

MOTORIZED PULLEY 220M & 220H

Ø 216 mm



To match your requirements in diameter 216 mm, our product range offers two different loading performances for your BULK applications:

- M for Medium-duty
- H for Heavy-duty

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 this diameter, you might have to choose a larger one.

M for Medium-duty

The internal parts of 220M are designed to match irregular working conditions in applications such as mobile crushing & screening, cement & concrete plants, mobile conveyors and open stone & gravel pits. 220M provide sufficient belt tension.

H for Heavy-duty

A reinforced 3-stage-gearbox provides 220H with the necessary strength needed for low speeds, high torque and the listed belt tension.

220H is popular in re-cycling (hand sorter conveyors), bunker discharge conveyors and where a combination of slow speed and high torque is required. For the choice of the Motorized Pulley it is very important to know or to calculate the belt tension T1+T2 (radial load). This **MUST NOT OVERCOME** the "max. radial load" allowed as shown in the catalogue.

Be careful to very high belt tensions when using thick, heavy and/or large belts.

If this type cannot provide the necessary max. radial load T1+T2, you have to choose a Motorized Pulley with a bigger diameter.

STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel Ø 216 mm steel shell treated with anti-rust wax
- Powder coated cast iron bearing housings
- Mild steel shafts treated with anti-rust wax
- Shaft sealing system - degree of protection IP66/67 (EN60034-5)
- Compact powder coated die cast aluminium terminal box
- Larger powder coated die cast aluminium terminal box >= 5.5 kW
- 3-phase induction motors with thermal protector
- Voltage: wide range 3-phase single voltage. Most common voltages available. Please specify!
- Motor winding insulation Class F
- Dynamically balanced rotor
- One out of two oil plugs fitted with a magnet to filter the oil
- Oil change recommended every 20.000 operational hours
- Minimum RL. Please refer to pages 30/31
- Maximum RL – Please inquire!
- Non standard RL's available
- To be used in horizontal positions ± 5 degree only!

Please note:

- Straight or elbow connector available
- Parallel shell available. Diameter equal to dimension Ø A
- Two speed motors on request
- Special speed available on request
- Motorized Pulleys for non-horizontal positions available on request
- The high speed of 2-pole motors can cause higher noise levels and are therefore not recommended in noise sensitive areas

STAINLESS STEEL

Stainless steel version or rust-resistant version on request -
For an optimum design of the correct anti-corrosion performance, we need the properties of the materials being conveyed. Our sales team will offer you the best available solution.

Electrical connection options:

- Salt water resistant powder coated aluminium terminal box with zinc plated exterior bolts
- Stainless steel terminal box – AISI 304 range (max. 4 kW)
- Straight stainless steel connector with flying lead – AISI 304 range (max. 4 kW).

When ordering, please specify the required voltage, electrical connection, options, brackets and idler pulleys.

- Environmental consideration: page 72/73
- Technical precautions: page 75 ff.,
- Optional extras: page 27,
- Connection diagram: page 91 ff.

MOTORIZED PULLEY 220M & 220H

Optional extras



SPECIFICATIONS	220M & 220H
Food grade oil & grease - FDA & USDA recognized - available on request	x
Dust explosion proof Motorized Pulleys - ATEX 95 - Zone 22 - for applications handling of dusty grain etc. According to European Directive 2014/34EG	On request!
TOTAL acid resistant stainless steel option - AISI 316	x
Re-greasable labyrinth seals - mild steel	x
Black rubber lagging - STANDARD specifications: - Smooth lagging - Hardness 60 ±5 Shore A - Diamond lagging - Hardness 60 ±5 Shore A	o 5 mm 6 mm
White smooth rubber lagging (FDA). Oil, fat & grease resistant	x
SPECIAL lagging available on request - e.g. hot vulcanized etc.	x
Single phase motors available on request	x
Electromagnetic brake (for 5.5 kW not available)	x
Min. RL dimensions increases by (mm)	100
Mechanical backstop	x
Modified for vertical mounting	o
Modified for mounting between 5° - ≤90° - e.g. for magnetic separators	o
Insulation class F - Allowable ambient temperature: -25°C/+40°C	Std.
Insulation class H with synthetic oil	X
SPECIAL motors for applications with NO belt contact	x
Low noise drives for noise sensitive areas	x
Parallel shell	x
Thermal protector	Std.
IP66/67 Compact powder coated aluminium terminal box - food grade approved	Std. ≤ 4.0 KW
IP66/67 Compact stainless steel - AISI 304 or 316 range - terminal box	≤ 4.0 KW
IP66/67 Larger powder coated aluminium terminal box - food grade approved	Std. ≥ 5.5 KW
Straight or elbow connector with flying lead	≤ 4.0 KW
Straight connector with flying lead - Stainless steel - AISI 304 range -	≤ 4.0 KW
Shaft sealing system - degree of protection IP66/67 (EN60034-5)	Std.
Screened cables - a MUST together with Frequency Converters	x
3-phase single voltage (3 x 400V) or (3 x 690V) 50Hz +/-10% tolerance - DIN IEC 38	Std.
Euro wide range voltage (380-415V 50 Hz) with +/-10% tolerance - DIN IEC 38 or (660-690V 50 Hz)	x
Special voltages - 50 and/or 60 Hz Please specify!	On request!
Dual voltage - delta/star - connection possibility!	x
CSA approved motors - available on request only!	x

x = Optional extras

o = Available as option with certain limitations. Please refer to Technical precautions pages 75 ff.

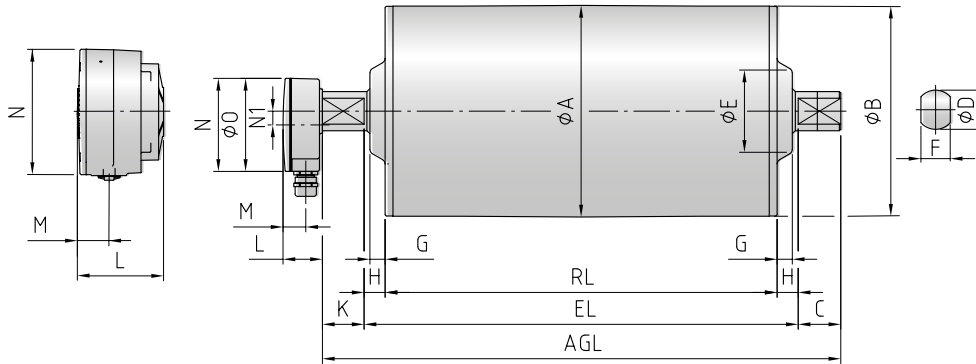
Std. = Fitted as standard

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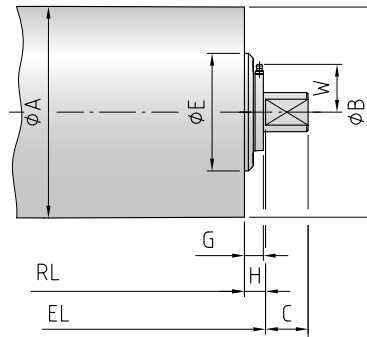
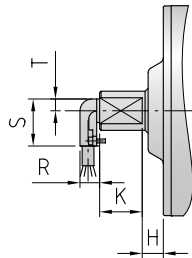
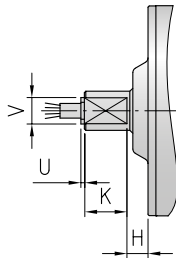
Motorized Pulley with Terminal box



Straight connector

Elbow connector

Idler pulley
SS version



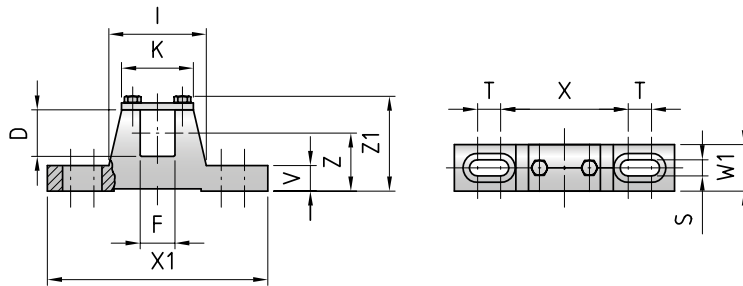
Type	Motorized Pulley or Idler Pulley (UT)											Compact terminal box <4.0 kW				Larger terminal box >5.5 kW				Straight connector <4.0 kW		Elbow connector <4.0 kW		
	A mm	B mm	C mm	D mm	E mm	F mm	G mm	G TS9/11 mm	H mm	K mm	W mm	L mm	M mm	N mm	N1 mm	L mm	M mm	N mm	O mm	U mm	V mm	R mm	S mm	T mm
220M & 220H	216	214.5	43.5	40	100	30	15.5	19.5	21.5	41.5	-	41	24	95	14	87	27	107	105	4	27	20	48	12
UT220M & UT220H	216	214.5	43.5	40	100	30	15.5	22.5	21.5	-	52	→ Idler Pulley shown with re-greasable seals												

MOTORIZED PULLEY 220M & 220H

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Mounting brackets
KL41-HD



Motorized Pulley	Material	Bracket description	Dimensions											Weight		
			D mm	F mm	I mm	K mm	S mm	T mm	V mm	W1 mm	X mm	X1 mm	Z mm		Z1 mm	
Type																kg
220M & 220H	Steel	KL41-HD	40	30	84	62	14	20	22	40	110	190	50	83	2.1	



Mobile Crushing & Screening – Features: Compact, equal weight, distribution, reliable and LOW maintenance.

Further product details:



<https://www.rulmeca.com/contenuti/qrcode/english/220.pdf>

MOTORIZED PULLEY 220M & 220H

Ø 216 mm - 50 Hz



Motor			Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2* N	Special min. RL	Type	Weight in kg for STANDARD width Dimension RL in mm (RL >2000 mm available on request)										Type of Bracket
Power kW/HP	No. of Poles	Gear stages							400	450	500	550	600	650	700	750	800	per 50 mm up to 2000	
0.37/ 0.50	8	3	0.13 0.16	291 236	2707 2195	25000	450	220H		64	67	70	73	76	79	82	85	3 kg	KL41-HD
		2	0.20 0.25 0.32 0.40 0.50 0.63 0.80 1.00 1.25	190 152 118 95 76 60 47 38 30	1767 1414 1098 884 707 558 437 353 279	11500	400	220M	48	51	54	57	60	63	66	69	72	3 kg	KL41-HD
0.55/ 0.75	8	3	0.13 0.16	432 351	4019 3265	25000	500	220H			71	74	77	80	83	86	89	3 kg	KL41-HD
		2	0.20 0.25 0.32 0.40 0.50 0.63 0.80 1.00 1.25	282 226 176 141 113 89 70 56 45	2623 2102 1637 1312 1051 828 651 521 419	11500	450	220M	55	58	61	64	67	70	73	76	3 kg	KL41-HD	
0.75/ 1.00	8	3	0.13 0.16	592 481	5510 4476	25000	500	220H			71	74	77	80	83	86	89	3 kg	KL41-HD
		2	0.20 0.25 0.32 0.40 0.50 0.63 0.80 1.00 1.25	385 307 239 191 153 122 96 77 62	3581 2856 2223 1777 1423 1135 893 716 577	11500	450	220M	55	58	61	64	67	70	73	76	3 kg	KL41-HD	
1.10/ 1.50	6	3	0.16 0.20	705 564	6558 5246	25000	500	220H			68	71	74	77	80	83	86	3 kg	KL41-HD
	4		0.25 0.32	452 353	4205 3284		450		61	64	67	70	73	76	79	82			
1.10/ 1.50	4	2	0.40 0.50 0.63 0.80 1.00 1.25 1.60 2.00 2.50	282 226 178 141 112 90 70 56 45	2623 2102 1656 1312 1042 837 651 521 419	11500	400	220M	46	49	52	55	58	61	64	67	70	3 kg	KL41-HD
Motor			Max. Radial Load T1+T2* N	Special min. RL	Type	Weight in kg for STANDARD width Dimension RL in mm (RL >2000 mm available on request)										Type of Bracket			
						400	450	500	550	600	650	700	750	800	per 50 mm up to 2000				
Idler Pulley			11500	400	UT220M	25	27	29	31	33	35	37	39	41	2 kg	KL41-HD			
			25000	400	UT220H		29	31	33	35	37	39	41	43	2 kg	KL41-HD			

* T1+T2 value is valid for shortest available RL – in case of any questions please contact Rulmeca sales.

MOTORIZED PULLEY 220M & 220H

Ø 216 mm - 50 Hz



Motor			Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2* N	Special min. RL	Type	Weight in kg for STANDARD width Dimension RL in mm (RL >2000 mm available on request)											Type of Bracket	
Power kW/HP	No. of Poles	Gear stages							400	450	500	550	600	650	700	750	800	per 50 mm up to 2000			
1.50/ 2.00	4	3	0.25	616	5730	25000	450	220H		61	65	68	71	74	77	80	83	3 kg	KL41-HD		
			0.32	481	4476																
			0.40	385	3581																
		2	0.50	307	2856																
			0.63	243	2260																
			0.80	191	1777	11500	400	220M	48	51	54	57	60	63	66	69	72	3 kg	KL41-HD		
			1.00	153	1423																
1.25	123	1144																			
1.60	96	893																			
2.00	77	716																			
2.50	62	572																			
2.20/ 3.00	4	3	0.32	705	6558	25000	500	220H			68	72	75	78	81	84	87	3 kg	KL41-HD		
			0.40	564	5246																
			0.50	451	4195																
		2	0.63	358	3330																
			0.80	282	2623	11500	450	220M													
			1.00	226	2102				55	58	61	64	67	70	73	76	3 kg	KL41-HD			
			1.25	180	1674																
1.60	140	1302																			
2.00	115	1070																			
2.50	90	837																			
3.00/ 4.00	4	3	0.50	616	5730	25000	550	220H			74	77	80	83	86	89	3 kg	KL41-HD			
			0.63	481	4476																
			0.80	385	3581																
		2	1.00	307	2856																
			1.25	245	2279	11500	500	220M													
			1.60	192	1786				60	63	66	69	72	75	78	3 kg	KL41-HD				
			2.00	154	1433																
2.50	123	1144																			
4.00/ 5.50	2	3	0.63	649	6037	25000	550	220H			74	77	80	83	86			89	3 kg	KL41-HD	
			0.80	511	4754																
			1.00	409	3805																
		2	1.25	327	3042	11500	500	220M													
			1.60	255	2372				60	63	66	69	72	75	78	3 kg	KL41-HD				
2.00	204	1898																			
2.50	163	1516																			
5.50/ 7.50	2	3	0.80	702	6530	25000	550	220H										3 kg	KL41-HD		
			1.00	562	5228																
			1.25	450	4186																
			1.60	351	3265																
			2.00	281	2614																
2.50	225	2093																			
Motor			Max. Radial Load T1+T2* N	Special min. RL	Type	Weight in kg for STANDARD width Dimension RL in mm (RL >2000 mm available on request)											Type of Bracket				
						400	450	500	550	600	650	700	750	800	per 50 mm up to 2000						
Idler Pulley			11500	400	UT220M	25	27	29	31	33	35	37	39	41	43	43	2 kg	KL41-HD			
						25000	400	UT220H		29	31	33	35	37	39	41	43	2 kg	KL41-HD		

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