



Innovative Power Transmission

RENK Group
Data, Facts and Products
2017

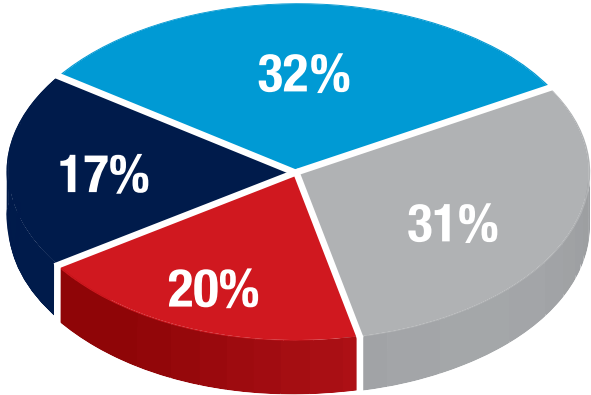
The RENK Group in Figures

Financial year	2012 € million	2013 € million	2014 € million	2015 € million	2016 € million
New orders	525	504	666	483	486
Germany	176	196	137	181	173
Outside Germany	349	308	529	302	313
Sales	476	485	480	487	496
Germany	165	168	153	147	200
Outside Germany	311	317	327	340	296
Orders on hand 1)	634	648	827	812	799
Germany	296	323	295	297	256
Outside Germany	338	325	532	515	543
Number of employees Average on year	2098	2199	2112	2087	2104

1) as of December 31

Sales by Divisions 2016

Sales in %



- Special Gear Units
- Vehicle Transmissions
- Standard Gear Units
- Slide Bearings

Supervisory Board:

Dr. Ingrun-Ulla Bartölke

Wolfsburg

Chair of the Supervisory Board
Head of Corporate Accounting
and External Reporting of
Volkswagen AG

Roberto Armellini^{*)}

Augsburg

Vice Chair of the Supervisory Board
Trade Union Secretary

Michael Behrendt

Hamburg

Chair of the Supervisory Board
of Hapag-Lloyd AG

Hardy Brennecke

Wolfenbüttel

Head of the Executive Office for the
Commercial Vehicles division of
Volkswagen AG, Secretary General
Volkswagen Truck & Bus GmbH

Joachim Drees

Stuttgart

Member of the Management of
Volkswagen Truck & Bus GmbH,
Chief Executive Officer of MAN SE
and Chief Executive Officer of MAN
Truck & Bus AG

Dipl.-Ing. (FH) Rainer Handschuh^{*)}

Augsburg

Chair of the General Works Council
of RENK AG
Chair of the Works Council of
RENK AG, Augsburg plant
and RENK Test System GmbH

Christiane Hesse

Wunstorf

Member of the Executive Board
(Personnel und Organisation)
of the Volkswagen Financial
Services AG

Dipl.-Ing. (FH) Frank Hoffmann^{*)}

Augsburg

Division Manager of Vehicle
Transmissions RENK AG, Augsburg

Thorsten Jablonski

Ilsede (Peine district)

Head of Business segment
Gearbox

Head of Location Kassel der
Volkswagen AG

Herbert Surmann^{*)}

Rheine

Chair of the Works Council of
RENK AG, Rheine plant

Walter Vogt^{*)}

Eltville

Trade Union Secretary with the
IG Metall Executive Board,
Frankfurt/M.

Ingo Weidner^{*)}

Hannover

Mechanical Engineering Technician

^{*)} elected by the staff

Executive Board / Company Managements

Executive Board:

CEO Dipl.-Ing. (FH) Florian Hofbauer
Landsberg (Lech)
Spokesperson
Engineering and Sales

CFO Dipl.-Kfm. (Univ.) Christian Hammel
Munich
Administration and Production

Company Managements:

RENK AG Augsburg Plant
Corporate Headquarters
Management Special Gear Units
Dr. Gottfried Braun
Management Vehicle Transmissions
Frank Hoffmann

RENK AG Hannover Plant
Management
Manfred Hukker
Richard Voß

RENK AG Rheine Plant
Management
Dr. Mohamed Zeyed Sfar
Martin Pleus

RENK-MAAG GmbH, Switzerland
Management
Thomas Fritschi
Winfried Vogl

RENK Test System GmbH, Augsburg
Management
Mathias Karrer
Rainer Thomay

RENK Systems Corporation, USA
Management
Joerg Cordes

COFICAL RENK
Mancais do Brasil Ltda., Brazil
Management
Ermelindo Rezende

RENK Shanghai Service and Commercial Co., Ltd., China
Management
Mr. Jun Tang

RENK France S.A.S., France
President
Pascal Jakimon

RENK Transmisyon Sanayi A.S., Turkey
Management
Dr. Franz Hoppe
Contact: Tanju Cakir

RENK U.A.E. LLC., United Arab Emirates, Abu Dhabi
Management
Klaus Huber
Contact: Rejith Moosa Karakuni

RENK Corporation, USA
President
Mark Gosnell

Company History and Engineering Milestones

1873	Company founded by Johann Julius Renk in Augsburg, Germany
1897	Conversion into a joint stock company trading as "Zahnradfabrik Augsburg, vorm. Joh. Renk (Act. Ges.)"
1916	Production of the largest gear cutting machine till then (7 m diameter)
1923	Integration of the company into the GHH group of companies, now MAN SE
1926	The very first gearwheels with ground flanks
1939	Production of the world's fastest (36,000 rpm) gear transmission for the aircraft industry
1943	Development of the principle of hydrostatic superimposed steering for tracked vehicles
1956	The first high-speed gear units with a pitch circle velocity of 185 m/sec.
1961	The world's first electronic controls for automatic vehicle transmissions
1964	1st RENK-MAAG Synchronous Clutch Coupling delivered (20,000 kW)
1965	Development of the hydrostatic/hydrodynamic steering drive for tracked vehicles
1971	First-ever brake system with friction and hydrodynamic brakes integrated in a vehicle transmission system
1975	Acquisition of the slide bearings and couplings division of Eisenwerke Wülfel, Hannover
1976	RENK is the first to harden and grind gearwheels with a diameter of over 3,000 mm
1982	Construction of the most powerful marine gear unit till then (40,000 kilowatts)
1986	The company's Augsburg-based industrial and marine gear division is spun off and integrated into RENK TACKE GmbH Creation of the company's "Control and Test System" division
1989	At 75,000 kilowatts, RENK develops a high-speed gear unit with the highest-ever power transmitted in one gear mesh
1992	Construction of the most powerful planetary gear unit (20,600 kilowatts) for a ship propulsion system with counter-rotating propellers
1997	Launch of the world's most powerful high-speed gear units with a gas turbine rating of 100 megawatts
1998	Bevel planetary gear unit for one of the biggest vertical raw meal grinders with a rating of 4,800 kilowatts
1999	Premiere of the world's most powerful high-speed gear unit with a gas turbine rating of 140 megawatts

2000	<p>Presentation of the newly developed etaX[®] gear unit for higher efficiencies.</p> <p>For the Test System division RENK acquires the activities of the US American company LABECO</p> <p>Acquisition of the slide bearing activities from A. Friedr. Flender AG for the RENK Hannover plant</p>
2001	The world's first CODAG system for the main propulsion of a frigate (38 megawatts total rating)
2002	Development of a 5-megawatt AeroGear [®] for wind-energy plants
2004	<p>The first heavy-duty naval gear unit in COGAG arrangement (6,300 kilowatt total rating) featuring the lowest specific weight in its class anywhere</p> <p>Founding of RENK Test System GmbH</p>
2011	<p>Acceptance of the world's first gear system built for the hybrid propulsion of a frigate in CODELAG arrangement, 30,000 kilowatts total power</p> <p>Delivery of a 65-MW gear system for the world's biggest megayacht (185 m)</p>
2012	Delivery of an electric hybrid gear unit for the world's biggest sailing yacht (142 m)
2013	Manufacture of the world's biggest planetary gear system designed for a wind energy nacelle testing unit with a torque of 15,000,000 newton meters.
2015	<p>The world's most powerful cement grinder gear unit COPE[®], with eight motors and a rating of 10 megawatts</p> <p>The first electric drive module AED[®] for quiet marine propulsion systems</p> <p>The world's biggest spur gear unit (290 t) for driving the cutter head of a suction dredger with a torque of 2,500,000 newton meters</p> <p>Commissioning of until then the biggest-ever test rig for complete wind-energy nacelles</p> <p>First test rig for all-electric twin-rotor helicopter gear units</p>
2016	<p>Delivery of the biggest test rig up to now for geared turbo fans (100 MW)</p> <p>Delivery of the biggest roller bearing test rig up to now for wind turbines</p> <p>Manufacture of until then the biggest roller bearing test rig</p> <p>RENK-MAAG manufactures largest, fastest-running, spur gear Parallel Shaft Gear Unit in the world (pitch line velocity 156 m/s, center distance 1.73 meters)</p>

Subsidiaries and Affiliates



COFICAL RENK Mancais do Brasil Ltda.

Guaramirim / Brazil

Slide bearings

98%

RENK Corporation

Duncan / USA

Distribution company, slide bearings assembly and service agency

100%

RENK France S.A.S.

Saint-Ouen-l'Aumône / France

Production of automatic transmissions for tracked vehicles and brake systems; coupling sales & marketing

100%

RENK-MAAG GmbH

Winterthur / Switzerland

Turbo gears, spare parts, synchronous clutch couplings, shiftable clutches, marine spares and service

100%

RENK Shanghai

Service and Commercial Co., Ltd.

Shanghai / China

All RENK products

100%

RENK Test System GmbH

Augsburg / Germany

Test systems

100%

RENK Systems Corporation

Camby / USA

Test systems

Service for maritime gear units

100%

RENK Transmisyon Sanayi A.S.

Istanbul / Turkey

All RENK products

55%

RENK U.A.E. LLC.

Abu Dhabi / United Arab Emirates

All RENK products

49%

Products

The companies of the RENK group are renowned worldwide as manufacturers of special-purpose gear units, drive components and test systems meeting the highest quality standards. Great flexibility in meeting customer demands is an outstanding characteristic of these companies.

The products and data appearing in this booklet can only provide a rough outline. Special solutions are available by arrangement at any time.

Our Product Range comprises the following Systems and Components:

Automatic vehicle transmissions	10
Industrial Gear Units	11–16
Marine Gear Units	17–19
Couplings	20–23
Slide bearings	24
Test systems	25

Automatic Transmissions for Tracked Vehicles

Our automatic powershift transmissions for tracked vehicles are suitable for operating with diesel engines and gas turbines. They are available in so-called “T”, “L” or “U”-configurations for front and rear installation. Besides the power-shiftable driving gears, the transmissions also contain the steering and braking system. Control and monitoring are provided by an electronic system. In addition to the basic functions of a tracked vehicle transmission, other components of the driveline can be supplied (i.e. fixed and variable ratio PTOs, final drives, transfer gear boxes, ...).

Transmissions for Tracked Vehicles (Augsburg)

Type	Vehicle Installation Front	Rear	Typical vehicle weight*	Power in kW	Power in hp
HSWL 106	•		25–35 t	300–530	400–700
HSWL 256	•		35–45 t	500–800	700–1,100
HSWL 284C	•		50–60 t	700–1,100	950–1,500
HSWL 295		•	50–70 t	800–1,200	1,100–1,600
HSWL 354		•	50–70 t	900–1,300	1,200–1,800
RK 304S		•	50–70 t	650–1,050	900–1,400
RK 325	•		50–70 t	800–1,200	1,100–1,600
ESM 350 1)		•	40–55 t	600–900	800–1,200
ESM 500 1)		•	50–70 t	750–1,200	1,000–1,600

1) Fabrication RENK France

* Guide only: Please contact RENK with specific vehicle details.

Industrial Gear Units

RENK develops and builds industrial gear units for almost any field of application. In addition to the design versions listed in the tables, the RENK product range includes one-off special-purpose gear units for power generation, cement production, rubber and plastic industries, water and wind power stations, transport and conveyor equipment, and open-pit mining applications.

RENK-MAAG manufactures the former MAAG Series G turbo gear units, customized gear units as well as couplings and offers global service and spares for MAAG turbo and marine gears.

High-Speed Spur Gear Units (Augsburg)

Flexible Series – Standard Series (Welded Casings)

Type	Transmitted ratio	Distance between shafts mm	Power value P/n [kW/rpm]
TA...XI TAE...XI TAD...XI	1.2–12	200–1,300	1–100
TA...I	5.5–9.5	500–900	1–14
Design:	TA...XI	Double-helical toothing	
	TAE...XI	Single-helical toothing	
	TAD...XI	Single-helical toothing with thrust collar	
	TA...I	Double-helical toothing	
	<i>etaX</i> [®]	Power loss optimized (TA + TPV series)	
Different design types according to API, DIN/ISO or AGMA. Special design available on request.			

P: Power in kW | n: Speed of the low-speed shaft in rpm

Industrial Gear Units

High-Speed Spur Gear Units (Rheine)

Compact Design Series – Standard Series (Cast Casings)

Type	Transmitted ratio	Distance between shafts mm	Power value P/n [kW/rpm]
TNA	1–4.5	200–500	1–8
TNB	3.5–9	200–500	1–8
TCS	5–15	500–900	1–14

Compact Design Series – Standard Series (Welded Casings)

Type	Transmitted ratio	Distance between shafts mm	Power value P/n [kW/rpm]
TS	5–10	400–1,300	1–27
TB	3–5.5	400–1,300	5–35
TL	1–3.5	400–1,300	20–70
TCS	5–15	500–900	1–14
THGD	3–12	250–800	1–7

Design:	Double-helical toothing
	Single-helical toothing
	Single-helical toothing with thrust collar (THGD)

Different design types according to DIN/ISO, AGMA, or API.

Special design available on request.

Industrial Gear Units

Parallel Shaft Gear Unit (RENK-MAAG GmbH, Winterthur)

Flexible Design Series – Helical Teeth (Welded Casings)

Type	Transmitted ratio	Centre distance mm	Power kW
G 1) 2) 3)	1–10 *)	120–1,600	1–180,000
SG 1) 2) 5)	1–10	320–800	1–40,000
HET Gear® 4)	1–10	320–900	1–180,000
MULTICOM® 6)	1–18 *)	160–1,600	0–50,000

Firm Design Series – Helical Teeth (Cast Casings)

Type	Transmitted ratio	Centre distance mm	Power kW
GB 2) 5)	up to 2.5	160–650	1–50,000
GN 2) 5)	2.5–6.5	130–1,000	1–25,000
GS 2) 5)	6.5–10	220–1,200	1–10,000

Design:	1)	D double helical teeth
	2)	X single helical teeth with thrust collar
	3)	Designed also as pinion “on top” or as “pinion underneath”
	4)	HET Gear® High Efficiency Turbogear (power loss optimized)
	5)	Firm centre distance and firm span (standard type)
	6)	Integral gearbox MULTICOM® with thrust collar (GMX)
	*)	higher with intermediate shaft

Different design types according to DIN/ISO, AGMA or API.
Special design available on request.

High-Speed Planetary Gear Units (Augsburg)

Type	Transmitted ratio		Power value P/n [kW/rpm]
CPG	3–11		1–30
PTG	8–30		0.2–2
RECOVAR	Variabel		0.1–10
TPV	2–50		1–80
Design:	CPG	Planetary gear unit for mounting to 4-pole motors, generators or free-standing. Center distance: coaxial	
	PTG	High-speed double-stage drive for small turbines in compressors	
	RECOVAR	Superimposition gear units	
	TPV	Power splitting gear unit	

High-Speed Planetary Gear Units (RENK-MAAG GmbH, Winterthur)

Type	Transmitted ratio	Speed [rpm]	Power kW
Px	1.6–13	up to 36,000	1–45,000
PD two stage	12–45	up to 36,000	1–45,000
P multi-stage	1:100	up to 36,000	1–45,000
PV power splitting gear unit	8–80	up to 36,000	1–45,000
Design:	with separate casing without casing		
Different design types according to DIN/ISO, AGMA or API. Special design available on request.			

Industrial Gear Units

Planetary Gear Units for Mills (Augsburg)

Gear Units for Ball Mills

Type	Transmitted ratio	Power value P/n [kW/rpm]	Number of modular sizes
PBLZ	40–100	100–800	5

Gear Units for Vertical Roller Mills

Type	Transmitted ratio	Power value P/n [kW/rpm]	Number of modular sizes
KPAV	30–50	10–70	9
KPBV	30–100	50–500	10
COPE	30–50	150–700	3

Gear Units for Roller Presses (Augsburg)

Type	Transmitted ratio	Power value P/n [kW/rpm]	Number of modular sizes
REROPA	30–100	10–200	8

Gear Units for Water Power Stations (Augsburg, Rheine)

Type	Transmitted ratio	Power value P/n 1)
PAR	3–9	20–250
PBR	9–20	50–300
BLR	8–16	30–500
RIV	2–8	1–100

Different design types according to DIN or AGMA.
Special design available on request.

Industrial Gear Units

Gear Units for Co-Rotating Twin Screw Extruders (Augsburg)

Type	Ratio Main drive and variable speed drive	Output torque KNm
SUPREX	4–40	100–500 / each output shaft

Gear Units for Belt Conveyor and Crushers (Augsburg)

Type	Transmitted ratio	Power value P/n [kW/rpm]
KA	6–25	10–50
Surface cooled, higher torques feasible if equipped with a cooling system.		

Gear Units for Wind Power Stations (Rheine)

Type	Transmitted ratio	Power value kW
AeroGear® WPS WP	10–150	1,500–15,000

Clutch Gearboxes (RENK-MAAG GmbH, Winterthur)

With integrated MS oder ZD clutch

Type	Transmitted ratio	Speed [rpm]	Power kW
G-XXs 1) 2) 3)	1–8	up to 10,000	up to 100,000
Design:	1)	D double helical teeth	
	2)	X single helical teeth with thrust collar	
	3)	Designed also as pinion “on top” or as “pinion underneath”	
Different design types according to DIN/ISO, AGMA or API. Special design available on request.			

Marine Gear Units

RENK offers a comprehensive range of special custom gear units from reversing gear units starting at 1,000 kW to complex gear units arrangements for naval vessels with 100,000 kW and more of installed power, including all requisite control and monitoring systems. Many of today's ships are equipped with **CODAD**¹ and **CODOG**², **CODAG**³ or **COGAG**⁴ propulsion plants. Special Cross Connect gears and **CODELAG**⁵ units, for propulsion plants with electric motor and gasturbine propulsion complete the product range.

Custom Gears for Naval and Yacht Applications (Augsburg)

Product type	Main application fields
Combined Systems Customized gear system for any combination of DE, GT, EM etc.	Navy & Governmental Vessels, some Mega-Yachts with complex Propulsion Systems
SISO AS(L), BS(L) etc. customized single-in/single-out gearboxes for GT, DE or EM; flexible arrangements	Navy & Governmental Vessels, some Mega-Yachts with optimized power transmission to CPP or WJ. Also fast commercial vessels with GT-Propulsion or WJ
SIDO BS xxx/2 customized single-in double-out gearboxes mainly for GT	Propulsion Systems with WJs for Navy Ships and Yachts. Also fast commercial vessels with GT-Propulsion or WJ
ASL, PreCon Pre-configured sizes (100, 86) of single-stage DE gearbox with PTI option	Propulsion Systems with WJs for Navy Ships and Yachts
Planetary Gears PAS, PLS, PWS special purpose planetary gears	Navy OPVs and Corvettes with straight forward DE Propulsion System on CPP and FPP. Power range approx. 0.5 –10 MW
AED Electric Drive Module front-end or tunnel-versions. Power range approx. 1.4 MW – 6.0 MW	Research, Navy vessels and Yacht with compact, low weight and low noise electric or hybrid propulsion system

- 1) **C**ombined **D**iesel **A**nd **D**iesel
- 2) **C**ombined **D**iesel **O**r **G**as turbine
- 3) **C**ombined **D**iesel **A**nd **G**as turbine

- 4) **C**ombined **G**as turbine **A**nd **G**as turbine
- 5) **C**ombined **D**iesel **E**lectric **A**nd **G**as turbine

Marine Gear Units

Single-Engine Marine Gear Units (Rheine)

Type	Transmitted ratio per step	Power value P/n [kW/rpm]	Number of size ranges	Design
RSH	2–8.5	0.6–45	17	Horizontally offset shafts as well as individual arrangement
RSHL	2–8.5	0.6–45	17	Horizontally offset shafts (as well as individual arrangement) with multiple-disc clutch
RSV	2–8.5	0.6–45	17	Vertically offset shafts as well as individual arrangement
RSVL	2–8.5	0.6–45	17	Vertically offset shafts (as well as individual arrangement) with multiple-disc clutch
T ² RECS	3–6	0.4–7	7	Vertically offset shafts (as well as standardized arrangement with roller bearings) also with multiple-disc clutch

Twin-Engine Marine Gear Units (Rheine)

Type	Transmitted ratio per step	Power value P/n [kW/rpm]	Engine distances mm	Number of size ranges
NDSL	2–8.5	1–90	2,000–5,300	Individual arrangement
NDSQL	2–8.5	1–90	2,000–5,300	Individual arrangement
NDSH	2–8.5	1–90	2,000–5,300	Individual arrangement
HDS II	8–16.8	1–90	4,000–6,300	Individual arrangement

Marine Gear Units

Auxiliary Marine Drives, Tunnel Gear Units, Shaft Generator Drives (Rheine)

Type	Power kW	Bore Ø for flange mm	Number of size ranges
SHH II	500–10,000	610–1,150	10

Propeller Shaft Clutch (Rheine)

Type	Torque kN	Number of size ranges
PSC	320–7,800	10

Special Gear Units for Dredgers (Rheine)

Typ	Transmitted ratio per step	Power value P/n (kW/rpm)	Purpose	Number of size ranges and steps
CDSH	2–8.5	8–12	Cutter Head Drive	Individual arrangement
SV	2–8.5	1–12	Pumps and Generators	Individual arrangement
SH	2–8.5	1–12	Pumps and Generators	Individual arrangement
DSH	2–8.5	1–12	Pumps and Generators	Individual arrangement

Couplings

The couplings and clutches made by RENK are used in all industrial fields of application. The range of the RENK plant in Rheine includes curved-tooth couplings, high-speed diaphragm and Raflex® flexible disk couplings, synchronous clutch couplings, shiftable clutches, HYGUARD® safety couplings and TORLOC® clamping elements as well as curved-tooth articulated spindles for torques from 21 – 1,500 kNm.

Curved-Tooth Couplings® (Rheine)

Basic Design Series for Industry, Shipbuilding and Marine Engineering

Design	Type series	Bore Ø min./max. mm
Basic design	SB	12–820
	SBk/LBk	12–950
With retaining ring	SBR	12–400
	SBRk/LBRkn	12–260
With intermediate sleeve	SBL	12–460
	SBLk/LBLk	12–520
Intermediate sleeve with retaining ring	SRL	12–400
	SRLk/LRLkn	12–260
Intermediate shaft	SBG	12–535
	SBGk/LBGk	12–535
Intermediate shaft with retaining ring	SRG	12–460
	SRGk	12–280
Brake disk for shoe brake	SBD	12–225
	SBkD/LBkD	12–260
With brake disk for disk brake	SBT	12–225
	SBkT/LBkT	12–260
Vertical type for oil or grease lubrication	VSB	12–225
For grease lubrication only	VLBk	12–260
With single-part coupling sleeve	HBk	12–520

Couplings

Curved-Tooth Couplings® (Rheine)

High-Speed Series

Design	Type series	Bore Ø min./max. mm
Non-split sleeve	THB ZTN/ZTK	12–210 18–205
Split sleeve with Z- or U-section retaining ring	TSB TSR	12–320
Non-split intermediate and hub sleeve	TFH ZTA/ZTAK	18–205
Split intermediate sleeve	TF	12–280
Split intermediate	ZTF/ZTFK	18–205
Intermediate sleeve	TSBL TRL ZTNH/ZTKH	12–320 18–205
Intermediate shaft Z-section retaining rings	TRG	12–320

High-Speed Diaphragm Couplings (Rheine)

Design	Type series	Bore Ø min./max. mm
High-speed Diaphragm	MCN/MCF	30–320

Couplings

Raflex® Flexible Disk Couplings (Rheine)

Basic Design Series

Design	Type series	Bore Ø min./max. mm
Basic design	DSL	10–220
Types with intermediate shafts	DSG	
Types for short shaft distances	DSH	

Raflex® Flexible Disk Couplings (Rheine)

High-Speed Series

Design	Type series	Bore Ø min./max. mm
“Reduced moment configuration” API 671	MTR	35–282
Flange design API 671	MTM	40–462
Flange design “low speed” API 671	MTL	40–462
For pumps and compressors API 610	DSP	53–231
“Reduced moment configuration” API 671	DTR	10–290
Flange design “low speed” API 671	DTL	40–462

Couplings

Couplings (Hannover)

Type	Size	Shaft Ø mm	Designation	Application
N	018...454	10...500	ELCO elastic coupling®	General electrical machinery, compressors, fans, pumps, electrical machinery and shipbuilding
B	149...353	19...220	ELCO elastic coupling®	
S	123...324	19...200	ELCO elastic coupling®	
W	259...341	45...200	ELCO elastic coupling®	
KAZ	31...71	300...800	Shaft disconnecting device with integrated thrust bearing	Marine drives

Synchronous Clutch Coupling (RENK-MAAG GmbH, Winterthur)

Type	Size	Power value P/n [kW/rpm]	Application
MS, HS	8–88	up to 120*	Power Generation Industry Marine

Shiftable Clutches (RENK-MAAG GmbH, Winterthur)

Type	Size	Power value P/n [kW/rpm]	Application
ZD	16–88	up to 120*	Power Generation Industry Marine

* Higher ratios possible on request.

Slide Bearings

RENK Hannover plant supplies hydrodynamically lubricated slide bearings and flexible couplings, both in standard and special versions. Advanced computer programs, partially developed by RENK, are used for calculating the operating parameters of the bearing design. Efficient 3D CAD programs allow for flexible response to customer's requirements.

Slide Bearings (Hannover)

Type	Size	Shaft Ø mm	Application
ER/EG	7...45	55...560	Electrical machinery, fans, compressors, pumps
EG	56...112	475...1,250	
EF	7...45	55...560	
EM	9...45	80...560	
ZM	7	55...75	
SC	36...140	315...1,400	Electrical machinery
SM	22...56	200...560	Ship propulsion, hydro generators
WG	600...9,000	200...1,400	Drives for rolling stands
HG	28...45	250...450	Hydro generators, cement industry
IS	10...52	100...520	
SN	16...100	140...1,000	Ship propulsion, hydro turbines
Radilus® LRL	13...85	110...850	
Axilus® LA	125...850	110...850	
D	16...80	180...850	
Rotrix	II...V	1,250...2,400	Cement mills and ore dressing plants
SH	40...100	400...1,000	
TR		1,200...6,000	
Bearings shells G	50...750	50...750	Gear units, turbines, pumps, fans
EVE/EVF	01...018	70...560	Vertical electrical machinery pumps, fans
VT/VG	7...40	70...400	
Special bearings with fabricated housing			
External lube oil units			

Test Systems

RENK Test System GmbH designs and builds turn-key test systems for research/development, production and quality assurance.

Test Systems for:

Passenger Car/Truck- and Agricultural Machinery	Railway
<ul style="list-style-type: none">• Transmissions, axles and torque converters• Clutches• Dual mass flywheels• Drive shafts• Drive components• Brakes• Friction linings• Power/drive trains• Complete vehicles (e.g. chassis dynamometers)	<ul style="list-style-type: none">• Wheelsets and wheelset bearings• Engines, transmissions and axles• (Wagon) Couplers• Brakes and friction linings
Wind Energy	Aerospace
<ul style="list-style-type: none">• Nacelles• Drive and power trains• Transmissions/couplings• Rotor and transmission bearings	<ul style="list-style-type: none">• Helicopter transmissions• Drive components• Rotor blades• Geared turbofan
	Defence
	<ul style="list-style-type: none">• Transmissions for heavy tracked vehicles and heavy wheeled vehicles• Hydraulic components• Combustion engines

Additional Services and Products:

- Maintenance and service
- Upgrading of existing test systems
- Test rig components (adaption gear boxes, hydraulic supply units)
- Test rig control software automation

Production Facilities inside Germany

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RENK – A company of the MAN Group

Edition 03/2017