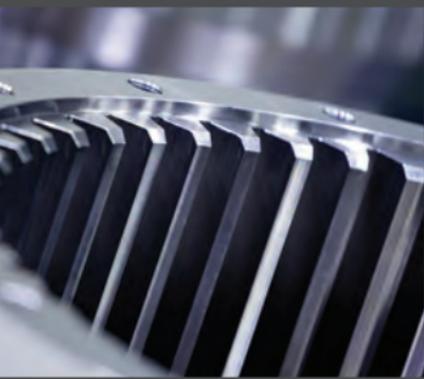
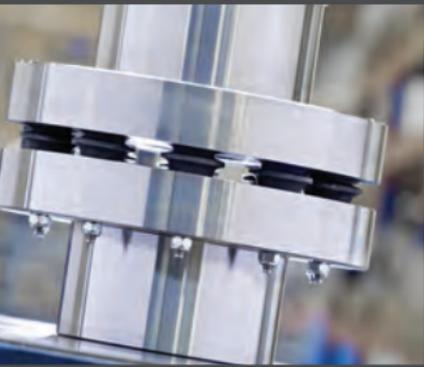
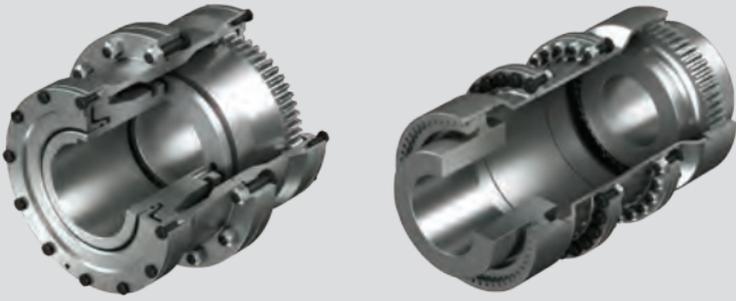


# RENK coupling solutions for all applications.



EMPOWERING FORCES.





## RENK gear couplings

The range of gear couplings from RENK has become the most comprehensive in the world since it was patented in 1939. The wide range of product series and versions gives you a high degree of freedom to design the shaft connections – also in the most demanding of applications.

### Basic series (Type LBK, SBK, SB)

The gear couplings are particularly suitable for compensating axial, radial and angular shaft misalignments as torsionally rigid shaft connections for form-fit torque transmissions.

#### Features

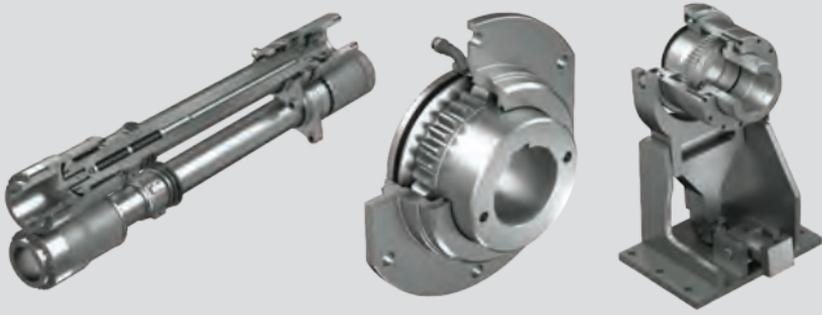
- Misalignment  $\pm 1.5^\circ$  for each half of the coupling, up to  $\pm 3^\circ$  in special versions
- Toothing versions: naturally hard, hardened, or hardened and ground
- Special requirements such as class approvals, API 671 conformity or ATEX 2014/34/EU possible
- Lubrication with oil or grease filling or continuous oil lubrication is possible

### Turbo series (Type TSB, TF, ZT)

The gear couplings in the turbo series are ideal solutions for transmitting high torques at maximum speeds.

#### Features

- For high and maximum speeds
- Hardened and ground internal and external toothing for the ZT series
- API 671-compliant, ATEX 2014/34/EU possible



## RENK gear spindles

RENK gear spindles (Type GS) are primarily used where high torques need to be transmitted without a cardanic effect in conjunction with small external diameters. The design allows high misalignment compensation in combination with a high axial displacement. This is the case with hot and cold rolling mills, continuous casting systems, and straightening presses in particular.

### Features

- High transmission of torque
- Compact external dimensions
- Large axial displacement and angular misalignment  $\pm 3^\circ$
- Either grease or oil lubrication
- Customized design possible

## RENK gear joints

Gear joints (Type FS) serve as connection elements between the drive unit and lifting device. The articulated joint is torsionally rigid yet flexible in all directions, which offers significant advantages in comparison with a rigid coupling. Curved-tooth articulated joints are primarily used in the area of hoisting and conveyor technology for crane hoists and hoisting drum drive systems.

## Shifting gear couplings

Connectable couplings (Type HAW) are usually have a dual-cardanic design. The gearing parts of the connectable gear coupling can be engaged or disengaged at a standstill or, for special designs, even in the event of synchronous operation of connected units. If necessary, operators can thus temporarily disconnect certain machines of a drive train or also connect auxiliary or alternative drives, if necessary.



## **HYGUARD safety couplings**

The HYGUARD safety coupling is a load-separating, torque-limiting coupling that ensures an overload protection of high-quality components in the drive train. It transmits the torque via hydraulically generated frictional engagement. The release torque can be adjusted and remains constant throughout the entire operating time.

### **Series (Type BW, BWL, HW, HEW, HDW)**

In addition to the standard series, variable adjustments to meet customer wishes can be realized.

### **Features**

- Transmission of high torque in the smallest of spaces
- Overload protection with adjustable constant torque limits
- Constant trigger torque
- Rapid recommissioning at minimal costs

## **TORLOC clamping elements**

TORLOC clamping elements connect machine elements quickly and reliably by frictional engagement. They are also used as quick-release couplings.



## RAFLEX flexible disk couplings

The low-maintenance, wear-free RAFLEX flexible disk couplings are torsionally rigid and flexibly offset. Due to the layered structure of the specially shaped disks, these couplings compensate for axial, radial, and angular misalignments between the drive and working machines without generating high restoring forces.

### Standard and turbo series

#### (Type DSL, DSH, DSP, DTL, DTM, DTR, MT)

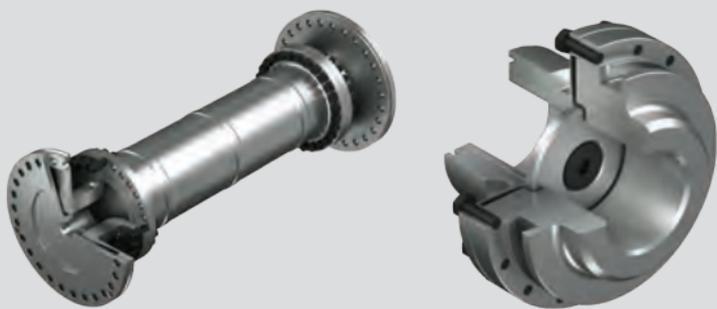
Our RAFLEX portfolio is divided into two series: basic and turbo. The couplings in the DS series are particularly suitable for industrial use in pumps, fans, presses, crane systems, generators as well as for naval applications. The DT series is designed for high-speed applications such as turbines, compressors or generators.

### Features

- Backlash-free transmission of torque
- Compensation of shaft misalignments
- High quality in terms of run-out and balancing
- API-compliant, ATEX 2014/34/EU possible
- Maintenance-free

## EQ-Flex® flexible disk couplings

This special design of the steel disk coupling contains an overload protection. The coupling is current-insulated by a reinforced glassfibre Polyamid intermediate piece. If desired, the coupling can be equipped with a brake or belt pulley. Other options include a turning device or speed sensor disk.



## Diaphragm couplings

The customized contour of the diaphragm allows for the compensation of axial, radial and angular misalignments under load.

Highest torques are safely and reliably transmitted at the highest speed via a contoured single or multi-disk diaphragm. Power ranges of up to 150 MW can be easily accommodated matching with our high speed gear units.

RENK diaphragm couplings are maintenance-free and stand out with their years of trouble-free operation. The basic design consists of just a few components. This makes assembly and handling easier for users.

Each diaphragm coupling is designed using FEM calculation methods to optimally meet the requirements of individual customers.

### Features

- Maximum radial rigidity
- Low restoring and bending moments
- Lightweight
- Maximum balance quality
- Few individual parts
- Maintenance-free
- API 671-compliant, ATEX 2014/34/EU possible



## Flexible couplings – Type ELCO

The special design of the ELCO coupling ensures a failsafe, consistent transmission of torque. It permits limited radial and angular misalignments of the shafts being connected and absorbs longitudinal displacements. The installation of a correctly designed ELCO coupling reduces torque and speed shocks and protects systems from damage and consequential costs. The ELCO coupling has proved itself in tens of thousands of drive systems through its adaptable design and its accurate workmanship.

### Features

- Reduction of torque and speed shocks
- Reduction of torsional vibrations
- Failsafe, consistent transmission of torque
- Compensation of angular and radial misalignments
- Compensation of longitudinal displacements
- Easy axial removal of the profile sleeves and bolts

### **RENK Aktiengesellschaft**

Hannover plant

Weltausstellungsallee 21

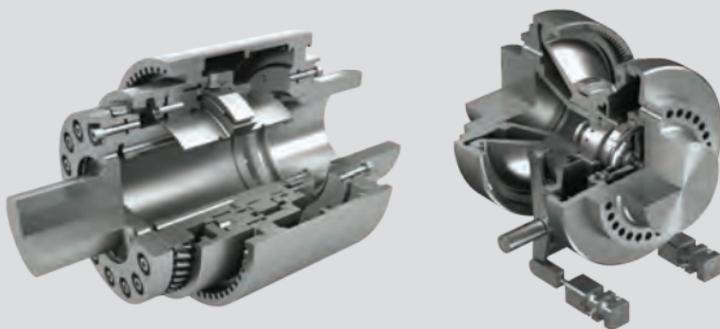
30539 Hannover, Germany

Phone: +49 511 8601-0

Fax: +49 511 8601-288

E-mail: [info.hannover@renk.biz](mailto:info.hannover@renk.biz)

**[www.renk-ag.com](http://www.renk-ag.com)**



## Synchronous clutch couplings

Versatile synchronous clutch couplings from RENK-MAAG are the ideal solution for demanding applications. In addition to functioning as an overrunning clutch, the integrated flexible gear coupling ensures compensation between the two connected machines (compensation of angular as well as radial and axial displacement). Due to the integrated flexible gear coupling, additional bearings for the coupling can be avoided for a shorter overall system length.

The wide range of series and versions gives you a high degree of freedom for designing the shaft connection. We offer the ideal coupling for even the most complex application scenarios.

The synchronous clutch coupling of the MS type provides a form-fit connection between synchronously rotating system parts and automatically separates at non-synchronous speeds, respectively at negative torque.

Due to their straight toothing, synchronous clutch couplings of the HS type also enable transmission of the full negative torque without disengaging. This HS type can be disengaged by remotely controlled hydraulics.

### **RENK-MAAG GmbH**

PO Box 3068

Sulzer-Allee 46

8404 Winterthur, Switzerland

Phone: +41 52 262-8988

Fax: +41 52 262-8989

E-mail: [info@renk-maag.ch](mailto:info@renk-maag.ch)

**[www.renk-ag.com](http://www.renk-ag.com)**



## **RENK long-life grease**

### **Characteristics**

RENK long-life grease is a highly adhesive, fibrous special grease which retains its full lubrication capacity even over extended periods of time. The thixotropic structure ensures high dripping resistance during standstill, even in unfavorable installation conditions. RENK long-life grease corresponds to NLGI grade 1. It is water repellent and completely neutral to the installed seals, for example those made of NBR.

### **Applications**

RENK long-life grease is specially tailored to the requirements of our gear couplings.

### **Long-term lubrication**

RENK long-life grease extends the maintenance interval of RENK's gear couplings to a maximum of 25,000 operating hours or five years. This period corresponds to the intervals of major overhauls at power plants and API standards.

### **Container sizes**

RENK long-life grease is available in convenient, easy-to-use cartridges or in larger containers as well, if required.

0.28 kg cartridge

1.0 kg can

4.5 kg can

18 kg pail

The address for the Rheine plant on the back should be used for inquiries or orders relating to RENK long-life grease.



## **We are there for you – around the world.**

Our customers are our top priority – which is why providing our partners abroad with a direct, on-site contact is important to us. This task is carried out in 50 countries by 90 representative offices which provide assistance with questions relating to all of RENK's products.



**Learn more online  
about RENK couplings**

[www.renk-ag.com/goto/S-2be704b](http://www.renk-ag.com/goto/S-2be704b)

### **RENK Aktiengesellschaft**

Rheine plant  
Rodder Damm 170  
48432 Rheine  
Germany  
Phone: +49 5971 790-0  
Fax: +49 5971 790-208  
E-mail: [info.rheine@renk.biz](mailto:info.rheine@renk.biz)

[www.renk-ag.com](http://www.renk-ag.com)