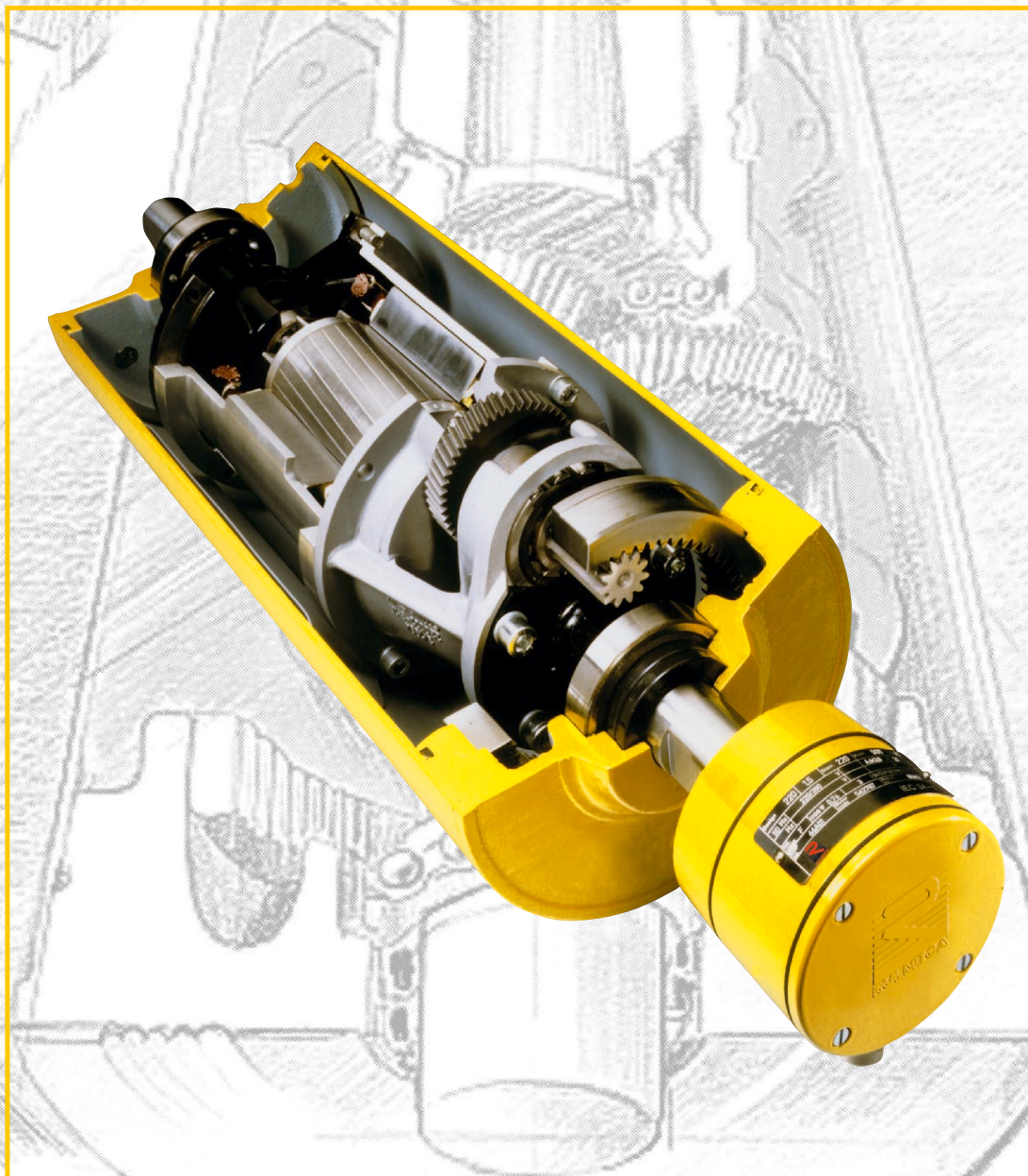


# Motorized Pulleys for belt conveyors



## Summary table



3ª ed. MOT BU FAA GB 04/05

**BULK HANDLING**



# Rulmeca Motorized Pulleys: a new name with deep roots

The Rulmeca Motorized Pulleys presented in this catalogue have a long history to tell.

It goes back to the 1950's, when the product was developed in Germany and Denmark.

Eventually, through a merging process the German Förder- und Antriebstechnik Aschersleben GmbH and the Danish John Kirkegaard Maskinfabrik A/S became partners of the Interroll Group.

From the early 1990's the manufacturing of all Interroll's BULK Motorized Pulleys were centralised in Aschersleben, Germany.

In July 2003 the production facility in Aschersleben, Germany, where Motorized Pulleys have been developed and produced for almost half a century, was purchased by Rulli Rulmeca Spa Italy, along with the entire BULK Business Unit.

It is from this plant, today renamed **RULMECA FAA GmbH**, that the JOKI, EGT and INTERROLL traditions for quality and reliability will be continued under the **RULMECA brand**.

It is thanks to this long history that Rulmeca can be ranked as a very experienced manufacturer of BULK Motorized Pulleys offering the world largest product range.

**Stay with us !**

[www.rulmeca.com](http://www.rulmeca.com)

## Features and Benefits of Rulmeca Motorized Pulleys

### **Purpose-built design**

The Rulmeca Motorized Pulley has been specifically designed for belt conveyors.

### **Totally enclosed**

The motor, gearbox and bearings are totally enclosed and sealed inside a steel shell; therefore they are unlikely to fail due to harmful environmental conditions such as water, dust, grit chemicals, grease, oil, etc.

### **Space saving design**

Because the drive unit and the bearings are mounted inside the Motorized Pulley shell, it takes up much less room than a conventional drive. No need for costly extras like chains, v-belts, couplings, bearings, support structure and special guarding.

### **Safety**

The Rulmeca Motorized Pulley is probably one of the safest drives available because the motor is completely enclosed and the external shafts are always stationary. The only moving external parts are the Motorized Pulley shell and bearing housings.

### **Low purchasing and installation cost**

The Rulmeca Motorized Pulley is quite often less expensive than exposed drives because it has fewer parts. Therefore less conveyor design and parts purchasing costs. It is also much quicker and easier to install - certainly less than a quarter of the time taken to fit an exposed system.

### **Low maintenance cost**

The end user also benefits from the

Rulmeca Motorized Pulley, because it requires no maintenance other than the recommended oil change every 10,000 hours and oil seal change every 30,000 hours. In other words almost 5 years between oil changes based on an 8-hour/day working week. Synthetic oil can be specified to extend the service range up to 30,000 hours.

### **Efficiency**

The Rulmeca Motorized Pulley usually has a much higher efficiency from electrical motor to shell (Pulley face) than conventional drives, because it has fewer frictional losses, and therefore efficiencies of up to 97% can be achieved.

### **Cleanliness**

Because the Rulmeca Motorized Pulley is hermetically sealed it cannot contaminate any conveying materials such as food, electrical components, plastics and other materials that must be kept perfectly clean during handling.

### **Aesthetic appearance**

If installed correctly the Rulmeca Motorized Pulley always looks good. Due to its compact size and smooth lines, quite often the Motorized Pulley is out of sight, because it is hidden within the conveyor frame.

### **Thermal protection**

All three phase Rulmeca Motorized Pulleys are protected by our thermal protection switch. This heat sensitive switch is built

into the motor windings to protect the motor from overheating. The thermal protector must be connected to a normally closed circuit.

### **Weight saving and distribution**

Often the Rulmeca Motorized Pulley is lighter than conventional drives and often it is possible to reduce the cost of the conveyor structure, because the weight is evenly distributed within the conveyor frame.

### **Variable frequency converter**

All Rulmeca Motorized Pulleys with 3 phase motors are easily controlled by variable frequency converters working in the 15 Hz to 65 Hz frequency range. See Technical Precautions in the catalogue.

### **Fewer parts**

A Rulmeca Motorized Pulley consists of the Motorized Pulley and two fixing brackets! Exposed drives can require up to eight or more separate components, most of which have to be purchased from different suppliers or custom manufactured.

### **Low noise**

Thanks to the totally sealed enclosure and high quality gears the Rulmeca Motorized Pulley runs almost at a whisper – a very important fact in today's modern factory environments.

The Rulmeca Motorized Pulley – the ideal drive unit for conveyors **"Fit it and forget it"**.



## New enlarged product range

Rulmeca have just launched a product range, which has been reviewed, enlarged and up-graded to meet customer requirements.

In this connection, it was necessary to re-name all product descriptions to secure an easier choice of the right pulley for the right application.

The NEW product range offers three different loading performances:

- L for Light-duty
- M for Medium-duty
- H for Heavy-duty

In most cases you have a choice.

Therefore, it is important to notice the differences to choose the right type of pulley for the right application based on estimated belt tension (radial load) =  $T1+T2$ . The actual radial load MUST be LESS than the max. allowable radial load shown in this catalogue.

Be aware of increased belt tensions using multi-ply thick heavy belts and/or larger belt widths.

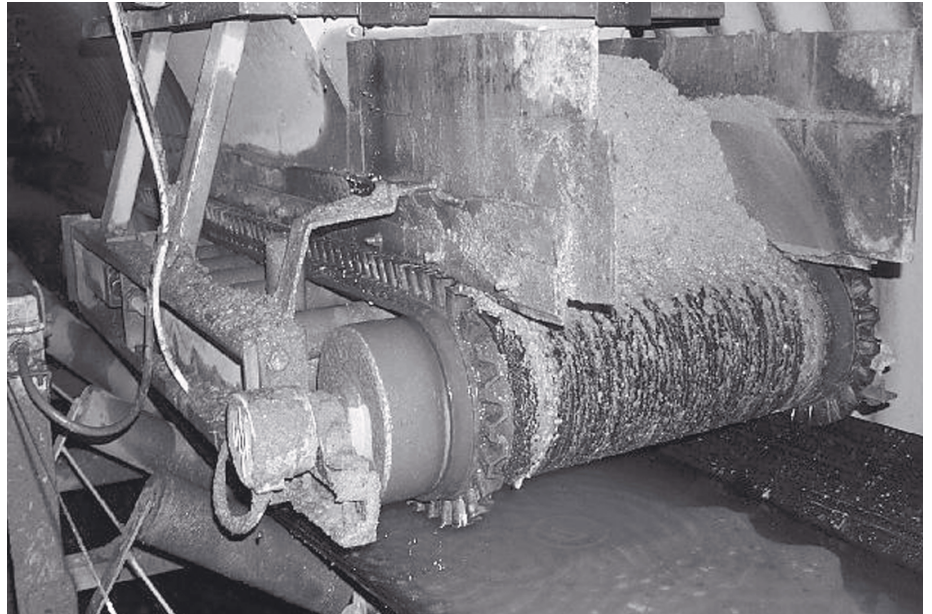
If you do not find the belt tension needed in the wanted diameter, you might have to choose a larger one.

The three above loading performances offers a product range suitable for any type of application whether working under/with

- regular and constant operating conditions
- TOUGH and IRREGULAR working conditions
- irregular and extreme loadings in BRUTAL conditions.

For further information, please open our web-site - [www.rulmeca.com](http://www.rulmeca.com) - or contact your nearest Rulmeca distributor.

For more detailed information please refer to the NEW Rulmeca **Motorized Pulley catalogue** (96 pages).



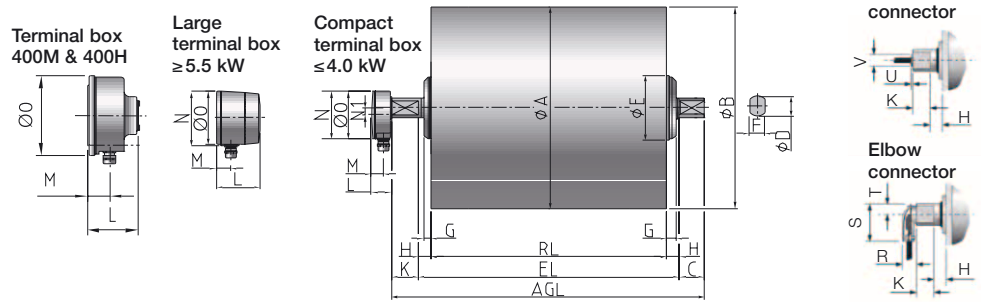
Sea-dredged aggregates working in wet, salty and aggressive environment! IP66/67 sealing – a MUST – often with re-greasable seals!



Crushing & Screening. A motorized pulley in its right element!



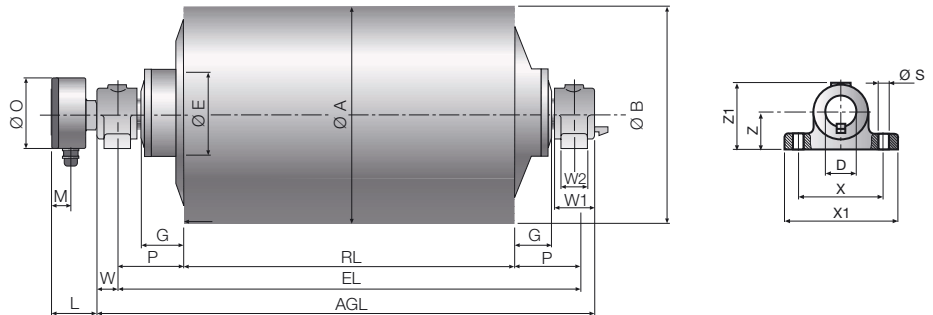
# Motorized Pulley 220M-500M



Type	Motorized pulleys or idler pulleys (UT)									Compact terminal box ≤ 4.0 kW				Larger terminal box ≥ 5.5 kW				Straight connector ≤ 4.0 kW		Elbow connector ≤ 4.0 kW		
	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	L mm	M mm	N mm	N1 mm	L mm	M mm	N mm	O mm	U mm	V mm	R mm	S mm	T mm
220M & 220H	216	214.5	43.5	40	100	30	15.5	21.5	41.5	41	24	95	14	87	27	107	105	4	27	20	48	12
320L	323	319	50	40	96	30	15	25	54	41	24	95	14	-	-	-	-	4	27	20	48	12
320M	321	319	50	40	125	30	15	25	54	41	24	95	14	87	27	107	105	4	27	20	48	12
320H	321	319	50	50	148	40	11	25	55	41	24	95	14	87	27	107	105	4	27	20	48	12
400L	404	400	50	40	125	30	20	25	54	41	24	95	14	87	27	107	105	4	27	20	48	12
400M & 400H	404	400	50	60	194	45	23	25	50	-	-	-	-	100	36.5	-	156	-	-	-	-	-
500L & 500M	501	497	50	60	194	45	23	25	50	-	-	-	-	100	36.5	-	156	-	-	-	-	-

UT220M & UT220H	216	214.5	43.5	40	100	30	15.5	21.5	-
UT320M	321	319	50	40	125	30	14	25	-
UT320H	321	319	50	50	148	40	11	25	-
UT400L	404	400	50	40	125	30	17	25	-
UT400M & UT400H	404	400	50	60	168	45	20	25	-

# Motorized Pulley 500H-800H



Type	Motorized pulleys or idler pulleys (UT)																	
	A mm	B mm	C mm	D mm	E mm	G mm	L mm	M mm	O mm	P mm	S mm	W mm	W1 mm	W2 mm	X mm	X1 mm	Z mm	Z1 mm
500H	501	497	-	65	192	95	100	36.5	156	150	23	47	90	60	180	240	80	141
630M	630	626	-	65	192	95	100	36.5	156	150	23	47	90	60	180	240	80	141
630H	630	626	-	90	268	88	165	54	230	150	26	61	117	80	250	320	100	183
800M	800	796	-	90	268	88	165	54	230	150	26	61	117	80	250	320	100	183
800H	800	796	-	120	330	80	200	62	260	150	33	95	160	120	300	370	110	213

UT500H	501	497	-	65	235	95	-	-	-	150	23	47	90	60	180	240	80	141
UT502H	501	497	-	90	226	85	-	-	-	150	26	61	117	80	250	320	100	183
UT630M	630	626	-	90	226	85	-	-	-	150	26	61	117	80	250	320	100	183
UT630H	630	626	-	120	330	75	-	-	-	150	33	95	160	120	300	370	110	213

The dimension "W" is the distance between the centre of the fixing hole of the bracket to the end of the terminal box.





Type of Motorized pulley Type	Dia-meter (mm)	Power (kW)	Max. radial load T1+T2 in (N)			Nominal belt speed at full load 50 Hz (m/sec)																Type of Motorized Pulleys - L, M or H						Minimum shell width (RL)*									
			L	M	H	0,13	0,16	0,20	0,25	0,32	0,40	0,50	0,63	0,80	1,00	1,25	1,60	2,00	2,50	3,15	4,00	4,50	L	M	H												
500L / 500M	500	2.20	35000	42200					M	M	M	L	L	L	L																	600	650				
500L / 500M	500	4.00	35000	42200							M	M	M	L	L	L	L															600	650				
500L / 500M	500	5.50	35000	42200										M	M	M	L	L	L	L	L	L										600	650				
500L / 500M	500	7.50	35000	42200												M	M	M	L	L	L	L	L									600	710				
500L / 500M	500	11.00	35000	42200													M	M	M	L	L	L										660	710				
500L / 500M	500	15.00	35000	42200														M	M	M	L	L										660	710				
500H	500	5.50			46000										H	H	H	H	H	H	H	H												750			
500H	500	7.50			46000											H	H	H	H	H	H	H												750			
500H	500	11.00			46000														H	H	H	H	H											750			
500H	500	15.00			46000															H	H	H	H	H										750			
500H	500	18.50			46000																H	H	H	H										750			
500H	500	22.00			46000																	H	H	H										750			
630M	630	5.50		46000										M	M	M	M	M	M	M	M	M											750				
630M	630	7.50		46000												M	M	M	M	M	M	M												750			
630M	630	11.00		46000															M	M	M	M	M											750			
630M	630	15.00		46000																	M	M	M	M											750		
630M	630	18.50		46000																		M	M	M											750		
630M	630	22.00		46000																			M	M											750		
630H	630	22.00			73600											H	H	H	H	H	H	H												950			
630H	630	30.00			98100													H	H	H	H	H	H												950		
630H	630	37.00			98100															H	H	H	H												950		
630H	630	45.00			88300																		H	H	H										950		
630H	630	55.00			88300																		H	H	H										950		
800M	800	22.00		73600													M	M	M	M	M	M													950		
800M	800	30.00		98100																			M	M	M	M									950		
800M	800	37.00		98100																				M	M	M	M									950	
800M	800	45.00		88300																					M	M										950	
800M	800	55.00		88300																						M										950	
800H	800	55.00			200000																			H	H	H	H	H	H							1150	
800H	800	75.00			200000																				H	H	H	H	H							1150	
800H	800	90.00			200000																				H	H	H	H								1400	
800H	800	110.00			180000																					H	H	H								1400	
800H	800	132.00			180000																						H	H								1400	

\* Standard shell width (RL) in 50 mm steps available.

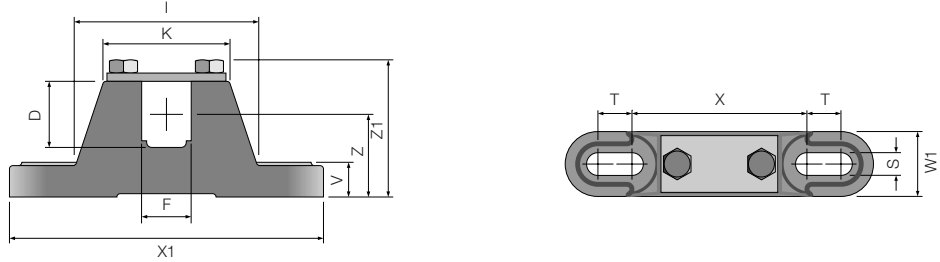
Order example	Type	Power (kW)	Diameter (mm)	Shell width (RL) (mm)	Belt speed (m/sec)	Rubber lagged	Backstop-pulley in clockwise direction	Voltage (Volts)	Frequency (Hz)
	500H	7.5	500	x 950	1.25	RUB**	BST***	400/690	50

Please contact Rulmeca for min. RL in connection with Motorized Pulleys with back stop or electromagnetic brake

\*\* Please, state type and thickness for rubber lagging (RUB\*\*)

\*\*\* Please, state direction of rotation viewed from t-box side (BST\*\*\*)

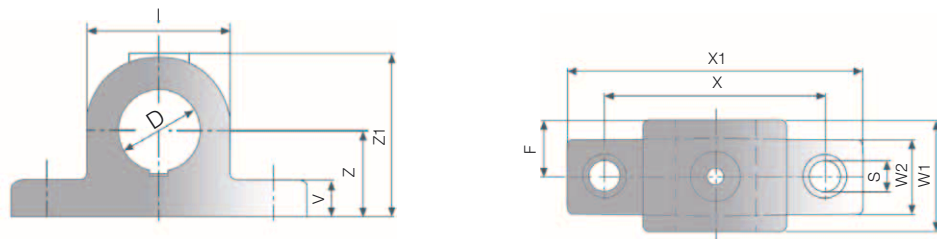
# Mounting brackets



Motorized pulleys Type	Material	Bracket description	Dimension in mm													Weight in kg
			D	F	I	K	S	T	V	W1	X	X1	Z	Z1		
220M & 220H	Spheroidal cast iron	KL41	40	30	84	62	14	20	22	40	110	190	50	83	1.9	
	Steel	KL41-HD	40	30	84	62	14	20	22	40	110	190	50	83	2.1	
320L & 320M	Spheroidal cast iron	KL41	40	30	84	62	14	20	22	40	110	190	50	83	1.9	
	Steel	KL41-HD	40	30	84	62	14	20	22	40	110	190	50	83	2.1	
320H	Steel	KL42	50	40	121	90	18	30	25	50	150	250	70	110	4.5	
400L	Spheroidal cast iron	KL41	40	30	84	62	14	20	22	40	110	190	50	83	1.9	
	Steel	KL41-HD	40	30	84	62	14	20	22	40	110	190	50	83	2.1	
400M & 400H	Steel	KL60	60	45	130	90	18	30	25	50	150	270	70	115	4.8	
500L & 500M	Steel	KL60	60	45	130	90	18	30	25	50	150	270	70	115	4.8	

# Mounting brackets

Type AL - with key  
& ALO - without key



Motorized pulleys Type	Material	Bracket description	Dimension in mm											Weight in kg
			D	I	S	V	F	W1	W2	X	X1	Z	Z1	
500H	Spheroidal cast iron	AL65 / AL065	65	115	23	34	45	90	60	180	240	80	141	8.0
630M	Spheroidal cast iron	AL65 / AL065	65	115	23	34	45	90	60	180	240	80	141	8.0
630H	Cast steel	AL90 / AL090	90	160	26	42	58.5	117	80	250	320	100	183	19.0
800M	Cast steel	AL90 / AL090	90	160	26	42	58.5	117	80	250	320	100	183	19.0
800H	Cast steel	AL120 / AL0120	120	200	33	50	65	160	120	300	370	110	213	38.0



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