



# KÜNEMUND – ALWAYS THE RIGHT SOLUTION

#### CONTENTS:

38–39 CONTACT DETAILS

4-7 WHO WE ARE
8-9 WHERE WE ARE
10-15 WHAT DEFINES US
16-17 INDUSTRIES
18-19 SERVICES
20-21 ROLLING BEARINGS
22-23 SPECIAL-PURPOSE/PRECISION BALL BEARINGS
24-25 HIGH TEMPERATURE ROLLING BEARINGS
26-27 LINEAR MOTION ENGINEERING
28-29 LINEAR SYSTEMS
30-31 SEALING TECHNOLOGY
32-33 SEALING ELEMENTS
34-35 PLAIN BEARINGS, GIUBOS
AND FURTHER ACCESSORIES
36-37 SPINDLE TECHNOLOGY



## ROOM FOR TRADITION AND IDEAS – SINCE 1919

Friedrich Künemund founded his company as a commercial agent in Stuttgart in 1919, selling electric tools and electric motors made by reputable manufacturers to engineering companies, mainly in the Baden-Württemberg region in south west Germany. Today we are a strong group of companies with 150 experienced employees, 10 sites and 150,000 products, and a leading supplier of rolling bearings, seals and linear motion engineering to customers in Austria, Germany and Switzerland. Our businesses and divisions are fully integrated, with a pool of interdisciplinary expertise waiting to take on your engineering challenges.

We aspire to meet any need, which is why we not only supply products from almost every major manufacturer, but also have our own production facilities for tailored solutions, working in trusted partnership with our customers and suppliers. We provide end-to end customer care from a designated contact – from consultancy for co-development using your design specifications, to volume production – so that you can focus on what you do best: business.





Künemund Stuttgart established as a

Zwicker Kugellager (Ball Bearings) established in Isslingen am Neckar Compound Hochtemperaturwälzlager High Temperature Rolling Bearings) established

Ritter Lineartechnik established, today Künemund Lineartechnik (Linear Motion Engineering) DIN EN ISO 9001:200 certification

Künemund älzlager Holding A established

Künemund Dichtungstechnik Baling Technology Established ünemund's centenary







FULL-RANGE PROVIDER
DESIGN
PREASSEMBLY
FAILURE ANALYSIS
BALL SCREW DRIVE REPAIR SERVICE
COMMISSIONED MANUFACTURE
SPECIAL-PURPOSE SOLUTIONS
PRODUCT TRAINING

# WE ARE BOTH A TRADING COMPANY AND A MANUFACTURER

#### TRADE, CONSULTANCY AND SALES

We've got you covered: our five trading companies give you access to the full Künemund Group portfolio including engineering consultancy – everything from standardised branded products to custom manufacture. Our experts are ready and waiting to answer your questions and discuss your requirements.

#### **BRANDS**

As a full-range provider, we offer proven and innovative products from our partner companies. We supply rolling bearings from brands such as Schaeffler, Timken, GRW and GMN, seals and machining spindles from leading suppliers such as GMN and IMT, and linear motion engineering from Schaeffler, Ewellix and Thomson.





























#### TAILORED SOLUTIONS MANUFACTURED IN-HOUSE

Künemund Group's manufacturing operations are designed to focus on your individual needs and requirements. We produce special-purpose ball bearings, high temperature rolling bearings, linear motion engineering and seals, all in-house.

#### **KÜNEMUND Linear Motion Engineering**

Linear motion engineering production and preassembly. Künemund Linear Motion Engineer not only manufactures high-grade ball screw drives and precision guide shafts to your drawings, but also supplies complete modular linear systems.

#### **KÜNEMUND Sealing Technology**

Künemund Dichtungstechnik GmbH specialises in manufacturing sealing elements in PTFE and PTFE compound. One of our specialities is sealing rings with a metal support ring that makes them suitable for open installation spaces.

#### **ADITEC Sealing Technology**

Our Aditec Sealing Technology division is responsible for the production of high-grade mechanical seals, in some cases based on Goetze technology, and provides engineering consultancy on static and dynamic seals.

#### **COMPOUND High Temperature Rolling Bearings**

Compound GmbH manufactures high temperature systems and rolling bearings with special-purpose dry lubricants for a long, maintenance-free service life even in extreme conditions.

#### **ZWICKER Precision Bearings**

Zwicker Precision Bearings produces special-purpose ball bearings, precision-manufactured for your requirements and applications. We specialise in deep groove ball bearings with a variety of seals, cages, greases and oils. Alongside standard sizes, we supply custom dimensions, bearing pairs and complete units.

# OUR LOCATIONS – NETWORKED AROUND YOUR NEEDS

The Künemund group of companies has 10 locations in Germany. Thanks to our tightly networked organisation, we're accessible, responsive and efficient. Our customers value our speed and service quality.

Each of our manufacturing sites has a different focus, which means you can take your enquiry straight to the experts. However, you can contact any of our businesses regardless of their specialism, no matter what you need. We take care of the next steps internally and ensure your requirements are handled by experts from the relevant division.

#### **OUR TRADING COMPANIES**

- Künemund GmbH & Co. KG 70565 Stuttgart
- Künemund GmbH 77694 Kehl am Rhein
- Künemund Wälzlager
  Halle GmbH
  06179 Teutschenthal-Holleben
- Künemund Wälzlager
  Nuremberg GmbH
  90475 Nuremberg
- Künemund Düsseldorf GmbH 40589 Düsseldorf

#### **OUR PRODUCTION OPERATIONS**

- Künemund GmbH & Co. KG

   Aditec –

  72829 Engstingen-Haid
- Compound GmbH
  Hochtemperatur Wälzlager
  77694 Kehl am Rhein
- Künemund
  Lineartechnik GmbH
  77767 Appenweier-Urloffen
- Zwicker Kugellager GmbH94508 Schöllnach
- Künemund
  Dichtungstechnik GmbH
  47918 Tönisvorst



# 150,000 products

#### **AVAILABILITY**

Thanks to our integrated operations and warehousing system, we can supply over 150,000 different items at any time.



#### E-COMMERCE/EDI

Direct or indirect links to our ERP system make order processing easy, reliable and fast. 150

#### **EMPLOYEES**

make customer satisfaction and high quality their top priorities.

## 100 years' experience

#### **EXPERTISE**

Working with us gives you the reassurance that comes with 100 years of experience and cutting-edge expertise in assembly development and manufacture.



## A SINGLE POINT OF CONTACT

under one roof: parts, delivery and service.

# **DIN EN ISO 9001**

#### **CERTIFICATION**

Il our operations have beer DIN EN ISO 9001 certified since 2001.





SPEED
FLEXIBILITY
CUSTOMER SATISFACTION
PARTNERSHIP
RELIABILITY
PROXIMITY
SAFETY
QUALITY
CONTINUOUS IMPROVEMENT
FORWARD-THINKING
INNOVATION

# WHAT DEFINES US – TAILORED. PERSONAL. EXPERIENCED.

## FAST, FLEXIBLE AND COST-EFFECTIVE

We operate in a fast-paced customer environment. When it comes to changing needs and requirements, we are agile: we deal with a range of industries that have completely different demands. For us, fast response times, customer proximity and maximum commitment are the norm. We save our customers time, money and stress, with rapid procurement, assembly supply and preassembly.

## INNOVATION AND CONTINUOUS IMPROVEMENT

We never stop reviewing our capabilities. We embrace change and are always looking for new opportunities to improve the way we do things. We learn from our own and others' experience, and enjoy passing on our knowledge. We make ongoing investments in our workforce, plants, infrastructure and machinery. We also take calculated risks to tap into new business opportunities and develop a wide range of innovations.

## SATISFIED CUSTOMERS AND TOP QUALITY

We care about more than just sales figures. High quality and customer satisfaction really matter to us, as do fair, close cooperation and long-term customer relationships. We think and act based on our customers' needs, analysing them in depth and moving swiftly to meet them. And with a comprehensive quality management system, we leave nothing to chance. Künemund Group constantly shares knowledge across the whole business to keep our product and other expertise right up to date.

With several distribution warehouses and our own production facilities, we guarantee high product availability and efficient order processing. We know our work inside out, and ensure that every level of our organisation is dependable. These are the enabling factors behind our high product and service quality and production reliability.





PERSONAL CONSULTANCY
INDUSTRY EXPERTS
SPECIALIST KNOWLEDGE
SOLUTION PROVIDER
COMMITMENT
MOTIVATION
SUSTAINABILITY
SOCIAL ENGAGEMENT

# PERSONAL CONSULTANCY, INCLUDING ON SITE

All our consultants and salespeople are experts in their fields and in the industries they deal with. Professional, knowledgeable and totally customer-focused, your personal contact will take care of all your concerns and technical issues. That's the Künemund experience whenever you deal with us.

One of the ways we add value is through our comprehensive consultancy service. If your application is complex, we work with you to specify the initial brief. This means we can draw on Künemund Group company experts to help you develop solutions and engineering designs, and we'll be happy to visit your site.

We motivate and develop our employees, and we're proud to have such a long-standing workforce of bona fide industry veterans. Our committed, high-achieving team is our most valuable asset and critical to our success. They truly identify with your work and your projects. Every company has strategies and products; we believe that people make the difference.

## SUSTAINABILITY AND SOCIAL ENGAGEMENT

In an ever-changing world, people need solid values they can rely on. And that includes taking economic, ecological and social responsibility. We never stop working on the essentials, like fairness, empathy, integrity, trust and a sense of responsibility.

Our priorities include:

- Safeguarding and developing our locations
- Creating jobs and giving our workforce regular training and development
- A sustainable, ecologically sound supply chain
- Human rights
- Responsible, accurate and secure data handling
- We support the Tübingen CENTRE FOR RARE DISEASES (www.zse-tuebingen.de)



# THE RIGHT SOLUTION FOR EVERY REQUIREMENT

The problems and complexities facing different industries demand a lot of flexibility. We have an excellent overview of best practices in a variety of sectors. With over 100 years' experience, we benefit from in-depth process and product expertise, and we know how to translate that expertise into efficient production systems, whether with products from well-known manufacturers or in a customised, industry-specific solution. We can help you produce high-quality products without compromising cost-effectiveness or process reliability.

## COMPOUND HIGH TEMPERATURE ROLLING BEARINGS

- Steel industry
- Ceramics and glass industry
- Vacuum applications

#### LINEAR MOTION ENGINEERING

- Machine tools
- Automation technology
- Papermaking machines and printing presses
- Medical engineering

#### ADITEC

- Gear manufacture
- Pump manufacture
- Hydraulic systems
- Agricultural machiner

#### SEALING TECHNOLOGY

- Food industry
- Packaging industry
- Pharmaceuticals and chemicals
- Pump manufacture
- Steel industry
- Medical engineering

#### **ZWICKER PRECISION BEARINGS**

- Medical engineering
- Electric motors
- Instrumentation and control engineering
- Machine tools
- Mechanical engineering
- Packaging machinery
- Special-purpose machinery



### **OUR SERVICES**

Alongside a wide range of products from well-known manufacturers we have a second core activity: our own production plants for rolling bearings, seals and linear motion engineering. These in-house manufacturing capabilities mean that we can offer more added value. We support you every step of the way, from consultancy at the start of the project, to product selection and calculations, right through to order processing (e-commerce solutions). The product specialists in our production operations will provide expert input when you need more than just a standard product. You can have confidence in an experienced team whose maxim is "Customisation as standard".

#### **DESIGN CONSULTANCY**

#### Calculations:

- Bearing calculations taking account of adjacent parts
- Lubrication design, with relubrication intervals where applicable
- Dynamic calculations for spindle bearings
- Operating clearance calculations
- CAD service

#### FAILURE ANALYSIS

Determination of failure cause in rolling bearings and linear motion engineering of all types:

- Assessment of current condition on site
- Microscopic, documented examinations of failed parts
- Help with new designs or redesigns
- Environmental conditions and adjacent parts taken into account

## LINEAR MOTION ENGINEERING REPAIR SERVICE

Our authorised Schaeffler Linear Centre provides a repair service for ball screw drives and linear modules.

#### INSTALLATION AND MAINTENANCE SERVICE

- Help with installing bearings, seals and linear systems
- Online or offline machine diagnostics (condition monitoring)
- Additional services provided by FAG Industrial Services GmbH
- Installation service, sale of special measuring instruments for installation
- corrective maintenance schedules
- Alignment, balancing
- Equipment and services for lubrication and lubrication point monitoring
- Repair service for large rolling bearings

#### OTHER SERVICES

- Manganese phosphating for components up to 340 mm in diameter
- Cleaning and inspection of existing plant
- Lubrication, including small quantities, with special-purpose greases, pastes or oils
- Project supervision
- Training
- E-commerce solutions: EDI

 $^{19}$ 

### **ROLLING BEARINGS**

In addition to our range of standard Schaeffler, Timken, Koyo and NTN/SNR rolling bearings, we supply several types of GRW miniature ball bearings and GMN high-precision spindle and radial deep groove ball bearings, right through to ultra-precision (UP) class. We also supply GMN freewheels.

#### **PRODUCTS**

- Ball bearings
- Cylindrical roller bearings
- Spherical roller bearings
- High-precision ball bearings
- Housed bearings
- Tapered roller bearings
- Miniature ball bearings
- Needle bearings
- Track rollers
- Plain bearings

#### **BENEFITS**

- Objective advice from a single point of contact for all your questions about rolling bearings and corresponding accessories
- Access to a wide network

















#### **SERVICES**

- Failure and condition analysis
- Microscopic examinations of rolling bearings
- Recommendations for suitable lubricants and determination of required relubrication intervals for your application
- Service life calculations
- Recommendations and calculations for new rolling bearing designs, factoring in the whole bearing location (bearing, sealing, lubrication and mating parts)





















# SPECIAL-PURPOSE/PRECISION BALL BEARINGS

Zwicker supplies a comprehensive range of special-purpose ball bearings, from deep groove with special lubrication to ceramic, superhard and special cages to matched pairs. Our range also includes ready-to-install bearing units, cast flanged bearings, track rollers, aligning ball bearings and bearings for prosthetics. We implement your custom rolling bearing requirements to perfection.

#### **PRODUCTS**

- Deep groove ball bearings (including pairs)
- Hybrid bearings
- Stainless steel bearings
- Angular contact ball bearings
- Flange bearings, bearing units
- Custom bearings and bearing components to drawings
- Custom track rollers
- Custom cages
- Custom seals

#### **BENEFITS**

- Flexible production
- From small runs and prototypes to series production, all under one roof
- Tailored advice on complete bearing location (bearing, seal, lubrication and connecting parts)













#### SERVICES

- Prototype and small-scale production
- Design consultancy and service life calculation
- Retrofitting and rework
- Failure analysis and solutions
- Lubrication recommendations

#### **APPLICATIONS**

- Food industry
- Medical engineering
- Papermaking machines and printing presses
- Packaging machinery
- Electric motors





### HIGH TEMPERATURE ROLLING BEARINGS

Our COMPOUND division, supplying solid-lubrication high temperature rolling bearings, covers almost all common bearing designs primed with dry lubricants or special greases for extreme environmental conditions. These bearings are typically used in a wide variety of applications from steelworks to high-vacuum systems. We make the dry lubricants required for these and have our own in-house phosphating pretreatment process.

#### **PRODUCTS**

- Solid-lubricated rolling bearings
- Deep groove, angular contact and spherical ball bearings
- Spherical, cylindrical and tapered roller bearings
- High temperature rolling bearings up to 350°C
- Special bearings for the glass, steel and ceramics industries

#### **BENEFITS**

- Rolling bearings with solid-lubrication (no relubrication required)
- Suitable for extreme conditions
- Withstand extreme temperatures (-80°C to +350°C)
- Long, maintenance-free service life guaranteed
- Standard DIN sizes
- Ultra-low friction
- Environmentally friendly and maintenance-free









#### **SERVICES**

- Finishing (coatings)
- Special-purpose lubrication (wide range of roller bearing greases and oils)
- Custom solutions even for small batches
- Comprehensive advice

#### **APPLICATIONS**

- Steel industry
- Ceramics industry
- Glass industry

#### **BEARINGS FOR**

- Roller conveyors
- Hearth kiln trucks
- Tunnel kiln trucks
- Hot material transport containers





### LINEAR MOTION ENGINEERING

Our Künemund Linear Motion Engineering division specialises in proven products such as ball screw drives, plus precision guide shafts for a wide variety of applications. As a certified Schaeffler partner we can offer you a comprehensive product range as well as the benefit of Schaeffler's expert know-ledge. We always have ball screw drives and guideway systems in stock, and can preassemble them to your specifications at any time. Adjacent components such as bearing housings can be manufactured to your drawings. We can also supply you with other products from well-known manufacturers such as Ewellix and Thomson.

#### **PRODUCTS**

- Ball screw drives
- Precision shaft guidance systems
- Monorail guidance systems, including rustproof versions
- Track roller guidance systems
- Off-the-shelf guidance systems, shafts and screw drives in factory lengths
- Off-the-shelf bushings, bogies and nuts

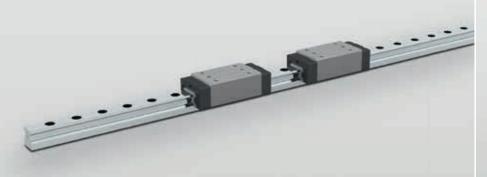
#### **BENEFITS**

- Schaeffler Technology systems partner
- Tailored special-purpose solutions from 1-off
- Wide range of products in stock
- Fast delivery















#### **SERVICES**

- Parts cut to length and finished to your requirements
- Design support
- Screw drive repairs, all makes
- CAD service

#### **APPLICATIONS**

- Machine tools
- Woodworking machinery
- Special-purpose machinery
- Printing presses and papermaking machinery
- Machine and plant engineering
- Handling and automation technology
- Special-purpose machine building















### LINEAR SYSTEMS

As a partner to Schaeffler, Ewellix and Thomson, we focus on only the highest-quality products. Our Linear Systems division provides everything from individual components to comprehensive advice and services and even turnkey solutions, including for driven linear units. Consequently we can implement standard-based custom solutions – even for small volumes – and deliver them quickly.

#### **PRODUCTS**

- Linear modules
- Linear tables
- Actuators and lifting columns
- Driven linear units
- Linear systems
- Rustproof versions
- Optional cleanroom versions

#### **BENEFITS**

- Schaeffler Technology systems partner for driven linear units
- Custom solutions from 1-off
- Technical support







#### **SERVICES**

- Finishing to customer requirements
- Module and axis construction to your drawings
- Design support and engineering services
- Module, axis and screw drive repairs

#### **APPLICATIONS**

- Optical industry
- Medical engineering
- Robotics
- Cleanroom and vacuum applications
- Joining technology
- Automation and handling technology













### SEALING TECHNOLOGY

This division specialises in producing high-grade seals and sealing elements in PTFE and PTFE compound. One of our specialities is sealing rings with a metal support ring that makes them suitable for open installation spaces.

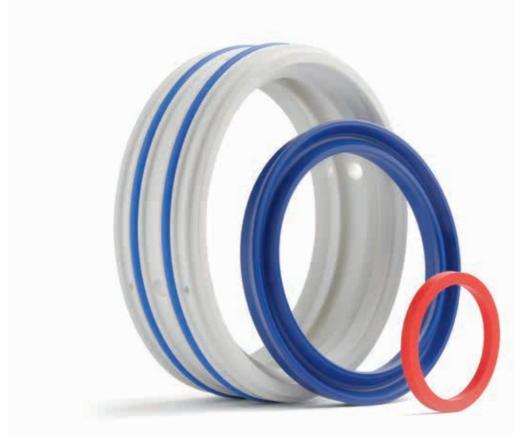
#### **PRODUCTS**

- Tecoflon rings (PTFE shaft sealing rings)
- High-grade special seals in PTFE for pneumatic and hydraulic applications
- Plastic turned parts to customer specifications
- Plastic ball bearings
- Any type
- Any dimensions

#### **BENEFITS**

Suitable for extreme application conditions:

- High thermostability from –270°C to +260°C
- Universal chemical resistance
- Low adhesivity
- Excellent electrical properties
- Resistant to almost all solvents
- Low wear
- Physiologically harmless
- Hygienic design
- High operating pressures
- High circumferential speeds
- Suitable for dry-running





#### **APPLICATIONS**

- Pneumatic and hydraulic applications
- Food industry (vacuum systems)
- Medical engineering
- Pharmaceutical industry
- Chemical industry
- Valve and pump manufacture
- Steel industry
- Machine and plant engineering
- Automation technology

#### APPROVALS AND CERTIFICATIONS

- ATEX
- BAM
- FDA
- etc.





### **SEALING ELEMENTS**

To ensure that we can meet any customer requirement, Künemund supplies products under the Aditec brand name, produces high-grade mechanical seals (including based on Goetze technology), provides technical advice, and sells static and dynamic seals from well-known manufacturers. Our specialists will advise you on the best seal solution for your application based on operating conditions and movements.

#### **PRODUCTS**

#### Static seals

- O- and X-rings
- Washers
- Support rings
- Flat seals

#### Rotary seals

- Shaft sealing rings (axial/radial)
- Mechanical seals
- Mechanical face seals
- Stuffing boxes
- V-rings

#### **Reciprocating seals**

- Wipers
- U-rings
- Fabric seals
- Piston seals

#### Special-purpose seals

- Moulded parts to customer drawings
- Elastomeric couplings (rubber-to-metal bonds)









#### **APPLICATIONS**

- Hydraulics and pneumatics
- Automotive engineering (agriculture, mining)
- Excavators and bulldozers
- Food technology
- Paper industry
- Pump manufacture
- Steelworks
- Machine and plant engineering

- Household appliances (dishwashers and washing machines)
- Medical engineering
- Motors
- Aviation
- Wind turbines
- Wastewater technology









# DRY BEARINGS, GUIBO COUPLINGS AND OTHER ACCESSORIES

To uphold our single-source promise, we supply additional products from well-known manufacturers to complete our wide range of rolling bearings.

#### Dry bearings

Alongside Federal Mogul Glycodur dry bearings, we distribute bushings, flanged bushings, thrust washers and strip material from other suppliers.

#### Mechanical face seals

As a full-range sealing technology provider, we supply Goetze mechanical face seals for extreme contamination levels and applications up to 200 °C, plus piston rings in a variety of materials. Mechanical face seals are used anywhere where maintenance-free operation is a prerequisite.

#### **Guibo couplings**

Guibo coupling is a highly flexible shaft coupling capable of angular and axial movement and is used in vehicle engines, construction machinery, electric drives and generators, or to connect feed pumps with centrifugal pumps.





#### ADDITIONAL ACCESSORIES

- Piston rings
- Lock nuts and locking plates
- Clamping and withdrawal sleeves
- Belleville washers
- Balls and rollers
- Snap rings, retaining rings
- Wave spring washers











### SPINDLE TECHNOLOGY

We have worked in partnership with GMN and IMT for many years. We're happy to advise you on the core component of any machine tool: the machining spindle. Whether milling, drilling or grinding, we draw on the expertise of the two market leaders.

All products are made in Germany, are comprehensively tested and meet the most stringent quality controls.

#### **GMN**

With long-standing experience in the development and manufacture of high-quality machine components, GMN is a specialist in producing efficient, long-lasting spindles for high-speed and high-performance applications. With its in-house production of high-precision ball bearings, GMN supplies not only standard ranges with a host of equipment options, but also customised solutions, and can therefore provide the ideal machine spindle for virtually any application.

#### IMT

IMT's slogan for its impressive, innovative technology is "THE FASCINATION OF POWER & ROTATION". IMT pushes the boundaries again and again, and fascination and passion are the wellspring of all those ground-breaking products. As a professional spindle manufacturing specialist, IMT supplies a broad-based, sophisticated product range of cutting-edge, high-performance spindles along with the required accessories for your manufacturing needs.

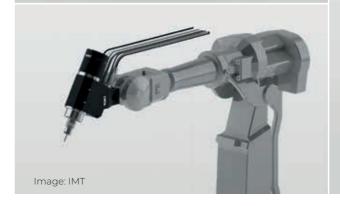
#### **PRODUCTS**

- High-frequency spindles for grinding and milling machines
- Robotic spindles for automation













#### **APPLICATIONS**

- Grinding
- Milling
- Dressing
- Drilling
- Engraving
- Polishing
- Balancing
- PCB machining

- Dental technology
- Robotics
- Optics
- Special-purpose motors
- Renewable energies
- Pumps, compressors









### **CONTACT DETAILS**

40589 Düsseldorf-Benrath

If you have a question about our products, services or company, please get in touch with one of our locations below.

#### **OUR TRADING COMPANIES COUNTRY CONTACTS** Germany (DE) Künemund GmbH & Co. KG Telephone +49 711 72587-90 Schockenriedstraße 46A Fax +49 711 72587-50 + Switzerland (CH) 70565 Stuttgart stuttgart@kuenemund.de Germany (DE) Künemund GmbH Telephone +49 7851 8702-0 France (FR) Max-Planck-Straße 6 Fax +49 7851 8702-99 77694 Kehl am Rhein kehl@kuenemund.de Italy (IT) Künemund Wälzlager Telephone +49 345 444 66-66 Germany (DE) Halle GmbH Fax +49 345 444 66-89 Poland (PL) An der Schnellbahn 2 halle@kuenemund.de 06179 Teutschenthal-Holleben Künemund Wälzlager Telephone +49 9128 91181-0 Germany (DE) **Nuremberg GmbH** Fax +49 9128 91181-32 Austria (AT) Am Flachmoor 8 nuernberg@kuenemund.de Czech Republic (CZ) 90475 Nuremberg Künemund Düsseldorf GmbH Telephone +49 211 879644-0 Germany (DE) Netherlands (NL) Bonner Straße 373 Fax +49 211 879644-10

duesseldorf@kuenemund.de





Schockenriedstr. 46A 70565 Stuttgart Germany

