

RULMECA DRIVE ROLLER

IDEAL IN APPLICATIONS

THE FLEXIBLE BL3 DRIVE ROLLER CONFIGURATION enables it to be used in a wide range of conditions and for a wide range of workloads.

- WIDE RANGE OF SPEEDS SET
- ENERGY SAVING
- FREQUENT START/STOP CYCLES
- BRUSHLESS MOTOR TECHNOLOGY WITH CONSTANT TORQUE
- LOW LEVELS OF SYSTEM NOISE
- SAFETY FOR LINE OPERATORS

Rulmecca 24VDC Drive Rollers (RDR) are designed to play a key role in industrial applications in which roller transportation is an important part of the production process. The Drive Roller is a motor integrated Ø 50 mm roller for unit handling conveyors able to transmit motion to the adjacent rollers by belts/chains.

Thanks to the many possible configurations and selected finishing, this product is easily placed into a large variety of unit handling applications.

The RDR (Rulmecca Drive Rollers), can be connected to slave driven rollers by round belts, Poly V belts, chains. They can also be configured as frictioned or crowned to drive light belts.

They are installed directly in the conveyor frame to save space.

As well as being classified as an electrically-safe system since it is powered by 24V DC, the Drive Roller is an extremely silent, compact, efficient and long-lasting solution which does not require maintenance of its functional parts.



GLOBAL PRESENCE AND LOCAL SERVICE



- Manufacturing, Sales, Service
- Sales, Service

Australia
Canada
China
Denmark / Sweden
Finland
France
Germany
India
Indonesia

Italy
Poland
South Africa
Spain / Portugal
Thailand
Turkey
United Kingdom
USA

ABOUT RULMECA

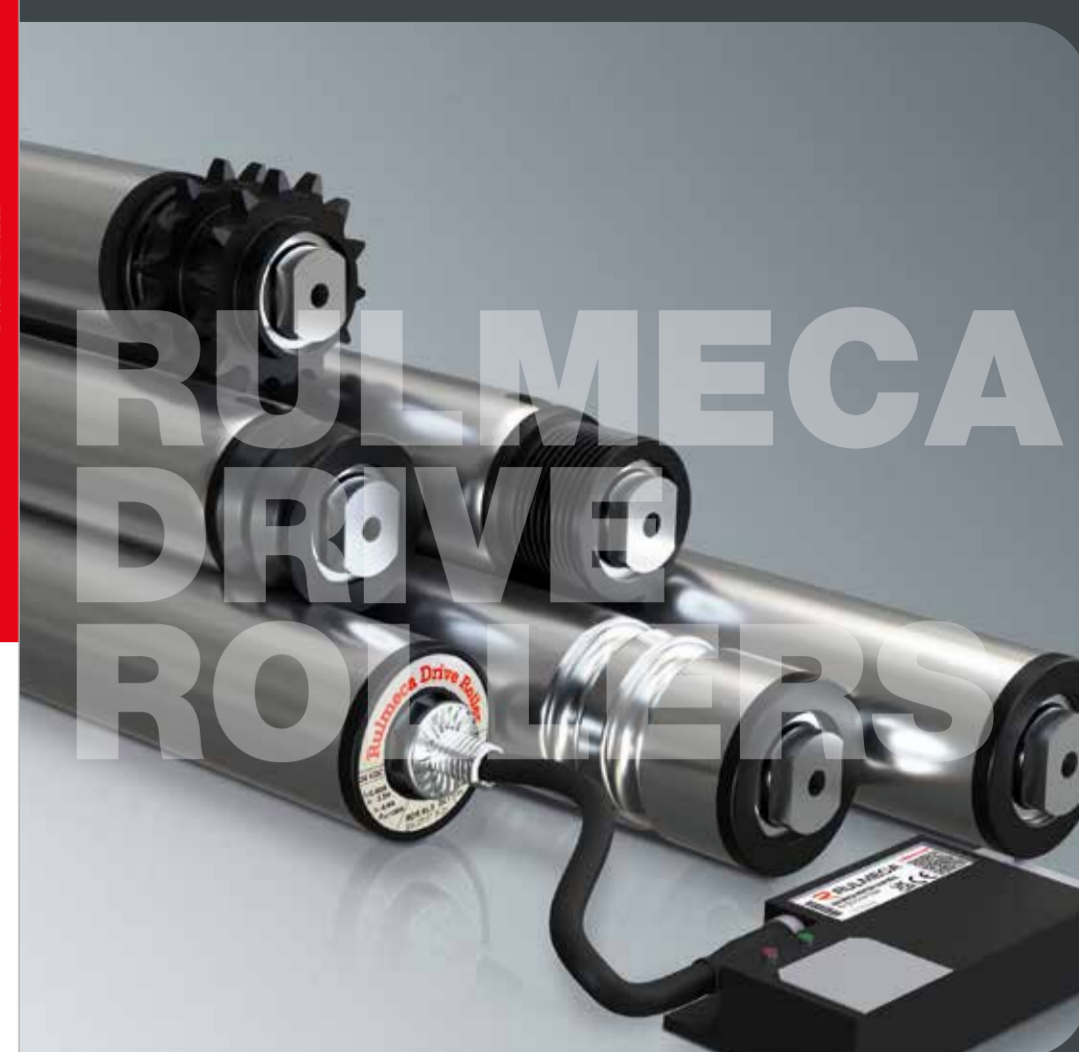
Founded in 1962, the Rulmecca Group has grown to be a leading partner to the global materials handling industry. With its three product brands, Rulmecca, Precismeca and Melco, Rulmecca Group is the world's largest supplier of rollers, idlers, pulleys and motorized pulleys for heavy duty belt conveyors for quarries and mining applications and of Rollers, Drum Motors and 24V Drive Rollers for Intralogistics.



RULMECA
MOVING AHEAD

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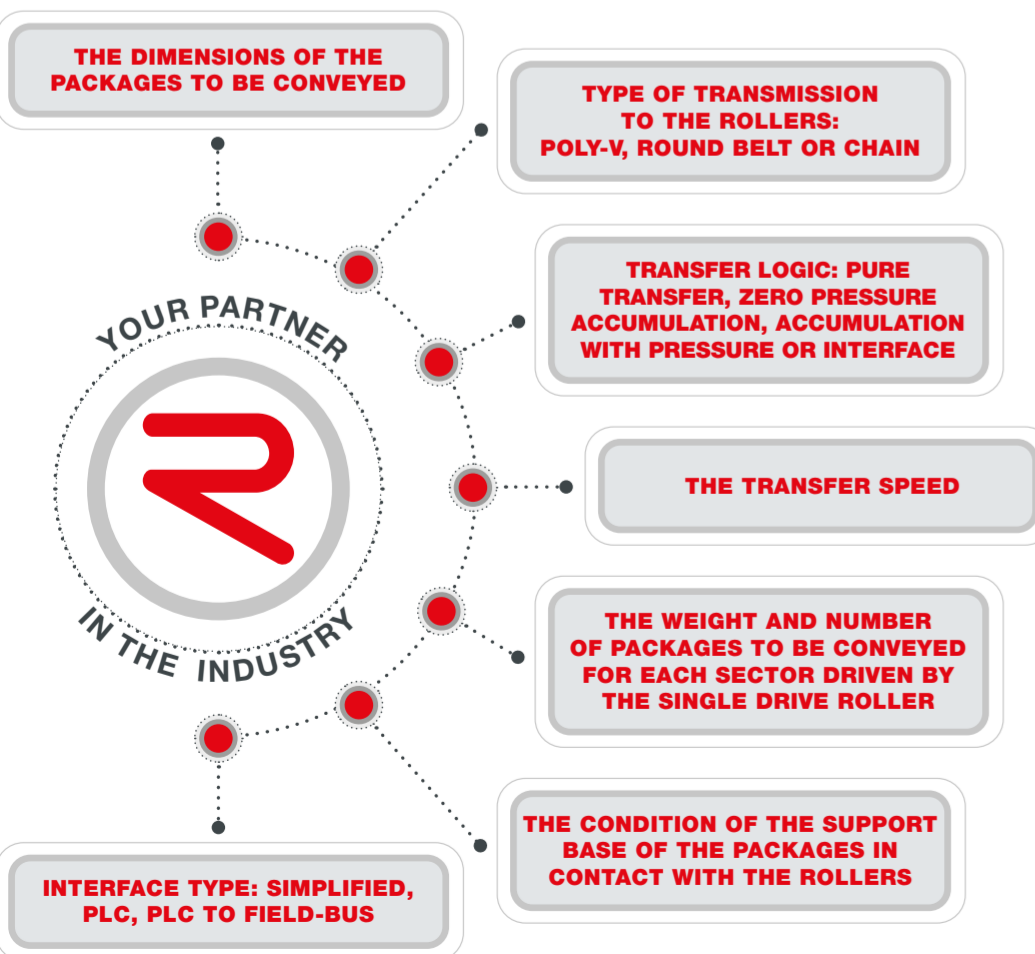


RDR
SERIES BL3 A NEW
DRIVE ROLLER CONCEPT

RULMECA
MOVING AHEAD

FEATURES

WHAT ELEMENTS DETERMINE THE DESIGN OF A ROLLER CONVEYOR?



The Drive Roller can be easily used in small belt conveyors that convey light loads and which have flexible belts that are not over-tensioned. Typical applications are those in which compact design solutions are required, as is the case in the electronics, pharmaceutical, and automotive industries, injection moulding of plastic parts, or manufacturing in general.

A roller conveyor with driven rollers can be easily built using the Drive Roller configured with the same sprocket used on the rollers, such as O-rings, Poly-V belts or Chains.



APPLICATIONS

SOLUTIONS FOR ANY INDUSTRY

- AIRPORT, SECURITY AND X-RAY SCREENING
- DISTRIBUTION CENTRES AND WAREHOUSING
- POSTAL, PARCEL AND E-COMMERCE
- END OF LINE FOOD AND FISH PROCESSING
- MANUFACTURING, PACKAGING AND AUTOMATION
- BEVERAGE PROCESSING

The Rulmecca Group Companies share a common philosophy, each catering to the specific needs of its market. These characteristics, the long-term perspective, and the attention to questions of social responsibility and sustainability are the cornerstones of our work. The experience garnered in 60 years of supplying manufacturers and end users has enabled Rulmecca to create a

vast range of components for in-house logistics: Rollers, Drum Motors and 24VDC Drive Rollers. As a manufacturer who focuses on components, Rulmecca is able to respond flexibly to its customers' needs. Our products contribute to improving the performance and reliability of the machines and systems in which they are installed.

Help needed? If you have questions or need technical assistance please visit our website Rulmecca.com to find all the technical and installation documentation. Our Customer Service team is at your disposal for any clarification.

THE BL3 DRIVE ROLLER POWERFUL, VERSATILE AND FAST

RELIABILITY, HIGH PERFORMANCE AND LOW ENERGY CONSUMPTION MAKE THE RDR BL3 DRIVE ROLLER THE IDEAL CHOICE FOR CUSTOMERS WHO DEMAND TOP PERFORMANCE

MOTORIZED CONVEYORS

This type of conveyor involves the rollers being driven by adjacent Drive Rollers, with all rollers then being motorized.

Thanks to the Rulmeca Patented solution related to the Drive Roller direct torque transmission system, between the motor output shaft and polymer drive heads (Poly-V, O-Ring or for chain) traction is always ensured.

Drive Rollers and rollers are joined using O-Rings, Poly-V belts or chains to allow the control of the rotating conveyor components.

With this configuration, the Customer can easily build transfer conveyors or zoned conveyors (for accumulation), always having maximum control of the package flow. The package movement is handled using manual controls, PLC, electronic Zero Pressure Accumulation management modules, or field bus interface modules.

LOW PRESSURE ACCUMULATION CONVEYOR

This system involves the use of rollers controlled by a single Drive Roller, each of them configured as frictioned.

The Drive Roller, in a frictioned configuration thanks to the patented Drive Roller transmission system, can keep the Poly-V, O-Ring or crowned pulley in motion independently from its tube.

This system ensures the possibility to fill spaces between the packages, even with different lengths and weights, creating an accumulation with low pressure between the packages.

O-RINGS TRANSMISSION

In order to use polyurethane O-Rings as transmission system between rollers, the Drive Roller can be configured to have grooves on the tube or a double grooved polymer drive head.

POLY-V TRANSMISSION

Poly-V belts ensure the most efficient way to transmit motion between the Drive Roller and rollers thanks to the higher transmissible torque. The Drive Roller can be configured with a Poly-V plastic head able to hold two, 3 or 4 ribbed Poly-V belts.

CHAIN TRANSMISSION

The Drive Roller can be configured with a sprocket plastic head able to hold single or double chains.

RDR BL3 DRIVE ROLLER ELECTRICAL CONTROL

The BL3 Drive Roller does not necessarily need the external Motion Control electronic board (although it is strongly recommended) because it can be interfaced directly to PLC I/O modules or simple switches and a potentiometer (for varying the speed if necessary).

Thanks to the absence of regenerative energy during braking and the integrated protections, installation and use of the BL3 is easy, efficient and cost effective.

CONTROL MODULES

RDR BL3 can be driven by:

- PLC directly, thanks to all needed protections being integrated.
- Rulmeca Motion Control card (RMC-BL3), which simplifies the BL3 Drive Roller interface to systems.
- Zero Pressure Accumulation card (ZPA), which prevents product collisions in order to ensure safe accumulation.
- AS-Interface or I/O Link modules, that allow the use of a Field-Bus for large or fully automated conveyors.



DRIVEN ROLLERS



117 SERIES

Very versatile rollers with great scope that run particularly smoothly and silently. The tube can be zinc-plated, galvanized steel or stainless steel, ø 50, 1.5 mm thick, with 2 grooves formed into the tube for transmission with round belts.



135/138 SERIES

These series allow several combinations with maximum handling flexibility and system modularity. They are available in:

- Friction and fixed driven rollers with pulley for flexible Poly-V belts with interchangeable pulleys. They are available in the galvanized steel tube version or by request in the AISI 304 stainless steel version or other versions that are equivalent to the Drive Rollers.
- Friction and fixed driven rollers with double groove pulley for round belts with interchangeable pulleys. They are available in the galvanized steel tube version or by request in the AISI 304 stainless steel version.
- Friction and fixed driven rollers with P2C pinion for light and medium loads, they are interchangeable and intended for use in RDR Drive Rollers for transmission to chain rings. The tube can be galvanized steel or stainless steel, ø 50, 1.5 mm thick.



KRO SERIES

These rollers are ideal to carry out curves in the conveying lines for packages and are obtained by directly fitting polypropylene tapered sleeves onto the steel tube of the base roller itself.

- They are available in several configurations:
- Tapered rollers with grooves for transmission with round belts. Two grooves for transmission with round belts are made in the protruding part of the 50mm ø steel tube.
 - Driven tapered rollers with fixed pulley for transmission with flexible Poly-V belts. Extremely powerful and silent transmission, ideal to manage high loads.
 - Driven tapered rollers with double groove fixed pulley for transmission with round belts. The innovative transmission system using a round belt positioned to the side of the roller is ideal to make curves in conveyor lines for light and medium-weight.

DIMENSIONAL DATA

Standard tube [mm]	ø 50 x 1.5
Alternative tube [mm]	ø 51 x 2 and ø 53 x 3
Maximum length C [mm]	1500

Please refer to the possible configurations

ELECTRICAL DATA

Nominal voltage	24 VDC
Nominal current	3 A
Nominal power	43 W
Max. inrush current	4.5 A

ENVIRONMENTAL CONDITIONS

Operating temperature	-10 - +35 °C
Storage temperature	-30 - +75 °C
Maximum humidity	90% without condensation

GENERAL TECHNICAL DATA, SERVICE LIFE

Noise	55 dB(A)
Theoretical average service life in nominal conditions	15,000 h

Maximum static load on the Drive Roller:	
C ≤ 1000 mm	110 daN

DRIVE HEAD SHAFT CONFIGURATION

	Plain tube	Grooved tube	Poly-V pulley head	Double grooves pulley head	Pinion chain head	Machined tube for belt
Floating Pin M8-19	•	•	•	•	•	•
11 mm hex springed shaft			•	•		

CABLE-SIDE (FOR ALL CONFIGURATIONS)



BECAUSE PARTNERSHIP MATTERS