

# *Services & Solutions*

**Full Service**







Well positioned for the future: Ulrike Wulf with her sons (Florian and Julian) and Norbert Brothun

# MOIN

## Take a look and get to know us better

This brochure is an invitation to take a look at our fascinating world. A world that has changed completely since our company was founded in 1930. Our business fields have grown and we have deepened our know-how by working with our partners, suppliers and customers. Of course, a few things have remained the same. These include our ability to question, the urge to develop further and the goal of meeting our customers' needs.

On the following pages, we will show you where we stand today, what areas we can help you with, and how we are implementing the future topics of sustainability, environmental protection and continuing education. You will also get an impression of how we work, and our values and goals are reflected too. Of course, we could simply say that we're your expert advisor and solution partner for your individual requirements in the fields of hydraulics, sealing technology and so much more. Yes, that's true, but such claims are not really that innovative or convincing. So browse through it, let the impressions sink in and contact us if you have any questions. Afterwards we will work together to achieve your goals – no matter how small or large they might be. We look forward to hearing from you.

Ulrike Wulf

Norbert Brothun



A little story on the side: Many of our business partners ask us why our company is called Gottwald and not Brothun. Since we are a family-run company, this choice of name is quite obvious. But in fact, the company is still named after its founder: Franz Gottwald. After he passed away and Helmut Brothun acquired the company in 1970, he decided not to change the company name out of respect and appreciation for the founder. This decision vividly illustrates one of the values Gottwald stands for: We are focused on technology, but it's people who matter most to us.

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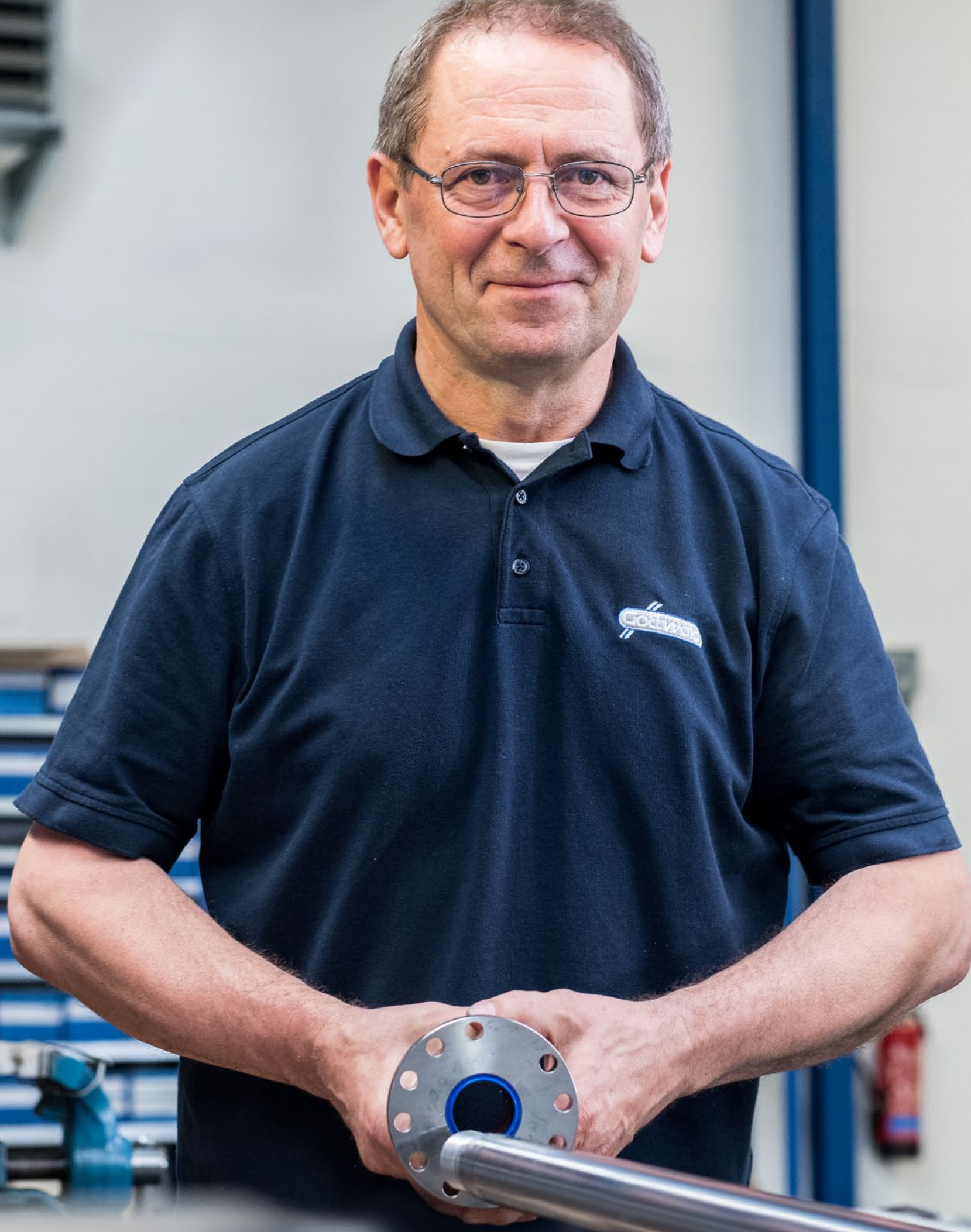


# *Sealing technology*

**Inconspicuous, but very effective**

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The world of sealing systems is multifaceted. Virtually innumerable designs, sizes and a wide variety of materials make the topic complex and exciting at the same time. We constantly analyze your needs and keep close track of the product variety of our market-leading manufacturers at all times. As a result, we constantly develop our skills further for you because one thing is for sure: Striving for the best possible result is what drives us.





# The world of seals

## It all comes down to the right design and assembly

The failure of a seal is one of the most common causes of machine failure. The good news is that a large share of seal failures is preventable! This is because seals need to be designed and installed correctly in order to function smoothly. The right choice of the lubricant is also crucial to achieving optimal functionality. All of this requires expertise, knowledge of materials and experience.

We can help you to avoid seal failures and thus machine breakdowns. We would also be happy to train your employees and, in the process, increase your productivity.

### Sealing kits and kittings

Need a replacement seal? We make your job easier and create complete sets of seals for OEMs and MROs. This means you always have the right seal at hand to perform maintenance, repair and servicing work. Simply call us or order them directly at: [gottwald-shop.com](http://gottwald-shop.com)

### Sampling

We test and determine the right seals on the basis of unused or damaged samples. On the basis of the damage, we can also see whether a seal was designed improperly. On request, we also carry out material tests in co-operation with you.

### Seal installation service

We assemble your seals! Through our professional assembly, we ensure that seals function properly. This can extend the service life, which in turn reduces your costs. And we can also train your personnel on site if you'd like.

### Elastomer lab

We test the quality of the elastomers you use. Our test methods include measuring the compression set of a seal, for example. We compare the result with the values in the manufacturer's specifications.



### Optimization

We never stop improving our sealing solutions. You benefit directly from the benefits this brings. For example, reduced friction lowers your energy requirements, cuts costs and reduces CO<sub>2</sub> emissions.

### Flat gasket production

In our flat seal production, we combine knowledge of materials with manufacturing expertise. We plot and stamp flat gaskets made of elastomers, fluoroplastics and metal, for example. This creates ideal solutions for various applications and temperature ranges.



## Gottwald is a Freudenberg Partner

Freudenberg Sealing Technologies is part of the Freudenberg Group and is one of the world's leading manufacturers of sealing solutions. Since the development of the Simmerring® in 1932, Freudenberg has made it its business to develop and manufacture sealing solutions for a wide range of industries. Freudenberg Sealing Technologies is highly regarded for its quality and innovative capabilities in the automotive industry, aircraft construction, the pharmaceutical industry and shipbuilding, among other industries. Together with our strong partner, we develop and improve sealing solutions for our customers, taking all current industry-specific requirements into account.







# Gottwald Xpress

## CNC precision for your seals

We are so much more than a wholesaler. We are the partner who helps you keep downtime and stoppages in your company as low as possible. Our design department with its own manufacturing facility allows us to respond flexibly and at short notice to your needs. We manufacture to cover repair requirements, prototypes and small series. We have proven materials from various well-known manufacturers on stock and can therefore offer 24h express delivery. Call us and put us to the test.

### Construction

The design and calculation of an optimally functioning sealing system requires experience and technical know-how. We develop new seals to meet your requirements or analyze and improve your current sealing systems.



### Consulting

We want you to benefit from our experience. So please feel free to contact us for support. The earlier, the better. We take measurements and advise on possible improvements, materials, food conformity and hygienic designs.

### Production capabilities

We produce your seals from synthetic materials, elastomers and selected metals. We plot and punch flat gaskets from various materials. Always individually and with the highest precision through the use of high-quality machines. From prototypes to large-scale production.

### For repairs

Need spare parts? Then visit us at either our locations in Bremen or Hamburg or we will come to you. Then we can measure your parts and produce a production drawing. Next we manufacture the seals you need either from commercial standard or proven Freudenberg materials. Problem solved – quickly and efficiently.

### Your added value

- Secure supply chain management
- Less downtime
- Solving of complex requirements
- Simple and fast processes
- Quality through expertise and experience
- Reliability through certification
- Seal assembly service

### Industries

- Trade
- Fluid technology
- Heavy industry
- Food and Beverage industry
- Mobile machines
- Energy
- Mobility



## Gottwald is a certified Freudenberg Xpress® production site

As an official Freudenberg Xpress® production site, we jointly benefit from more than 165 years of manufacturing expertise. We are proud to be part of such a network. This enables us to produce standard profiles for every industry as well as individual customized solutions. The processes are tried and tested and have proven themselves many times over.

For Freudenberg Xpress® productions, we use only original profiles and the original materials. As a result, we achieve the quality of series products for every piece – even in small-batch production, which is extremely economical thanks to how we work.

We even manufacture and deliver urgent spare parts to our customers within 24 hours.





## *Fluid technology*

### **Our power for your systems**

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The hydraulic and pneumatic systems in machines, systems and equipment are complex units that require our attention.

Besides regular maintenance and repairs, we use our expertise and the specialized knowledge of our partners to optimize your current fluid systems – either in our workshop or at your site.



# Hydraulics workshop

## Repair and overhaul with a test bench run

Our hydraulics workshop is equipped with extensive and modern machinery. We work independently of manufacturers so that we can always find the right solution for you. Our specialists repair all types of fluid components and maintain them. Fast and effective special solutions are also part of our everyday business. Did you know that you can also rent various units and equipment from us?

### The products you need from A to Z

Repairs and overhauls are just as much part of our scope of services in the workshop as the conversion and modification of all hydraulic systems. For example, our hydraulics experts optimize the sealing system and the guideways of hydraulic cylinders. Our services include:

- Hydraulic cylinders
- Hydraulic motors
- Hydraulic power units
- Hydraulic pumps
- Coolers

### Controls and valves

By rebuilding, modifying and repairing your hydraulic controls, we ensure loss-free power transmission, for example. Functioning valves are crucial for controlling the power flow. Therefore, we check, seal, adjust and readjust them.

### Hoses

We test, change and document your hydraulic and pneumatic hoses. Because we have our own production, we are able to manufacture exactly the hose lines you need for your systems. This also includes optimizing the current hoses. Final acceptance takes place according to customer requirements.

### Special solutions

Does your application require a special solution? Then we are the right partner for this too. We rely on our decades of experience and expertise to carry out piping, tubing and modifications according to your requirements.

### Mechanical manufacturing

We produce spare parts from various materials in our workshop for repairing and maintaining your machines and equipment. We lathe, hone, mill, drill and saw – conventionally and CNC-controlled.

### Laboratory

We can perform short-term trend analyses by microscope on request in our laboratory. This gives you a quick assessment of the composition of your hydraulic oil. In the process, we determine the water content or viscosity, for example.

### Customized bearing lubrication

We can provide you with the perfect lubrication for your bearings. In our specialized department, we match the ungreased high-end bearings from our manufacturers with exactly the special lubricant that is ideally suited to your application. This ensures optimal functionality of your bearings. What service life do you need?

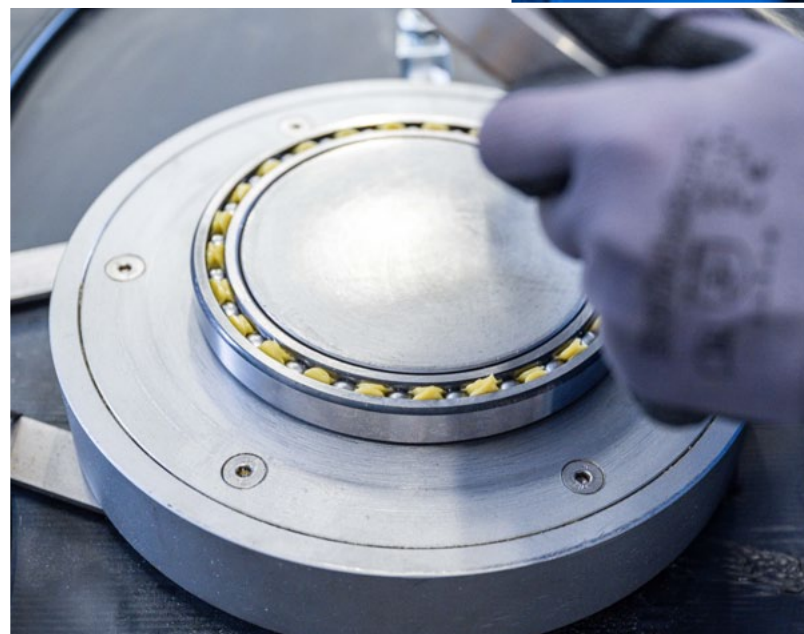
### Our rental equipment

- Drainage units
- Flushing and filtering units
- Filling and testing devices
- WalForm flanging equipment
- Mounting devices
- Measuring devices
- Other devices on request



### Defect analysis

We test and scrutinize. Through many years of joint research and development, we have perfected our defect analysis – something we are very proud of. We pass on this unique know-how from generation to generation in our workshop.







## Fluid service

Let it run – we will seal it for you

We take care of your hydraulically operated systems directly on site by performing planned and condition-based maintenance and in the event of acute malfunctions. Since malfunctions and failures do not always occur during working hours, our experts are there for you as part of our 24h service. The service vehicles are equipped with all of the necessary diagnostic devices and tools. We also take care of the documentation for you.

Environmental protection, reduction of operating costs and reduction of downtimes are goals that every company strives to achieve. We also help here by providing concepts and implementing measures to optimize your hydraulic systems. What goal can we support you with?

### System expertise

There is almost nothing we haven't seen before. So rely on our experience in troubleshooting, with revisions, commissioning and retrofitting as well as in optimizing your systems.



### Optimizations

Things can always be done better. Based on our experience, we know exactly where there is potential for optimization. Benefit from our diverse concepts, standardization measures and our logistics services.

### Services

- Piping
- Hoses
- Repairs
- Assembly and disassembly
- Conversions
- Modifications
- Training

## Documentation and hazard identification

There is a legal requirement to document the maintenance and repair work that is carried out. To ensure the greatest possible security, our documentation even goes far beyond the legal requirements. It includes all machine lists, defect lists, particle distribution lists, maintenance lists and optimization lists. We thus ensure that you are always up to date.

Maintenance work on hydraulics can lead to a variety of hazards. We are aware of our special responsibility and carry out the risk assessment required by the BetrSichV reliably and with a high level of professional expertise prior to performing maintenance work. We also adhere to the resulting occupational safety measures and document this.



### Fluid engineering

- Revisions and commissioning
- Hazard assessments
- Measurement and classification of fluid contamination
- Filter and accumulator service
- Elimination of leakage
- Oil change, tank cleaning and flushing
- Documentation

### System solutions

Besides the workshop and services already mentioned, we are also experts on your system solutions. These include the repair and maintenance of systems, parts and individual components – independent of the manufacturer.

### Seal installation and optimization

We install and optimize seals to prevent the leakage of fluids and thus ensure the full functionality of your systems. Professional implementation protects the environment and reduces malfunctions and downtime.





# Hydraulic accumulators

## Versatile with an indispensable effect

The main task of pressure accumulators in hydraulic systems is to absorb a certain amount of the hydraulic fluid when the pressure rises and to release it again when the pressure falls. This technology is used to maintain a certain level of system pressure, to dampen shocks, store energy or also as a safety function in emergencies, for example.

In Germany, pressure accumulators are subject to the Pressure Equipment Directive and thus to mandatory testing. We have the necessary expertise and comply with all prescribed safety regulations in our work. In the area of accumulator maintenance, we work independently of manufacturers and always offer you the best and most cost-effective solution.

### Your benefits

- Increased energy efficiency
- High operational reliability
- Long service life
- Application-specific development
- Easy maintenance

### Applications

- Construction machinery
- Machine tools
- Solar and wind energy
- Automation and robotics
- Commercial vehicles
- Automotive gearboxes
- Suspensions of chassis systems

## Gottwald is your partner for pressure accumulators

### Our services at a glance

- Consulting and design
- Testing and individual filling
- TÜV acceptance and documentation
- Repairs and bladder replacement
- Picking and accessories
- Flexibility for small quantities
- Prompt delivery from stock

### Self-generated nitrogen

We use pressure accumulators from leading manufacturers with state-of-the-art diaphragms, particularly efficient seals and a long service life. For this reason, we use only high-purity nitrogen, which we produce ourselves from our ambient air. Therefore, it is always available and we are independent of external suppliers. This reduces

the carbon footprint of our pressure accumulators and minimizes the risks of handling gas cylinders.

### Diaphragm accumulators

We use pressure accumulators from leading manufacturers with state-of-the-art diaphragms, particularly efficient seals and a long service life. For this reason, we use only high-purity nitrogen, which we produce ourselves from our ambient air. Therefore, it is always available and we are independent of external suppliers. This reduces the carbon footprint of our pressure accumulators and minimizes the risks of handling gas cylinders.

### Bladder accumulators

Bladder accumulators are ideal in industrial and commercial fluid power systems to store energy, reduce noise or as shock absorbers. With this type of technology, the gas and hydraulic fluid are reliably separated by an internal elastic bladder. The fluid flowing in at pressure compresses the gas in the bladder. As soon as the pressure drops, the liquid flows back and the gas inside the bladder expands. Bladder accumulators are completely refillable and repairable.

### Piston accumulators

Piston accumulators are true all-rounders due to their flexible design and installation. Gas and hydraulic fluid are separated from each other by a piston. In combination with high-quality seals, the stick-slip effect is reduced noticeably. Depending on the application, welded, bolted and even weight-reduced piston accumulators suitable for mobile use are available. The welded and screwed accumulators are refillable, while the screwed piston accumulator is also completely repairable.







## *Air filtration*

**We protect people, processes and the environment**

Air quality is an important criterion in many areas of work. It is important for people, products and machines. Depending on the area of application, different requirements apply that must be met. We ensure optimal air quality through individual consulting, high-quality filter systems and customized services. Our efficient filter systems that filter viruses and bacteria from the air ensure process reliability, even in times of crisis.







**Partner of  
Freudenberg Filtration**

As a pioneer in the field of air and liquid filtration, Freudenberg Filtration offers tailor-made solutions for many different industries. Individual and industry-specific requirements for air hygiene and purity are at the forefront of filter system development. The goals are to protect people, the environment and natural resources through efficient filtration systems, while at the same time optimizing industrial processes.

## The best air quality for everyone

### Safety thanks to filters, service and advice

Thanks to our air quality management, which adapts to your needs, you will achieve the best possible air quality for your application. The high-quality multistage filter systems meet the highest quality and hygiene standards. Our service and analysis modules can be used according to your needs. During our individual consultation, we identify optimization potential and provide you with recommendations on the implementation. Take advantage of our complete solution from a single source. You will receive a perfectly coordinated result without additional organizational effort.

#### Viledon filterCair modules

- Actual analysis and system checks
- Hygiene monitoring according to VDI 6022
- Filter changes
- Workspace analysis
- Flow and overpressure analysis
- Emission analysis
- Energy efficiency

#### Your added value

- Customized solutions
- Reduced organizational effort
- Audit-compliant documentation
- Highest hygiene standards
- Improved system reliability
- Long-term positive energy balance
- Higher system efficiency

#### Industries

- Food and beverages
- Mobility and transport
- Production and materials
- Energy and resources
- Healthcare and pharmaceuticals
- Chemistry and process industry
- Living and working

#### Filter systems

We provide you with full support for building your new or converting your current air filtration systems. Our services include on-site inventory, individual advice, profitability analyses and order processing, including designing the filter systems, instructions and documentation. Even after fulfilling the order, we will continue to be available to you for assistance.

#### Filter blanks

Air filters are critical to ensuring that air conditioning and ventilation systems function properly. Since air heating, ventilation, and air conditioning (HVAC) systems come in different sizes, the filters are also needed in individual sizes. We cut and commission your filters from whole filter mats to fit your needs precisely. Then you won't have to worry about changing filters anymore.

#### Air germ counter

So that you know whether the air in your offices or production environment meets hygiene requirements, you can have us perform an airborne germ count test. As soon as we know the current status, we will be happy to advise you on any further measures that might need to be taken.



#### Energy efficiency

Improved energy efficiency saves costs and is good for the environment at the same time. Our certified air filters in the highest energy efficiency classes make a significant contribution to reducing energy consumption. This is because their excellent resistance behavior reduces pressure losses. This enables energy-optimized operation of HVAC systems.

#### Standards and guidelines

There are many different standards and directives relating to air quality and air filtration, which our products and services comply with 100%. We would be happy to support you in answering your questions about valid standards and directives in your area of application. You will benefit from our many years of experience and our expertise.





## *What we are all about*

**Success through service, advice and know-how**

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We don't take things for granted, but question them and look for ways to improve them. With us, this happens quite automatically.

No matter what task you come to us with. Thanks to our many years of partnership with manufacturers and customers, we know the challenges and, as consultants, are the perfect interface between the two.



# Technical advice like in the old days

## With digitalization and today's online commerce

We have made a conscious decision to work with a variety of well-known manufacturers. We take the time to get to know and test products. This enables us to recognize the differences and the respective advantages for specific areas of application. We then have the greatest possible overview and can also achieve synergies, by combining different manufacturers, for example.

### Tandem visits

The possibility to ask individual questions and obtain immediate answers offers enormous benefits. Take advantage of the opportunity to exchange experience with the experts at Gottwald and the technicians from the manufacturers. You will then receive high-quality technical information paired with practical knowledge.

### Individual logistics

Through our procurement management, we ensure that all products are usually available for delivery within 48 hours. We also react flexibly to our customers' requirements in the area of logistics:

- Kanban system
- Private or White Label
- Customized packaging solutions
- Customize packages with your logo or item number
- Create sets of seals and fittings

### Automated central warehouse

We ensure a high level of product availability in our automated central warehouse to meet your needs quickly and efficiently. The storage system is organized according to the principle "First In – First Out." This prevents long storage times and you receive a product that is in perfect condition.

### Supply chain

A functioning supply chain is vital to maintaining reliable and successful business relationships. We always strive to deliver the products and goods you order at short notice. To ensure our ability to deliver, we are well networked and work with reliable premium partners. In addition, we always have several reliable sources of supply for all products. This means that we can fill your order on time even if a supplier is unavailable at short notice.



### Use of sustainable products

Many manufacturers have now included sustainable products in their range. They offer good performance and at the same time protect the environment. This also opens up many opportunities for companies in mechanical engineering or production to improve their sustainability. On request, we will be happy to advise you on sustainable alternatives for your business operations.



## Digitalization: Interfaces and our online shop

For us, the question is not whether we should digitalize. We ask ourselves what areas we can usefully digitalize in order to achieve the greatest possible benefit. After all, digitalized processes are most effective when everyone involved pulls together in the same direction.

Our automated central warehouse is our prime example of a successful digitalization process. We can also offer you an interface to your ERP system if you'd like. This makes our working relationship even less complicated and faster. In our online shop, you have the possibility to browse through our product variety and order your desired products quickly and conveniently.







# *Shaping the future*

## **Thinking and acting sustainably**

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Sustainability and environmental protection are important issues of our time. That is why it is important to use and conserve resources sensibly. With targeted measures, we can make an important contribution that offers benefits for the environment and for your company. The use of ecological products, reduction of material consumption and reduction of CO<sub>2</sub> emissions are goals that we can achieve together with you.





### “thinking ahead” – responsibility comes from tradition

Our world is changing at an incredibly rapid pace. Globalization and digitalization are leading to changes in competitive conditions, and our customers’ needs are also changing. In addition, we face the important task of protecting our environment.

As a traditional family-run company, we are aware of the responsibility we have to our future generations and take it seriously. Projects such as those at Rügenwalder Mühle or bremenports show what “thinking ahead” means to us. The seal symbolizes what we stand for – we think ahead and take responsibility.

*“At Gottwald, we have always aspired to do more than others. We don’t just want to change or adapt, we want to help shape and improve. This is why we combine technical progress with sustainability and thus make a valuable contribution to future generations.”*

Norbert Brothun, Managing Director

## Matching needs and solutions

### Efficient filter systems reduce CO<sub>2</sub> emissions Bio-lubricants relieve the environment

#### Added value from Viledon filterCair

Viledon filterCair air quality management is a service package consisting of filters, service and advice. As a trade partner, we take care of all the coordination and processing, so you don’t have to worry about a thing.

- The air filtration systems ensure controlled air quality in accordance with hygiene standards.
- The special solutions for cleanrooms consist of a multi-stage filter concept that removes coarse particles, ultra-fine particles and germs.
- Professional maintenance improves the efficiency and availability of your systems.
- Continuous innovation makes customized solutions possible.

#### Benefits of bio-lubricants and hydro-lubricants

The issue of climate and environmental protection is of great importance to us. That is why we focus on new developments that consist of oils from renewable raw materials, for example, or that are largely biodegradable. Hydro-lubricants are lubricants with a functional water content. These new developments are good for the environment and at the same time extremely effective. They are also characterized by:

- Reduced energy consumption
- A significant temperature reduction of the component during operation
- Improved occupational health and safety for employees by eliminating the use of harmful solvents

#### Viledon solution at Rügenwalder Mühle

The food manufacturer wanted to achieve stable and audit-compliant assurance of air quality and an increase in the service life of the filters used. After consulting with them and analyzing the situation, we offered a service package that essentially consisted of the following components: coordination of filter replacement and installation, warehousing and logistics, monitoring of supply and recirculation systems, hygiene inspections, on-site technicians, energy efficiency consulting, as well as design and documentation. Thanks to an ideal combination of energy-efficient Viledon filters, we managed to completely achieve the objectives and cost savings.



#### Bremenports relies on environmentally compatible products from Klüber Lubrication



The use of biodegradable lubricants is a key approach of the greenports sustainability strategy developed by bremenports, because unintentional leaching of lubricants can occur in dredging or in barrages, for example. Based on our experience, we brought bremenports together with Klüber Lubrication and accompanied the entire process. And the result is impressive indeed. Since the introduction of the specially developed high-performance bio-lubricants, bremenports has become many times more sustainable. In addition, consumption has been significantly reduced, which in turn cuts working time and costs and protects the environment.



## Cooperation with the Academy for Applied Fluid Technology

The Fluid Academy has set itself the goal of improving employees' basic technical knowledge. After all, expert knowledge is the key to efficient use of your machines. The range of courses on offer consists of various seminars covering the diversity of fluid technology in line with the current state of the art. The Academy has training facilities in Bremen, including a training workshop. Besides our own experts, we also draw on the experienced instructors who work for our long-standing partners and suppliers. If you wish, we can also hold training courses on your premises. Through technical forums and special events, the Academy contributes to networking within the industry. Visit the Academy at [fluid-akademie.de](http://fluid-akademie.de).

### Scope of services

The training program offered is specifically geared towards fluid technology. Among other areas, the Academy offers you courses on the following areas:

- Hydraulics
- Sealing technology
- Hydraulic components
- Air filtration
- Hydraulic accumulators
- Valves and pumps
- Qualified persons for hydraulic hoses

### Occupational safety

Trained personnel makes a significant contribution to improving occupational safety. After all, many occupational accidents occur due to a lack of knowledge or lack of caution. In training courses, your employees learn how to deal with hazardous situations correctly and to act accordingly.

### Train your apprentices

During everyday work life, there is often not enough time or personnel available to teach trainees the important basic knowledge in detail. This is the basis for their future work performance, however. So please take advantage of the opportunity and have your trainees trained at the Academy.

### Tech Days

Simply take time to focus on a specific topic. That is exactly what our technology days offer you. Take a closer look at the various product-related, safety-related and industry-relevant presentations. Refresh your knowledge and bring yourself up to date. The dates are to be announced.



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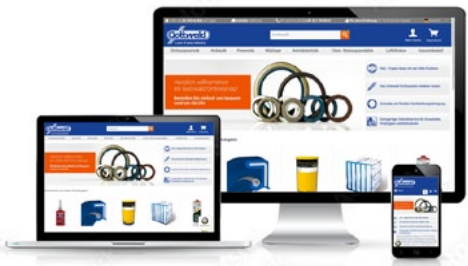
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*There for you around the clock –  
analog and digital*

Premium  
brands,  
premium  
simple.



### Visit the Gottwald Online Shop

The benefits are here waiting for you

- View prices and delivery times
- Order status by e-mail
- Track packages
- Repeat order by click

### Or pick up the phone

Reachable by phone 24/7

- During plant hours
- For emergencies outside plant hours, we offer emergency service on hydraulic and spare parts

Convenient and easy: [gottwald-shop.com](http://gottwald-shop.com) or **+49 421 69469-0**

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