

AIRMATIC®

WE'LL HANDLE IT.



MOTORIZED PULLIES

THE SMART ALTERNATIVE TO EXPOSED DRIVES

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MOTORIZED PULLEYS

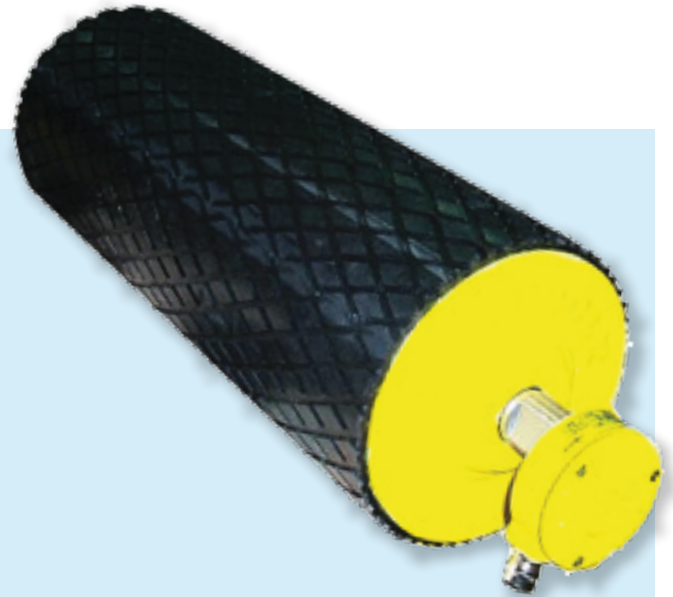
RULMECA® MOTORIZED PULLEYS were first produced in 1953 to offer Conveyor Belt Operators and Designers a compact, hermetically sealed, highly efficient conveyor belt drive. The RULMECA Motorized Pulley is quick and easy-to-install, and requires almost no maintenance. This conveyor belt drive resists the effects of abrasive dust, water, oil, grease, and other contaminants.

COMPACT

RULMECA's internally powered conveyor belt drives have enhanced space utilization in restricted areas, lowered energy costs, reduced downtime, lowered noise levels, and increased safety for more than 50-years. From underground mines to barges, quarries, bulk terminals, sand & gravel, cement, salt, fertilizer, glass, and numerous mineral processing plants, Plant Operators and Designers have taken advantage of RULMECA's Motorized Pulley's compactness.

HERMETICALLY SEALED

RULMECA's AC Squirrel-Cage Induction Motor and Gearbox are hermetically sealed within the oil-filled Motorized Pulley Shell, creating high drive reliability and requiring little-to-no maintenance. Sealing the drivetrain within the Pulley Shell protects it from abrasive and corrosive environments. All mechanical components are automatically splash-lubricated. Since the Pulley Shaft is "dead" (non-rotating), there are no external pillow blocks to lubricate. Maintenance is reduced to changing synthetic gear oil every 50,000 operating hours.



VFD COMPATIBLE

Motorized Pulleys are Variable Frequency Drive compatible. Various options enable them to drive inclined, reversing, articulating, and high-duty cycle conveyors. Each Motorized Pulley provides specific HP at fixed belt speeds within a particular Pulley diameter and face widths. Variable Frequency Drives provide belt speed flexibility.

SIMPLE MOUNTING

RULMECA Motorized Pulleys simplify conveyor drive mounting in challenging locations such as tail drives, dual drives, and center nest drives. To mount Motorized Pulleys, simply align the Pulley, fasten four mounting bolts to the conveyor structure, and make electrical connections.



**...THE SMART ALTERNATIVE
TO EXPOSED DRIVES...**

EXTERNAL OPTIONS

Surface finishes (including stainless steel in some models), lagging (including rubber and ceramic), and sealing systems (including standard and labyrinth seals) yield excellent service in abrasive and corrosive environments.

INTERNAL OPTIONS

RULMECA fits optional Internal Mechanical Backstops and DC Brakes directly to the Motor Rotor Shaft. This gives them mechanical advantage (as high as 100:1) and protects them within the hermetically sealed environment.

BROAD PRODUCT LINE

RULMECA's Motorized Pulleys offering includes nine (9) different diameters combining 0.33 to 330 HP motors with two- or three-stage Gearboxes in any face width. Plant Operators and Designers find a single or dual-drive RULMECA Motorized Pulley package to meet virtually any need. RULMECA Motorized Pulleys are built-to-order, or, depending upon specifications and scheduling requirements, are shipped from stock.

THE CONCEPT

Oil Plug Magnet

Captures metallic grit and eliminates oil “break-in” period.

Stationary External Shaft

Safely fastened to conveyor frame with mounting brackets — no pillow blocks to maintain.

Factory Oil-Filled

For motor cooling and lubrication of all gears and bearings requiring synthetic oil change every 50,000 operating hours.

Electric AC Motor

Efficient squirrel cage induction design which is VFD compatible.

Rotating Drum

Only moving external part.

Oil “Drip Lip”

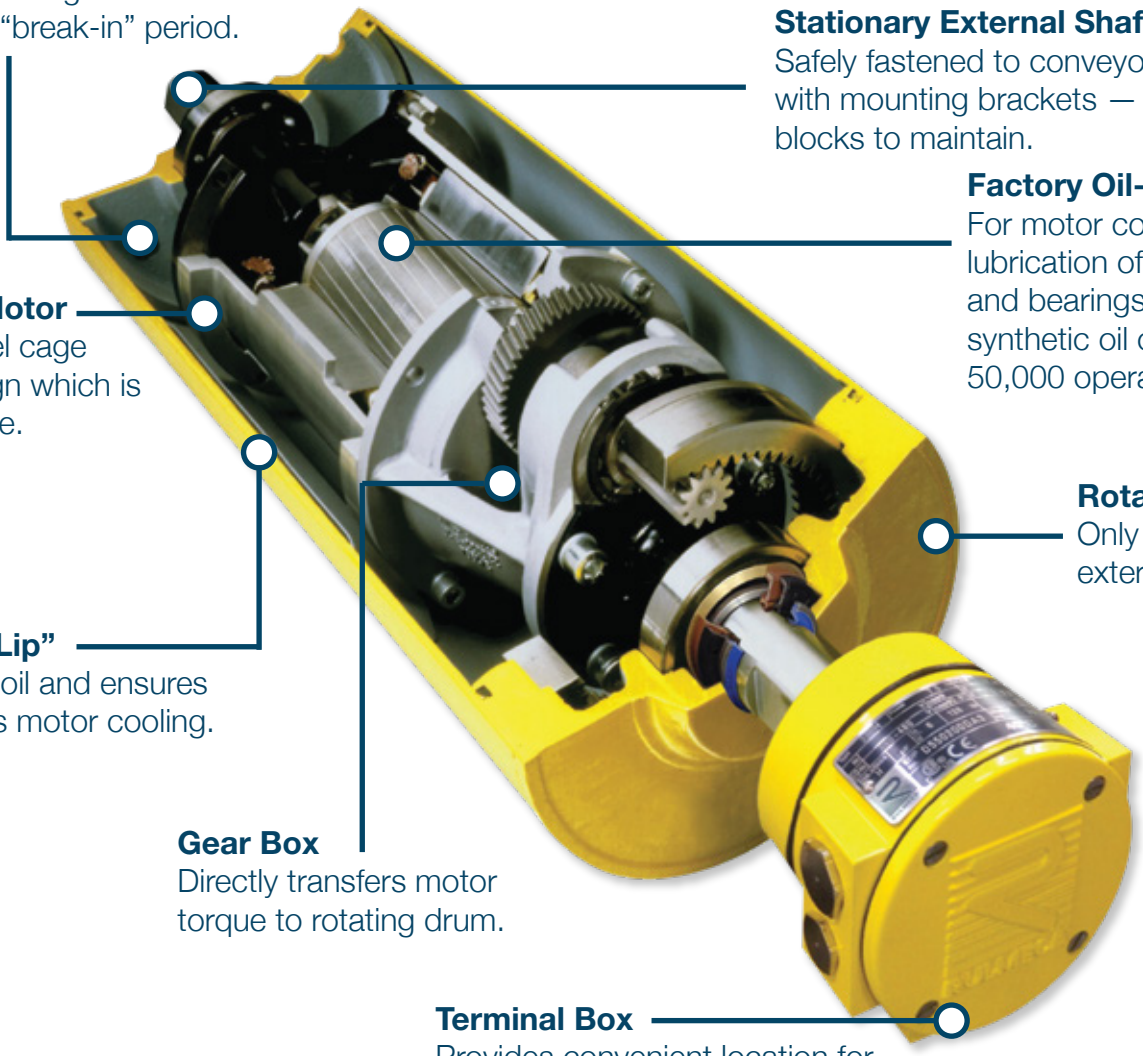
Circulates oil and ensures continuous motor cooling.

Gear Box

Directly transfers motor torque to rotating drum.

Terminal Box

Provides convenient location for power and control wire installation, accessible from three sides.



138LS MOTORIZED PULLEY

The RULMECA **138LS** Motorized Pulley, with machined helical gearbox, performs with a gearbox efficiency of 95% of nominal power, in a compact diameter of 5.45". With a minimum roller length (RL) of 11.81" and power ranging from 0.13 to 1.0 HP, the 138 Motorized Pulley is suitable for most small diameter applications including light agricultural conveyors, light C & D debris conveyors, and mobile and portable conveyors. The 138E features a standard enclosure class of IP69 and is also available in stainless steel for wash-down applications.



TYPICAL APPLICATION: SMALL ROCK CONVEYOR



RULMECA 5.45" Dia 0.5 HP Motorized Pulley built into a Small Rock Conveyor at a construction site. The 138E is RULMECA's most compact Motorized Pulley, making it problem-free, and the perfect solution for light and portable conveyors.

STANDARD SPECIFICATIONS

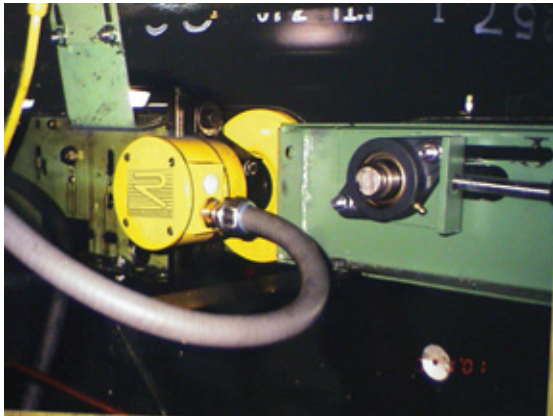
- Crowned Mild Steel Shell; 5.45" Dia with Anti-Rust Wax
- Die Cast Aluminum Bearing Housing
- Mild Steel Shaft Treated with Anti-Rust Wax
- Die Cast Lightweight Aluminum Gearbox Housing
- Sealing System Provides IP66/67 Degree of Protection
- Compact Die Cast Aluminum Terminal Box with WAGO Connectors
- 3-Phase Induction Motor
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 1 of 2 Oil Plugs Fitted with Magnet to Filter Oil
- First Oil Change Recommended After 50,000 Operational Hours
- Maximum RL = 70.87"
- Non-Standard RL's Available (Please Inquire)
- Single Phase Available in 0.33, 0.50, & 0.75 HP (Supplied with Running Capacitor)
- To Be Used in Horizontal Positions Only
- Stainless Steel Options Available (see Page 15 for details)



165L MOTORIZED PULLEY

The RULMECA **165LS** Motorized Pulley, with machined helical gearbox, performs with a gearbox efficiency of 95% of nominal power, in a compact diameter of 6.49". With a minimum Roller Length (RL) of 15.75" and power ranging from 0.15 to 3.0 HP, the 165E Motorized Pulley is suitable for most small diameter applications including light agricultural conveyors, light C & D debris conveyors, and mobile and portable conveyors. The 165E features a standard enclosure class of IP69 and is also available in stainless steel for wash-down applications.

TYPICAL APPLICATION: PROCESSING FACILITY



RULMECA 6.49" Dia 1 HP Motorized Pulley moving product on a transfer belt at a processing facility.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 6.49" Dia with Anti-Rust Wax
- Die Cast Aluminum Bearing Housing
- Mild Steel Shaft Treated with Anti-Rust Wax
- Die Cast Lightweight Aluminum Gearbox Housing
- Sealing System Provides IP66/67 Degree of Protection
- Compact Die Cast Aluminum Terminal Box with WAGO Connectors
- 3-Phase Induction Motor
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 1 of 2 Oil Plugs Fitted with Magnet to Filter Oil
- First Oil Change Recommended After 50,000 Operational Hours
- Maximum RL = 70.87"
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions Only
- Stainless Steel Options Available (see Page 16 for details)



RULMECA 6.49" Dia 1 HP Motorized Pulley moving product on a transfer belt at a processing facility.

TYPICAL APPLICATION: CEMENT PLANT



RULMECA 8.5" Dia 4 HP Motorized Pulley at 200 FPM driving a 30" W feeder belt on 1 of 2 hopper feeder conveyors beneath aggregate mixing bins at a Cement Plant.

NOTE: When ordering hopper feeder drives, always include material shear force in power calculations.

220M & 220H MODELS

RULMECA's 8.5" diameter Motorized Pulley range offers two different performance levels for bulk applications. The RULMECA **220M** Medium Duty Motorized Pulley is designed to match harsh operating conditions in applications such as mobile crushing and screening, cement and aggregate plants, mobile conveyors, and open stone and gravel pits.

The RULMECA **220H** Heavy-Duty Motorized Pulley features a 3-Stage Gearbox which provides the necessary strength needed for low speeds and high torque. The **220H** is popular in recycling (hand sorter conveyors), bunker discharge conveyors, and applications where a combination of slow speed and high torque is required.

NOTE: It is important to note the differences between Medium and Heavy-Duty in order to determine the right type of pulley for your application based on estimated belt tension (radial load). The actual radial load must be less than the maximum allowable radial load.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 8.50" Dia with Anti-Rust Wax
- Powder-Coated Cast Iron Bearing Housings
- Mild Steel Shafts Treated with Anti-Rust Wax
- Sealing System Provides IP66/67 Degree of Protection
- Powder-Coated Die Cast Aluminum Terminal Box
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 1 of 2 Oil Plugs Fitted with Magnet to Filter Oil
- First Oil Change Recommended After 50,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Stainless Steel & Semi Rust-Free Options Available (see Page 15)



320L, 320M & 320H MODELS

RULMECA's 12.64" diameter Motorized Pulley range offers three different performance levels for bulk applications. The RULMECA **320L** Light-Duty Motorized Pulley is designed for regular and continuous operating conditions. It is advisable to rubber lag these Pulleys to grip the belt and limit belt tension. Typical applications include portable conveyors, and cross belts in mobile crushing and screening equipment.

NOTE: The **320L** should not be used for low-speed, high-torque feeder conveyors.

The RULMECA **320M** Medium-Duty Motorized Pulley is designed for tough and harsh operating conditions including crushing and screening applications, asphalt, cement, and concrete plants.

The RULMECA **320H** Heavy-Duty Motorized Pulley features a 3-Stage Gearbox, larger shafts, and stronger bearings which enable the **320H** to provide low-speed at high-torque and handle irregular loadings in harsh operating conditions.

TYPICAL APPLICATION: SAND & GRAVEL PIT



RULMECA 12.64" Dia 7.5 HP Motorized Pulley installed on a 24" W inclined "overs belt" at 300 FPM. This conveyor stacks large usable rocks scalped from the product stream at the active face of the pit. The Motorized Pulley's built-in mechanical backstop protects personnel and equipment from product carryback when it's necessary to stop a fully loaded belt.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 12.64" Dia with Anti-Rust Wax
- Powder-Coated Cast Iron Bearing Housings
- Mild Steel Shafts Treated with Anti-Rust Wax
- Sealing System Provides IP66/67 Degree of Protection
- Powder-Coated Die Cast Aluminum Terminal Box
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 1 of 2 Oil Plugs Fitted with Magnet to Filter Oil (320L)
- 2 Oil Plugs Fitted with Magnet to Filter Oil (320M & 320H)
- First Oil Change Recommended After 50,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Stainless Steel & Semi Rust-Free Options Available (see Page 15)



400L, 400M, & 400H MODELS

RULMECA's 15.91" diameter Motorized Pulley range offers three different performance levels for bulk applications. The RULMECA **400L** Light-Duty Motorized Pulley is designed for regular and continuous operating conditions. It is advisable to rubber lag these Pulleys to grip the belt and limit belt tension. A popular application for the **400L** is self-cleaning magnetic separators. The **400L** uses the Motor and Gearbox from the 320M Medium-Duty Motorized Pulley.

The RULMECA **400M** Medium-Duty Motorized Pulley is designed for harsh operating conditions. The 400M is typically used in heavy mobile crushing and screening applications as well as in crushed stone, ore, cement, steel, and fertilizer handling.

The RULMECA **400H** Heavy-Duty Motorized Pulley features a solid 3-Stage Gearbox which enables the **400H** to provide low-speed at high-torque and handle irregular loadings in harsh operating conditions.

TYPICAL APPLICATION: SCREEN FEED HEAD PULLEY



RULMECA 15.75" Dia 15 HP Motorized Pulley on a mobile TPH recirculating crushing/screening plant. Pulley is mounted to bottom of structural support beam.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 15.91" Dia Painted Yellow (2.4 mil Min. Thick)
- Bolted Powder-Coated Cast Iron Bearing Housings & Covers Painted Yellow (2.4 mil Min. Thick)
- Mild Steel Shafts Treated with Anti-Rust Wax
- Sealing System Provides IP66/67 Degree of Protection
- Powder-Coated Aluminum Terminal Box (400L)
- Cast Iron Terminal Box (400M & 400H) Painted Yellow (2.4 mil Min. Thick)
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 2 Oil Plugs Each Fitted with Magnet to Filter Oil
- First Oil Change Recommended After 50,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Stainless Steel & Semi Rust-Free Options Available (see Page 15)

500L, 500M, & 500H MODELS

RULMECA's 19.72" diameter Motorized Pulley range offers three different performance levels for bulk applications. The RULMECA **500L** Light-Duty Motorized Pulley is designed for harsh operating conditions. The **500L** is typically used in heavy mobile crushing and screening applications as well as in crushed stone, ore, cement, steel, and fertilizer handling. The 500L uses the Motor and Gearbox from the 400M Medium-Duty Motorized Pulley.

The RULMECA **500M** Medium-Duty Motorized Pulley features a 3-Stage Gearbox which enables it to provide low-speed at high-torque and handle irregular loadings in harsh operating conditions. The **500M** uses the Motor and Gearbox from the 400H Heavy-Duty Motorized Pulley.

The RULMECA Heavy-Duty Motorized Pulley has the strongest internal components in this diameter range with Gearbox, Shaft, and Bearings designed for tough, harsh, and extreme operating conditions.



TYPICAL APPLICATION: TACONITE PROCESSING PLANT



Two limestone feeder belt drives beneath a storage silo were converted from 20-year old DC motors to AC-powered Motorized Pulleys. ABB VFDs drive RULMECA 19.72" Dia 5.5 HP Motorized Pulleys to a maximum of 120 FPM. Conversion enabled plant operator to eliminate exposed motors and gear-boxes, and replace SCRs, relays, and timer banks with VFDs in control panel.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 19.72" Dia Painted Yellow (2.4 mil Min. Thick)
- Bolted Powder-Coated Cast Iron Bearing Housings & Covers Painted Yellow (2.4 mil Min. Thick)
- Mild Steel Shafts with Nitrided Shaft Sleeves (for 500H)
- Sealing System Provides IP66/67 Degree of Protection
- Cast Iron Terminal Box for Painted Yellow (2.4 mil Min. Thick)
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulations
- Dynamically Balanced Rotor
- 2 Oil Plugs Each Fitted with Magnet to Filter Oil
- Black Painted Mounting Brackets (500L & 500M) Available on Request
- Yellow Painted Mounting Brackets (500H) Included
- First Oil Change Recommended After 50,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Stainless Steel & Semi Rust-Free Options Available (see Page 15)



630M & 630H MODELS

RULMECA's 24.80" diameter Motorized Pulley range offers two different performance levels for bulk applications. The RULMECA **630M** Medium-Duty Motorized Pulley features a 2-Stage Gearbox which enables it to handle irregular loadings in harsh operating conditions. The **630M** uses the Motor and Gearbox from the 500H Heavy-Duty Motorized Pulley.

The RULMECA **630H** Heavy-Duty Motorized Pulley has stronger internal components with Gearbox, Shaft, and Bearings designed for tough, harsh, and extreme operating conditions.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 24.8" Dia Painted Yellow (2.4 mil Min. Thick)
- Bolted Powder-Coated Cast Iron Bearing Housings & Covers Painted Yellow (2.4 mil Min. Thick)
- Mild Steel Shafts with Nitrided Shaft Sleeves
- Sealing System Provides IP66/67 Degree of Protection
- Cast Iron Terminal Box for Painted Yellow (2.4 mil Min. Thick)
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulation
- Dynamically Balanced Rotor
- 2 Oil Plugs Each Fitted with Magnet to Filter Oil
- Yellow Painted Mounting Brackets (AL & ALO) Included
- First Oil Change Recommended After 50,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquire)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Stainless Steel & Semi Rust-Free Options Available (see Page 15)

TYPICAL APPLICATION: LIMESTONE QUARRY



Crawler-mounted transfer bridge using a RULMECA 24.8" Dia Motorized Pulley at tail of transfer conveyor at a limestone quarry. Drive Pulley is mounted in expanding bracket-type jacking screw take-up.



800M, 800H, & 800HD MODELS

RULMECA's 31.50" diameter Motorized Pulley range offers three different performance levels for bulk applications. The RULMECA **800M** Medium-Duty Motorized Pulley features a 2-Stage Gearbox which enables it to handle irregular loadings in harsh operating conditions. The **800M** uses the Motor and Two-Stage Gearbox from the 630H Heavy-Duty Motorized Pulley.

The RULMECA **800H** Heavy-Duty Motorized Pulley has stronger internal components with Two-Stage Gearbox, Shaft, and Bearings designed for tough, harsh, and extreme operating conditions.

The RULMECA **800HHD** Heavy-Duty Motorized Pulley features all the strong internal components of the **800H**, but with a 3-Stage Gearbox which enables operation with slower belt speeds.

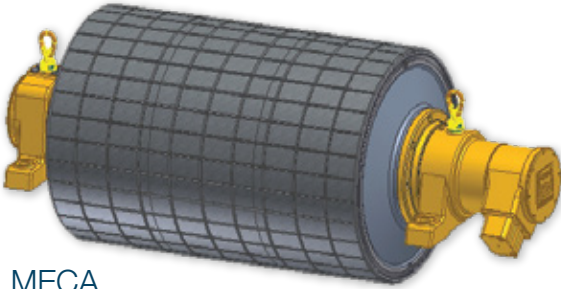
TYPICAL APPLICATION: LIMESTONE PIT AT CEMENT PLANT



Crawler-mounted bucket wheel excavating limestone from a pit adjacent to the producer's cement plant. It uses tail-mounted, RULMECA 31.5" Dia 100 HP Motorized Pulleys to drive the 54" W boom and tail conveyor belts at 600 FPM. Externally-mounted brakes prevent carryback material when conveyors are stopped because both can articulate to a 16° maximum inclination.

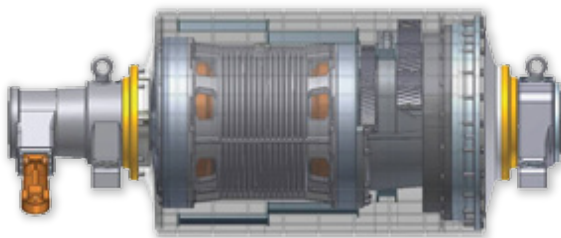
STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 31.50" Dia Painted Yellow (2.4 mil Min. Thick)
- Bolted Powder-Coated Cast Iron Bearing Housings & Covers Painted Yellow (2.4 mil Min. Thick)
- Mild Steel Shafts with Nitrided Shaft Sleeves
- Sealing System Provides IP66/67 Degree of Protection
- Cast Iron Terminal Box for Painted Yellow (2.4 mil Min. Thick)
- 3-Phase Induction Motors with Thermal Protector
- All Common Voltages Available (Please Specify)
- Class H Motor Winding Insulation
- Dynamically Balanced Rotor
- 2 Oil Plugs Each Fitted with Magnet to Filter Oil
- Yellow Painted Mounting Brackets (AL & ALO) Included
- First Oil Change Recommended After 30,000 Operational Hours
- Minimum RL (Please Inquire)
- Maximum RL (Please Inquire)
- Non-Standard RL's Available (Please Inquiry)
- To Be Used in Horizontal Positions $\pm 5^\circ$ Only
- Semi Rust-Free Option Available (see Page 15 for details)



RULMECA

1000HD Motorized Pulley



RULMECA **1000HD**
Motorized Pulley
(Back View)

**TYPICAL APPLICATION:
SHIP LOADING TERMINAL**



A ship loading terminal replaced original motorized pulleys with RULMECA 40" Dia 200 HP Motorized Pulleys which drive the 60' L, 72" W boom belt at 600 FPM; The terminal also installed a 200 HP Motorized Pulley to drive a 75' L, 72" W discharge conveyor at 600 FPM.

NOTE: Maximum available size in the **1000HD** is 40.16" Dia at 330 HP.

1000HD MODELS

The RULMECA **1000HD** Heavy-Duty Motorized Pulley is a highly developed, reliable and powerful drive with a power range of 220-330 HP. It is able to take a high radial load and is robust in design. It is especially useful in applications such as mining conveyors, excavators, stackers, reclaimers, and ship-loading conveyors. The **1000HD** is designed for tough, harsh, extreme, and brutal working conditions. Its compact design allows plant personnel to save on material and cost when designing the conveyor. With its high protection rating and its standard labyrinth sealing system, the **1000HD** can be used in any environment.

STANDARD SPECIFICATIONS

- Crowned Mild Steel Shell; 40.16" Outside Dia
- Mild Steel Shafts
- Totally Enclosed Cast Iron Brackets
- Shell Lagged with 0.39" in Thick Bonded Ceramic Lagging
- Cast Steel Bearing Houses
- Cast Steel 3-Stage Gearboxes
- Sealing System Provides IP66/67 Degree of Protection
- Cast Iron Terminal Box
- 3-Phase Induction Motors with 3 Phase Single Voltage
- 460V / 3-Phase / 60 Hz Standard Voltage (Please Specify)
- Class H Motor Winding Insulation
- 3 Bi-metallic Thermal Protectors in Connected Series, 2 PT100 Temperature Resistors & 3 PTC Resistors Connected in Series
- Dynamically Balanced Rotor
- 2 Oil Plugs (with Magnet)
- Minimum Roller Length RL = 55.12" @ 220 HP & 59.96" @ 330 HP
- EP220 Synthetic Oil
- First Oil Change Recommended After 30,000 Operational Hours
- Regreasable Labyrinth Seals with Automatic Greasing System
- Special Speeds Available Upon Request



UNIT HANDLING & FOOD PROCESSING

The RULMECA **Unit Handling & Food Processing Motorized Pulleys** are compact, lightweight, safe, reliable, low maintenance and have an excellent service network. These internally powered pulleys are used in the package handling and food processing industries in a wide range of standard flat belt, plastic module and positively-driven thermoplastic conveyor, as well as in many non-belt applications.

Motorized Pulley Options											
Model	80	113	138	165	220	320	400	400	630	800	1000
Diameter	3.15"	4.45"	5.45"	6.49"	8.50"	12.64"	15.75"	19.72"	24.80"	31.50"	40.16"
HP	0.03 - 0.16	0.05 - 0.50	0.33 - 1.0	0.50 - 3.0	0.50 - 7.5	1.0 - 15	3.0 - 20	3.0 - 40	7.5 - 75	30 - 180	220 - 330
Speed	12 - 240	12 - 350	24 - 300	24 - 768	24 - 600	24 - 600	38 - 768	48 - 768	150 - 960	240 - 1064	600 - 1320

TYPICAL APPLICATION: UNIT HANDLING / FOOD PROCESSING



Pulley diameters of 4.45", 5.45" and 6.49" are most popular in Unit Handling and Food Processing applications.

STANDARD SPECIFICATIONS

- Motors are VFD-compatible
- Motors are available to run on single phase and three phase power supplies, including: 115v, 230v, 380v, 460v, and 575v

INDUSTRY APPLICATION EXAMPLES

- Stainless Steel Components
- Food Grade Oil
- Various Lagging Materials
- Mechanical Backstops
- Electromagnetic Brakes
- Industry Applications:
 - Poultry, Fish, Pork & Beef Processing Plants
 - Fruit & Vegetable Processing Plants
 - Beverage Processing Plants
 - Postal, Parcel & Retail Distribution Centers
 - Airport Luggage handling & check-in systems
 - Profiled Pulley Surface
 - Sprockets matching popular Modular Belt
 - Labyrinth Seals
 - Special Paint
 - Incremental Encoders
 - Security Scanning systems
 - Manufacturing & Automation systems
 - Grocery Store check-out stands

SUMMARY COMPARISON CHART

Diameter (in)	Model	Power (HP)	Belt Speed (fpm)	Min. Face Width (in)	Max. Radial Loads (lbs)	Mounting Bracket
5.45"	138E	0.13 - 1.0	10 - 300	11.81	1,066	S2Y AKL
6.44"	165E	0.15 - 3.0	12 - 760	15.75	2,097	6Y A0K
8.50"	220M	0.5 - 5.5	48 - 600	15.75	2,585	6Y A0K
	220H	0.5 - 7.5	30 - 600	17.72	5,620	
	320L	1 - 5.5	76 - 600	15.75	2,585	6Y A0K
12.64"	320M	1 - 15	38 - 600	19.69	4,496	6Y A0J
	320H		24 - 480	21.65	7,868	
	400L	3 - 10	192 - 760	19.69	4,496	6Y A0K
15.75"	400M	3 - 20	76 - 760	23.62	9,100	6Y A09
	400H		38 - 300	25.59	11,250	
	19.72"	500L	3 - 20	96 - 760	23.62	7,868
500M		48 - 480		25.59	9,487	
500H		7.5 - 40	120 - 760	29.53	10,340	ALO / AL65
24.80"	630M	7.5 - 30	150 - 760	29.53	10,340	ALO / AL65
	630H	30 - 75	240 - 960	37.40	16,600*	ALO / AL90
	800M	30 - 61	300 - 960	37.40	16,600*	ALO / AL90
31.50"	800H	75 - 180	384 - 1064	45.28	40,500*	ALO / AL120
	800HD	75 - 180	240 - 600	61.02	44,500*	ALO / AL120HD
40.16"	1000HD	220 - 330	600 - 1320	55.12	67,443	ALO / AL

* Varies with HP (630H Range 16,600 - 22,000 lbs; 800M Range 16,600 - 22,000 lbs; 800H & 800HD Range 40,500 - 45,000 lbs)

SUMMARY OF OPTIONAL EXTRAS

X = Optional Extras
 • = Option w/Certain Limitations
 Std = Supplied as Standard
 -- = Not Available

SPECIFICATION	
Total Stainless Steel (AISI 304 Range) w/Regreasable Labyrinth Seals	
Total Stainless Steel (AISI 304 Range) w/Standard Seals	
Total Stainless Steel (AISI 316 Range) w/Regreasable Labyrinth Seals	
Total Stainless Steel (AISI 316 Range) w/Standard Seals	
Semi-Rust Free w/Regreasable Labyrinth Seal	
Semi-Rust Free w/Standard Seals	
Regreasable Labyrinth Seals (w/Carbon Steel Tube & Shafts)	
Food Grade Oil & Grease (FDA & USDA Recognized)	
Dust Explosion Proof Certification ATEX 95 Class II Zone 22 Atmosphere (EU Directive 94/9EC Article 8)	
Black Rubber Lagging, Standard Specification, Cold-Bonded Diamond Pattern, Hardness 60 ± 5 Shore A	
Black Rubber Lagging, Standard Specification, Cold-Bonded Smooth Pattern, Hardness 60 ± 5 Shore A	
White Rubber Lagging, Standard Specification, Cold-Bonded Smooth Pattern, Oil / Fat / Grease Resistant	
Special Rubber Lagging (eg, Hot Vulcanized Bond, Ceramic Segments, Ceramic Blocks [in Rubber])	
Solid Ceramic Lagging	
Electromagnetic Brake	
Mechanical Backstop	
External Brake Shaft (for Mechanical Brake by Others)	
Modified for Vertical Mounting	
Modified for Mounting Between 5° and 90° (eg, for Magnetic Separators)	
Motor Insulation Class H w/Synthetic Oil (Allowable Ambient Temperature -13°F to 120°F)	
Motor Insulation Class F w/Standard Oil (Allowable Ambient Temperature -13°F to 104°F)	
Special Motors for Applications with No Belt Contact	
Low Noise Drives for Noise-Sensitive Areas	
Parallel Shell (ie, No Crown)	
Yellow Powder-Coated Cast Iron Terminal Box	
Yellow Powder-Coated Aluminum Terminal Box	
Gray Powder-Coated Aluminum Terminal Box (Food Grade Approved)	
Compact Powder-Coated Aluminum Terminal Box (Food Grade Approved)	≤ 5.5 HP Only
Compact Unpainted Aluminum Terminal Box	≤ 5.5 HP Only
Compact Stainless Steel Terminal Box (Food Grade Approved AISI 304 or 316 Range) ≤ 5.5 HP Only	
Straight or Elbow Connector w/Standard Power Cord	≤ 5.5 HP Only
Straight Connector w/Screened Power Cord	≤ 5.5 HP Only
Straight Connector w/Standard Power Cord (Stainless Steel in AISI 304 Range)	≤ 5.5 HP Only
Voltage: Single Voltage (460) Stator (Y Winding) Wired for 460V / 3Ph / 60 Hz @ Terminal Box	
Special Voltage Motors (eg, 1000V)	
Single Phase Motors	
CASA Approved Motors	

138 E	165 E	220M & 220H	320 L	320M & 320H	400 L	400M & 400H	500L & 500M	500 H	630M	630H	800M, 800H, & 800HD	1000HD
TS7N	TS7N	TS9N	TS9N	TS9N	TS9N	TS9N	--	--	--	--	--	--
--	--	TS10N	TS10N	TS10N	TS10N	TS10N	--	--	--	--	--	--
X	X	X	X	X	X	X	--	--	--	--	--	--
--	--	X	X	X	X	X	--	--	--	--	--	--
--	--	TS11N	TS11N	TS11N	TS11N	TS11N	TS11	TS11	TS11	TS11	TS11	TS11
--	--	TS12N	TS12N	TS12N	TS12N	TS12N	TS12	TS12	TS12	TS12	TS12	--
--	--	X	X	X	X	X	X	X	X	X	X	Std
X	X	X	X	X	X	X	--	--	--	--	--	--
X	X	X	X	X	X	X	X	X	X	X	X	X
1/8"	1/8"	1/4"	5/16"	5/16", 1/4"	5/16"	5/16"	3/8"	3/8"	3/8"	3/8"	3/8"	--
1/8"	1/8"	1/4"	5/16"	5/16", 1/4"	5/16"	5/16"	3/8"	3/8"	3/8"	3/8"	3/8"	--
•	•	•	•	•	•	•	--	--	--	--	--	--
•	•	•	•	•	•	•	•	•	•	•	•	--
--	--	--	--	--	--	--	--	X	X	X	X	Std
X	X	X	X	X	X	X	X	--	--	--	--	--
X	X	X	X	X	X	X	X	X	X	X	X	X
--	--	--	--	--	--	--	--	500H	X	X	X	X
•	•	•	•	•	•	•	--	--	--	--	--	--
•	•	•	•	•	•	•	--	--	--	--	--	--
Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
X	X	X	X	X	X	X	X	X	X	X	X	--
•	•	•	•	•	•	•	--	--	--	--	--	--
X	X	X	X	X	X	X	X	--	--	--	--	--
X	X	X	X	X	X	X	X	X	X	X	X	X
--	--	--	--	--	--	Std	Std	Std	Std	Std	Std	Std
--	--	Std	Std	Std	Std	--	--	--	--	--	--	--
--	--	X	X	X	X	--	--	--	--	--	--	--
--	--	•	•	•	--	--	--	--	--	--	--	--
Std	X	--	--	--	--	--	--	--	--	--	--	--
X	X	•	•	•	--	--	--	--	--	--	--	--
X	X	X	X	X	X	X	--	--	--	--	--	--
X	X	X	X	X	X	X	--	--	--	--	--	--
X	X	X	X	X	X	X	--	--	--	--	--	--
Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
X	X	X	X	X	X	X	X	X	X	X	X	X
•	--	--	--	--	--	--	--	--	--	--	--	--
X	X	X	X	X	X	X	X	X	X	X	X	X

APPLICATION ENVIRONMENTS

Abrasive, Wet, High Humidity Environments



Hermetically sealed carbon steel tube and end housings with standard paint are suitable for most bulk applications. However, aggressive environments may require regreasable seals, special finish, or stainless steel.

Articulating Conveyors

Electromagnetic brakes or external brake shafts (by others) provide suitable material “holdback” capability for articulating conveyors. Mechanical backstops will not work in this application because these conveyors elevate and lower material.

Chemical / Corrosive Environments

Aggressive environments may require regreasable seals, special lagging material, special finish, or stainless steel.

Dust & Gas Environments

Motorized Pulleys with IP67 sealing are available with optional certification* for service in an ATEX 95 Class II (dust explosion proof”) Zone 22 atmosphere, according to European Union Directive 94/9EC Article 8. Motorized Pulleys are not “intrinsically safe” or “flame proof” and are not suitable for service in: Class I (gasses, vapors, & liquids), Class II Zone 20, or Class II Zone 21.

*MSHA Certified

Elevating Conveyors

Mechanical backstops provide suitable material “holdback” capability for fixed position, non-reversing, inclined conveyors.



Food Handling

Regreasable seals, full stainless steel, and food grade oil, grease, and lagging material are suitable for this environment, which usually includes frequent high pressure / chemical wash down.

High Altitude >3,300 ft Above Sea Level (ASL) Standard RULMECA Motorized Pulleys are suitable for high elevation applications. When calculating motor power requirements, de-rate the power by 2.5% for elevations of 3,300' to 5,000' ASL, and by 5% for elevations of 5,000' to 6,000' ASL. Contact AIRMATIC for application assistance on elevations < 5,000' ASL.

High Ambient Temperature Standard RULMECA Motorized Pulleys with Class F Motor and standard oil are suitable for use in a maximum ambient temperature of 104°F. Motorized Pulleys with Class H Motor and synthetic oil are suitable for use in a maximum ambient temperature of 120°F. For higher ambient temperature conditions, contact AIRMATIC.

HIGH DUTY CYCLE

Model	Max.# of Start/Stops
138E	240/hr
165E	180/hr
220M & 220H	120/hr
320L, 320M, 320H, 400L, 400M, 400H	25/hr
500L, 500M, 500H, 630M, 630H, 800H, & 800HD	10/hr
1000HD	5/hr

Standard RULMECA Motorized Pulleys are suitable for frequent starting and stopping, without the use of soft start devices as shown above. More frequent starts/stops are possible through the use of optional special pulley construction and/or soft starters.

Impact Loading

Conveyors subject to frequent impact loading (ie, non-continuous material flow) may require higher motor power and stronger gearbox than indicated by “continuous flow” belt pull calculations.

Induction Conveyors



Electromagnetic brake provides excellent product “hold” capability in induction systems requiring “indexing”.

Low Ambient Temperature

RULMECA Motorized Pulleys with standard motor and oil are suitable for use in a minimum ambient temperature of -13°F. Optional food grade oil lowers the pulley operating temperature range to a minimum of -22°F. Contact AIRMATIC for lower operating temperatures. Special oil, special seals, and internal anti-condensation heater may be required.

Marine Environment



Corrosive ocean environment often requires regreasable sealing system, stainless steel, or special surface finish.

Noise-Sensitive Environments



In noise-sensitive areas (eg, locations where public access to conveyors is permitted) certain Motorized Pulley design restrictions apply. Contact AIRMATIC for special oil viscosities, specially balanced pulleys, and when to avoid the use of 2 pole motors.

Non-Belt Applications
Special Motorized Pulley designs are available for “non-belt, V-belt, partial belt, and modular belt” applications. It is essential that each special application be designed to adequately dissipate heat from the pulley surface.

Non-Horizontal Mounting (ie, 5° to 90° and Vertical)



Certain applications (eg, self-cleaning electromagnet for tramp iron, pictured above, “tilted” package sortation conveyors, and “traveling wall”), require the pulley shaft to be mounted out of the horizontal plane. This Motorized Pulley option requires extra oil, grease packed top bearing, and special electrical termination.

Oil, Greasy, & Fatty Material



Environments with high amounts of oil, grease, and/or fat require special oil-resistant lagging. If they require frequent high pressure and/or chemical cleaning they may also require regreasable seals and stainless steel or special surface coating.

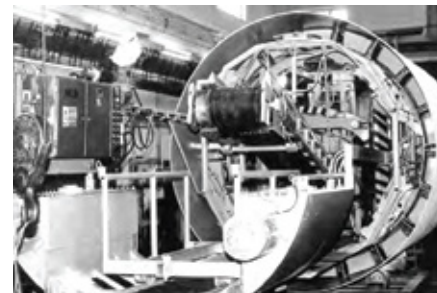
Reversible Conveyors

All standard 3-phase RULMECA Motorized Pulleys are suitable for use in reversing conveyors. However, motor control circuit must be designed to bring pulleys to a complete stop before reversing direction.

Starting Under Load

All RULMECA Pulley Motors are “Design C” and developed for direct starting. They allow 200% start-up torque when started directly. To reduce start-up current, it is possible to use starting device such as soft starter or variable frequency drive. Note that these devices may reduce start-up torque.

Underground Tunneling & Mining



RULMECA Motorized Pulleys have been incorporated into Tunnel Boring Machines for years. However, they are not “intrinsically safe” or “flame proof” and are not suitable for service where explosive gasses, vapors, liquids, or dust are continuously present.



AIRMATIC founded in 1944, is a woman-owned Industrial Distributor, with installation and maintenance capabilities, offering equipment, machinery, and shop supplies to the Industrial, Construction, Utility, Government, and Commercial Markets. Our products and services are sold through three business units:

The **MATERIALS MANAGEMENT GROUP** provides products and services to industries that convey, store, transport, and process powders and bulk solids from aggregates, cement, and chemicals to foods, grains, metals, power generation, and waste water treatment applications;

The **SERVICE GROUP** provides fabrication, installation, and maintenance services to improve bulk materials handling efficiency; mechanical clean-out services for silos and hoppers to eliminate material flow problems; and shop repair/rebuilding and modifications services of products sold by the Company.

The **TOOL GROUP** provides power tools, personal protective equipment, materials-handling equipment, shop equipment and MRO supplies used for production, fabrication, assembly, metal removal, maintenance, and storage in manufacturing, construction, utility, and commercial applications. Our Customers tell us that by choosing **AIRMATIC** to solve their problems, they gain increased productivity, decreased costs, and a safer, cleaner work environment.



RULMECA is a world leader in the development and production of belt conveyor rollers/ idlers, motorized pulleys, fabricated pulleys, and related components for the bulk handling industry. Founded in 1962, the Company operates 22 manufacturing facilities throughout the world including its USA Plant in Wilmington, NC. RULMECA works with leading OEM's, Engineering companies, and End-Users through a network of independent distributors and service centers.

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