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Rotary Joints by Maier – A Union for Life

Excellent quality in products and service, safety and reliability as well as a treasure trove of experience gained in more than 90 years of company history provide the foundation for our leadership in rotary joint technology. Our successful formula for optimal leak-proof solutions: intensive development combined with testing both in the laboratory and in the field – for high performance of machines and plants in different industries.

Our company supplies many basic series, more than one thousand standard types, and numerous special solutions to safely connect pressure pipes to rotating systems – for heating or cooling with water, steam or

thermal oil, for conveying cooling lubricant or for controlling production processes by means of hydraulic oil or compressed air. Rotary joints by Maier are available from our subsidiaries and a vast network of distributors all over the world.

This brochure invites you on a tour through our company and gives you an insight into our range of products and services. If you like to know more about us, please visit our website: www.maier-heidenheim.de

First Choice for all Industries

Plastic Industry

Paper Industry

Chemical / Pharmaceutical Industry

Food Industry

Textile Industry

In general, all kinds of Manufacturing Systems

Machine Tools

Renewable Energies



We create lifelong connections. This means ...

... for our customers

The satisfaction and loyalty of our customers is our first priority. We cultivate personal relationships, listen closely to the concerns of our customers, and are a reliable and dedicated partner in every situation.

... for our employees

We provide our employees with long-term development perspectives, are loyal and expect loyalty in return, and show great appreciation for the expert knowledge which our employees apply for the benefit of the company.

... for our suppliers and service providers

We cultivate trustful relationships aimed at long-term cooperations with our business associates. We adhere to our agreements and place emphasis on excellent payment behavior.

Our Vision

As an innovative family-owned enterprise that goes back almost 100 years, we offer the best products and service features worldwide.

Solution-oriented thinking and acting according to ethical values are the cornerstones of our success.

We set the standards for excellent quality. These standards will make us grow in a sustainable and profitable manner and strengthen our leadership in technology.



Andreas Greiner
CEO

Florian Maier
CEO and managing
associate



We are a successful enterprise. This means ...

... for our customers

We want to maintain and strengthen our leading position in the market with forward-looking development, financial independence, and the focal point on satisfied customers as guarantors of our success.

... for our employees

Success brings satisfaction – this also holds true for the daily work. All employees contribute to the collective success by achieving the optimum results in their field of work.

... for our suppliers and service providers

Companies who work with us have to fulfil our high requirements and will benefit from the reliability of a successful partner in return.

We act according to ethical values. This means ...

... for our customers

We develop and sell products which are sustainable due to their quality and durability and which were produced under very good working conditions.

... for our employees

We treat each other fairly, respect the personality of other people regardless of their position in the company, and distance ourselves from any kind of discrimination.

... for our suppliers and service providers

We pay fair prices for quality work and are honest negotiating partners.

Competent – in Every Respect



As a result, our rotary joints are a guarantee for great operating safety and supreme functionality, performance, and durability. Our competence begins at development and ends with our service.

We offer our customers full support throughout the whole lifetime of the product. All around the globe, our highly skilled employees are happy to help you with their expertise.

QUALITY

Quality is the basis for our long-ranging success. It begins with the use of high-quality materials from certified and audited suppliers. The high quality standard of our Maier Rotary Joints is achieved by further processing the material in modern machining centers and at state-of-the-art assembly stations, continuing until the finished goods are packed.

WORLDWIDE SERVICE

Upon inquiry, the Maier Service Team is at our customers' disposal, offering qualified service technicians to assure your machine is running efficiently and economically. We also provide assistance when our customers have questions concerning modernization.

RELIABILITY

Our customers can always rely on our products and our employees. These are the quality standards which we set for our products and for ourselves.

CERTIFICATION

Our customers can trust our products completely – because design and production of all rotary joints comply with the European Pressure Vessel Regulations 2014/68/EU. We are approved manufacturers according to AD2000-HP0 and EN ISO 3834.

ATEX

These are EU regulations for mechanical explosion protection. Marked rotary joints of series DP, DX, DQ, and H are certified according to the European Explosion Protection Guideline 2014/34/EU for category 2G in temperature classes T2, T3 and T4. We supply these special rotary joints in compliance with the required ATEX specification upon request.



Our name is synonymous with excellent quality. This means ...

... for our customers

We supply fully developed, long-lasting and extremely reliable products for which we offer long-term aftersales support.

... for our employees

Quality requires qualification. Therefore we give young people a thorough vocational training, constantly provide all employees with advanced education, and equip their workplaces with efficient tools and supplies for work.

... for our suppliers and service providers

We expect consistent, first-class quality from our suppliers and strive for a long-term and reliable partnership.

We are leaders in technology. This means ...

... for our customers

Our customers receive rotary joints for all pressures, temperatures, media, and speeds. We set the standards because research and development are important key areas of our enterprise.

... for our employees

We involve all employees in our development and improvement processes. We encourage them to think things through and to contribute their own ideas.

... for our suppliers and service providers

We appreciate suppliers and service providers with a great deal of innovative strength who are prepared to participate in the process of continuous enhancement and will share their know-how.

Our Solutions at a Glance

This is to give you a summary of the advantages, the ranges of application, and the performance spectrum of Maier Rotary Joints.

K / KL / KS



High performance rotary joints for the internal supply of cooling agent to machine tools. Series K with TESS technology (Thermal Expansion Sealing System) is substantially suitable for dry run (does not apply to KS). They can be used with a minimum amount of lubricant (MQL). This is achieved by an internationally patented proprietary development.

MP



Multi-pass rotary joints for various media and pressures with the option to separate passages completely. The dimensions as shown in our catalogue are to give you a first impression of the technical possibilities and the application potential.

DX



All-purpose rotary joints for water, equipped with mechanical seal and roller bearings. DXS with extremely resistant, ceramic-coated sealing face for higher temperatures and speeds and a long service life.

DP



All-purpose rotary joints for water and thermal oil with balanced mechanical seal and roller bearings. Various sealing combinations are available, depending on application. Meet the special requirements of the printing and plastic industries.

DQ



Rotary joints for thermal oil with vast temperature and speed ranges and balanced mechanical seal. DQ, DQT, DQTX with additional cooling circuit for cooling and lubricating bearings and seal. Meet the requirements of high-speed calenders. Patented system.

H



All-purpose rotary joints with maintenance-free slide bushing and sealing ring of artificial carbon. Metal-impregnated sealing ring for thermal oil; suitable for a high compressive load when used with hot water and steam. H3 with integrated vacuum valve for steam cylinders. Great number of different designs.

M



Sturdy rotary joints for soiled media at low speeds.

DZ



Rotary joints for compressed air. Several channels for different pressures as well as for large and small volumes. Design with special sealing rings and ceramic or hard material counter faces.

DA



Rotary joints supported by rods with maintenance-free, metal-impregnated sealing rings.

DC



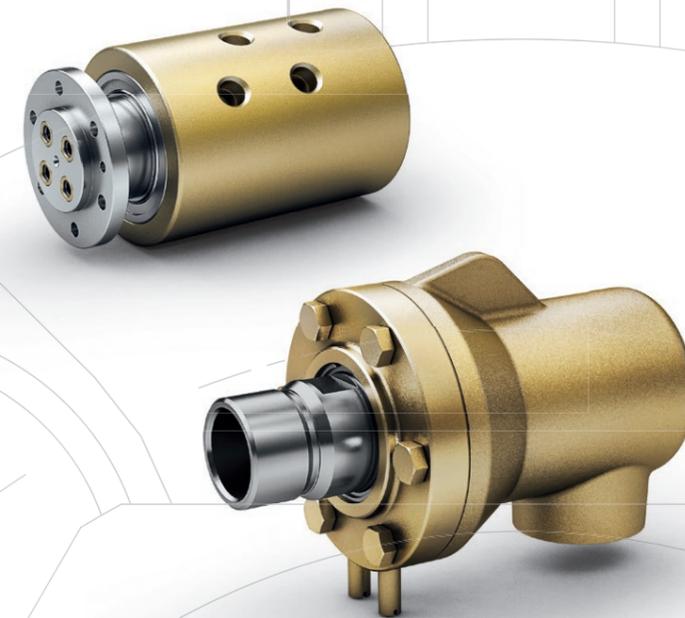
Rotary joints for hot water and steam at high pressures and speeds. Balanced mechanical seal with external water cooling. Meet the special requirements of paper and nonwoven calenders, fiber and corrugated paper plants. Suitable for big, steam-heated dryers. Patented system.

Maier Rotary Joints

are fittings to connect piping to rotating rollers and units for conveying media under pressure and temperature.

Maier Rotary Joints are suitable for cold and hot water; steam up to 250°C, 40 bar; thermal oil up to 390°C; hydraulic oil up to 350 bar; compressed air

up to 40 bar; chemicals; cooling lubricant up to 150 bar; vacuum; high speeds; and dry run. There are 10 standard series available in nominal sizes ranging from 3 to 500 mm. In addition, we offer special solutions for other media and extreme operating conditions.



Series	DA	DC		DP		DQ					DX			DZ	H		K	M	MP	
Type		DC	DCL	DP	DP-800	DQL	DQ	DQT	DQTX	DQ5		DX	DXS	Special DX		H	HW			
Cooling water	●			●								●	●	●		●	●		●	●
Hot water	●		●	●									●			●	●		●	
Steam	●	●														●	●		●	
Cooling lubricant				●														●		
Air														●				●		●
Vacuum													●	●	●					●
Hydraulic oil																				●
Thermal oil	●				●	●	●	●	●	●				●						
Dry run																		●		
MQL																		●		
Operating Conditions																				
PN max (bar)	40	40	16	10	10	10	10	10	13	10		8	8	8	40	20	40	80/120	20	200
T max (°C)	300	250	180	160	160	230	300	350	400	300		80	150	120	20	250	300	40	160	80
Speed max...min ⁻¹	$\frac{100.000}{DN \times PN}$	$\frac{100.000}{DN \times PN}$	$\frac{100.000}{DN \times PN}$	$\frac{55.000}{DN}$	$\frac{55.000}{DN}$	$\frac{50.000}{DN}$	$\frac{100.000}{DN \times PN}$	$\frac{100.000}{DN \times PN}$	$\frac{100.000}{DN \times PN}$	$\frac{130.000}{DN \times PN}$		$\frac{50.000}{DN}$	$\frac{55.000}{DN}$	On Request	30	$\frac{50.000}{DN \times PN}$	$\frac{100.000}{DN \times PN}$	16.000/24.000/36.000	$\frac{8.000}{DN}$	200
DN (mm) min...max	50 – 300	25 – 370	25 – 150	10 – 100	10 – 100	25 – 125	25 – 200	25 – 150	25 – 150			10 – 80	10 – 200	...150	200	15 – 100	25 – 300	3 – 10	15 – 100	

More than

90

Years
of Experience

—

to your Advantage

Maier develops high-quality rotary joints for demanding applications. Since the company's foundation as a foundry in 1925, quality and innovation have taken first priority. Christian Maier GmbH & Co. KG was founded as a family enterprise, and the company will continue to stay in family hands. For the last 35 years, internationalization and concentration on the core segment have been pushed forward.

Today, Christian Maier GmbH & Co. KG is represented by three independent, wholly-owned subsidiaries in the USA, in Italy, and in China. Authorized

distributors in more than 50 countries ensure that our products and services are available around the world. What is more, the trade name Maier stands for first-class product quality and the use of modern materials and technologies.

This fundamental understanding is the basis of our success – as well as a relationship to customers, suppliers, and all other business partners which is based on trust and appreciation. Our passion for perfect results is your benefit. Therefore we ask you to remain challenging.



We are a family-owned enterprise. This means ...

... for our customers

We take personal responsibility for our decisions, stand by our word, and vouch with our name. We are reliable partners.

... for our employees

We place great emphasis on loyalty, support and challenge our employees according to their competence and personality and place emphasis on personal relationships and respectful behaviour.

... for our suppliers and service providers

We are a rooted and reliable customer. We expect our partners to adhere to ethical principles like fair working conditions and sustainable, ecological activities.

Our History at a Glance

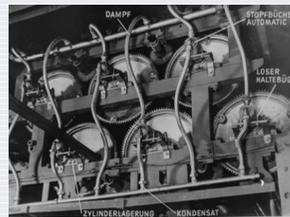
1925

Foundation of the enterprise as a foundry by brothers Christian and Friedrich Maier. Among other things, cast parts for the electrical and textile industries were produced



1944 – 1948

Production of apparatuses for the dental industry



1963

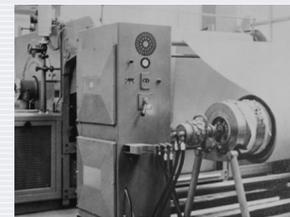
Death of Erich Maier (sen.)
Production of the first slicers for customer Lindenfarb in Unterkochen / Germany
Friedrich Maier joins the company

1965

Production of the 10,000th hay dryer

1967

Death of founder Christian Maier



1981

Erich Maier (jun.) becomes managing associate

1982

Friedrich Maier retires

1983

Founding of an administrative board chaired by Friedrich Maier

1984

Ending of hay dryer production



2000

Founding of Maier America (Atlanta / Norcross, Georgia)

2002

Divestment of the machine engineering division

2005

Market entry in China with our first distributor in Shanghai



1920s

1930s

1940s

1950s

1960s

1970s

1980s

1990s

2000s

2010s



1936

Relocation to the new factory in Würzburger Straße



1950

Erich Maier (sen.) enters the company as CEO
Extension of the factory by a hall for machine construction with attached turning shop

1952

Production of the first automatic stuffing box

1956

First patent for rotating unions, the so-called stuffing box

1957

Production of first hay dryers under license



1970

Production of the first hydraulic winders

1971

Start of international business.
Participation in ITMA Paris (International Textile Machine Exhibition)



1997

Founding of Maier Italia, the first independent, wholly-owned subsidiary, situated north of Milan in Gerezano, Saronno

1992

Expansion of international business with the aid of distributors in Europe and the USA



2012

Founding of Maier Kunshan (Shanghai) with independent assembly and field service for China and South-East Asia

2015

With Florian Maier, the fourth generation comes aboard. At the end of the year, Erich Maier retires as CEO and joins the administrative board

2016

Andreas Greiner and Florian Maier are CEOs

Rooted in Heidenheim – at Home all over the World

Subsidiaries in the USA, in Italy and China as well as a strong network of more than 50 distributors and sales partners all around the world guarantee an international presence with 24-hour-spare parts

supply in all important industrial countries. Authorized service centers in the USA, in Italy and China carry out repairs locally.



We think and act globally. This means ...

... for our customers

Our sales offices and production plants as well as our service partners are spread worldwide and serve our customers internationally. We provide quick and comprehensive service at home and abroad.

... for our employees

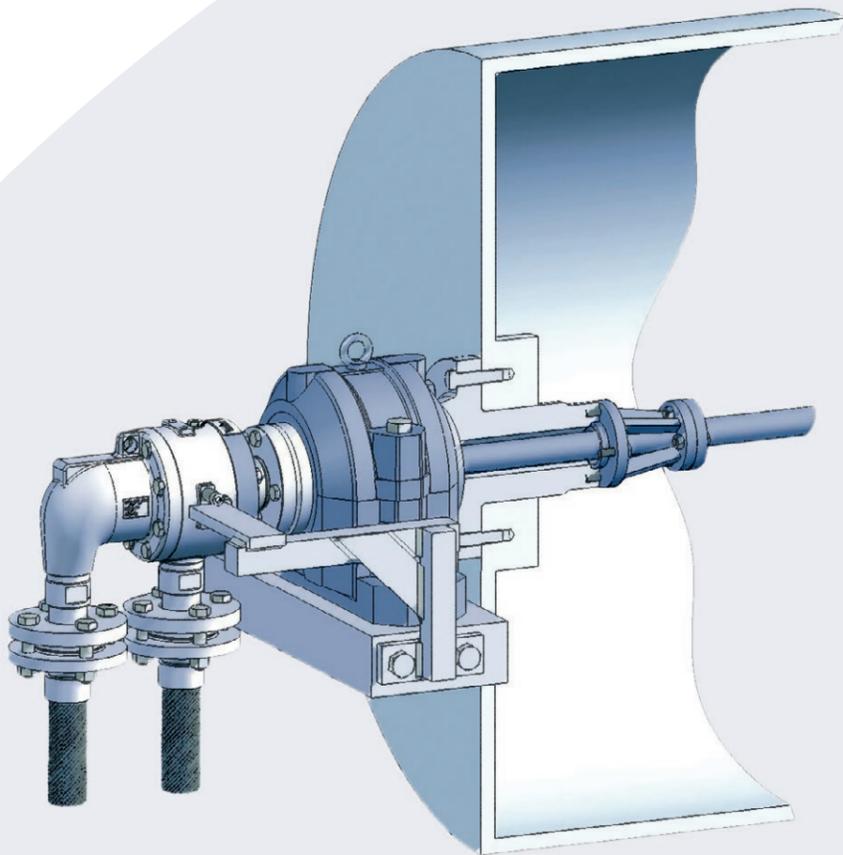
Our employees do not only see their own activity, they have an overall view of the whole business. We foster open communication and transparency on all levels.

... for our suppliers and service providers

Global projects require a high degree of flexibility. We appreciate business partners who also think on a global level and prove to be flexible.

- Subsidiaries
- ▲ Representatives
- Distributors & Sales Partners

Leak-proof Solutions – Versatile Solutions for a great Variety of Applications



We work and think in a solution-oriented way. This means ...

... for our customers

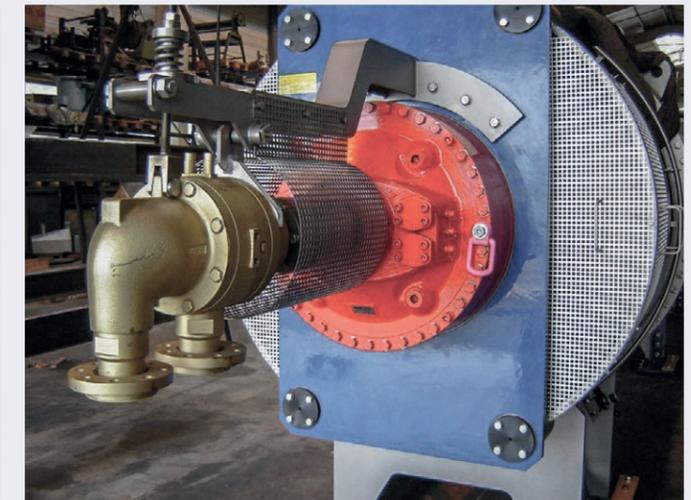
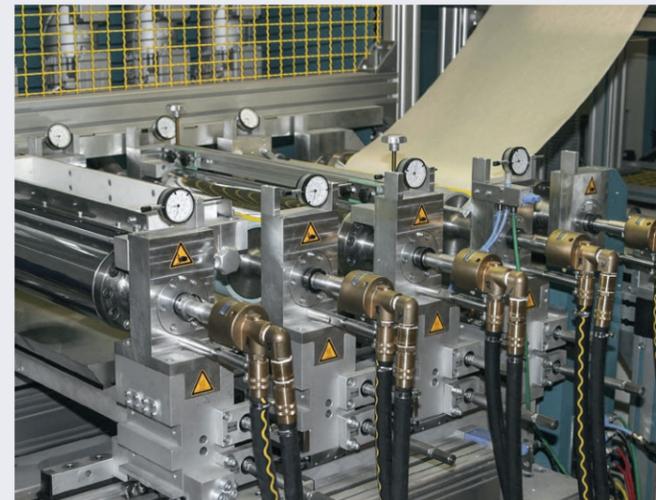
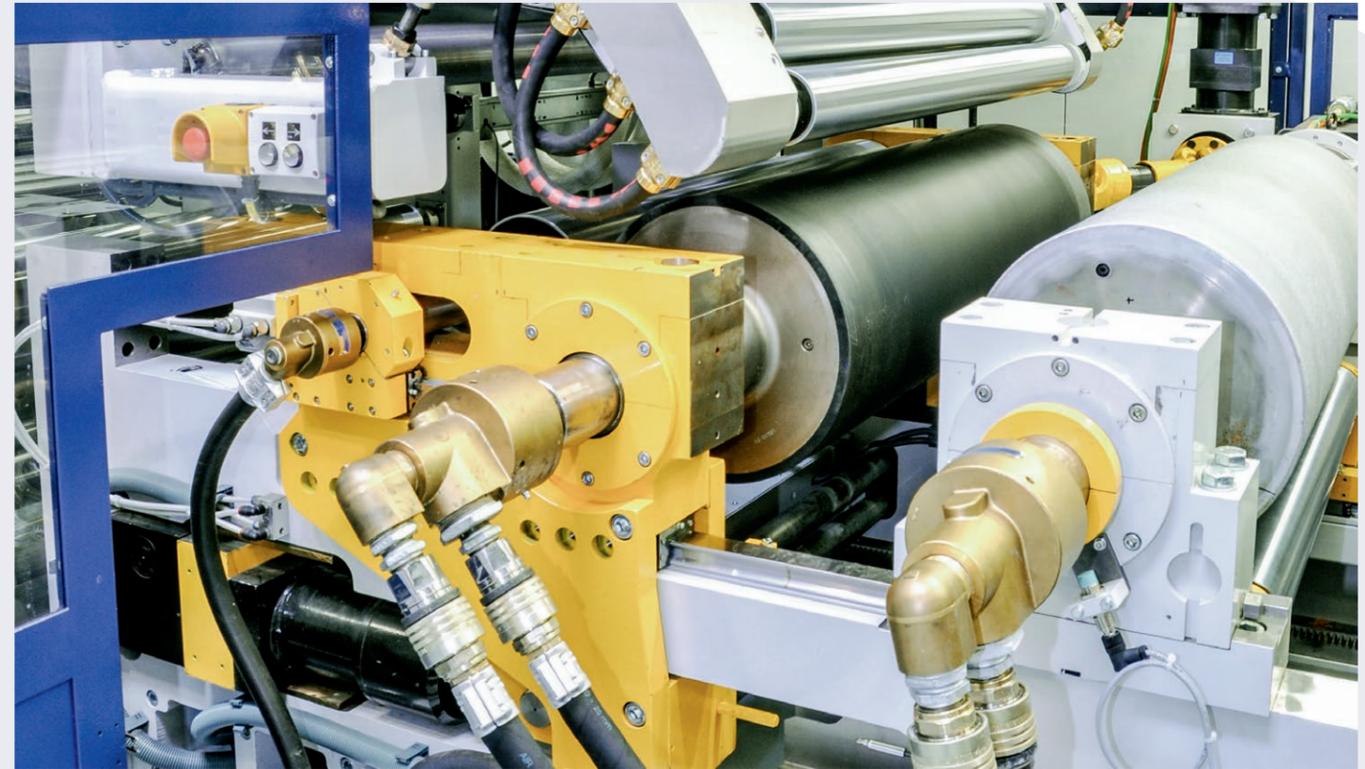
The customers and their requirements take centre stage. It is our foremost intention to supply our customers with the most economical products for their particular process.

... for our employees

The requirements of our customers set the standard for the work of our employees. Creativity is necessary to solve challenging tasks in a target oriented manner.

... for our suppliers and service providers

Our suppliers are involved in the development processes from an early stage to achieve the best result possible on behalf of our customers.



A Wide Vertical Range of Manufacturing in Core Competencies & a Modular Product Structure

At their location in Germany, Christian Maier produces rotary joints with a modern machine park and utilizes efficient logistic processes. This means short distances and quick decisions which help us to speed up product development, optimize manufacturing processes and

make quality assurance more efficient. Which, in return, gives us the certainty that we have done everything to provide our customers with the best solution in the market.



Rotary Joints certified to ATEX Regulations 2014 / 34 / EU

Series DX, DXS DN 10 – 150



c: with constructive safety
Media: water, water-glycol
Evaluated and filed at TÜV SÜD

Series HWA, HWB, HWX DN 15 – 100



b: with ignition source monitoring by means of temperature sensor
Media: water, steam, thermal oil
Evaluated and filed at TÜV SÜD

Series DP, DPN DN 6 – 100



c: with constructive safety
for sealing combinations 1, 3, 5
Media: water, water-glycol, air, thermal oil
Evaluated and filed at TÜV SÜD

Series DQ, DQT DN 25 – 150



c: with constructive safety
b: with ignition source monitoring by means of temperature sensor
Medium: thermal oil
Evaluated and filed at TÜV SÜD

xx = supply flow temperature

From Prototype – to Start of Production

Rotary joints are usually negligible components compared to the value of the machine. But they are significant for the effective operation and productivity of the machines and plants they are installed in. Heavy demands on performance require theoretical and experience know-how of numerous applications. For this reason we carry out fundamental research in our laboratory and pursue developments together with our customers. In close cooperation with our design and sales departments customer-oriented new developments are constantly and

extensively tested in our own laboratory. Needless to say that the data obtained in these tests can be documented and evaluated by computers. Thanks to our laboratory, we are in a position to test all relevant media, temperatures, and pressures in order to guarantee a maximum in safety. Each product is run through a quality assurance process which ensures that all quality requirements are met and guarantees consistent product quality.



We are innovative. This means ...

... for our customers

We continuously refine our products and use the most modern materials and production methods. Every task we are given by our customers, we see as a challenge and motivation to develop the best solution possible.

... for our employees

Our company benefits from the ideas and the creativity of our employees. We support thinking outside the box and are open for unconventional proposals.

... for our suppliers and service providers

Suppliers and service providers are involved in our innovation strategy because their expert knowledge contributes to the added value.

Locations



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We are a growth company. This means ...

... for our customers

By offering an optimum price-performance ratio, excellent service, and innovative products, we want to keep our existing customers satisfied and increase our customer base continuously.

... for our employees

Growth can only be achieved through innovation and constant improvement of the performance. We lay the necessary foundations for our employees with motivational measures and a qualified range of offers for training and further education.

... for our suppliers and service providers

Working with us is forward-looking because our business partners benefit from the company's growth as well.

Notes

