

## Curved Tooth Couplings



The production process of the curved tooth couplings was invented by Albert Tacke more than 60 years ago and was already patented in 1939.

The worldwide use of the curved tooth coupling in all fields of technology provides proof of the high recognition and capability of this coupling design.

**In 1999, the 1000 000th curved tooth coupling was produced by the RENK works in Rheine.**

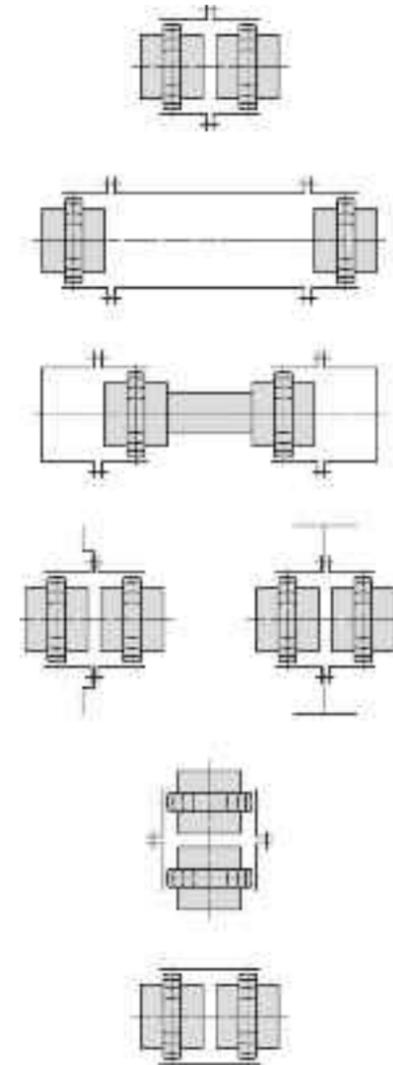
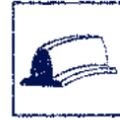
We offer the most comprehensive range of couplings worldwide. The multitude of construction series and options allows complete freedom to engineer the ideal shaft connection for your particular application. It also gives you the certainty to select the optimum solution, even for the most severe operation conditions.



Product catalogues:

- Basic Construction Series Industry, Ship and Marine Technology
- Standard Construction Series AX-BO® and RAFINEX®
- High-Speed Construction Series
- Disengageable at Standstill

## Curved Tooth Couplings



**Basic design**

**Basic design with retaining ring**

**Spacer design**

**Spacer design with retaining ring**

**Intermediate shaft design**

**Intermediate shaft design with retaining ring**

**Design with brake disk for shoe brake**

**Design with brake disk for disk brake**

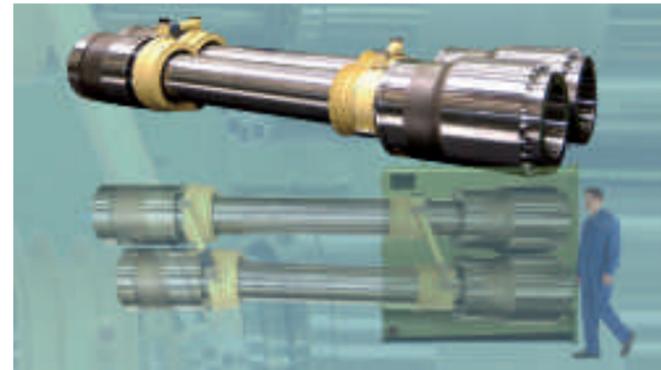
**Vertical design**

**Design with one-piece coupling sleeve**

## Curved Tooth Articulated Joints Curved Tooth Spindles Couplings



The main field of application of the FS-type curved tooth articulated joints is crane hoisting gears and cable drum drives in the field of lifting and materials handling equipment.



Curved-tooth spindle couplings are mainly used where large torques need to be transmitted with minimal external diameters and at the same time a high misalignment capability is required. This is the case, for example, with hot and cold rolling mills, continuous casting plants, straightening presses and rotary furnaces, etc. Due to the large number of different designs for the spindle heads, this drive element can be used not only for the original equipment, but is also extremely useful for retrofitting or modernising such plants.

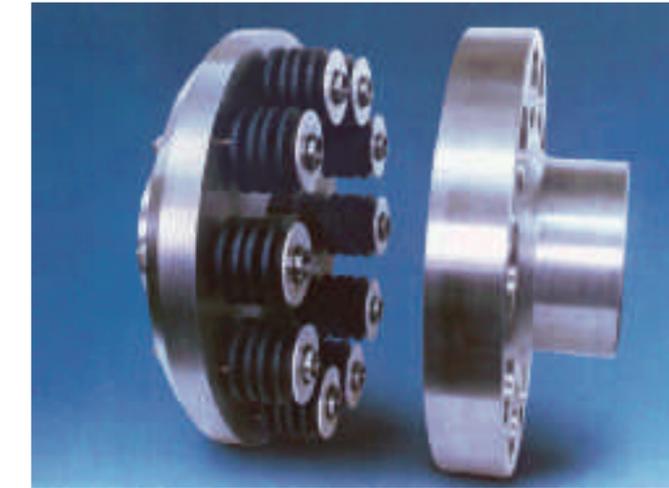
Product catalogues:

- Curved Tooth Articulated Joints
- Curved Tooth Spindle Couplings

## ELCO Coupling® with Elastic Profile Sleeves from the Hanover Works



The torsionally resilient ELCO coupling® has proven its worth in tens of thousands of drives due to its adaptable construction and precise workshop design.



- Torque and speed shocks are dampened by the spring and cushioning properties of the profile sleeves.
- Angular and radial displacement is counterbalanced by the all-round elasticity and plasticity of the profile sleeves.
- Longitudinal movements of the shafts are counteracted by the smooth displaceability of the profile sleeves in the bores of the coupling counter-piece.

### ELCO Coupling®:

RENK Aktiengesellschaft  
Hannover works  
Weltaustellungsallee 21  
30539 Hannover/Germany

Telephone: ++49 511 8601-0  
Telefax: ++49 511 8601-288  
E-Mail: info.hannover@renk.biz

Product catalogue:

- ELCO Coupling®

## Range of Couplings



### Curved Tooth Couplings



### Raflex® Steel Disk Couplings



### Diaphragm Couplings



### ELCO Coupling® with Elastic Profile Sleeve



### HYGUARD® Safety Couplings



### TORLOC® Clamping Elements



## HYGUARD® Safety Couplings



HYGUARD® Safety Couplings offer maximum reliability. In combination with the proven curved tooth coupling, HYGUARD® acts like a safety coupling with torque limitation. The release torque is adjustable and remains constant throughout the entire operation time. The dependable protection for expensive machinery.



- High torque transmission capacity within little space
- Torsionally rigid, articulated shaft connection
- Overload protection with adjustable torque limitation
- Constant release torque throughout the entire operation time
- No interruption of operation due to material fatigue
- Low down-time costs
- Fast re-commissioning
- No cost-intensive stock-keeping of spare parts

Product catalogue:

- Safety Couplings, Clamping Elements
- HYGUARD® TORLOC® Shear Pins

## Raflex® Steel Disk Couplings



The steel disk couplings of the construction series Raflex® belong to the torsionally stiff, flexible shaft connections. Like the well-established curved tooth couplings, these power transmission elements are completely made from metal. Contrary to the curved tooth couplings, they do not need lubrication and are hence maintenance-free.



**API 610    API 671**

Product catalogues:

- Basic Construction
- Series MTP
- High-Speed Series

## High-Speed Diaphragm Couplings



High-speed diaphragm couplings of the series MCN and MCF transmit the torque through a contoured single diaphragm. They are predominantly designed for use on applications involving high and very high speeds. The high flexibility of the diaphragm under load allows the compensation of angular, axial and parallel misalignments of the shafts connected by the coupling.



- No need for lubrication and maintenance
- High temperature resistance
- Extremely high radial stiffness
- Low restoring forces and bending moments
- Low weight
- Diaphragm protected against corrosion
- Very high torque and speed capability
- Extended lifetime – utmost dependability
- Extraordinarily high balance quality
- Easily removed diaphragm sleeve
- Low number of mechanical connecting elements

Product catalogue:

- High-Speed Diaphragm Coupling

## RENK Longlife Grease



### Properties

RENK Longlife Grease is a strongly adhesive, special fibrous grease which retains its full lubricity over long periods. Its thixotropic structure renders RENK Longlife Grease highly resistant to dripping when immobile, even under unfavourable installation conditions. RENK Longlife Grease complies with NLGI class 1. It is fully water-resistant and completely neutral with respect to the integrated seals, e.g. those made of NBR material.

### Fields of Application

RENK Longlife Grease is especially adapted to the requirements of curved-tooth couplings.

### Long-term Lubrication

RENK Longlife Grease extends the maintenance intervals of curved-tooth couplings to 25,000 hours of operation or up to 5 years. This period corresponds to the intervals for major maintenance inspections of power stations and to the requirements of API.

### Container Sizes

RENK Longlife Grease is available in practical, easy-to-handle cartridges or in larger containers if required.

**0.28 kg cartridge**

**0.75 l (0.73 kg) tin**

**2.5 l (2.36 kg) tin**

**5 l (4.88 kg) tin**

**18 kg hobcock**

Please send any enquiries or orders for RENK Longlife Grease to the address stated overleaf.

## RENK Aktiengesellschaft Operating worldwide



### Representations:

Algeria  
Argentina  
Australia  
Austria  
Bangladesh  
Belgium  
Bosnia-Herzegovina  
Brazil  
Brunei  
Bulgaria  
Canada  
People's Republic of China  
Croatia  
Cyprus  
Czech Republic  
Denmark  
Finland  
France

Great Britain and Ireland  
Greece  
Hungary  
India  
Israel  
Italy  
Japan  
Korea (South)  
Kuwait  
Luxembourg  
Macedonia  
Malaysia  
Mexico  
Monaco  
Morocco  
Netherlands  
New Zealand  
Norway  
Oman  
Pakistan

Philippines  
Poland  
Portugal  
Serbia  
Singapore  
Slovakia  
Slovenia  
South Africa  
Spain  
Sweden  
Switzerland  
Syria  
Taiwan  
Thailand  
Tunisia  
Turkey  
United Arab Emirates  
USA  
(Canada, Puerto Rico)  
Venezuela

### Licensees:

Brazil  
People's Republic of China  
India

### Associations and Subsidiaries

United Arab Emirates  
USA

**More information about our coupling range is contained in our product catalogues which we gladly send to you upon request.**



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