products can meet all demands, reliably and sustainably.





**“I know that many of our products are used around the world. That makes me proud.”**

*We are your competent partner  
for Fluid Technology Solutions of  
the e.holding companies.*





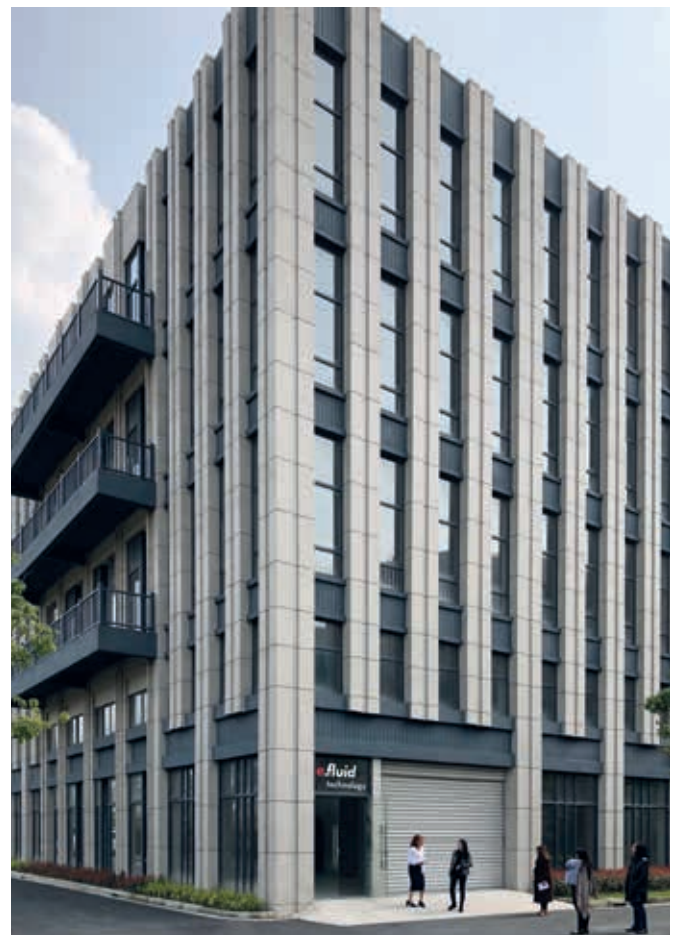
## OUR PROFESSIONAL TEAM PROVIDES APPLICATION EXPERTISE, QUALITY SERVICE AND TECHNICAL SUPPORT

**E Fluid Technology Co., Ltd. in Shanghai offers standard solutions as well as customer-specific innovations of VSE precision flow measurement technologies, Beinlich performance pumps and DST permanent magnetic couplings for the most diverse of industry sectors. The successful team, which is made up of Chinese employees and German management, is a reliable and specialised partner for all customers in China.**

Starting from the first inquiry, we provide personal consultations tailored to each individual client need. Working closely with our clients from the initial project development helps us streamline the design, assembly and commissioning processes to follow.

Close cooperation between E Fluid Technology and the companies of the Echterhage Group in Germany leads to synergy effects that are essential for solving complex tasks. We provide flexible and customised products and system solutions according to client requirements and specifications. By offering complete systems at a single source, we are able to achieve optimal performance for our clients.

The acquisition of a building in Shanghai has provided even more space to E Fluid Technology for distribution. A highly intelligent storage system with extended warehousing reduces delivery times to a minimum and enables a fast delivery of standard products to Chinese customers. In addition, the company always provides competent on-site services for installation, repair and maintenance. Customer-specific tests and the calibration of flow meters are carried out on-site in Shanghai. An additional office in Guangzhou ensures that distribution and services are covered in China's southern regions.



## E.HOLDING PRODUCTION COMPANIES



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### **DST Dauermagnet-SystemTechnik GmbH**

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