



PTFE Sealant Technologies

KWO® Dichtungstechnik GmbH

www.kwo-ptfe.de

EN

KWO® Dichtungstechnik GmbH

Performance is our success



KWO® is a family owned and international engineering company, specialized in the design, manufacturing and supply of high-quality expanded PTFE sealing products (ePTFE). For 30 years numerous prestigious customers from various industries have put trust in our product quality, our competence, our innovative and quality-oriented management and in our perfect services. This has made our company a renowned partner and growing business in the plastics and PTFE industry.

Welcome TO OUR COMPANY!

Dear current and prospective customers, Dear business partners,

With this brochure we would like to introduce our company KWO® Dichtungstechnik GmbH; providing international, innovative and high-quality PTFE sealing products to you.

For more than 30 years and now in second family generation, KWO® has focused on manufacturing, selling and developing ePTFE sealing products. We are proud to produce our products solely in Germany while remaining an independent technology company; especially our mission "performance is our success" supports our decision to produce exclusively in Schechen near Rosenheim, Germany.

Due to our high-quality standards, not only does our PTFE sealing technology meet demanding requirements in the field of sealing technology, it is also worldwide reputable and stands for the highest quality, ever reliability, strong performance and long lifespans. The sustainable continuous development of these parameters make us proud!

In order to offer those parameters at all time to you, we have established a continuous research and development in order to remain technology leader. Thus, we offer our customers innovative solutions in the field of sealing technology; yet, we do not only see ourselves as a product manufacturer, but also offer our customers and partners a comprehensive technical service at all times.

With our slogan "In the region – for the region", our KWO® products are sold worldwide in more than 50 countries on five continents. We achieve this worldwide market coverage through the help of our authorized dealer network. In this way, we open up new markets, help our existing customers to develop further in their market and offer professional support at all time. Close to the markets and close to our customers.

But also environmental issues matter to us! This means, by using low-leakage and long-lasting KWO® sealing products, we help the industry reduce its eco-balance sustainably and economically. As a German manufacturer, we feel responsible for making an important contribution to environmental protection. For our customers, employees and business partners. For our environment and society.

We look forward to (continuing) a good cooperation while assuring to remain a reliable partner for all sealing technology matters.

Yours sincerely



Christopher Steppe (CEO und Owner)

Waltraud Bals-Steppe (Owner)



Christopher Steppe
(CEO und Owner)

Waltraud Bals-Steppe
(Owner)

Core-Values – OUR PROMISE – PERFORMANCE IS OUR SUCCESS

Whether in strategic questions or in daily business: At KWO® we focus on our clearly defined values. Based on these values we motivate ourselves every day to fulfill our customers' promise "performance is our success".

Experts

- 30 years of experience in manufacturing and technical applications
- Close cooperation with raw material manufacturers
- Continuous development
- Registered patents



Quality

- Made in Germany
- ISO 9001 certified since 1994
- High-quality raw materials
- Wide variety of product approvals and certifications

Service

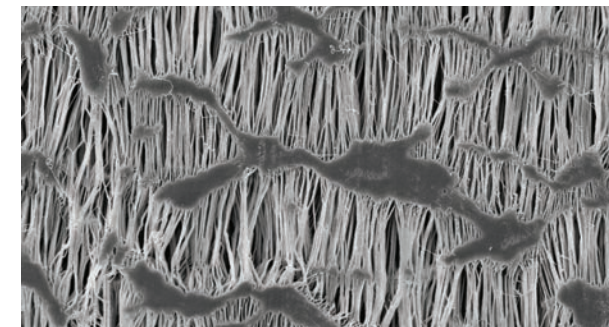
- Consultancy and training services
- Authorized international distribution network
- Fast delivery time
- Completely integrated ERP system

Technology – 30 YEARS OF PRODUCT QUALITY AND COMPETENCE

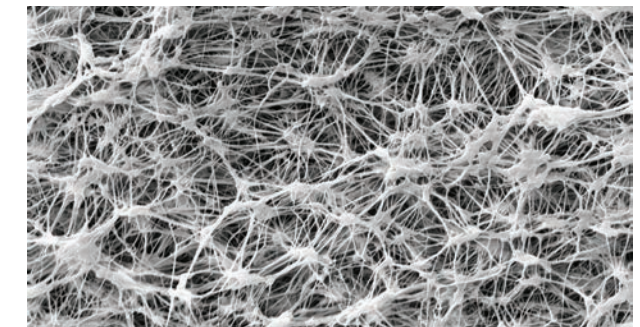
Fascinated by the chemical, mechanical and thermal properties of PTFE, we have been focusing exclusively on this high-performance plastic since our founding. Our core competence is the expansion of PTFE. During expansion, and under certain parameters, the plastic transforms into a resistant and fine-pored material whose performance spectrum is unique.

Our KWO® sealing systems are among the most durable, reliable and chemically resistant products worldwide. Operating temperatures from -268°C to +315°C are no challenge for our products. Especially under extremely aggressive chemical conditions, KWO® gaskets prove their performance and durability.

With the help of our special manufacturing process, KWO® products of the line "PTFE Sealant Technology" can be easily used on weak, damaged or inclined flanges. Thus, KWO® products seal even at low bolt forces, are dimensionally stable and prove themselves by a minimal loss of surface pressure, which ensures safety against blowing out. Thus, the sealing of steel and glass-lined steel flanges is a standard discipline to us.



Monoaxial orientated PTFE structure

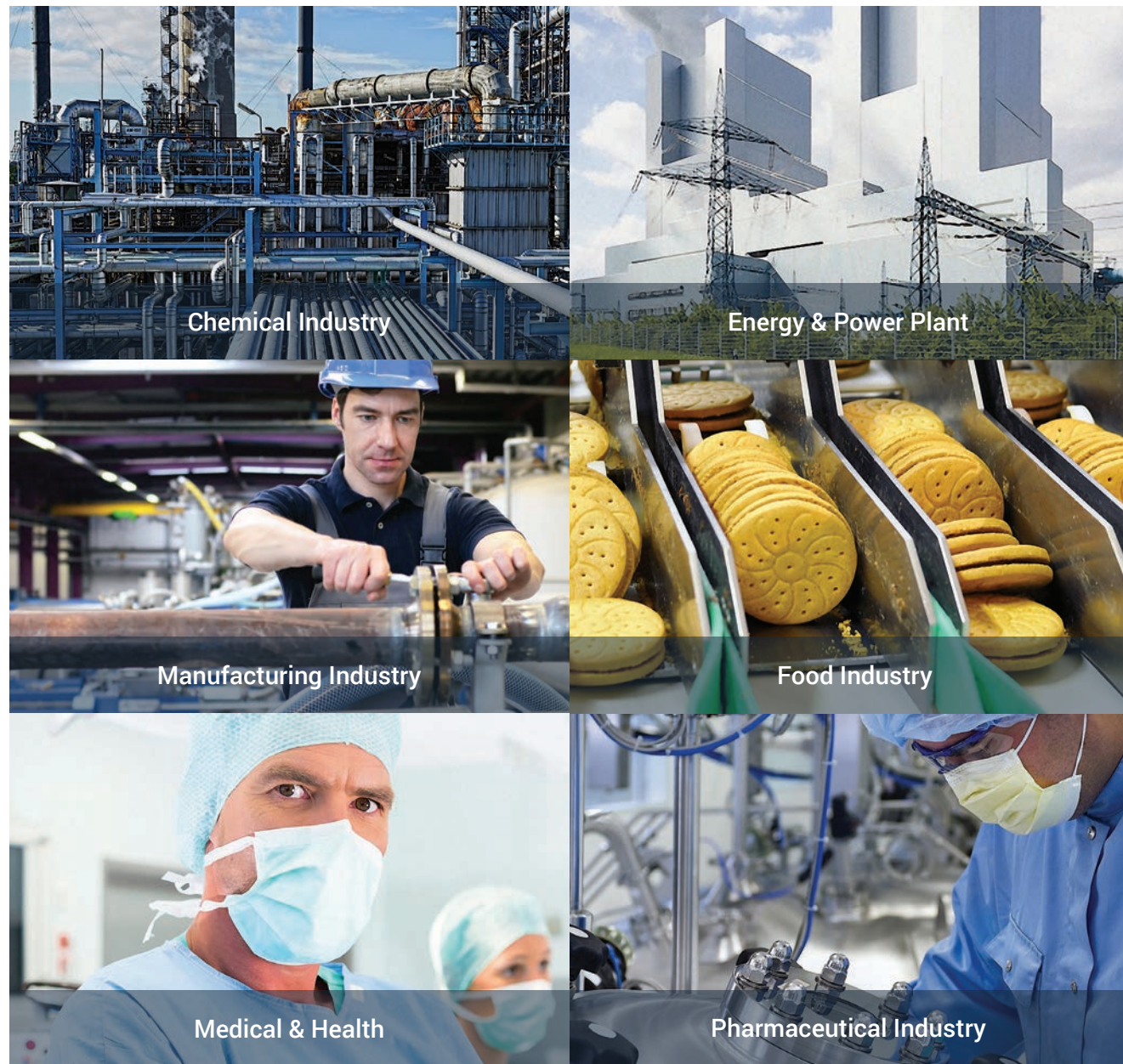


Multidirectional orientated PTFE structure

Properties of PTFE	Performance of ePTFE gaskets
<ul style="list-style-type: none"> ■ high chemical & thermal resistance ■ flame retardant ■ physiologically inert ■ low coefficient of friction ■ biocompatibility 	<ul style="list-style-type: none"> ■ high adaptability ■ superior resistance to creep and cold flow ■ density from 0,6 to 1,0 g/cm³ ■ high creep resistance ■ no caking onto flange

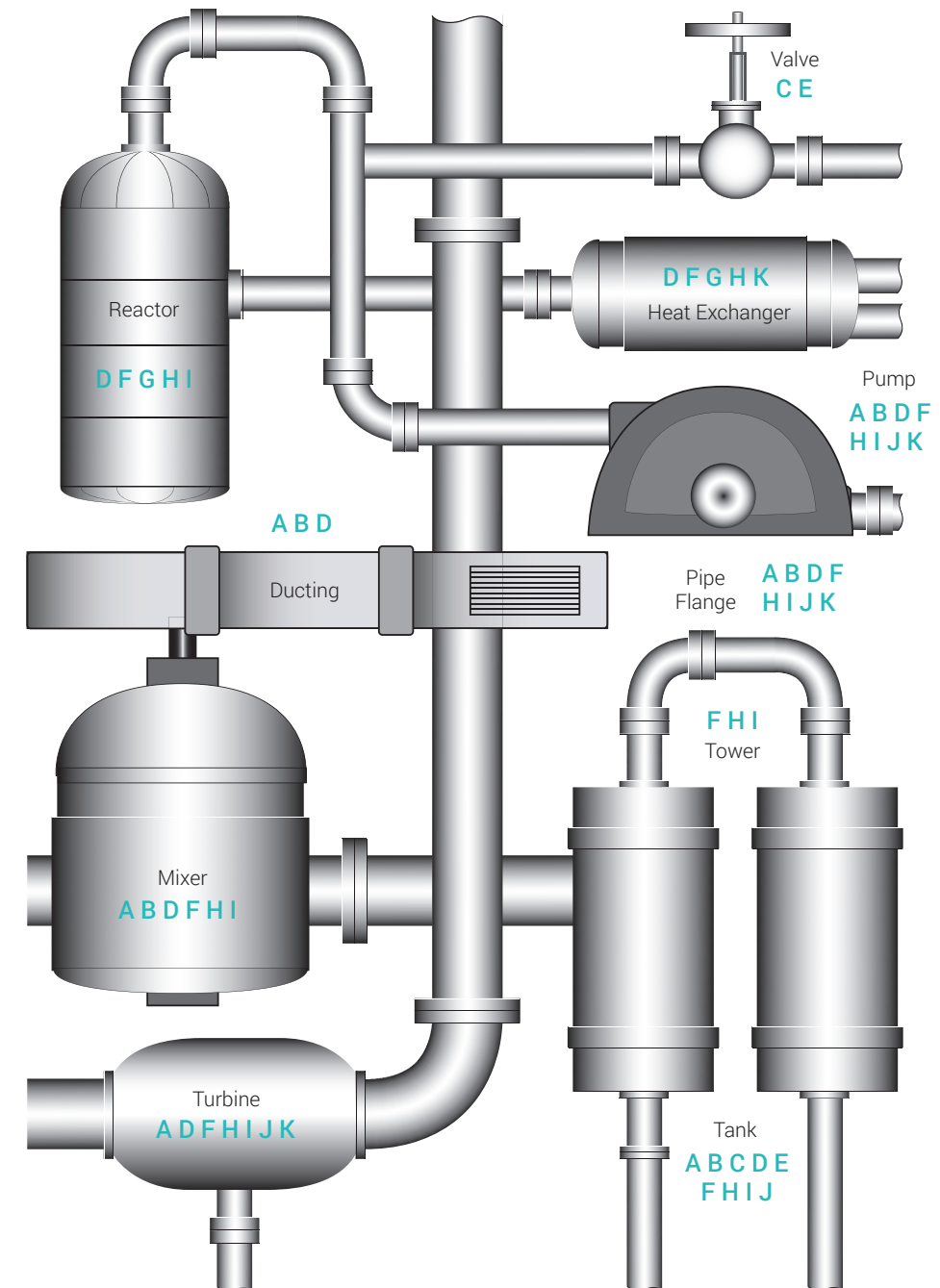
Industries – SOLUTIONS FOR NUMEROUS INDUSTRY SECTORS

Our sealing products are suitable for applications in many industry sectors. Three different product groups and important certificates will make it easy for you to find the optimal sealing solution for your specific industry.



Applications – WE THINK IN SEALINGS

Our sealing products are used in many demanding applications, ensuring maximum reliability and economy at all times. As an example, our sealing solutions can be safely used on weak, damaged or inclined flanges. In addition, our gaskets make it possible to universally seal various pipeline systems.



ePTFE gasket tapes

- A Universal Tape F Premium
- B Universal Tape HD
- C Universal Tape R
- D CellFlon Tape
- E CellFlon Tape R
- F MultiTex Tape
- G MultiTex Tape DK

ePTFE gasket sheets

- H MultiTex Sheet
- I CellFlon Sheet Blue
- J CellFlon Sheet Brown

ePTFE gasket ring

- K MultiTex Ring
- L MultiTex Ring DK

PTFE – GASKET TAPE

KWO® PTFE tapes are a universal alternative to the conventional flat gaskets.

Advantages:

- easy to store
- universally applicable
- easy installation even for larger components
- no waste



KWO® Universal Tape F Premium

A



KWO® Universal Tape F Premium is a joint sealant tape made from 100% pure, monoaxially expanded PTFE and especially suitable for food and pharmaceutical applications. The exceptional malleability of the ePTFE joint sealant tape compensates out-of-parallel or damaged sealing surfaces and allows use with stress sensitive connections and applications. Due to their reliable, durable and economical sealing, it helps to optimize our customers' production and manufacturing processes.



KWO® Universal Tape HD

B



KWO® Universal Tape HD is a sealing tape of monoaxially expanded pure PTFE and is characterized by a rectangular cross-section and a relatively small width. The high density of the material and the special cross-section of the tape allow to seal very uneven surfaces even at a low gasket stress. KWO® Universal Tape HD is suitable for delicate sealing applications on surfaces vulnerable to tension, such as glass or ceramics. The tape can also be used to seal weak flanges subject to considerable deformation, for example glass reinforced plastics (GRP), plastic fittings and ventilation facilities.



KWO® Universal Tape R

C

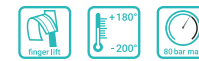


KWO® Universal Tape R is a round sealing cord, which is manufactured with the same technology than the KWO® Universal Tape F Premium. The round shape has no additional adhesives and is suitable for high purity applications, where the gasket is positioned in the respective wells provided.



KWO® CellFlon® Tape

D



KWO® CellFlon® Tape is a sealing tape made from expanded virgin PTFE with a modified texture. The sealing tape is particularly suitable for demanding and very clean applications, for example in the food industry and in the pharmaceutical manufacturing sector. The patented CellFlon® processing method improves considerably the mechanical properties and strengthens the fiber structure. Consequently, the tape is much more compact and has a lower cold-flow tendency as well as better recovery properties. These characteristics allow a wide range of applications, regardless of the shape and size of the sealing surface.



KWO® CellFlon® Tape R

E



KWO® CellFlon® Tape R is the round version of the CellFlon® Tape. Here, too, the patented CellFlon® process is used in production and the same outstanding properties are achieved as with the KWO® CellFlon® Tape. The round cord is ideal for container lid with a given groove for positioning. Also, for slow-moving valve spindle seals, CellFlon® Tape R is an ideal replacement for conventional braided packings or PTFE extrudate.



KWO® MultiTex® Tape

F



The innovative product is ideally suitable for steel flanges and glass-lined steel flanges. The flexible material made of 100% multi-directional expanded PTFE is chemically inert, and highly resistant to creep, cold flow and clamp-force loss. KWO® MultiTex® Tape maintains an extra tight seal even at low loads.



KWO® MultiTex® Tape DK

G



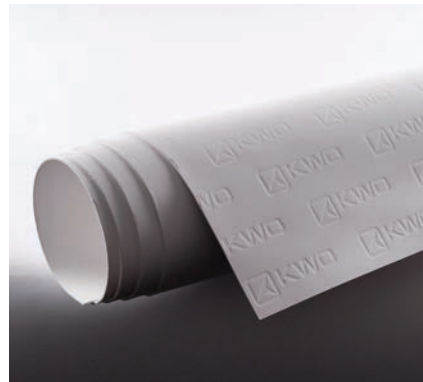
KWO® MultiTex® Tape DK is especially designed for the sealing of steam boiler plugs and is suitable to seal man hole, head hole and hand hole covers of steam boilers. The flexible material made of 100% multi-directional expanded PTFE adapts excellently to sealing surfaces and compensates for any unevenness of the cover or flange surface. The tape ensures a very high tightness immediately after the installation and is particularly suitable for the pressure test with cold water. KWO® MultiTex® Tape DK offers a lasting tightness under operating conditions and in applications with changing temperatures.

PTFE – GASKET SHEET

KWO® PTFE gasket sheets are the universal sealing solution for applications up to 250°C. The sheets can be processed with various types of cutters and a water jet.

Advantages:

- outstanding chemical and thermal resistance
- wide range of certifications and testings
- high safety margins
- for uneven surfaces



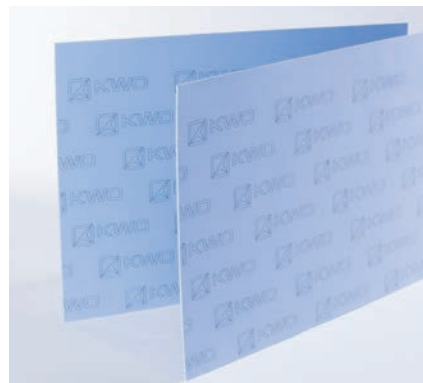
KWO® MultiTex® Sheet



H



KWO® MultiTex® Sheet is produced from 100% multi-directional expanded PTFE without any pigments, inks or adhesives, and, therefore, suitable for clean applications – especially for food and pharmaceutical applications. The flexible material adapts well to sealing surfaces, compensates irregularities and seals at very low stress. It is suitable for use in steel flanges and glass-lined steel flanges, as well as stress sensitive connections.



KWO® CellFlon® Sheet Blue



I



KWO® CellFlon® Sheet Blue is a gasket sheet material containing structured PTFE and hollow glass micro-spheres. The product is especially for use in applications where the available bolt load is limited, uneven or damaged flange connections. Suitable for sealing most chemicals across the whole pH range (0-14), including moderate concentrations of acids and caustics, solvents, hydrogen peroxide or refrigerants.



KWO® CellFlon® Sheet Brown



J



KWO® CellFlon® Sheet Brown is a gasket sheet material containing structured PTFE and Silica. The product is especially for use in the chemical and petrochemical industry. It is suitable for sealing most chemicals across the whole pH range (0-14), including strong acids, hydrocarbons, steam, solvents or chlorine.



PTFE – GASKET RING

KWO® gasket rings are manufactured from our KWO® sheets. The standard sizes are usually on stock.

Advantages:

- outstanding chemical and thermal resistance
- wide range of certifications and testings
- high safety margins
- universal sealing of piping systems



KWO® MultiTex® Ring



KWO® MultiTex® Ring is produced from 100% multi-directional expanded PTFE without any pigments, inks or adhesives, and therefore suitable for clean applications – especially for food and pharmaceutical applications. The gasket can be used in all standard flanges and therefore it is the universal sealing of different piping systems. The highly compressible tape delivers long-life performance, lowers total system sealing costs and simplifies inventory stocking requirements, while also protecting against the use of the wrong gasket.



KWO® MultiTex® Ring DK



The oval ring is especially designed for the sealing of steam boiler plugs and is suitable to seal man hole, head hole and hand hole covers of steam boilers. The material adapts excellently to sealing surfaces and compensates for any unevenness of the cover or flange surface. The ring ensures a very high tightness immediately after the installation and is particularly suitable for the pressure test with cold water. KWO® MultiTex® Ring DK offers a lasting tightness under operating conditions and in applications with changing temperatures.

All technical information and advice given here is based on our previous experiences and/or test results. We give this information to the best of our knowledge, but assume no legal responsibility. Customers are asked to check the suitability and usability of the specific application, since product performance can only be judged if all necessary operating data are available. Specifications are subject to change without notice. KWO's terms and conditions of sale apply to the purchase and sale of the product.



WE ARE MUCH MORE THAN A PRODUCT SUPPLIER

Service

Being a technology-oriented company, KWO® is seeking to be more than only a product supplier. In our thinking and our work, we focus on the needs of our customers. It is, thus, self-evident that we provide competent consultancy in the planning phase and comprehensive support during construction with regard to sealing issues.

What you may expect:

- Application-related workshops and training either at our production site or in your premises
- Seminars and lectures about ePTFE and PTFE products
- Product data sheets and installation instructions
- Sound consultancy and application-oriented engineering

What we can test for you:

The following gasket characteristics can be analysed in our in-house laboratory:

- Amtec TEMES fl.ai1: DIN EN 13555, VDI 2440, DIN 28090-2 and DIN 3535-6
- ZwickRoell ProLine: ASTM F36 and DIN EN ISO 527-1

For further information or consultancy please contact us at service@kwo-ptfe.de!



Amtec multifunctional test rig TEMES fl.ai1

Quality Declaration



The quality of our service – and thus the satisfaction of our customers – is safeguarding our company's and employee's future. Therefore, we want to continuously develop our quality while focusing on the requirements and requests of our customers. We can only achieve this by constantly implementing quality management, continuously setting high product quality, ensuring innovative product developments as well as offering a service-oriented customer service.

Our company has been certified according to DIN EN ISO 9001 since 1994 and is regularly audited by the TÜV and also by our customers.

IN THE REGION – FOR THE REGION

KWO® Dichtungstechnik GmbH International

Locally embedded, globally active: Following our slogan "In the region – for the region", our KWO® sealing products are distributed worldwide in more than 50 countries on five continents. We achieve this worldwide market coverage through the help of our authorized dealer network. In this way, we open up new markets, help our existing customers to develop further in their market and offer professional support at all time. Close to the markets and close to our customers.



Australia • Austria • Bangladesh • Belgium • Brazil • Bulgaria • Canada • China • Croatia • Czech Republic • Denmark • Finland • France • Germany • Great Britain • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Jordan • Korea • Luxembourg • Malaysia • Netherland • New Zealand • Norway • Peru • Poland • Portugal • Romania • Russia • Singapore • Slovenia • South Korea • Spain • Sweden • Switzerland • Thailand • Turkey • United Arab Emirates • United States



Visit our website for more information: www.kwo-ptfe.de

You'll find important information on KWO® sealing products, technical specifications, recommended applications and installation instructions. You may also contact our technical support team to discuss your specific sealing challenges or find the optimal sealing solution for your specific industry.



KWO® Dichtungstechnik GmbH

Am Eschengrund 3
83135-Schechen
GERMANY

Tel.: +49 8039 90254-0
Fax: +49 8039 90254-299

E-Mail: info@kwo-ptfe.de
www.kwo-ptfe.de



Supplied by