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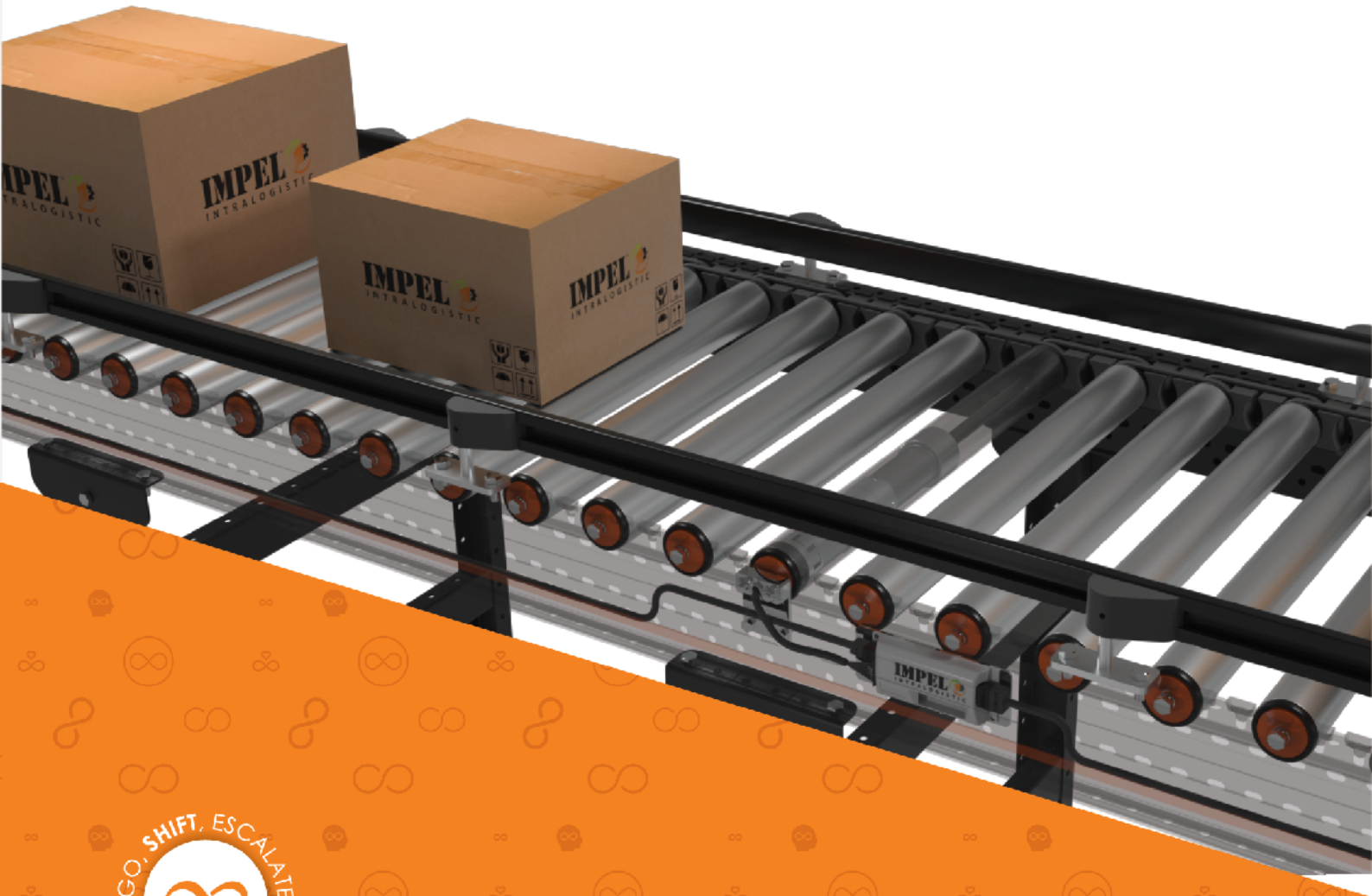
INTRALOGISTIC

LOGI INTERNAL SYSTEMS STIC



GO, SHIFT, ESCALATE

DC Roller Drive

DC Roller Drive

24 Volt D.C. Technology

Today's continuous conveyor systems can be used in many different sectors and industries. In recent years , in addition to the standard 400 V drive technology, 24V DC technology has become increasingly popular.

Energy demand, costs, system performance and flexibility are key factors in the choice of the optimum system. A direct comparison of the two techniques in many cases shows the 24V DC as the most efficient and attractive alternative.

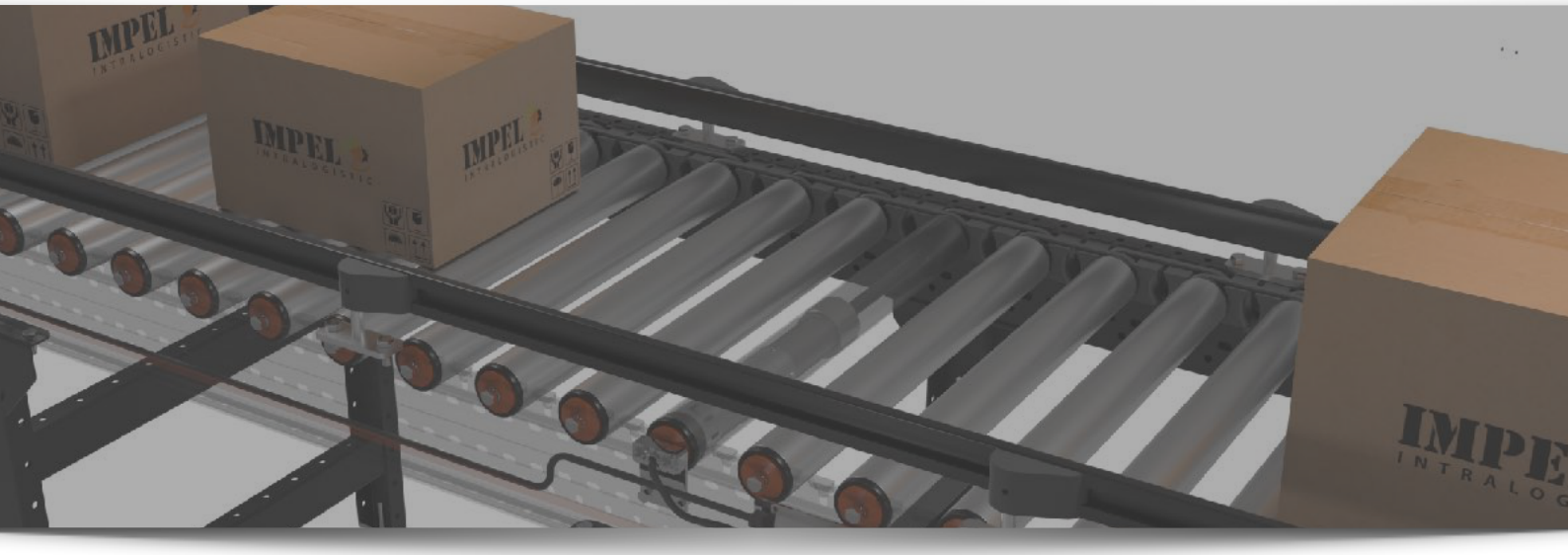
Today’s continuous conveyor systems can be used in many different sectors and branches of industry. As well as classic 400-volt drive technology, 24-volt drive technology has increasingly been used over the past few years. Since 24- volt and 400-volt drive technology share some common distinguishing features, the two drive technologies will be compared with each other in this paper. Possible distinguishing features include the operating mode, drive-train design and conveyer task. The advantages and disadvantages of state-of the-art 24- volt technology will subsequently be determined. A direct comparison of both technologies will then be made using the following criteria: “energy consumption”, “costs”, “system performance” and “flexibility”. To quantify the energy consumption in each case, a distinction will be made bet- ween six different scenarios, which will be duly compared.

DC Roller Drive

24 Volt D.C. Technology

Features

- Law Power Input 50 Watt
- Plug & play service,
- Eliminate External Motor & Gearbox and its mountings
- Zero Pressure Accumulation can be possible
- Multi Speed Control - 32 steps
- Speed control by analogue inputs with simple regulatory switch
- Smooth Acceleration & Deceleration
- Dynamic Braking with servo locking system
- Self position sensing capabilities.
- Protection against high voltage, high ampere and over temperature.
- Multi motor profile - I.e. Eco mode for light duty and boost mode for heavy duty application.
- One or more than one motor's topology can be synchronised by ethernet network protocol.
- Inbuilt sensor controls
- Commence with UL Standard.



DC Roller Drive

24 Volt D.C. Technology

Product Information

CE Certified and IP 54 rating

Tube Material:	Mild steel with zinc plated, Stainless Steel 304
Roller Diameter:	50 mm, 60.5 mm
Min. Roller Length:	Refer to “available minimum roller length table below”
Max. Roller Length:	1000 mm “Contact us for longer than 1000 mm”
Cable length:	600 mm /1000 mm
Motor Connector:	M8 - 4 pin
Operation:	0.5 sec ON / 0.5 sec OFF duty cycle or continues with rated load

Technical Data

	ECO Mode	BOOST Mode	BOOST - 8 Mode
Voltage	24 VDC		
Nominal Output	40W	50W	50W
Rated Current	2.5 Amp	3.5 Amp	3.5 Amp
Starting Current	3.0 Amp	5.0 Amp	8.0 Amp
Ambient Temperature	-10° to 50°		
Ambient Humidity	10 to 90% No Condensation		

Available Minimum Roller Length

		Interlocking Option		
Roller Diameter	Speed Code	Straight	PolyVee	Round Groove
50 mm / 60.5 mm	15, 20, 25	331	324	363
	35, 40, 60, 75	307	300	339
	95, 125, 175, 215	280	273	312

Characteristics Data for Roller Diameter - 50mm

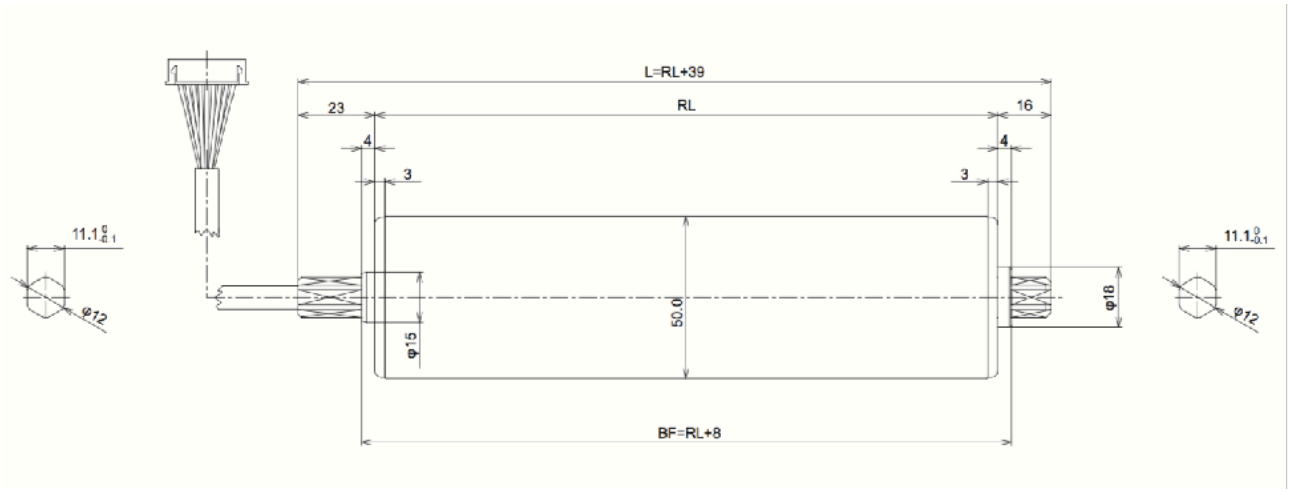
Speed code	Gearbox	Reduction ratio	Eco Mode						
			Speed (m/min)	Torque (N-m)		Tangential force (N)		Current (A)	
				Rated	Starting	Rated	Starting	Rated	Starting
5	3 Stage	45.00	2,0～20.3	2.97	16.39	118.8	655.7	2.5	3.0
20		32.94	2.7～22.7	2.17	12.00	86.9	480.0		
25		27.00	3.4～33.8	1.78	9.83	71.2	393.4		
35	2 Stage	18.30	4.9～49.9	1.20	6.66	48.3	266.6		
45		15.00	6.0～60.8	0.99	5.46	39.6	218.5		
60		10.98	8.2～83.1	0.72	4.00	28.9	160.0		
75		9.00	10.1～101.4	0.59	3.27	23.7	131.1		
95		6.82	13.3～133.8	0.44	2.48	17.9	99.3		
125	1 Stage	5.00	18.1～182.5	0.33	1.82	13.2	72.8		
175		3.66	24.7～249.3	0.24	1.33	9.6	53.3		
215		3.00	30.2～204.1	0.19	1.09	7.9	43.7		

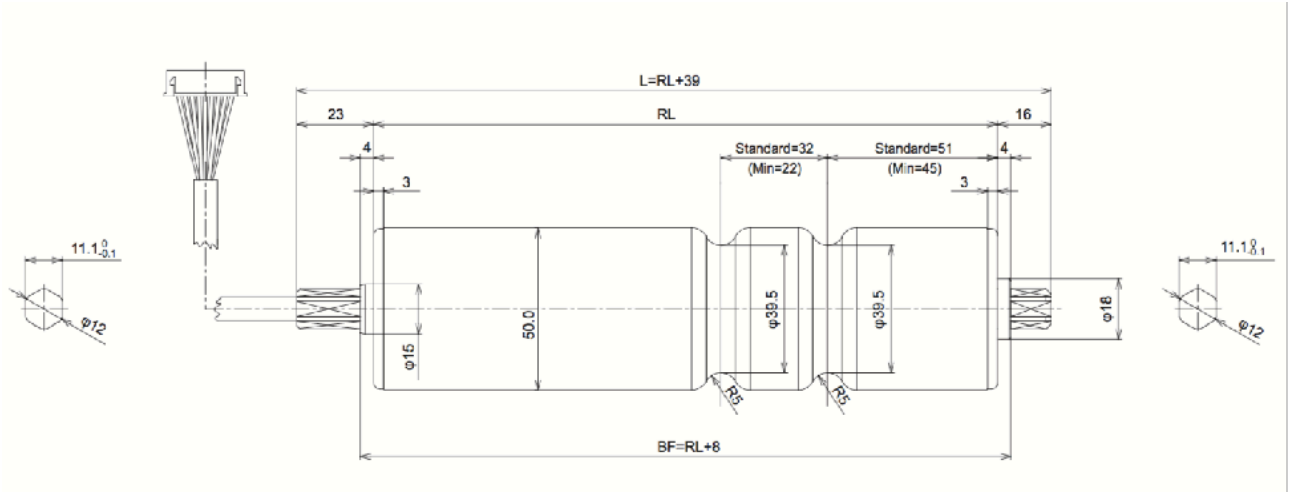
Speed code	Gearbox	Reduction ratio	Boost & Boost - 8 mode						
			Speed (m/min)	Torque (N-m)		Tangential force (N)		Current (A)	
				Rated	Starting	Rated	Starting	Rated	Starting
5	3 Stage	45.00	2.0 ～ 14.7	5.40	21.37	216.0	855.0	3.5	5.0
20		32.94	2.7 ～ 20.0	3.95	15.64	158.1	625.8		
25		27.00	3.4 ～ 24.4	3.24	12.82	129.6	513.0		
35	2 Stage	18.30	4.9 ～ 36.1	2.19	8.69	87.8	347.7		
45		15.00	6.0 ～ 44.0	1.80	7.12	72.0	285.0		
60		10.98	8.2 ～ 60.1	1.31	5.21	52.7	208.6		
75		9.00	10.1 ～ 73.3	1.08	4.27	43.2	171.0		
95		6.82	13.3 ～ 96.8	0.81	3.23	32.7	129.5		
125	1 Stage	5.00	18.1 ～ 131.9	0.60	2.37	24.0	95.0		
175		3.66	24.7 ～ 180.3	0.43	1.73	17.5	69.5		
215		3.00	3.2 ～ 219.9	0.36	1.42	14.4	57.0		

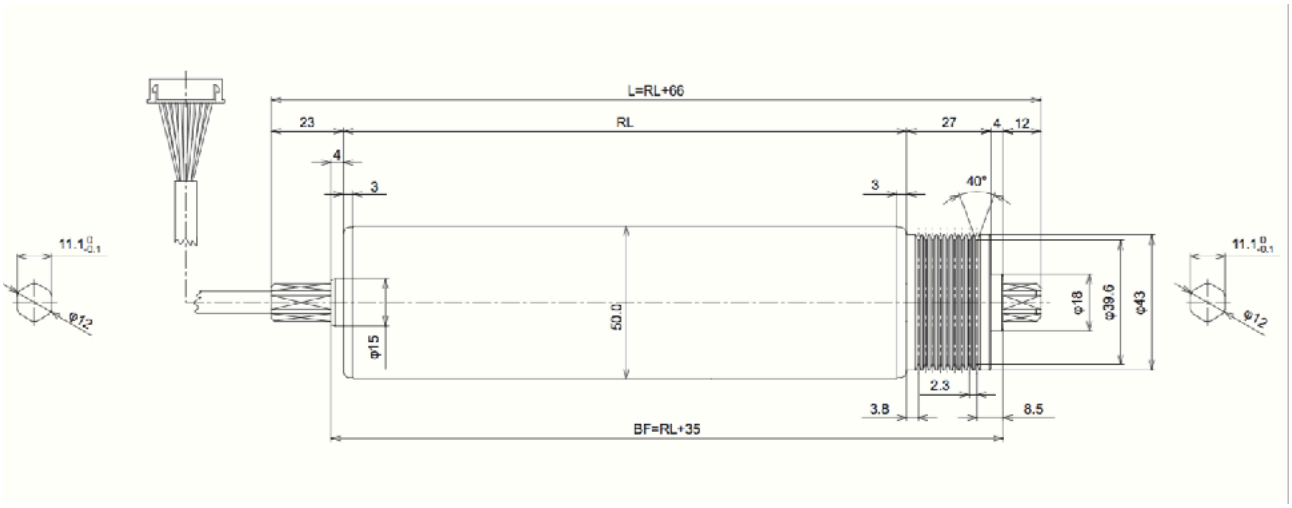
DC Roller Drive

24 Volt D.C. Technology

Dimension Drawing







DC Roller Drive

24 Volt D.C. Technology

EZ24
MULTI-DRIVE CONTROL

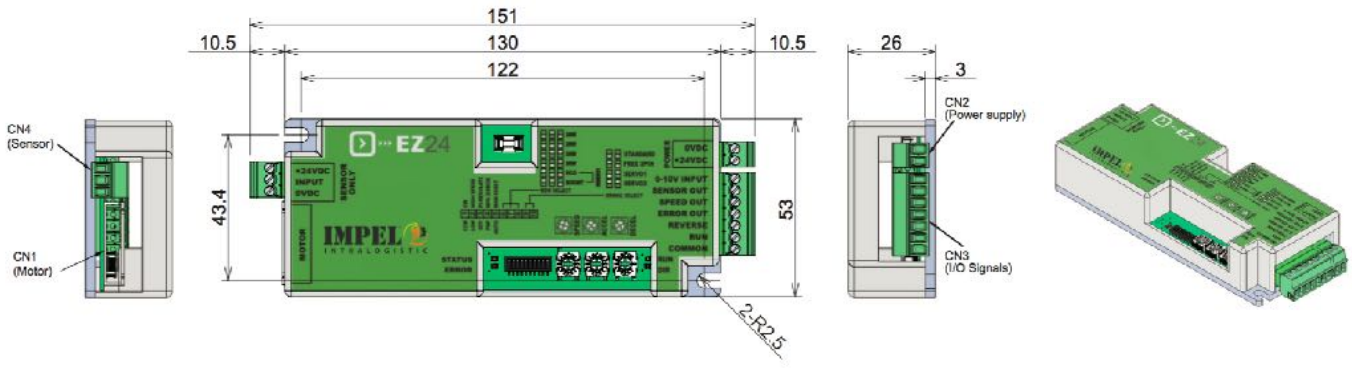
Features

- CE Certified
- 2 Different Performance Mode, Eco & Boost
- LED Error indicator
- 31 fixed speed setting with DIP switch (High/Low) and rotary switch (16 stages)
- 0-10V analog input for speed setting
- Run Motor forward or reverse
- Selectable braking methods - Dynamic brake, Non braking, Servo Lock Brake
- 16 Stage accel / Decel timer setting for 0 - 2.5 sec.
- NPN / PNP input applicable
- NPN / PNP error output available (select on DIP switch No.4)
- Built in brake control available with IL20

Technical Data

Voltage	24 VDC
Voltage Range	18 V - 28 V
Rated Current	2.5 Amp (ECO). 3.5 Amp (BOOST)
Starting Current	3.0 Amp (ECO), 5.0 Amp (BOOST)
Fuse	Present

Dimension Drawing



Energy Consumption

Going Green and Achieving Cost Savings Through the Use of DC 24V MDR (Motor Driven Roller)

For the last several years, a green movement has swept the globe. Consumers, organisations, and large corporations have all moved toward green initiatives. Whether in packaging, recyclable materials, or in energy efficient production. India too has recently pledged its support to this worthy cause with Prime Minister Modi committing to cut the "emissions intensity" of India's economy at the recent U.N. Climate Secretariat. For any industry, going green can be interpreted in several different ways. However for those in the materials handling industry, going green consists of **minimising the amount of energy and materials** being used in a system and ensuring that the material handling equipment and system positively affects the employees. Simply put, this means all machinery should be safe, energy efficient, cost effective, non polluting, low noise, and operate as cleanly as possible. While going green may be an option being considered, many businesses owners wonder if the investment in green material handling initiatives is really worth the cost and whether it will really save money. The answer can be a resounding YES.

The perception in industry is that MDR (Motor Driven Roller) conveyors can cost up to 15% more in terms of capital cost, however it is also known that they tend to yield the greenest results. Owing to this many corporations have decided to work with hybrid systems where transfers and merges are done with an MDR conveyor while the rest of the handling system is with existing conveyors. However considering the advances made by MDR in recent times, this fear is unfounded and such hybrid solutions are unnecessary. In order to dispel the doubts about the cost effectiveness of MDR conveyors, let us a draw a comparison between common conveyor types to get a better understanding on how DC 24V MDR are by far **The Greenest** and **Most Cost Effective** solution for the Material Handling industry.

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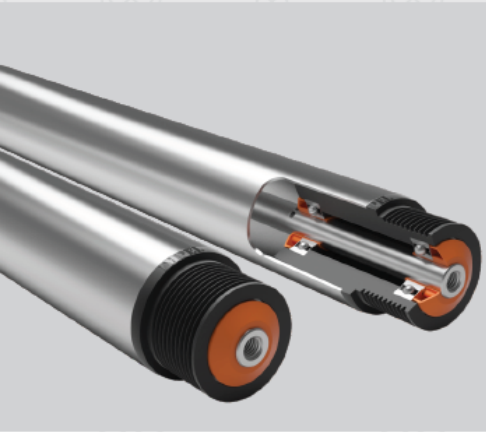

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