10.2025

RINGFEDER POWER TRANSMISSION

Installation and Operating Manual
RLN series

RINGFEDER® RLN

Elastomer Jaw Coupling



RLN A



RLN B



RLN H

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1 Legal Information

This installation and operation manual contains instructions that must be followed to ensure your personal safety and to prevent injury or damage to property.

Only qualified personnel are permitted to use the product or system to which this documentation applies. Please read and observe all related documents, especially the safety instructions and warnings.

2 Liability of the RINGFEDER POWER TRANSMISSION GMBH

All contents of this document, including texts, graphics, and figures, are protected by copyright. Unless otherwise stated, the copyright is held by **RINGFEDER POWER TRANSMISSION GMBH** (hereinafter referred to as RPT). This document may not be copied, reproduced, shortened, or expanded, either in whole or in part, without prior consent from the manufacturer.

RPT reserves the right to modify these instructions as part of ongoing development and considering new findings.



- RINGFEDER® couplings must be used in accordance with the intended functionality described in the technical paper and this assembly and operating manual.
- Third-party products or external components may only be used with prior approval from RPT.
- Proper transport, storage, positioning, assembly, installation, commissioning, operation, and maintenance are essential prerequisites for the fault-free and safe functioning of the products.
- The permissible environmental conditions must be observed.
- The design and dimensioning of the shaft-hub connections are the responsibility of the user.
- For future development of the product, we reserve the right to make technical modifications.

3 Safety Instructions

This installation and operation manual describes the coupling and provides guidance on its use from assembly to disposal. Retain this manual for future reference. Read the instructions carefully before using the coupling and follow all guidelines provided. Always observe the safety instructions.

3.1 Legend

Table 1 displays all symbols used in this manual.

Table 1: Legend for warning symbols

Warning Notice	Symbol	Warning message
General Mandatory Sign		Instructions marked with this symbol must be followed with particular care to ensure the correct operation of the coupling and consequently of the machine or system.
Warning of Personal Injury		This symbol warns of information that, if ignored, may lead to serious or fatal injuries.
Warning of Product Damage		This symbol indicates warnings that, if ignored, may result in damage to the coupling or the system.
Warning of Suspended Load		This symbol warns of the risk of injury from falling loads being transported, e.g., by crane.
Warning of Crushing Hazard		This symbol indicates work steps where there is an increased risk of crushing injuries.
Warning for Hot Surface		This symbol warns of hot surfaces that may cause burns, avoid contact to prevent injury.
Torque Specification Notice		Refer to the table for the tightening torques before installation.
Heating or Cooling Required		This symbol indicates that a heating or cooling process is required for assembly and/or disassembly.

Cleaning		This symbol indicates that the surface and/or object must be cleaned of all contaminants that could hinder assembly and/or operation.
Recycling / Disposal		This symbol indicates that the application of lubricant is required for proper operation and/or assembly of the coupling.

3.2 General Safety Instructions

Safe and trouble-free operation of the coupling is only ensured through familiarity with this manual. Failure to follow the instructions may result in damage to the product, property, and/or personal injury. RPT assumes no liability for damages or operational disruptions resulting from non-compliance with the manual.



During assembly, operation, and maintenance of the coupling, it must be ensured that the entire drive train is secured against unintentional activation. Rotating parts can cause serious injuries. Therefore, be sure to read and follow the instructions below:

- All work on and with the equipment must be carried out in accordance with safety regulations.
- In accordance with accident prevention regulations, all freely rotating parts must be protected against unintentional contact and falling objects by fixed protective devices.
- In case of a special coupling, the coupling design takes precedence.
- Unauthorized modifications to the coupling are not admissible. We decline any warranty due to consequent damage.
- Only use original spare parts from RPT.
- Visibly damaged parts must not be installed or put into operation.
- Note that improperly tightened screws can lead to serious personal injury and property damage.

3.3 EC Machinery Directive 2006/42/EC

The equipment supplied by RPT is component and not machine or incomplete machine within the meaning of the EC Machinery Directive 2006/42/EC. Accordingly, RPT is not required to issue a separate installation declaration.

4 Transportation, Delivery, and Storage

4.1 Transportation



Always use suitable transport equipment and lifting devices during transport to avoid injuries caused by falling components or crushing, as well as any kind of damage.

4.2 Scope of Delivery



Upon delivery, check for the presence of all items listed in the enclosed shipping documents. Any damage or missing parts must be reported to the supplier immediately in writing.

4.3 Delivery Conditions

The coupling is delivered pre-assembled, and the surfaces are lightly oiled to protect against corrosion.

4.4 Storage

Store the product in its original packaging. Under ideal conditions, the storage duration is unlimited.



- The coupling must not be exposed to aggressive media, extreme temperatures, or moisture.
- The coupling must not be stored together with acids, alkalis, or other corrosive chemicals.
- The storage location should be dry and dust-free. Humidity should not exceed 65%, and condensation must be avoided.
- All rubber materials must be stored away from heat-producing equipment and/or heating devices.
- The elastomers must be stored at temperatures between 20°C and 30°C. Their storage environment must be free from unusual gases, vapors, and chemical substances such as oils or greases.
- Always keep rubber materials away from direct sunlight and other sources of light with UV radiation properties. Direct exposure to sunlight and/or UV lighting will lead to premature aging of the product.

5 Technical Description

The RLN series is an elastomer jaw coupling designed to transmit torque between the drive shaft and the driven shaft using rubber elements. These elements absorb shocks, reduce peak forces, and compensate for angular, parallel, and axial misalignments between the shafts. For stationary applications additional equipment like brake drums, torque limiters, etc. can be added to the coupling and will not change the intended use.



Figure 1: RLN A components

Number	Component	Qty.
1	RLN part 1	1
2	rubber elements	acc. to size
4	RLN part 3	1
5	RLN part 2	1
6	bolts	acc. to size

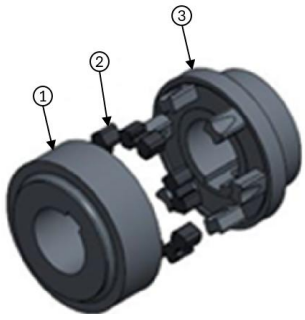


Figure 2: RLN B components

Number	Component	Qty.
1	RLN part 1	1
2	rubber elements	acc. to size
4	RLN part 4	1



Figure 3: RLN H components

Number	Component	Qty.
1	RLN part 1	1
2	rubber elements	acc. to size
7	RLN part 7	1
8	RLN part 6	1
9	bolts	acc. to size
10	RLN part 5	1

6 Technical Data

6.1 Dimensions

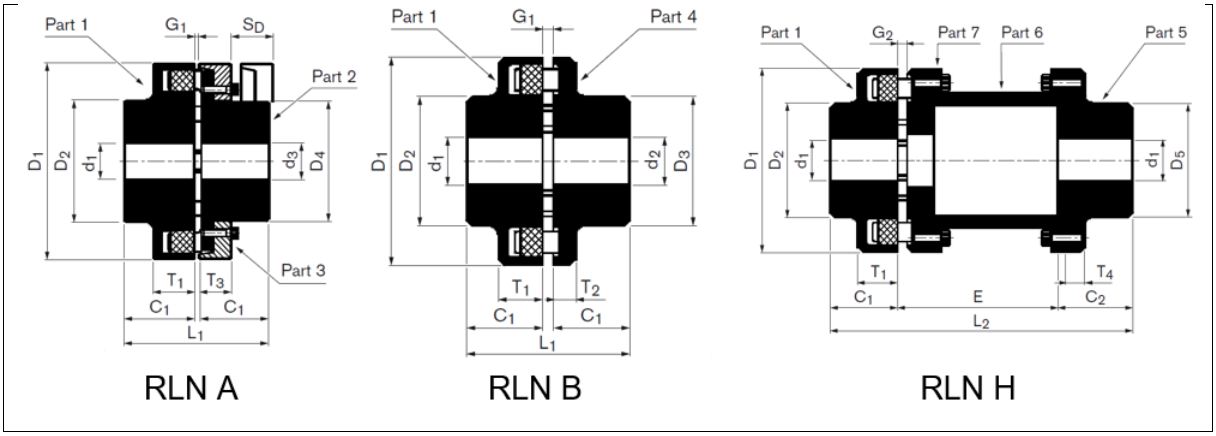


Table 2: Basic dimensions

Size	Type	Nom. transmissible torque T_{KN} [Nm]			n_{max} [1/min]	Max. bore diameter [mm]		
		RUB	PU	HTR		d1	d2	d3
68	B	46	68	115	7000	28	30	-
80	B, H	94	141	235	6000	34	44	-
95	B, H	134	201	335	5500	42	50	-
110	B, H, A	243	365	608	5300	49	56	42
125	B, H, A	335	503	838	5100	58	62	45
140	B, H, A	530	795	1325	4900	64	65	50
160	B, H, A	823	1235	2058	4250	70	70	58
180	B, H, A	1313	1970	3283	3800	82	82	65
200	B, H, A	1970	2955	4925	3400	86	86	75
225	B, H, A	2392	3588	5980	3000	92	92	85
250	B, H, A	3978	5967	9945	2750	102	102	95

For other dimensions, please refer to the technical data sheet available at www.ringfeder.com
For future development of the product, we reserve the right to make technical modifications.

6.2 Shaft Alignment.

In order to achieve the optimum service life of the coupling, shafts must be aligned, and the initial misalignment should not be more than 25 % of the maximum misalignment.

Table 3: Alignment method

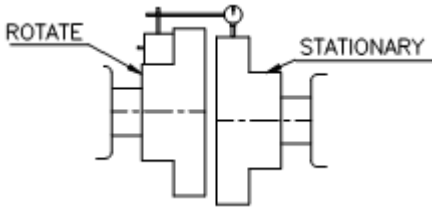
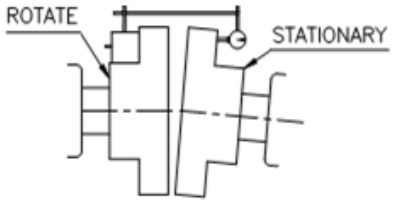
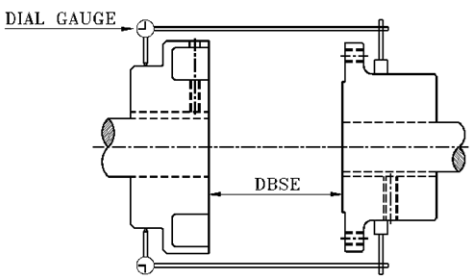
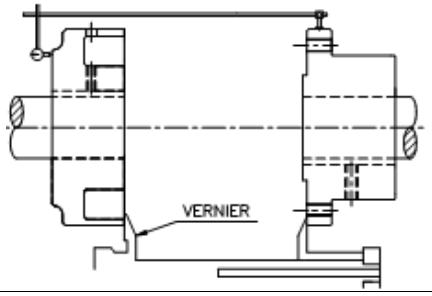
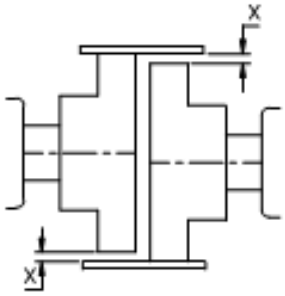
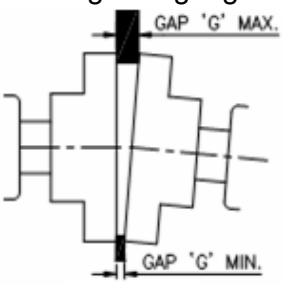
<table>
<tr><th>Method</th><th>Parallel/Radial</th><th>Angular</th></tr>
<tr><td rowspan="3">1</td><td>Using dial gauge

</td><td>Using dial gauge

</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Using a dial gauge: Fix a dial gauge on one hub and set the plunger on the outer diameter of the other hub. Rotate the coupling slowly to one complete revolution by taking dial gauge readings at 4 places 90° apart. The parallel misalignment is half of the Total Indicated Reading (TIR) of the dial gauge which should not exceed the value P. Check P and TIR values in Table 4 for installation process and Table 5 for operation process.</td></tr>
<tr><td rowspan="2">2</td><td>Using straight edge

</td><td>Using filler gauge

</td></tr>
<tr><td colspan="2">Using a feeler gauge: Measure gap G at 4 places 90° apart without rotating shafts. The difference in maximum and minimum gap will be the Total Indicated Reading (TIR), which will be the angular misalignment present. The values for the deviation in the standard clearance, i.e. the angular misalignment, must be within the permitted limits. Check maximum allowed values in Table 4 for installation process and Table 5 for operation process.</td></tr>
</table>

Table 4: Maximum permissible misalignment for installation process

Size	Angular misalignment		Axial [mm]	Parallel / Radial (P) [mm]	GAP (G) [mm]
	Degree [°]	TIR [mm]			
68	0.25	0.30	±0.25	±0.10	2-4
80	0.25	0.35	±0.25	±0.10	2-4
95	0.25	0.42	±0.38	±0.10	2-4
110	0.25	0.48	±0.38	±0.10	2-4
125	0.25	0.54	±0.38	±0.10	2-4
140	0.25	0.61	±0.38	±0.10	2-4
160	0.25	0.70	±0.38	±0.10	2-6
180	0.25	0.78	±0.38	±0.10	2-6
200	0.25	0.81	±0.38	±0.10	2-6
225	0.25	1.05	±0.38	±0.10	2-6
250	0.25	1.13	±0.38	±0.10	3-8

Table 5: Maximum permissible misalignment for operation process

Size	Angular misalignment		Axial [mm]	Parallel / Radial (P) [mm]	GAP (G) [mm]	Screw size	Tightening torque (TA) [Nm]
	Degree [°]	TIR [mm]					
68	1	1.20	±1.5	±0.4	2-4	-	-
80	1	1.40	±1.5	±0.4	2-4	M6	12.8
95	1	1.66	±1.5	±0.4	2-4	M6	12.8
110	1	1.92	±1.5	±0.4	2-4	M8	31.2
125	1	2.18	±1.5	±0.4	2-4	M8	31.2
140	1	2.44	±1.5	±0.4	2-4	M10	61.6
160	1	2.79	±1.5	±0.4	2-6	M10	61.6
180	1	3.14	±1.5	±0.4	2-6	M10	61.6
200	1	3.24	±1.5	±0.4	2-6	M12	108
225	1	4.20	±1.5	±0.4	2-6	M12	108
250	1	4.52	±1.5	±0.4	3-8	M16	264

7 Assembly

7.1 Before Installation

Check the coupling assembly for visible damage. If you find any damage, please contact RPT immediately.

Use suitable transport equipment and lifting devices for installation to prevent injuries caused by falling components or crashes, as well as any type of damage.

Ensure that the system is disconnected from the power supply and other possible energy sources before starting work!

Remove all protective coatings/lubricants from the individual components.

7.2 RLN A: Assembly

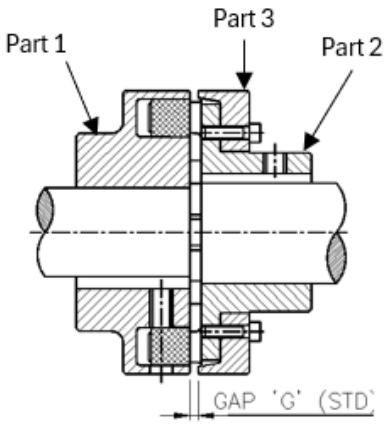


Figure 4: RLN A assembly

- Mount Part 1 on one shaft with key.
- Slide Part 3 over the other shaft and then mount Part 2 on the shaft with key.
- Ensure that the ends of the shaft ends face the inner side of Part 1 and Part 2 then tighten the set screw over the keys.
- Tighten Part 3 to Part 2 using the screws (see tightening torque in Table 5).
- Insert the rubber element into slots provided in Part 1.
- Bring Part 1 and Part 2 closer to maintain gap ‘G' (Table 5) as shown in
-
-
- Figure 4.

7.3 RLN B: Assembly

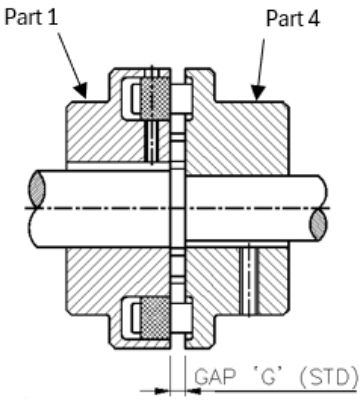


Figure 5: RLN B assembly

- Mount Part 1 and Part 4 on the respective shafts with keys, so that the ends of the shaft ends face the inner side of the hub and tighten the set screw on the keys.
- Insert the rubber element in slots provided in Part 1.
- Bring both parts closer to maintain gap G (Table 5) as shown in Figure 5.

For normal applications the shaft ends should be flush with the inner face of hub/adapter. They can protrude beyond the inner face of hub/adapter or remain inside if required the distance between two faces of hubs is to be maintained as specified. The variation in this distance should not exceed the permissible initial axial misalignment given in Table 5.

7.4 RLN H: Assembly

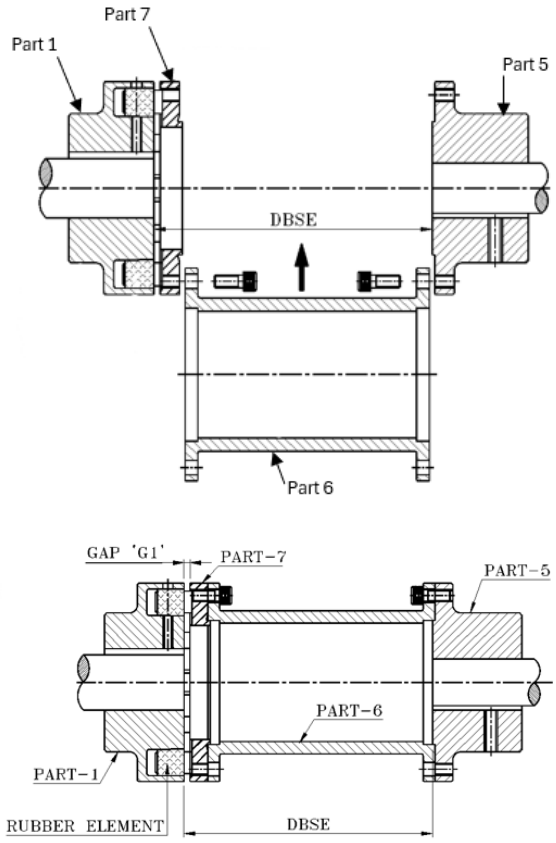


Figure 6: RLN H assembly

- Insert rubber elements in the slot provided in Part 1.
- Insert Part 7 in Part 1 as shown in Figure 6.
- Insert Part 6 between Part 7 and Part 5.
- Assemble Part 5 with Part 6 and tighten all screws. Then assemble Part 7 with Part 6 and tighten all screws (see tightening torque in Table 5).
- After complete assembly check gap G1.
  G1= 5 mm for sizes 80 to 140.
  G1= 6 mm for sizes 160 to 225.
  G1= 8 mm for size 250.

- If the coupling is dynamically balanced, ensure that the match marks are in straight line and unidirectional before bolting the assembly.
- The necessity for shields and/or guards varies with individual installations. The owner or user must provide the required safety guards. Safety guards or shields are not furnished by us with this equipment.

8 Start-up and Operation



- Before start-up check the flexible elements for correct seating, i.e., the flexible elements must sit flush with the end face of the hub, and the set screws for tightness. Check and if necessary, adjust the alignment and the gap dimension.





- Bolt tightening torques for the coupling and tightening torques for the foundation bolts of the coupled machine must be checked before startup. Enclosures (coupling protection, contact guard) must be fitted!
- Overload conditions during startup cannot be excluded. If the coupling breaks through overload, metal parts may fly off and cause personal injury and/or material damage.
- The coupling must run with little noise and without vibration. Irregular behavior must be treated as a fault requiring immediate remedy.
- If any irregularities are noticed during operation, switch the drive assembly off at once and determine the causes of the fault.
- If the cause cannot be identified or the unit is repaired with the facilities available, we recommend that you contact RPT.

9 Inspection and Periodic Maintenance

The RLN coupling can be monitored under running conditions as well as under idle conditions.

Inspect the coupling once in 6 months in idle condition or whenever it is taken for periodic maintenance.

During running conditions, it is recommended to check the vibration and noise on either side of the equipment to be under specified limits.

Visual inspection is recommended to check for the following defects:

- Flexible elements for wear, cracks, swelling or deep impression. If any of these defects are found in the flexible elements, replace them immediately.
- Axial, angular, and parallel misalignments are still within the acceptable limits, and no major movements have occurred. It is recommended that a record of misalignment readings is maintained.
- Bolts are tightened correctly.

10 Spare parts

We recommend storing spare items as given below, to have continuous operation and to reduce downtime due to failures.

Table 6: Spare parts

Coupling type	Components	Description	Quantity
RLN A, B, H	Part 1	Hub	1
RLN A	Part 2	Hub	1
RLN A	Part 3	Jaw body	1
RLN B	Part 4	Hub	1
RLN H	Part 5	Hub	1
RLN H	Part 6	Spacer	0
RLN H	Part 7	Jaw body	1
RLN A, H	Bolt set	All bolts to fix the coupling	1 set acc. to size
RLN A, H	Bolt set		
RLN A, B, H	Rubber element set	All rubber elements	1 set acc. to size

Please note that you do not need all items, only the one that refers to the coupling you have.

The hubs can be acquired with pilot bore.

Table 7: List for quantity used per coupling

Size	No. Rubber elements	No. of screws for the hub	No. of screws for the spacer
68	5	-	-
80	6	-	12
95	6	-	12
110	6	6	12
125	6	6	12
140	6	6	12
160	7	7	14
180	8	8	16
200	8	8	16
225	8	8	16
250	8	8	16

11 Malfunctions and their possible causes.

Table 8: Malfunctions and their possible causes

No.	FAILURE MODE	PROBABLE CAUSES	CORRECTIVE ACTIONS
1	- Worn elastomer - Shaft bearing failure	- Excessive shaft misalignment	- Realign coupling
2	- Ruptured elastomer - Loose hubs on shaft, sheared keys	- Torsional shock overload.	- Find and eliminate causes of overload - Use larger coupling
3	- Overheated elastomer	- Torsional vibration - Excessive starts and stops - High peak-to-peak torsional overload	- Use larger coupling - Add flywheel to hub
4	- Swollen or cracked elastomer - Severe hub corrosion	- Chemical attack	- Use more chemically resistant elastomer or hub (*) - Coat hub with anticorrosive coating
5	- Distorted or deteriorated elastomer	- Excessive heat	- Use more heat-resistant elastomer (*)
6	- Shattered elastomer	- Low temperature	- Use special low temperature elastomer (*)

(*) Consultation with RPT is required.

12 Disposal

When disposing of coupling parts, observe the locally applicable legal regulations.

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