Conveying elements for Intralogistics



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Foreword



The **Rollex** - Group with the head office in Germany produces conveyor rollers for technical machines and plants. Since 1973 Rollex is focused on the production of driven and non-driven, as well as on conical rollers, motor roller and zero pressure system components. In a further division gravity roller tracks for flow through and buffer systems as well as pallet rails are produced.

The combination of high technical expert knowledge, the use of modern machines and an extensive inventory makes it possible to offer solutions shortly for every application. So beside standard conveyor rollers even special solutions are manufactured relating to orders.

With world-wide locations and branches the **Rollex** - Group covers the most important world markets and serves customer world-wide. In Germany and the Netherlands more than 300 employees look for high customer satisfaction and smooth operational sequence.

Rollex - a strong partner!



ROLLEX Werne



ROLLEX Ebersdorf



ROLLEX Plant 3



Conveyor Components B.V., NL

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Weight

Shaft	Dimension in mm	Weight in kg/m
	5	0,154
	6	0,222
	8	0,395
	ASK 8	0,435
	10	0,617
	11	0,823
	ASK 11	0,823
	12	0,888
	14	1,208
	15	1,387
	17	1,782
	20	2,466
	25	3,853

Plastic tube	Dimension in mm	Weight in kg/m
	20 x 1,5	0,137
	30 x 1,8	0,245
	40 x 2,3	0,419
	50 x 2,8	0,64
	63 x 3	0,87
	90 x 7	2,809

Steel- and Stainless Steel tube	Dimension in mm	Weight in kg/m
	16 x 1	0,37
	20 x 1,5	0,684
	30 x 1	0,715
	30 x 1,5	1,054
	32 x 2	1,48
	40 x 1,5	1,425
	50 x 1,5	1,794
	50 x 2	2,368
	50 x 3	3,477
	60 x 2	2,861
	60 x 3	4,217
	60,3 x 1,65	2,385
	63,5 x 2,9	4,334
	70 x 2	3,354
	70 x 2,9	4,83
	80 x 2	3,847
	80 x 3	5,696
	88,9 x 2,9	6,151
	88,9 x 5	10,36
	108 x 3,25	8,396
	133 x 3,6	11,488

Caption SK = Gravity- and Conveyor Roller FR = Friction roller FE = Fixed drive roller FRE = Friction roller adjustable
SR = Steel tube KR = Plastic tube FG = Speed

	Page	Type				Description	Capacity	Tube diameter									
		SK	FR	FE	FRE		max. [N]	16	20	30	32	40	48	50	60	60.3	63	63.5
Gravity- and Conveyor Roller	22	50				Bearing housing with Ball Row	200	x	x	x	x	x						
	24	60				Bearing housing with Ball Bearing	600			x	x	x						
	26	100				Bearing housing with Ball Row	200							x	x	x	x	
	28	150				Bearing housing with Slide Bearing	150							x	x	x	x	
	30	200				Steel housing with Ball Row	1600			x		x		x	x			
	32	220				Steel housing with Ball Row	2400							x	x			
	34	250				Steel housing with Precision Ball Bearing	2400					x		x	x			
	36	260				Steel housing with Precision Ball Bearing	5000											x
	38	290				Steel housing with Precision Ball Bearing	1200					x						
	40	300				Bearing housing with Ball Bearing	1600						x	x	x	x	x	x
	42	301				Bearing housing with Ball Bearing	1600							x	x		x	x
	44	302				Bearing housing with Ball Bearing	1600							x	x			
	46	306				Bearing housing with Ball Bearing				x		x	x	x	x			x
	48	320				Bearing housing with Ball Bearing	600					x		x				
	50	400				Bearing housing with Ball Bearing	3600							x	x			x
	52	400 ST				Steel housing with Precision Ball Bearing												x
	54	401				Bearing housing with Ball Bearing	1600					x		x				
	56	402				Bearing housing with Ball Bearing	3600					x			x			x
	58	402 K				Bearing housing with Ball Bearing						x		x				
	60	402 ST				Steel housing with Precision Ball Bearing												x
	62	402 WT				Steel housing with Precision Ball Bearing	2400							x	x			x
	64	402 WS				Steel housing with Precision Ball Bearing	6000											x
	66	402 WST				Steel housing with Precision Ball Bearing	3600											
	68	402 WO				Steel housing with Precision Ball Bearing	3600											
Driven Roller	72			420		Thermoplastic synthetic material - Ripped-V-Belt PJ profile	500							x				
	74		421			Steel - Ripped-V-Belt PJ profile	500							x	x		x	
	76			423		Thermoplastic synthetic material - Round belt with two grooves	300							x				
	78		432	433		Steel double chain sprocket 3/8x7/32" z=12	400			x	x							
	80		435	436		Steel single chain sprocket 3/8x7/32" z=10	400			x	x							
	82		437	438		Steel single chain sprocket 3/8x7/32" z=10	400			x	x							
	84		445	446		Thermoplastic synthetic material - tooth belt wheel T8 z=20 Polychain	600							x	x		x	x
	86				445 R ST	Steel - tooth belt wheel T8 z=20 Polychain	1000							x	x		x	x
	88			447		Steel - tooth belt wheel T8 z=20 Polychain	1500							x	x			x
	90		450	451		Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=11	400							x	x	x	x	x
	92		452	453		Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=11	400							x	x	x	x	x
	94		454	455		Steel single chain sprocket 1/2x5/16" z=11	1000							x	x	x	x	x
	96				454 R	Steel single chain sprocket 1/2x5/16" z=11	1000							x	x	x	x	x
	98				456	Steel single chain sprocket 1/2x5/16" z=11	1000							x	x	x		x
	100		457	458		Steel single chain sprocket 1/2x5/16" z=11	1000							x	x	x	x	x
	102		462	463		Steel single chain sprocket 5/8x3/8" z=12	1000							x	x	x	x	x
	104				462 R	Steel single chain sprocket 5/8x3/8" z=12	1000							x	x	x	x	x
	106			464		Steel single chain sprocket 5/8x3/8" z=12	1500							x	x	x		x
	108		470	471		Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=14	400							x	x	x	x	x
	110		480	481		Thermoplastic synthetic material - double chain sprocket 1/2x5/16" z=14	400							x	x	x	x	x
	112		500	501		Steel double chain sprocket 1/2x5/16" z=14	1000							x	x	x	x	x
	114				500 R	Steel double chain sprocket 1/2x5/16" z=14	1000							x	x	x	x	x
	116			502		Steel double chain sprocket 1/2x5/16" z=14	1500							x	x	x	x	x
	118		506	507		Steel single chain sprocket 1/2x5/16" z=14	1000							x	x	x	x	x
	120				506 R	Steel single chain sprocket 1/2x5/16" z=14	1000							x	x	x	x	x
	122			508		Steel single chain sprocket 1/2x5/16" z=14	1500							x	x	x	x	x
	124			510		Steel double chain sprocket 5/8x3/8" z=15	3400											x
	126			511		Steel single chain sprocket 5/8x3/8" z=15	3400											x
	128			512		Steel double chain sprocket 3/4x7/16" z=13	4000											
	130			513		Steel single chain sprocket 3/4x7/16" z=13	4000											
	132			516		Thermoplastic synthetic material - tooth belt wheel T8 z=30 Polychain	1800											
	136			517		Thermoplastic synthetic material - tooth belt wheel T8 z=24, 25, 30, 34 HTD	1800											
	138			518		Thermoplastic synthetic material - double chain sprocket 5/8x3/8" z=18	1800											
	140			519		Thermoplastic synthetic material - single chain sprocket 5/8x3/8" z=18	1200											
	142		520			Steel double chain sprocket 5/8x3/8" z=15	1800											
	144				520 R	Steel double chain sprocket 5/8x3/8" z=15	1800											
	146		521			Steel single chain sprocket 5/8x3/8" z=15	1800											
	148				521 R	Steel double chain sprocket 5/8x3/8" z=15	1800											
	150			522		Thermoplastic synthetic material - double chain sprocket 5/8x3/8" z=15	1200											
	152			523		Thermoplastic synthetic material - single chain sprocket 5/8x3/8" z=15	800											
	154				533 R	Steel - tooth belt wheel T8 z=30, 34 HTD	1800											
	156			534		Steel - tooth belt wheel T8 z=30, 34 HTD	2000											
	158			539		Steel - Ripped-V-Belt PK profile	2000											
Conical Roller	164		540	541		Thermoplastic synthetic material - double chain sprocket 1/2x5/16" z=14	400							x				
	166		542	543		Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=14	400							x				
	168		550	551		Steel double chain sprocket 1/2x5/16" z=14	400							x				
	170		552	553		Steel single chain sprocket 1/2x5/16" z=14	400							x				
	172			563		Steel double chain sprocket 3/8x7/32" z=12	200		x									
	174		566	567		Steel double chain sprocket 3/8x7/32" z=12	100			x								
	176			568		Thermoplastic synthetic material - Ripped-V-Belt PJ profile	400							x				
	178			570		Thermoplastic round belt pulley with 2 grooves	300							x				
	180	600				Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	400							x				
	182	601				Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	100		x									
	184	602				Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	200			x								
Zero Pressure Conveying System	191					530 Clutch up to 10.000N												
	192					531 Clutch up to 1.200N												
	195					530 Z / 531 Z Pneumatic cylinder												
	197					536 E Electromagnetic Clutch 24V DC												
	199					Rollex Drive System												
	203					Rollex-Multi-Drive Card												
Motor Roller	210					Motor Roller 24VDC								x				
	212					Motor Roller / Drum Motor Type 850-89												
Belt Roller with	220					Type 400A Belt Drum												
	220					Type 402ST Idler												
	222					Type 400 (Belt Roller)												
	222					Type 402 WO (Belt Roller)												
	221					Accessories												
Brake (Conveyor) Roller	227					700 Brake conveyor roller												
	229					710-86 Brake roller												
	229					710-120 Brake roller												
Accessories	236					Guide Flanges, Buffer rings, Back up rings												
	238					Pallete rail												
	242					Roller rail												

						SR*	KR*	Shaft diameter												max. FG*	Note
70	80	88.9	90	108	133			5	6	8	SK8	10	SK11	12	14	15	17	20	25	m/s	
						x	x	x	x	x		x								0,3	
						x	x			x		x		x	x					1,5	
x	x					x	x		x	x	x	x	x	x						0,5	
x	x		x			x	x			x		x		x	x					0,3	Floating bearing
	x					x			x	x		x	x	x						0,6	
	x					x						x		x		x				0,6	
	x					x				x		x	x	x	x	x	x			1,2	
	x	x		x		x											x	x	x	1,2	
						x				x		x	x	x	x	x				1,2	
x	x	x	x			x	x			x		x	x	x	x					2	
x	x	x				x	x					x		x	x	x	x			2	
						x				x		x	x	x	x	x				2	
	x	x		x		x	x														Groove for belt drive
							x			x		x	x	x	x					1,2	Guide Flanges
	x	x		x	x	x	x											x		1,2	
	x	x		x	x	x												x	x	1,2	Capacity depending upon the load limit of tube and shaft
						x				x		x		x	x		x			1,2	
	x	x		x		x				x		x		x	x			x		1,2	
						x										x	x			1,2	Capacity depending upon the load limit of tube and shaft
	x	x		x	x	x												x	x	1,2	Capacity depending upon the load limit of tube and shaft
	x	x				x										x	x	x		1,2	
	x	x		x	x	x												x	x	1,2	
	x	x		x	x	x												x	x	1,2	
	x	x		x	x	x												x	x	1,2	
						x				x										1,2	
																				0,5	
												x	x	x	x	x				1,2	
						x	x			x										0,5	
						x	x			x										0,3	
						x	x			x										0,3	
	x					x	x							x	x	x				0,8	
	x					x	x									x				0,8	
	x	x				x										x	x			1,2	Drive fuse
x	x		x			x	x					x		x	x					0,3	
x	x		x			x	x					x		x	x					0,3	Floating bearing
x	x		x			x	x					x		x	x	x				0,3	
x	x		x			x	x									x				0,3	
x	x	x					x					x		x	x	x				0,3	Drive fuse
x	x		x			x	x							x						0,3	able to use as Deflection roller (Normal tooth form)
x	x	x	x			x	x					x		x	x		x			0,3	
x	x	x	x			x	x									x				0,3	
x	x	x	x			x						x		x	x		x			0,3	Drive fuse
x	x		x			x	x					x		x	x					0,3	
x	x		x			x	x					x		x	x					0,5	
x	x	x	x			x	x					x		x	x	x	x			0,5	
x	x	x	x			x	x									x				0,5	
x	x	x				x						x		x	x	x	x			0,5	Drive fuse
x	x	x	x			x	x					x		x	x	x	x			0,3	
x	x	x				x						x		x	x	x	x			0,3	Drive fuse
	x	x		x	x	x												x	x	0,5	Drive fuse
	x	x		x	x	x												x	x	0,3	Drive fuse
	x	x		x	x	x												x	x	0,5	Drive fuse
	x	x		x	x	x												x	x	0,3	Drive fuse
	x	x		x		x												x		0,8	Drive fuse
	x	x		x		x												x	x	0,8	
	x	x		x		x												x	x	0,5	
	x	x		x		x												x	x	0,3	
	x	x		x		x												x		0,5	
	x	x		x		x												x		0,5	
	x	x		x		x												x		0,3	
	x	x		x		x												x		0,3	
	x	x				x												x		0,5	
	x	x				x												x		0,3	
	x	x				x												x		0,8	
	x	x		x		x												x	x	0,8	Drive fuse
	x	x		x		x												x	x	0,8	Drive fuse
						x	x					x		x	x					0,5	
						x	x					x		x	x					0,5	
						x	x					x		x	x					0,5	
						x	x					x		x	x					0,5	
						x	x			x										0,5	
						x	x			x										0,5	
						x						x	x	x	x					0,8	
						x						x	x	x	x					0,8	
						x	x					x	x	x	x					0,8	
						x	x			x										0,5	
						x	x			x		x								0,5	
						x															
						x															
		x				x															
						x															
						x															
						x															
						x															
						x															

Construction Advice/Load Data

Common Construction Advice

- for straight and quiet running of the goods please look for parallelism of shafts, institutional roller level and parallelism of the roller track.
- look for environmental conditions (dust, wetness, acidics etc.)
- electrostatic charging
- maximum roller length/loads of the different materials (steel-or plastic-tube)
- tolerance of the tube (page 7)
- different rolling resistance of the bearings
- no plastic parts for higher temperatures
- for uneven surfaces note different load distribution
- installation length that are longer than listed upon request
- colour deviations possible

Construction advice driven roller

- do not alternate accumulation roller with positive drives
- for uneven surfaces use adjustable accumulation roller
- do not screw the nut too tightly with accumulation rollers, the spring may not be completely compressed (use alternatively the fixed drive)
- bolt tooth form only for tangential drive
- pressfit permanent drive only for continuous conveying, welded sprockets for stop and go
- welding seam perhaps higher than tube level
- look for the maximum speed for the drive elements
- look for tolerance of chains and drive belts
- breaking load of the chains
- motor placed centrical
- In accumulating roller the accumulation bush should be covered. This is to prevent contamination between the drive element and accumulation bush.

General abbreviations

A	axle
AGM	male thread metric
AL	axle length
ASK	hexagonal shaft
EL	installation length
IGM	female thread metric
RL	roller length
RO	tube length
SK	hexagonal
ST	steel
STI	steel galv.
SW	width across flat

Steel tube - Area loading in N

Tube diameter in mm	Clamping length 200 mm	400 mm	600 mm	800 mm	1000 mm	1200 mm	1400 mm
16 x 1	80	60					
20 x 1,5	150	100	80				
30 x 1	200	150	120				
30 x 1,5	250	200	160				
32 x 2	300	250	200				
40 x 1,5	1000	800	550	450			
40 x 2	1100	900	650	500			
40 x 3	1400	1300	1200	800	400		
50 x 1,5	1600	1500	1400	900	600		
50 x 2	1800	1700	1600	1000	700	450	
50 x 3	2500	2400	2000	1300	750	550	
60 x 2	2800	2700	2300	1500	800	600	350
60 x 3	3000	2800	2700	2300	1600	700	500
63,5 x 2,9	3500	3400	3300	3200	3000	2000	1800
70 x 2	1700	1700	1700	1500	1100	800	500
70 x 2,9	3500	3500	3500	3200	3000	2000	1800
80 x 2	2000	1800	1700	1600	1400	600	400
80 x 3	3600	3500	3400	3300	3000	2200	1900
88,9 x 2,9	4200	4000	3800	3700	3600	2500	2000
108 x 3,25	4500	4500	4500	4200	4000	3500	2600
133 x 3,6	4600	4500	4500	4300	4300	4200	4000

Plastic tube - Area loading in N

Tube diameter in mm	Clamping length 200 mm	400 mm	600 mm	800 mm	1000 mm	1200 mm	1400 mm
20 x 1,5	80	40					
30 x 1,8	200	100					
40 x 2,3	300	200					
50 x 2,8	400	300	100				
63 x 3	500	400	350	300			
90 x 7	800	700	500	400	350	200	100

Shaft - attached fixing - static loading in N

Tube diameter in mm	Clamping length 200 mm	400 mm	600 mm	800 mm	1000 mm	1200 mm	1400 mm
A6	1600	1100	1000				
A8	2400	2200	2000				
A10	3800	3600	3400	3200	3000		
A12	4200	4000	3800	3600	3400	3200	
A14	4600	4400	4200	4000	3800	3600	
A15	4800	4600	4400	4200	4000	3800	
A17	5100	5100	5100	5100	5000	4900	4800
A20	5600	5600	5600	5600	5400	5200	5000
A25	6200	6200	6200	6200	6000	5800	5600

Shaft - loose fixing - static loading in N

Tube diameter in mm	Clamping length 200 mm	400 mm	600 mm	800 mm	1000 mm	1200 mm	1400 mm
A6	400	100					
A8	700	500	250				
A8 SK	800	600	400				
A10	1400	1000	800	500	350		
A11 SK	1600	1100	900	600	400		
A12	1800	1200	900	600	400	200	
A14	2400	2000	1500	1200	1100	1000	
A15	2800	2400	2000	1700	1300	1200	
A17	3200	3000	2600	2100	1800	1600	1400
A20	4400	4200	4000	3800	3400	3000	2500
A25	4800	4300	4500	4400	4100	3500	3000