

Linear drive Nut

First in India

7 models



ROLLRINGTM
INDUSTRIES

Rollring Linear Drive Nut (RRLD Nut)

Revolutionize Linear Motion with Rollring linear drive nut

Introducing the Rollring Linear Drive Nut (RRLD Nut), a pioneering technology proudly made in India. Unlike conventional screw-based systems, the RRLD Nut seamlessly operates on a plain round shaft, delivering precise and efficient backlash-free linear motion.

Our commitment to engineering excellence has yielded a product that combines cutting-edge design, superior performance, and easy maintenance. The RRLD Nut expands possibilities across various industrial applications, offering unrivaled reliability and durability. Experience the future of linear motion technology with Rollring's innovative RRLD Nut, a testament to India's engineering prowess.

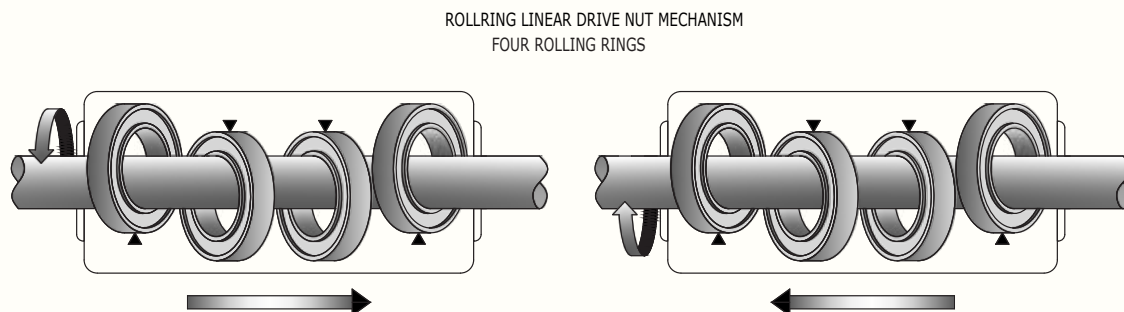


fig. 1

Key Features

- Operates on a plain smooth shaft.
- Proven system with virtually zero maintenance requirements.
- Flexibility to fine-tune stroke lengths.
- Preset pitch. Left-hand and right-hand pitch available.
- Backlash-free.
- Overload protection.
- High Efficiency.
- Linked nuts for higher side thrust.
- Left and Right-hand pitch on the same shaft.
- Resistant to vibrations.
- Compact design.

- Low torque requirement. Small motor can be used for complicated controls if required.
- Quiet operation.
- Low maintenance.
- Accommodates heavy loads with the use of a load carrier.
- Suitable for both horizontal and vertical applications.
- Traverse assembly available with shaft lengths of up to four meters.
- Side Thrust: Capable of handling loads ranging from 5 kg to 76 kg.
- Backed by a two-year guarantee

Applications

The Rollring Linear Drive Nut is suitable for various industrial applications, including

- Material handling machinery
- Winding equipment
- Test and measurement apparatus
- Metrology machinery
- Packaging systems
- Converting and finishing machinery
- industrial robots,
- fiber optics and photonics,
- machine tools
- laser machining,
- electronic manufacturing
- sliding doors

Specifications

Models: Choose from seven models with shaft diameters of 10mm, 15mm, 16mm, 20mm, 25mm, 30mm, and 40mm. Models include RRLD10, RRLD15, RRLD16, RRLD20, RRLD25, RRLD30, and RRLD40.

1. Rollring Linear Drive Nut for 10 mm Shaft - Model RRLD10

- **Number of Rolling Rings** : 3
- **Max Side Thrust** : 5 KG
- **Pitch** : 4 mm
- **Max Shaft Speed** : 2000 RPM
- **Max Linear Speed** : 8 meters/min
- **Weight** : 0.5 Kg
- **Drive Torque** : 0.25 Kg cm



2. Rollring Linear Drive Nut for 15 mm Shaft - Model RRLD15

- Number of Rolling Rings : 4
- Side Thrust : 18 KG
- Pitch : 7 mm
- Max Shaft Speed : 2000 RPM
- Max Linear Speed : 14 meters/min
- Weight : 1 Kg
- Drive Torque : 0.5 Kg cm



3. Rollring Linear Drive Nut for 16 mm Shaft - Model RRLD16

- Number of Rolling Rings : 4
- Side Thrust : 18 KG
- Pitch : 7 mm
- Max Shaft Speed : 2000 RPM
- Max Linear Speed : 14 meters/min
- Weight : 1 Kg
- Drive Torque : 0.5 Kg cm



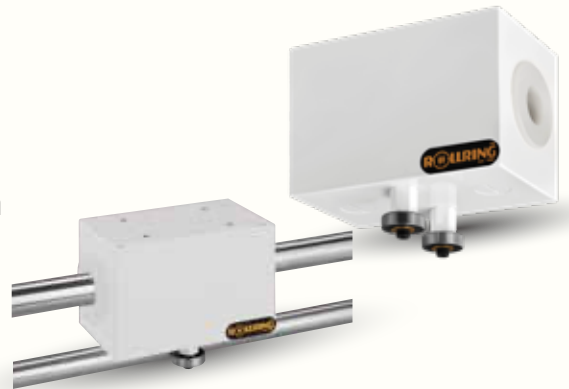
4. Rollring Linear Drive Nut for 20 mm Shaft - Model RRLD20

- Number of Rolling Rings : 4
- Side Thrust : 28 KG
- Pitch : 9 mm
- Max Shaft Speed : 1500 RPM
- Max Linear Speed : 13.5 m/min
- Weight : 1.9 Kg
- Drive Torque : 0.6 Kg cm



5. Rollring Linear Drive Nut for 25 mm Shaft - Model RRLD25

- Number of Rolling Rings : 4
- Side Thrust : 38 KG
- Pitch : 11 mm
- Max Shaft Speed : 1500 RPM
- Max Linear Speed : 16.5 meters/min
- Weight : 2.6 Kg
- Drive Torque : 0.6 Kg cm



6. Rollring Linear Drive Nut for 30 mm Shaft - Model RRLD30

- Number of Rolling Rings : 4
- Side Thrust : 42 KG
- Pitch : 14 mm
- Max Shaft Speed : 1000 RPM
- Max Linear Speed : 14 m/min
- Weight : 3.2 Kg
- Drive Torque : 3.5 Kg cm



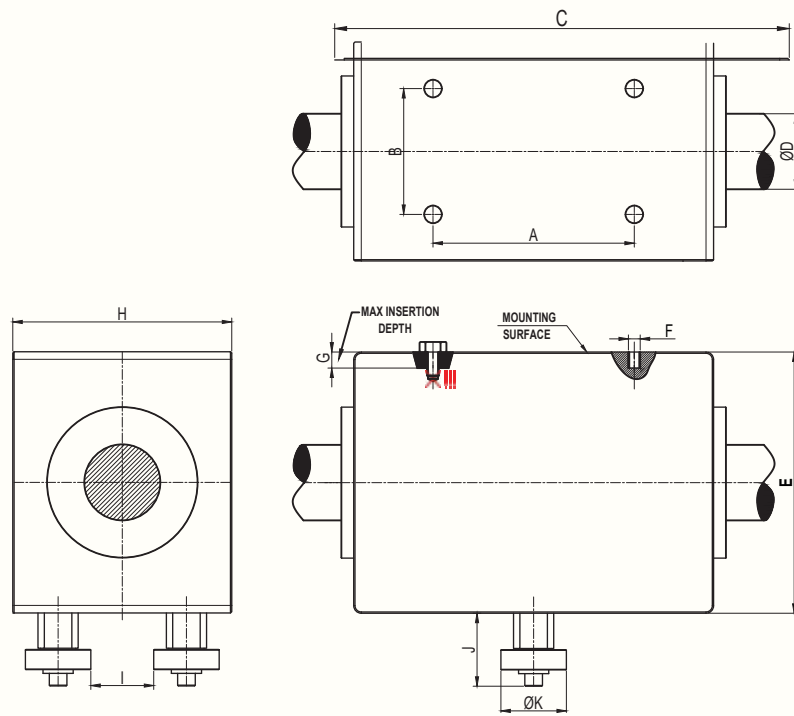
7. Rollring Linear Drive Nut for 40 mm Shaft - Model RRLD40

- Number of Rolling Rings : 4
- Side Thrust : 76 KG
- Pitch : 18 mm
- Max Shaft Speed : 1000 RPM
- Max Linear Speed : 18 meters/min
- Weight : 5.8 Kg
- Drive Torque : 4.5 Kg cm



Pitch: Linear movement per shaft rotation, available in fixed values for both directions. Linear speed depends on shaft speed.

Side Thrust: Maximum force that can be safely applied.



Dimensional details (mm)												
Sl No.	Model	A	B	C	ØD	E	F	G	H	I	J	ØK
1	RRLD-10	40	28	80	10	53	M4	5	43	10.2	18.5	17
2	RRLD-15	36	32	95	15	64	M5	6	56	16.2	20.5	19
3	RRLD-16	36	32	94	16	70	M5	6	56	16.2	20.5	19
4	RRLD-20	70	40	120	20	84	M6	8	71	20.2	28	22
5	RRLD-25	70	45	132	25	92.2	M6	8	80	20.2	26	26
6	RRLD-30	80	50	143	30	100	M6	10	87	25.2	29	26
7	RRLD-40	133	50	172	40	128	M10	12	110	30.2	34.5	32

fig. 3

Optional Accessories

- Free Movement Lever (Release Lever): Allows disengagement of the linear drive nut from the shaft.
- Optional scrapers gently clean the shaft during motion, ensuring uninterrupted operation.

Selection of Drive Nut

When selecting a drive nut model, it's crucial to account for the various forces and factors that influence its performance. This selection process takes into consideration the cumulative effects of the associated assemblies being traversed, frictional load, linear speed, weight of the drive nut, max traverse length, and other parameters.

Maintenance

Minimal maintenance required; routine shaft lubrication with grease suffices.

Drive Nut Assembly

Customizable to specific requirements, accounting for traverse length, guides, fixtures, load carriers, and shaft specifications.

Recommended Shaft Attributes:

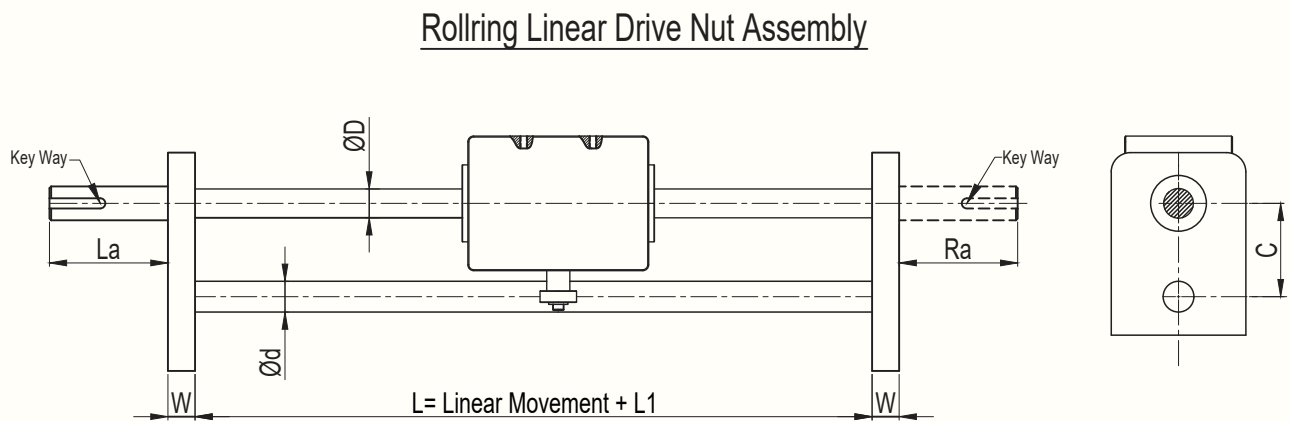
- High surface hardness
- Straightness
- Ground finish
- Material: C45
- Heat Treatment: High-Frequency Induction Hardening
- Hardness: HRC 58-62
- Surface Roughness: Polished $Ra \leq 0.8\mu$
- Shaft Straightness: Within 50μ per 300 mm
- Tolerance: g6
- Corrosion Protection: Hard Chrome

Guide Rod/Rail

Prevents linear drive nut rotation on the shaft, featuring two guide bearings.

Assembling Linear Drive Nut and Shaft

Insert one end of the shaft into the nut and rotate.



Linear Drive Model	RRLD10	RRLD15	RRLD16	RRLD20	RRLD25	RRLD30	RRLD40
Drive Torque	0.25	0.5	0.5	0.6	0.6	2.5	3.5
Max Linear Speed	8	14	14	13.5	16.5	14	18
L1 (mm)	100	120	120	160	170	190	210
ØD	10	15	16	20	25	30	40
Ød	10	16	16	20	20	25	30
C	38	45.5	48.5	61	61.6	68.5	86.5

fig . 4



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For inquiries, please feel free to reach out to us via WhatsApp /Phone /Mail

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