



Conveying elements for Intralogistics



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Selection of Conveyor Roller

In the general chapter you will find information for selecting and dimensioning of roller.

A conveyor roller normally consists of the tube, shaft and bearing.

Basically the materials and the construction of the roller should be chosen with regard to the requirements.

Which dimension, weight and characteristic does the transported good have and which demands does the transportation facility have to cover?

Results:

- roller length
- tube and shaft dimension
- bearing
- shaft centre distance
- conveying speed
- roller component materials of the roller device groups
- selection of the drive element

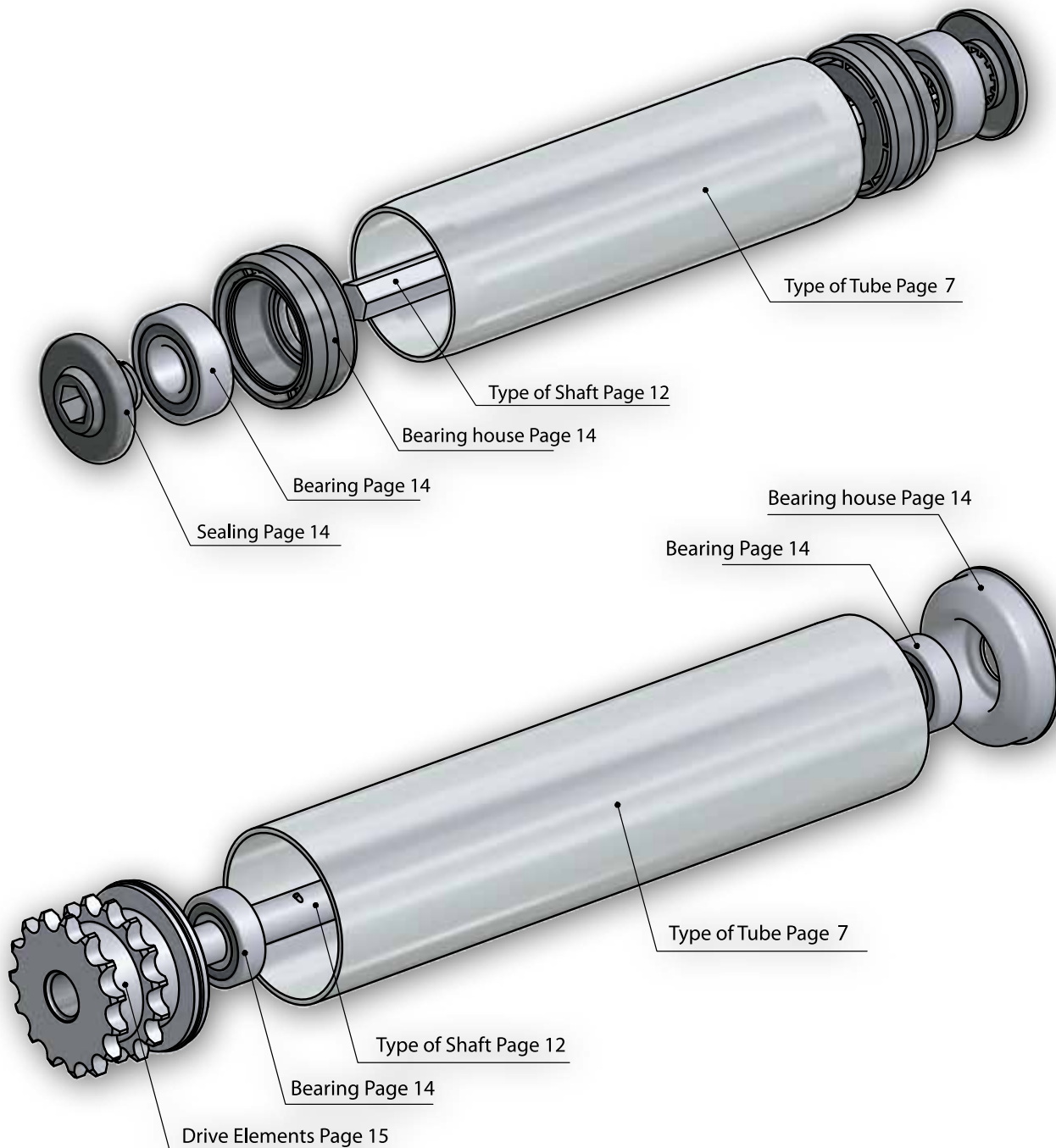
The bearing, tube and shaft variations have to be selected in such a way that the weakest construction unit is suitable for the required load capacity.

Even technical requirements like electrical discharging or the consideration of the environmental conditions such as temperature, air humidity, wetness etc. have to be considered for the configuration.

Selection of Conveyor Roller

The construction of a conveyor roller normally consists of the tube, shaft and bearing.
For a driven roller you have to add the driving elements.

Further details can be obtained by the following information.



Types of Tube

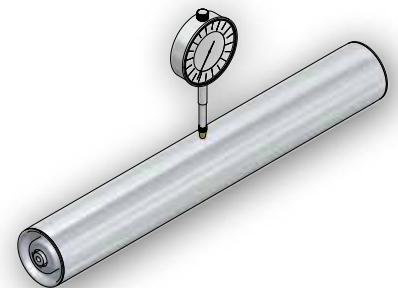
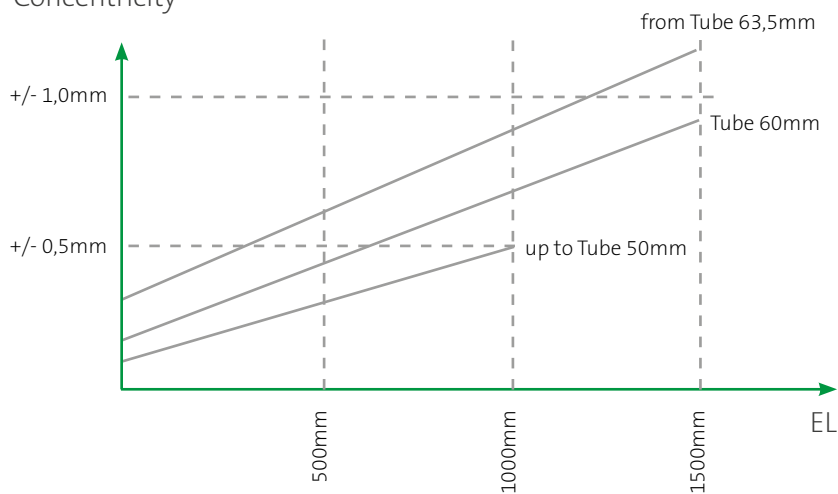
The construction of the transportation facility and the capacity of the tube affect the tube diameter (see end of cover page).

Steel Tubes: Conveyor roller tube EN 10 305-3 (DIN 2394) with limited tolerance material S235JR (ST37)

Tube-Ø in mm	Wall Thickness						
	1mm	1,5mm	2mm	2,9mm	3mm	3,25mm	3,6mm
16	X						
20		X					
30	X	X					
32			X				
40		X	X		X		
50		X	X		X		
60			X		X		
63,5				X			
70			X	X			
80			X*		X		
88,9				X			
108						X	
133							X

Concentricity: The DIN only gives the tolerance for the wall thickness and the rectitude.

Concentricity



* delivered only in dimension 79,5 x 1,75mm

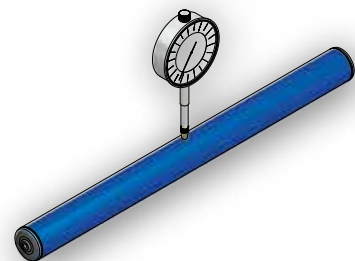
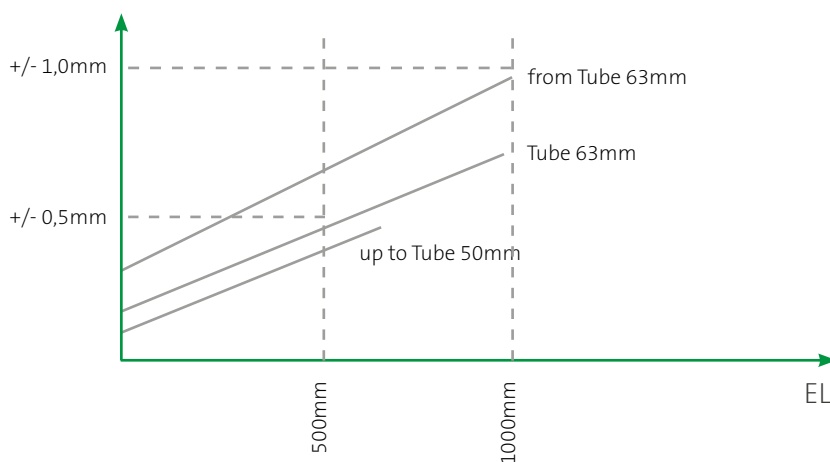
Types of Tube

Plastic Tubes: material – shock resistant special PVC
Two different colors are available ex stock
(RAL 5015 / blue – RAL 7032a / light grey).

Tube-Ø in mm	Wall Thickness					
	1,5 mm	1,8 mm	2,3 mm	2,8 mm	3 mm	7 mm
20	X					
30		X				
40			X			
50				X		
63					X	
90						X

Concentricity: The DIN only gives the tolerance for the wall thickness and the rectitude.

Concentricity



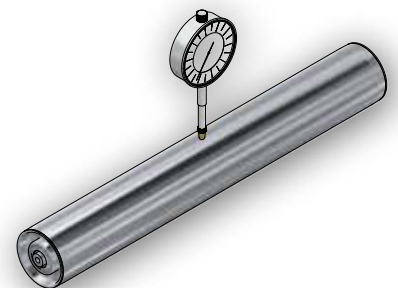
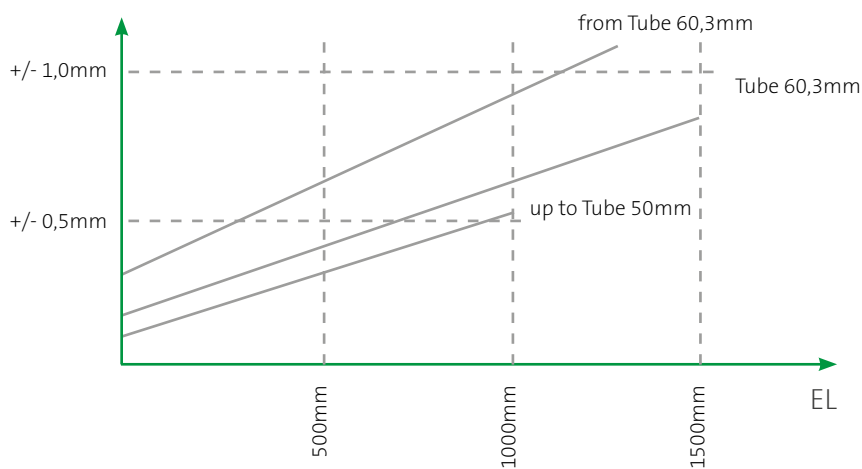
Types of Tube

Stainless Steel Tubes: material 1.4301 (X5CrNi18-10 or AISI 304)

Tube-Ø in mm	Wall Thickness					
	1mm	1,5mm	1,65mm	2mm	2,9mm	3mm
16	X					
20	X					
30	X	X				
40		X				
50		X		X		
60,3			X			
80				X		X
88,9					X	

Concentricity: The DIN only gives the tolerance for the wall thickness and the rectitude.

Concentricity



Types of Tube

Rollex offers several types of surface treatments and coatings. Depending on the requirement you can choose between the following tube surface refinements:

- Untreated: The roller tubes are not treated. They are designated with the code ST (Steel Tube), N2 (Stainless Steel Tube), KB or KGH (Plastic Tube).
- Galvanized: The galvanizing has a thickness of around 0,8µm. It is for corrosion protection, but please note that this protection can be destroyed by mechanic and thermic influences. At this parts the tubes may start rusting. Galvanized tubes are marked with the code STI. Driven roller that have to be galvanized in total (incl. Drive Element) have the code ST with the addition „galvanized in total“.
- PVC-Coating: The PVC-Coating will be made by air pressure. Rollex offers several different styles and dimensions:

PVC 60° Shore silver grey:

Tube-Ø	PVC 2 mm	PVC 3 mm	PVC 5 mm
30 mm	X		
40 mm	X	X	X
50 mm	X	X	X
60 mm	X	X	X
80 mm	X	X	X
88,9 mm	X	X	X
108 mm		X	X

PVC 60° Shore anthracite - antistatic:

Tube-Ø	PVC 2 mm	PVC 3 mm	PVC 5 mm
50 mm	X	X	
60 mm	X	X	

PVC 88° Shore black:

Tube-Ø	PVC 2 mm	PVC 3 mm	PVC 5 mm
50 mm		X	
60 mm		X	X

Types of Tube

Rubberizing: The tube will be coated with a black neoprene NBR-Rubber. This will be glued and grinded the required thickness. Hardness is around 60° Shore and it is available for all popular tube dimensions.
Tube 40 with 5mm coating can be delivered with rubber sleeves (standard) or as vulcanised coating

PU-Baytec Coating: Tubes can even be coated with a PU (Polyurethane). You can choose between PU Baytec 73° Shore black and the more expensive, because more labor-intensive PU nature, in different grades (70 – 90° Shore).

Epoxy Resin-Coating: Rollex steel roller with epoxy resin coating. In case of order please mention RAL color code.

Nitrocarburisation: This means the enrichment of the tube surface layer with nitrogen and carbon by thermochemical means. This causes a nitrided case containing a compound layer and a diffusion layer. It is a hardening method for surfaces, that means the depth is only max. 0,2mm. The border zone only has a hardness of max. 540 HV1.







Description:	Steel Tube	Steel	ST
		Galvanized	STI
		PVC-coated	STP2-5
		Rubberized	STG
		PU-coated	STPU
		Epoxy resin coated	STR
		Nitrocarburized	STH
	Plastic Tube	PVC shock-resistant blue RAL 5015	KB
		PVC shock-resistant grey RAL 7030A	KGH
	Stainless Steel Tube	Material 1.4301	N2

Types of Shaft

- Material: Rollex uses machining steel DIN EN 10277-3 or EN 10278-h and stainless steel material 1.4305.
- Dimensions: The construction of the transportation facility and the capacity of the shaft affect the shaft dimension (see end of cover page)

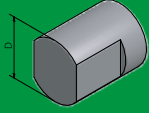
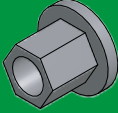
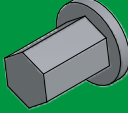
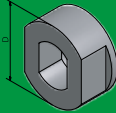
Shaft dimension in mm	Round	Hexagonal
5	X	
6	X	
8	X	
ASK 8		X
10	X	
ASK 11		X
12	X	
14	X	
15	X	
17	X	
20	X	
25	X	

- Shaft variations: Rollex conveyor roller are available with different shaft versions. By this means you can fit all requirements.

Description	A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø						
5				6		6
6	M 6 x 15			8		8
8	M 8 x 15		M 5 x 10	10		10
ASK 8						10
10	M 10 x 15	M 8 x 15	M 6 x 10	10	SW 8 x 10	10
ASK 11						10
12	M 12 x 15	M 10 x 15	M 8 x 10	10	SW 10 x 10	10
14	M 14 x 20	M 12 x 15	M 8 x 15 M 10 x 15	10	SW 12 x 10	10
15	M 14 x 20		M 8 x 15 M 10 x 15		SW 12 x 10	
17	M 16 x 20	M 12 x 15	M 10 x 15 M 12 x 18		SW 14 x 10	
20	M 20 x 25	M 16 x 20	M 10 x 15 M 12 x 18		SW 14/15 x 10 SW 14/15 x 13	
25		M 16 x 20	M 16 x 24		SW 18 x 10/13	

Types of Shaft

Material: Shaft slip on caps made of plastic are used for corrosion protection and reduces noise.

Shaft-Ø				
8	SW 10 x 10 D=12 SW 14 x 10 D=16	SK 11 x 11 SK 11 x 11 FA	SK 11 x 17	
10	SW 14 x 10 D=16 SW 12 x 10 D=16			
12	SW 14 x 10 D=16			
14	SW 17 x 10 D=21			
20				SW 30 x 12 D = 36 available in plastic and sintered metal

Bearing house

Rollex uses different bearings for the conveyor roller.

Thermoplastic synthetic material – Bearings made from PA, PP or PC, that make low noise.

Steel bearings made from steel or galvanized steel (deep drawing sheet).

Bearing

Rollex uses different types of bearing that are chosen by the requirements.

Slide bearings:	Thermoplastic synthetic material with slide bearing bush made of PA or POM. For light weights and wet environments.
Ball Row:	Thermoplastic synthetic material made of PP with steel- or stainless steel balls. For light weights. Conus ball bearing made of hardened steel. For light and medium weights.
Precision ball bearing:	Precision ball bearing light greased re DIN 625. Available in different sealings like ZZ, RS or Z. Series 608, 6000, 6001, 6003, 6004, 6005, 6204, 6202, 6205, 6303, bearing play C3.

Sealing

Thermoplastic synthetic material bearings are supplied either with a labyrinth packing or a plastic slide sealing that protects the rolling balls against pollution.

Drive Elements

Conveyor roller can be driven different ways. The following is important for the selection of the drive:

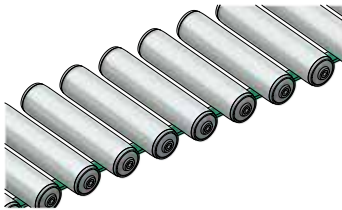
- transport device
- transport weight
- transport speed
- drive concept (accumulation drive/permanent drive)
- length of the conveyor
- environmental conditions
- selection of the driving element

Available Types of drive:

- Flat belt drive

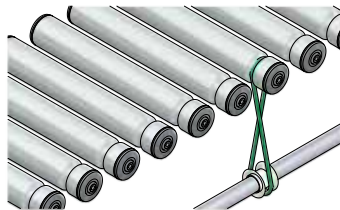
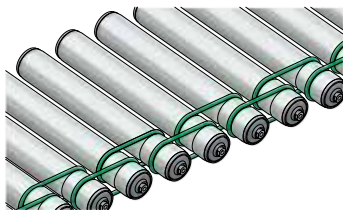
Conveyor roller are driven by a flat belt mounted below the roller.

For this concept all conveyor roller with a precision ball bearing from the Rollex-Roller range can be used.



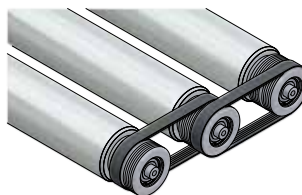
- Round belt drive

Round belt drives can be constructed in two different versions, either the torque is transmitted from roller to roller or by a so-called upright shaft below the roller. Versions please see page 46 in chapter 2.



- Ripped-V-Belt Grooved Belt Drive

Conveyor roller are driven by a Ripped-V-Belt grooved belt, by the use of the roller with a PJ-profile (up to 500N) or with a PK-profile (up to 10.000N). The center distance tolerance should be between -1 and +1mm.



Drive Elements

Ripped-V-Belt Grooved Belts

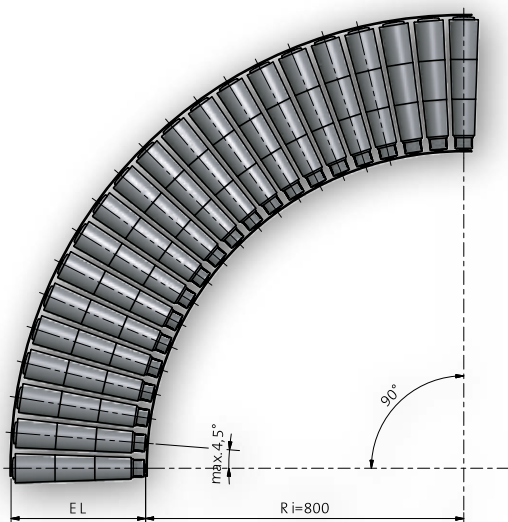
Center distance	Ripped-V-Belt Belt 2 or 3 ribs
55 mm	PJ 246
60 mm	PJ 256
68 mm	PJ 270
73 mm	PJ 282
75 mm	PJ 286
80 mm	PJ 290
90 mm	PJ 314
94 mm	PJ 316
100 mm	PJ 336
105 mm	PJ 346
120 mm	PJ 376

Ripped-V-Belt Drive D = 43 mm

Center distance	Ripped-V-Belt Belt 6 or 8 ribs
145 mm	PK 541
160 mm	PK 573
169 mm	PK 589
180 mm	PK 611
200 mm	PK 651
225 mm	PK 701
250 mm	PK 751
300 mm	PK 801

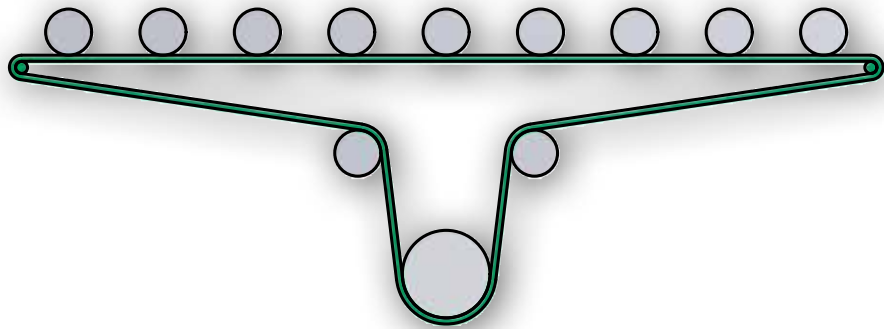
Ripped-V-Belt Drive D = 80 mm

The Ripped-V-Belt grooved belt with 2 ribs can even be used for curved conveyor lines. Please note that the angle between the conical roller should be max. 4,5°.

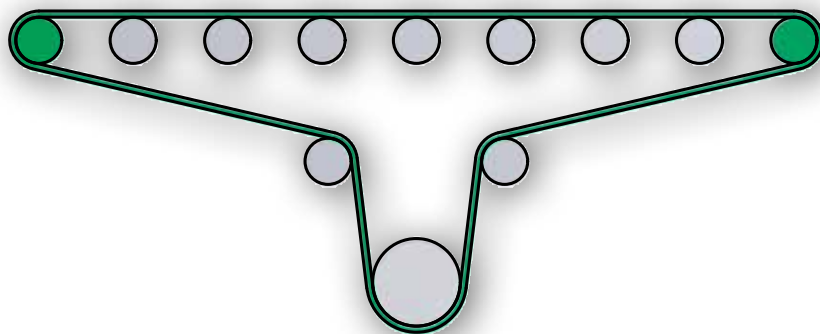


Drive Elements

- Tooth Belt Drive:** Conveyor roller are manufactured with a tooth belt drive, using a Poly Chain- toothing or an HTD- toothing. The center distance tolerance should be between 0 to - 0,3mm.
- Chain Drive:** Conveyor roller are manufactured with a chain sprocket, depending on the drive concept (tangential drive or drive from roller to roller).
- Tangential Drive:** Using the tangential drive only one chain is required for driving the complete roller track. Please note that for this concept only one tooth of the sprocket is working . The chain is guided by a chain slide bar.

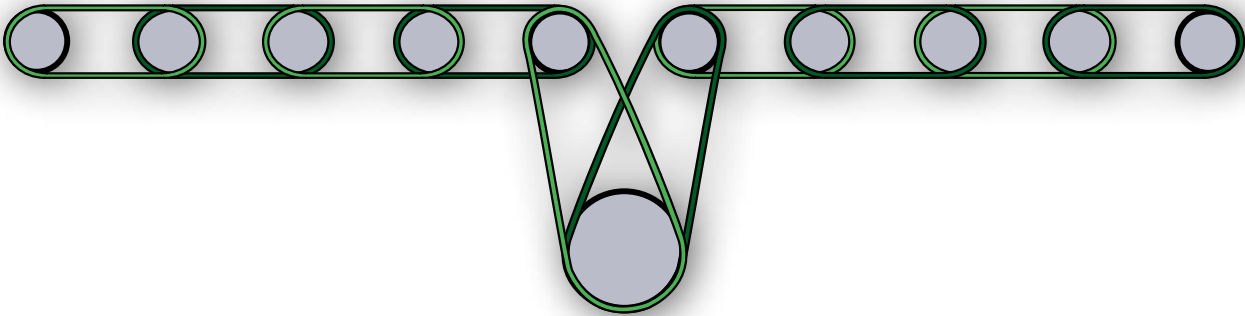


If the tangential chain is installed above the roller the last roller have to get a normal tooth profile because the bolt tooth form for tangential drive can not be used for chain enlacement.



Drive Elements

Drive roller to roller: The drive roller to roller is used with a double chain sprocket. The tolerance of the shaft center should be 0 to + 0,3 mm.



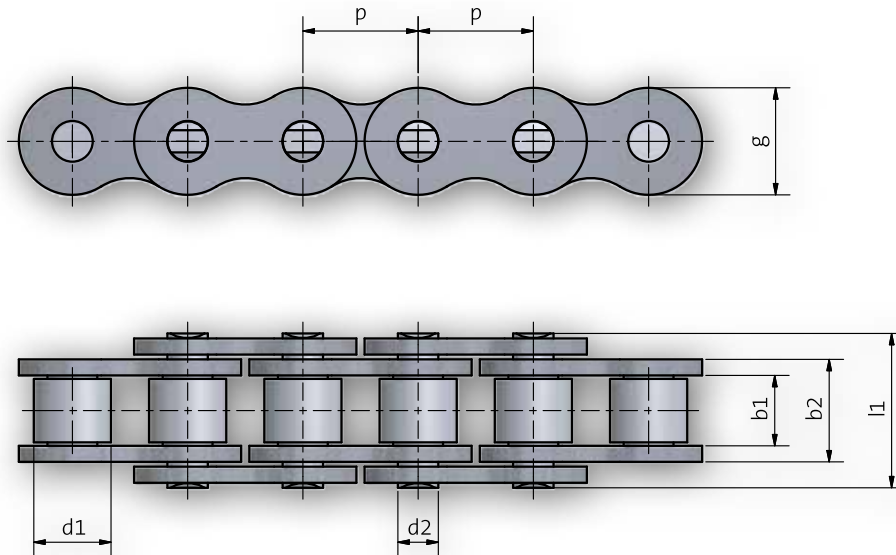
Please note the **centre to centre distances** for the different chains.

Chain left	3/8 x 7/32" z = 12	1/2 x 5/16" z = 14	5/8 x 3/8" z = 15	3/4 x 7/16" z = 13
22	47,6			
24	57,2			
26	66,7	76,2		123,8
28	76,2	88,9	103,2	142,9
30	85,8	101,6	119,1	161,9
32	95,3	114,3	134,9	181,0
34	104,8	127,0	150,8	200,0
36	114,3	139,7	166,7	219,1
38	123,9	152,4	182,6	238,1
40	133,4	165,1	198,5	257,2
42	142,9	177,8	214,3	276,2
44	152,4	190,5	230,2	295,3
46		203,2	246,1	314,3
48		215,9	261,9	333,4
50		228,6	277,8	352,4
52		241,3	293,7	371,5
54		254,0	309,6	390,5
56		266,7	325,4	409,6
58		279,4	314,3	428,6
60		292,1	357,2	447,7

Centre to centre distances in mm of the driving element.

Drive Elements

For dimensioning driven transport facilities please watch the break load of the chains.
Roller Chains DIN 8187



DIN/ISO Chain-No.	Trade Name $p \times b_1$	p	b_1 min.	b_2 max.	d_1 max.	d_2 max.	k min.	g max.	k max.	Break Load	
										L_1 min.	N min.
06 B-1	3/8" x 7/32"	9,525	5,72	8,53	6,35	3,28	3,33	8,2	3,3	13,5	9000
08 B-1	1/2" x 5/16"	12,7	7,75	11,3	8,51	4,45	3,9	11,8	3,9	17	18000
10 B-1	5/8" x 3/8"	15,88	9,65	13,28	10,16	5,08	4,1	14,7	4,1	19,6	22400
12 B-1	3/4" x 7/16"	19,05	11,68	15,62	12,07	5,72	4,6	16,1	4,6	22,7	29000
16 B-1	1" x 0,67"	25,4	17,02	25,4	15,88	8,82	5,4	21	5,4	36,1	60000

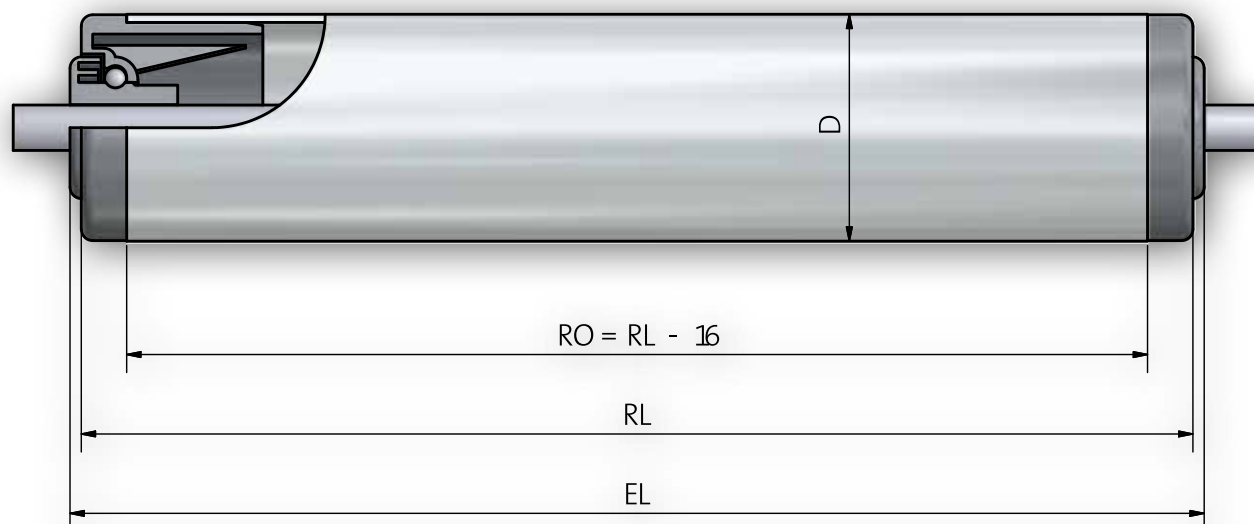
Single Roller Chains DIN 8187 (European version) ISO 606- 1982

Gravity- and Conveyor Roller





Type	Description	Page
50 / 51	Thermoplastic synthetic material - Bearing housing with Ball Row	22
60	Thermoplastic synthetic material - Bearing housing with Ball Bearing	24
100 / 101 / 102 / 103	Thermoplastic synthetic material - Bearing housing with Ball Row	26
150 / 151	Thermoplastic synthetic material - Bearing housing with Slide Bearing	28
200	Steel housing with Ball Row	30
220	Steel housing with Ball Row	32
250 / 251	Steel housing with Precision Ball Bearing	34
260 / 261	Steel housing with Precision Ball Bearing	36
290	Steel housing with Precision Ball Bearing	38
300	Thermoplastic synthetic material - Bearing housing with Ball Bearing	40
301	Thermoplastic synthetic material - Bearing housing with Ball Bearing	42
302	Thermoplastic synthetic material - Bearing housing with Ball Bearing	44
306 / 307 / 308 / 309	Round Belt Grooves	46
320	Thermoplastic synthetic material -Bearing housing with Ball Bearing	48
400	Thermoplastic synthetic material - Bearing housing with Ball Bearing	50
400 ST	Steel housing with Precision Bearing	52
401	Thermoplastic synthetic material - Bearing housing with Ball Bearing	54
402	Thermoplastic synthetic material - Bearing housing with Ball Bearing	56
402 K	Bearing housing with Ball Bearing	58
402 ST	Steel housing with Precision Ball Bearing	60
402 WT	Steel housing with Precision Ball Bearing	62
402 WS	Steel housing with Precision Ball Bearing	64
402 WST	Steel housing with Precision Ball Bearing	66
402 WO	Steel housing with Precision Ball Bearing	68



Roller 50 / Roller 51



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=				
5	RL+			2	2
6	RL+	15		5	5
8	RL+	18	5	5	5
10	RL+	17	5	5	5

Tube- and Shaft Combination

Tube dia.	A5	A6	A8	A10
16 x 1	x			
20 x 1,5		x	x	
30 x 1		x	x	x
30 x 1,8		x	x	x
32 x 2		x	x	x
40 x 1,5		x	x	x
40 x 2,3		x	x	x

Roller 50 / Roller 51

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celsius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Row

100N (depending upon the load limit of tube and shaft)

0,3 m/s

-5 to +40 C

Type 51 (Balls Stainless Steel 1.4034)

Gravity Roller - not for use as driven roller.

Tube dia. 16 mm only available with shaft dia. 5 mm.

For tube dia. 16 mm RO = RL - 14.

Order Example

Type 50 - 20x1,5 KB A8 FA EL=200mm

Bearing Type.....

Tube-Ø and wall thickness

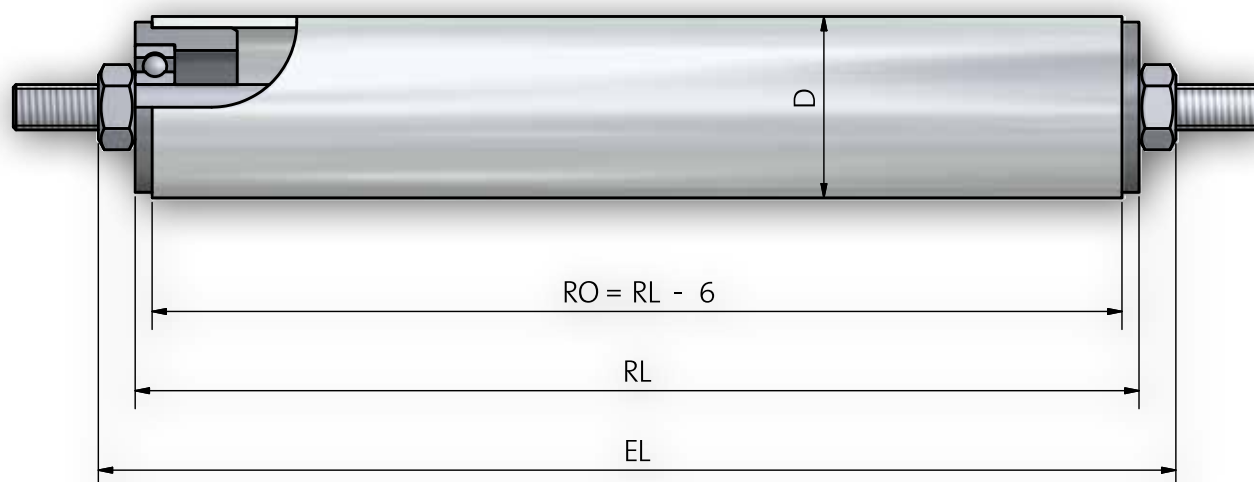
Tube quality

Shaft-Ø



Shaft Ends

Installation length

Roller 60



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
8	RL+	13	10
10	RL+	12	10

Tube- and Shaft Combination

Tube dia.	A8	A10	A12	A14
30 x 1	x	x		
30 x 1,8	x			
32 x 2	x	x		
40 x 1,5	x	x	x	x

Roller 60

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearing (Series 608,6000), 6202 re DIN 625 available in 2RS, ZZ Standard Series 608ZZ

600N (depending upon the load limit of tube and shaft)

1,5 m/s

-5 to +40 C

Shaft with Female Thread only in combination with shaft securing (Circlip, Starlock), antistatic version (only for Steel Tube).

Order Example

Type 60 ZZ - 30x1 STI A8 M8x15 EL=500mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

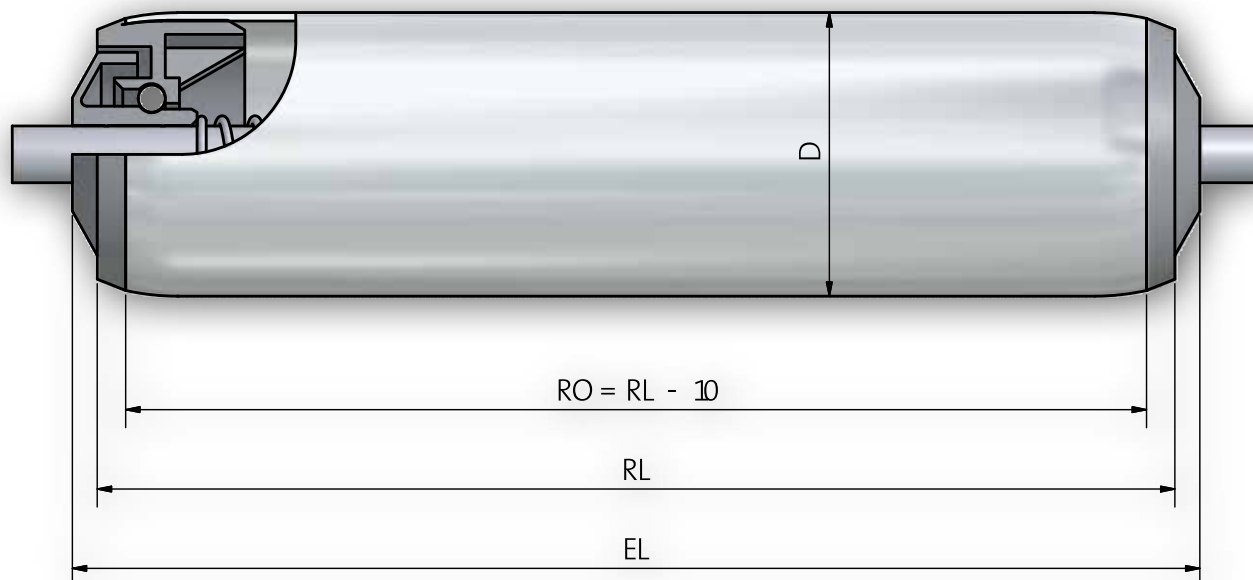
Tube quality |

Shaft-Ø |







Shaft Ends |

Installation length |

Roller 100/101/102/103



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft- ϕ	EL=						
6	RL+	20			10		10
8	RL+	23		10	10		10
S 8	RL+				10		10
10	RL+	22	10	10	10	10	10
S 11	RL+				10		10
12	RL+	24	10	10	10	10	10

Tube- and Shaft Combination

Tube dia.	A6	A8	A S8	A10	A S11	A 12
50 x 1,5	x	x	x	x	x	x
50 x 2,8	x	x	x	x	x	x
60,3 x 1,65	x	x	x	x	x	x
63 x 3	x	x	x	x	x	x

Roller 100/101/102/103

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Row

200N (depending upon the load limit of tube and shaft)

0,3 m/s

-5 to +40 C

Type 101 (with cage)

Type 102 (balls Stainless Steel 1.4301/1.4401)

Type 103 (balls Stainless Steel 1.4301/1.4401 with cage)

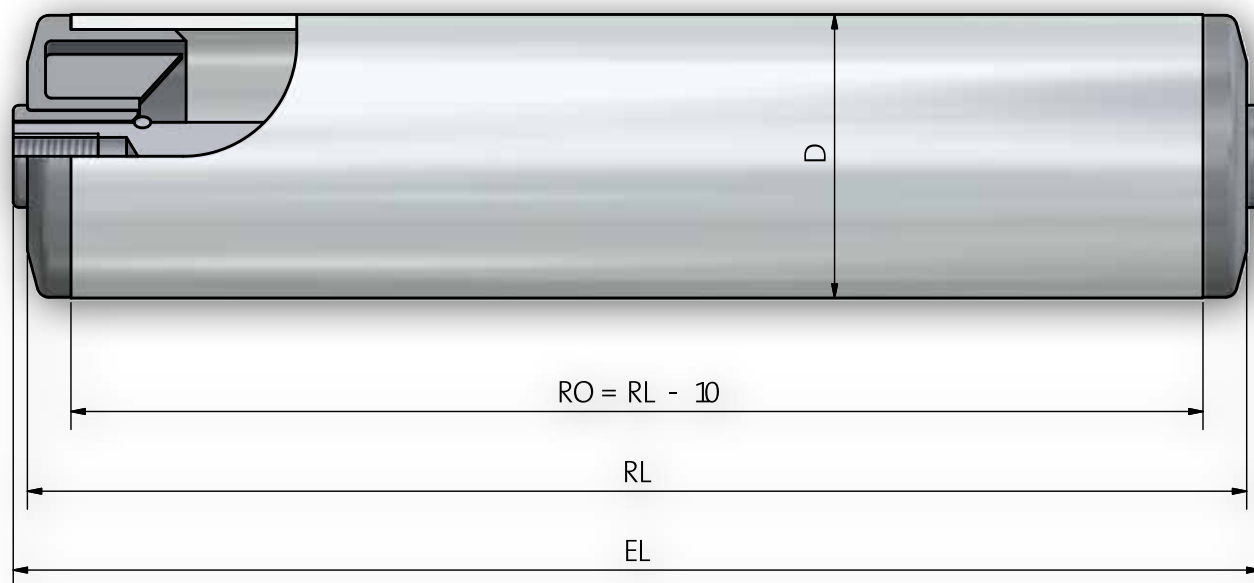
Gravity Roller - not for use as driven roller.

Order Example











Type 100 - 50x2,8 KB A8 FA EL=500mm

Bearing Type
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft Ends
 Installation length

Roller 150 / 151



Shaft dimensions

Order Specification		A...M...		A...JGM...		A...glatt		A...SW...		A...FA...	
Shaft- \varnothing	EL=										
		S	K	S	K	S	K	S	K	S	K
8	RL+	19	23			6	10			6	10
10	RL+	18	22	6	10	6	10	6	10	6	10
12	RL+	20	24	6	10	6	10	6	10	6	10
14	RL+	22	26	6	10	6	10	6	10	6	10

S = Steel tube **K** = Plastic tube

Tube- and Shaft Combination

Tube dia.	A8	A10	A 12	A 14
50 x 1,5	x	x	x	x
50 x 2,8	x	x	x	x
60 x 2	x	x	x	x
60,3 x 1,65	x	x	x	x
63 x 3	x	x	x	x

Roller 150

Bearing Type	Thermoplastic synthetic material - Bearing Site
Type of Bearing	Slide bearing bushes
Load Capacity/Roller	150N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Optional	
Note	Gravity Roller - not for use as driven roller. For tube dimension 50 x 2.8: RO = RL - 12.

Roller 151 (Special design)

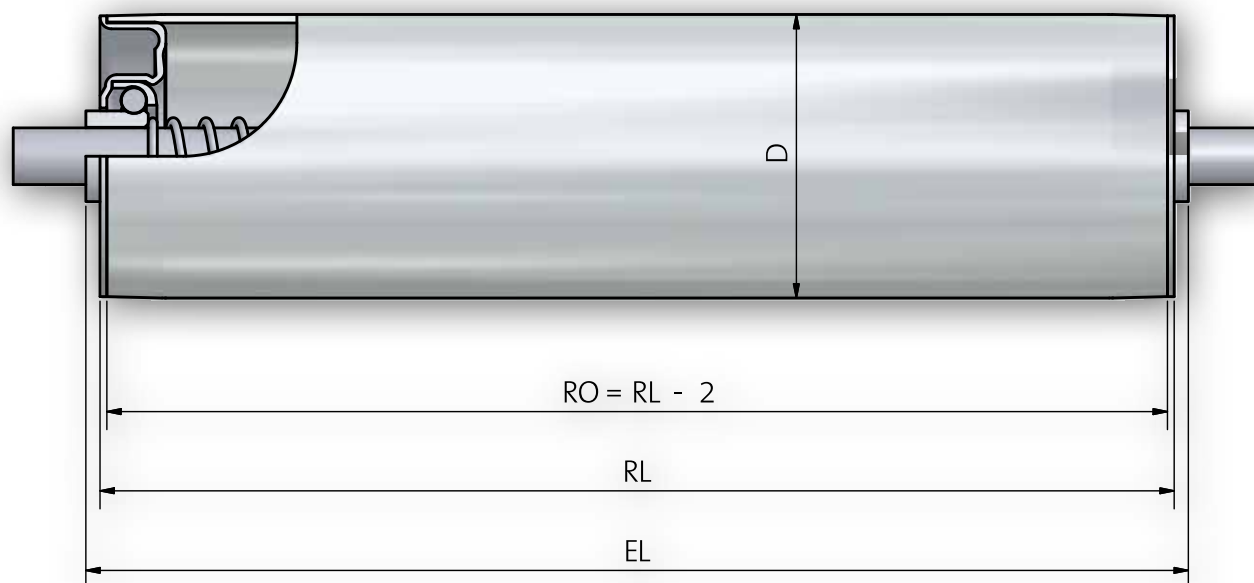


Note	Gravity roller - not to be used as driven roller. Closed plain bearing bush prevents infiltration of wetness.
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


Order Example Type 150

Type 150	150 - 50x2,8 KB A10 FA EL=500mm
Type 151	151 - 50x2,8 KB A12 IGM 8 EL=500mm
Bearing Type	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 200



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=					
6	RL+	16		6		6
8	RL+	19		6		6
10	RL+	18	6	6	6	6
S 11	RL+			6		6
12	RL+	20	6	6	6	6

Tube- and Shaft Combination

Tube dia.	A6	A8	A10	A S11	A 12
30 x 1,5	x	x	x		
40 x 1,5		x	x	x	x
50 x 1,5	x	x	x	x	x
50 x 2		x	x	x	x
60 x 2		x	x	x	x
80 x 2			x	x	x

Roller 200

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Steel housing with Ball Row

Ball Row

1.600N (depending upon the load limit of tube and shaft)

0,6 m/s

-5 to +80 C

With special greasing even for use in Deep Freeze Areas (-28°C)

Gravity Roller - not for use as driven roller.

Order Example

Type 200 - 50x1,5 STI A12 IGM 8x15 EL=500mm

Bearing Type

Tube-Ø and wall thickness

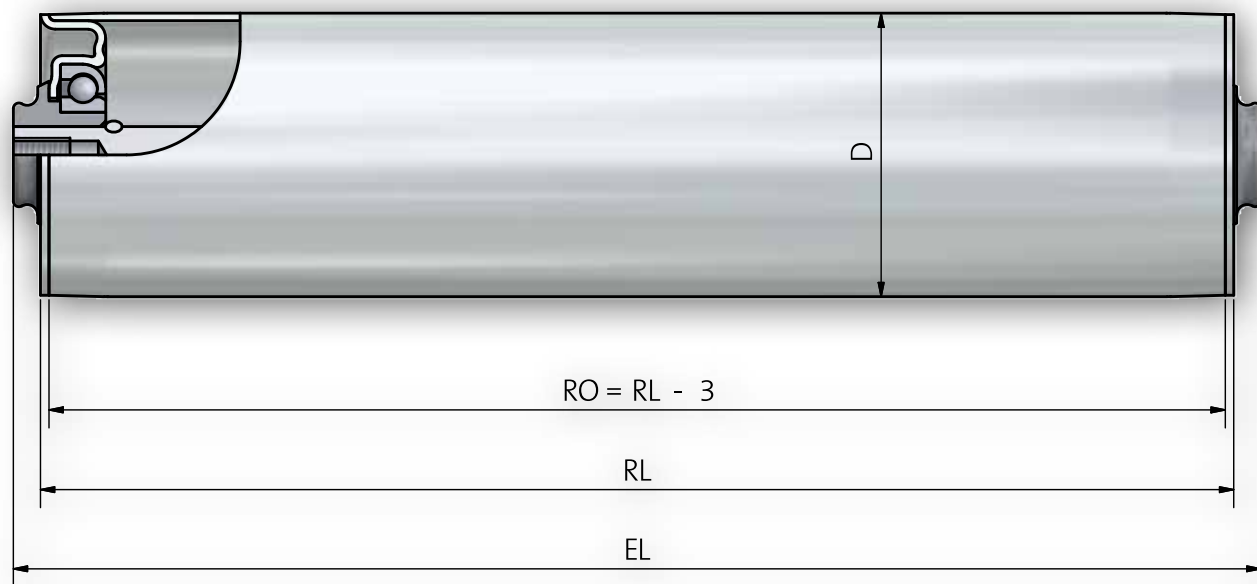
Tube quality

Shaft-Ø







Shaft Ends

Installation length

Roller 220



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=						
10	RL+	22	10	10	10	10	10
12	RL+	24	10	10	10	10	10
15	RL+	26	10	10	10		

Tube- and Shaft Combination

Tube dia.	A10	A12	A15
50 x 1,5	x	x	x
50 x 2	x	x	x
60 x 2	x	x	x
80 x 2	x	x	x

Roller 220

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Steel housing with Ball Row

Ball Row

2.400N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +80 C

With special greasing even for use in Deep Freeze Areas (-28°C)

Gravity Roller - not for use as driven roller.

Order Example

Type 220 - 50x1,5 STI A12 IGM 8x15 EL=500mm

Bearing Type |

Tube-Ø and wall thickness |

Tube quality |

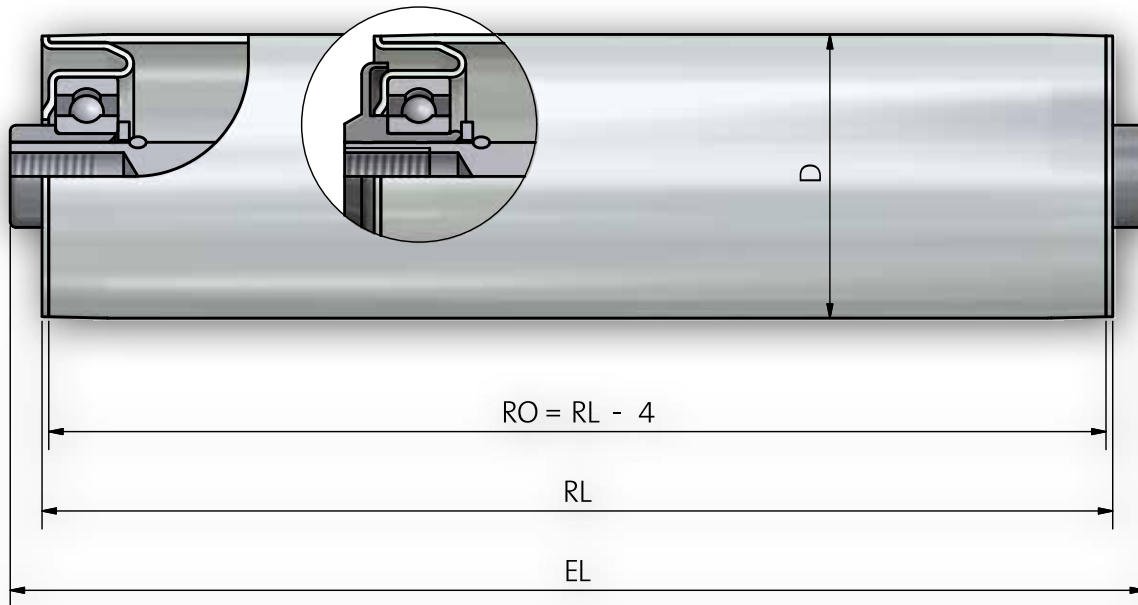
Shaft-Ø |

Shaft Ends |







Installation length |

Roller 250 / 251

Type 251



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=						
8	RL+	23			10		10
10	RL+	22	10	10	10	10	10
S11	RL+				10		10
12	RL+	24	10	10	10	10	10
14	RL+	26	10	10	10	10	10
15	RL+		10	10		10	
17	RL+	26		10		10	

Tube- and Shaft Combination

Tube dia.	A8	A10	S11	A12	A14	A15	A17
40 x 1,5				x			
50 x 1,5	x	x	x	x	x	x	x
50 x 2	x	x	x	x	x	x	x
60 x 2	x	x	x	x	x	x	x
60 x 3		x	x	x	x	x	x
80 x 2				x	x	x	x
80 x 3				x	x	x	x

Roller 250 / 251

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Steel housing with Precision Ball Bearing

Ball Bearings (Series 6001,6003,6202) DIN 625 available in 2RS, ZZ Standard Series

6202ZZ - plastic distance bushings to get the shaft diameters

2.400N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +60 C

Type 251 with additional shelter

For use as driven roller.

Tube dia. 40 mm only with Shaft dia. D=12 mm (Ending flat and FA not available).

Shaft dia. 15 mm und 17 mm without distance bush.

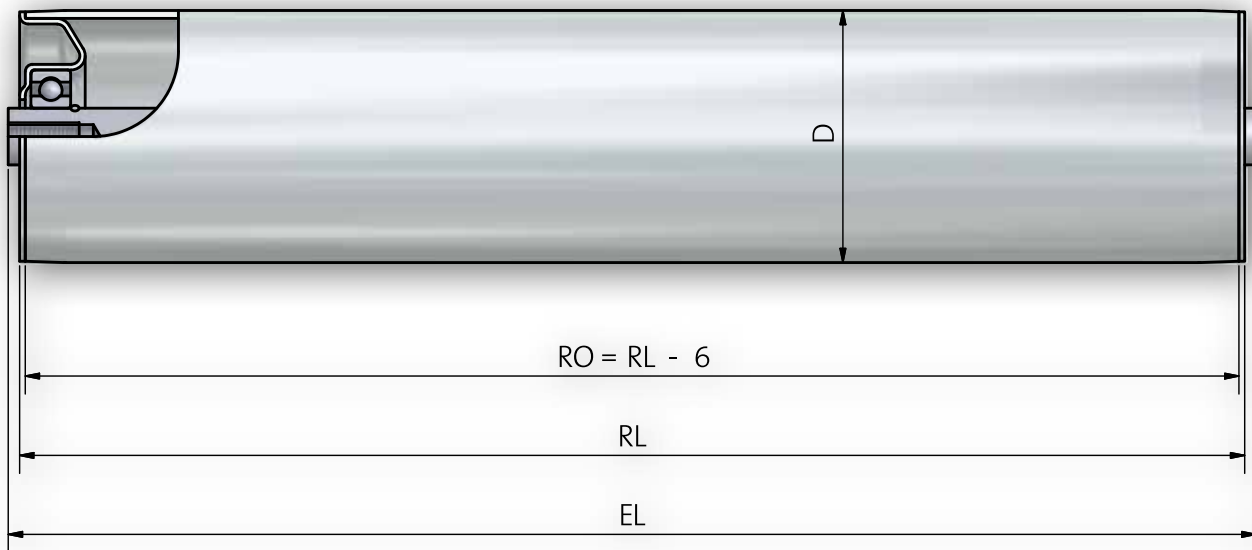
Type 251 for shaft 17 mm not available.

With special greasing even for use in Deep Freeze Areas (-28°C).

Order Example

Type	250 ZZ - 50x1,5 STI A12 IGM 8x15 EL=500mm
Bearing Type	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 260 / 261



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...SW...
Shaft- \varnothing	EL=			
17	RL+	22	6	6
20	RL+	24	6	6
25	RL+		6	6

Tube- and Shaft Combination

Tube dia.	A17	A20	A25
63,5 x 2,9		x	
70 x 2,9	x	x	
80 x 2	x	x	x
88,9 x 2,9	x	x	x
108 x 3,6		x	x

Roller 260 / 261

Bearing Type

Type of Bearing
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

Steel housing with Precision Ball Bearing

Ball Bearings (Series 6004,6005,6204) DIN 625 available in 2RS, ZZ
5.000N (depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
Type 261 with additional sealing
For use as driven roller.
Tube dia. 63,5 mm only available with shaft dia. D=20 mm.
With special greasing even for use in Deep Freeze Areas (-28°C).

Order Example







Type 260I ZZ - 88,9x2,9 STI A20 IGM 12x20 EL=950mm

Bearing Type
Ball bearing sealing
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 290



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=						
8	RL+				10		10
10	RL+	22	10	10	10	10	10
S 11	RL+				10		10
12	RL+	24	10	10	10	10	10
14	RL+	26	10	10	10	10	10
15	RL+		10	10		10	

Tube- and Shaft Combination

Tube dia.	A8	A10	A S11	A12	A14	A15
40 x 1,5	x	x	x	x	x	x

Roller 290

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Steel housing with Precision Ball Bearing

Ball Bearings (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202ZZ - plastic distance bushings to get the shaft diameters

1.200N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +60 C

For use as driven roller.

With special greasing even for use in Deep Freeze Areas (-28°C).

Order Example

Type 290 ZZ - 40x1,5 STI A12 IGM 8x15 EL=500mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

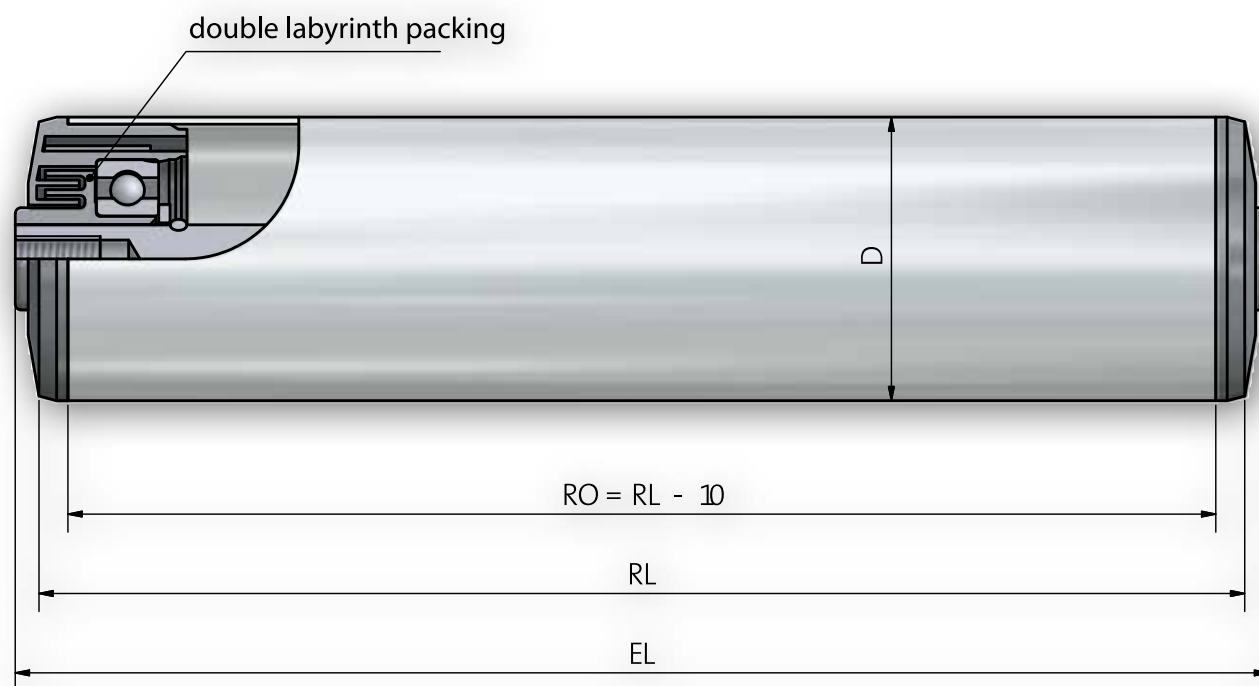
Tube quality |

Shaft-Ø |







Shaft Ends |

Installation length |

Roller 300



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=						
8	RL+	23			10		10
10	RL+	22	10	10	10	10	10
S 11	RL+				10		10
12	RL+	24	10	10	10	10	10
14	RL+	26	10	10	10	10	10

Tube- and Shaft Combination

Tube dia.	A8	A10	A S11	A12	A14
50 x 1,5	x	x	x	x	x
50 x 2,8	x	x	x	x	x
60 x 2	x	x	x	x	x
60,3 x 1,65	x	x	x	x	x
63 x 3	x	x	x	x	x
70 x 2		x	x	x	x
80 x 2		x	x	x	x
88,9 x 2,9		x	x	x	x
90 x 7		x	x	x	x

Roller 300

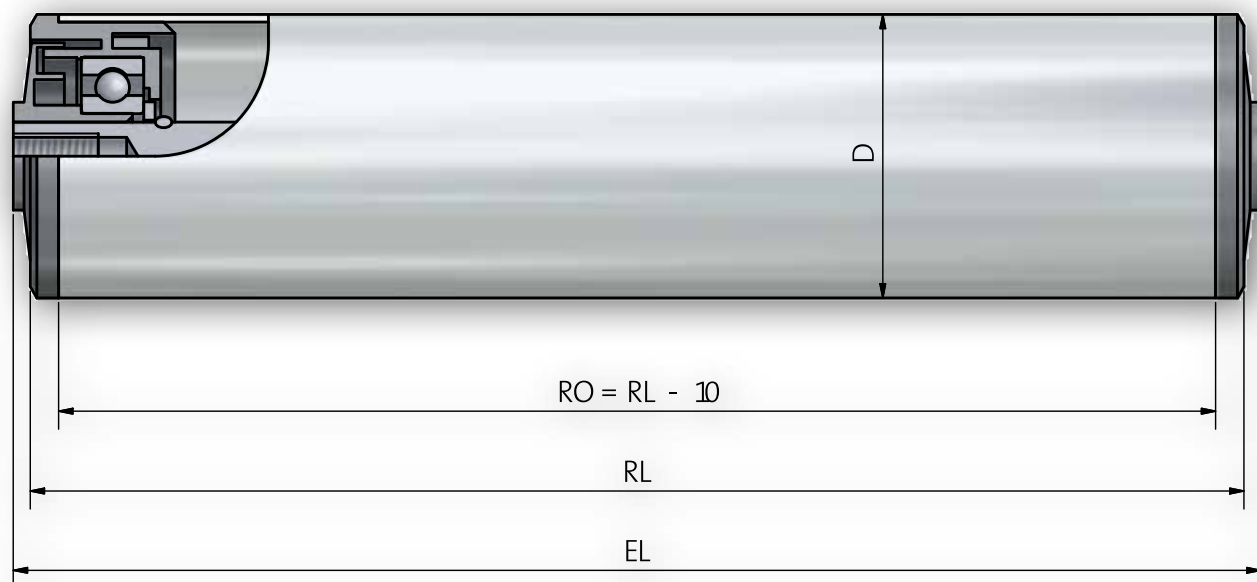
Bearing Type	Thermoplastic synthetic material - Bearing Site
Type of Bearing	Ball Bearings (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202ZZ
Load Capacity/Roller	1.600N (depending upon the load limit of tube and shaft)
Max. Speed	2 m/s
Range of Temperature Celcius	-5 to +50 C
Optional	Typ 300 D with plastic bearing cage and stainless steel balls 1.4401
Note	For use as driven roller (not 300 D).

Order Example






Type 300 **300 ZZ - 50x1,5 STI A12 IGM 8x15 EL=500mm**

Bearing Type	
Ball bearing sealing.....	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 301



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...
Shaft-Ø	EL=					
8	RL+	19	6	6	6	6
10	RL+	19	7	7	7	7
12	RL+	21	7	7	7	7
14	RL+	23	7	7	7	7
15	RL+	23	7	7	7	7
17	RL+	21	5	5	5	5

Tube- and Shaft Combination

Tube dia.	A8	A10	A12	A14	A15	A17
50 x 1,5	x	x	x	x	x	x
50 x 2,8	x	x	x	x	x	x
60 x 2	x	x	x	x	x	x
60,3 x 1,65	x	x	x	x	x	x
63 x 3	x	x	x	x	x	x
70 x 2		x	x	x	x	x
80 x 2		x	x	x	x	x
88,9 x 2,9		x	x	x	x	x

Roller 301

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearings (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202ZZ

1.600N (depending upon the load limit of tube and shaft)

2 m/s

-5 to +50 C

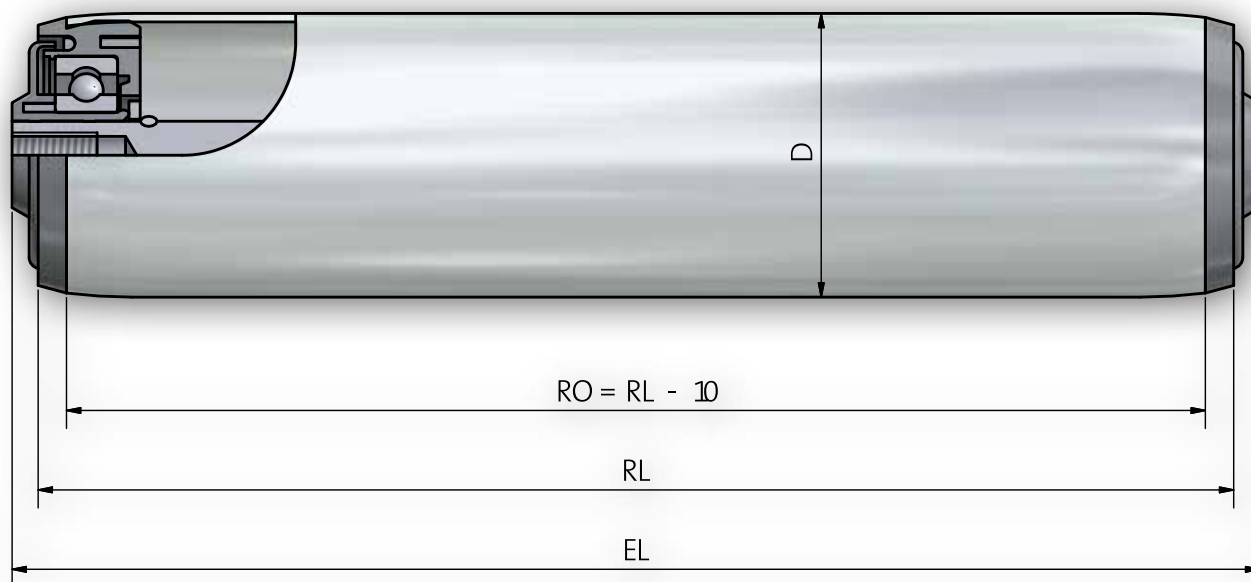
For use as driven roller.

Order Example







Type 300 **301 RS - 50x1,5 STI A14 IGM 8x15 EL=500mm**

Bearing Type
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft Ends
 Installation length

Roller 302



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...SW...	A...FA...
Shaft-Ø	EL=						
8	RL+	23	10	10	10	10	10
10	RL+	22	10	10	10	10	10
S 11	RL+				10		10
12	RL+	24	10	10	10	10	10
14	RL+	26	10	10	10	10	10
15	RL+	26	10	10	10	10	

Tube- and Shaft Combination

Tube dia.	A8	A10	S11	A12	A14	A15
40 x 1,5			x	x		
50 x 1,5	x	x	x	x	x	x
60 x 2	x	x	x	x	x	x

Roller 302

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearings (Series 6202) DIN 625 available in 2RS, ZZ Standard Series
6202ZZ - plastic distance bushings to get the shaft diameters

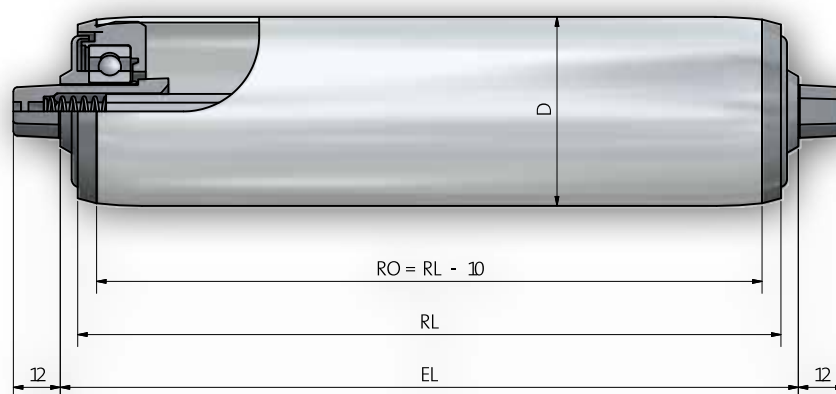
1.600N (depending upon the load limit of tube and shaft)

2 m/s

-5 to +50 C

For use as driven roller.
Antistatic Version.

Roller 302-50x1,5 STI ASK 8 SK 11x12 FA



Note

Roller equipped with conical hexagonal adapters on both ends which can be pressed in Load Capacity 400N

For 302-40x1,5 STI ASK 8 SK 11x12 FA the excess length of the spring loaded hexagonal shaft is 14 mm on both sides

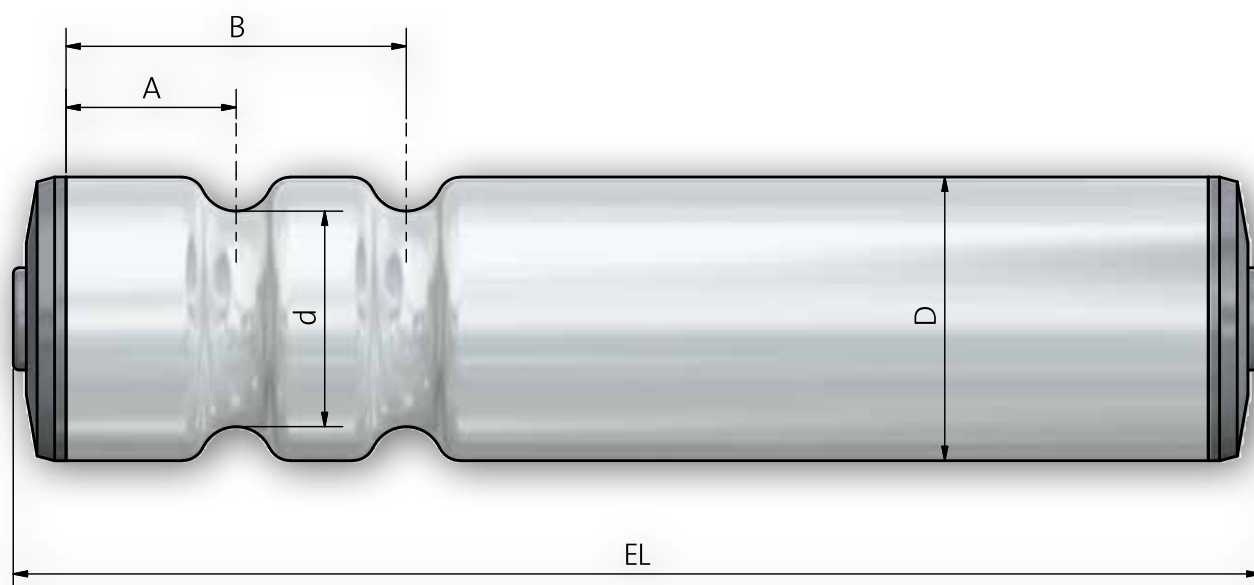
Order Example 302-50x1,5 STI ASK 8 SK 11x12 FA

Type	302 ZZ - 50x1,5 STI ASK 8 SK 11x12 FA EL=500mm
Bearing Type	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Order Example 302

Type	302 ZZ - 50x1,5 STI ASK 11 FA EL=500mm
Bearing Type	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 306 / 307 / 308 / 309



Steel tube

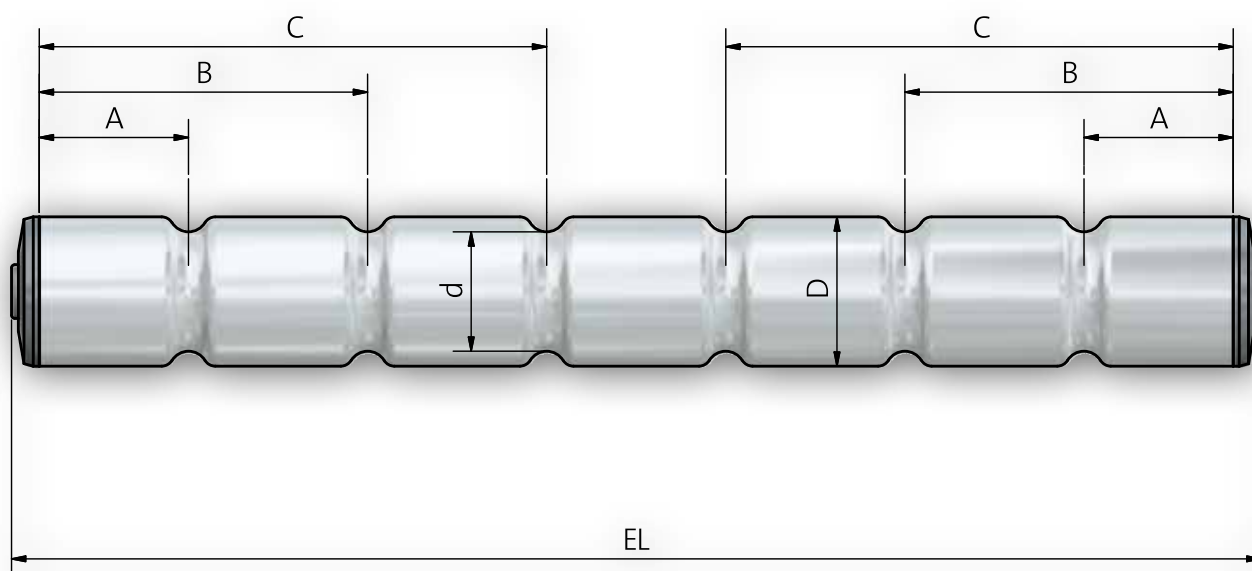
Belt-Ø	4	4	5	6	6	6	6	8	8
Tube dia.-Ø	30x1	40x1,5	48x1,5	50x1,5	60x2	63,5x2,9	80x3	88,9x2,9	108x3,25
A min	30	30	30	30	35	35	35	35	35
(B-A) min	30	30	30	30	35	35	35	35	35
d min	22	32	38	38	48	51	68	73	92

Plastic tube

Belt-Ø	4	4	5	5
Tube dia.-Ø	30x1,8	40x2,3	50x2,8	63x3
A min	35	35	30	35
(B-A) min	30	30	30	35
d min	22	32	40	53

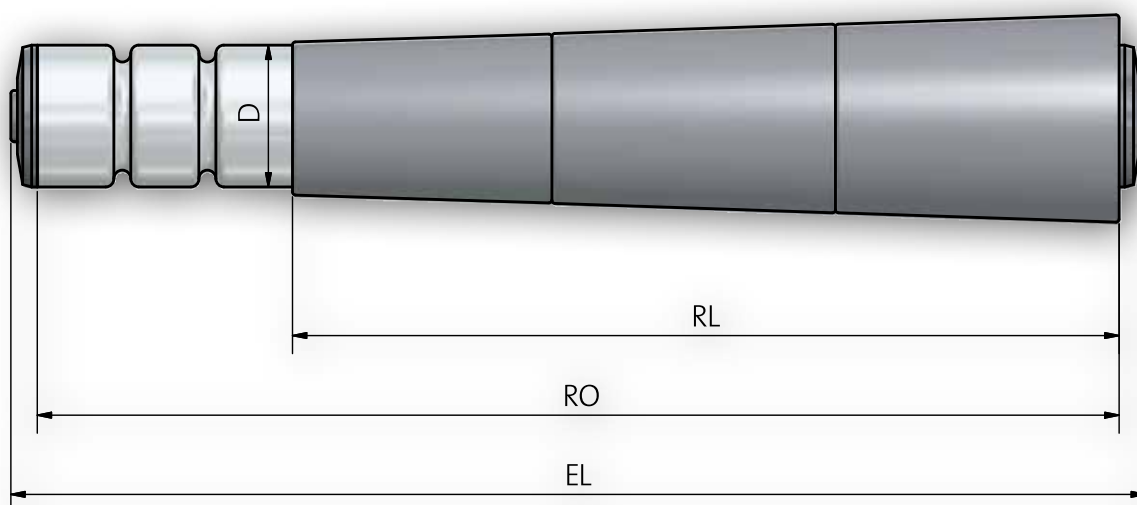
The following roller types can be used as grooved rollers:
60, 250, 260, 290, 300, 301, 302, 400, 402

Roller 306 / 307 / 308 / 309

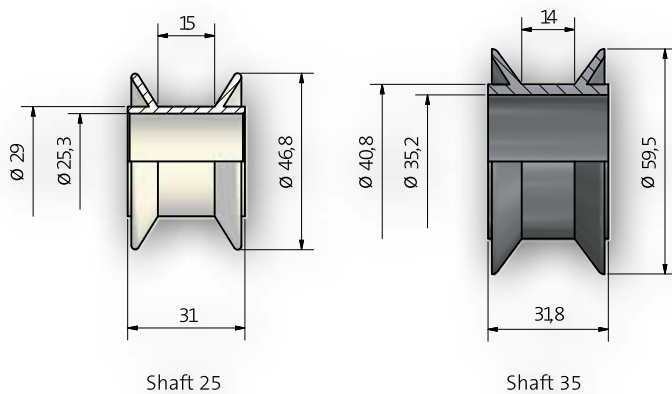


Note

Type 306 available with more grooves spread over the length. Minimum distance between grooves 30 mm.



Accessories: Round belt wheel

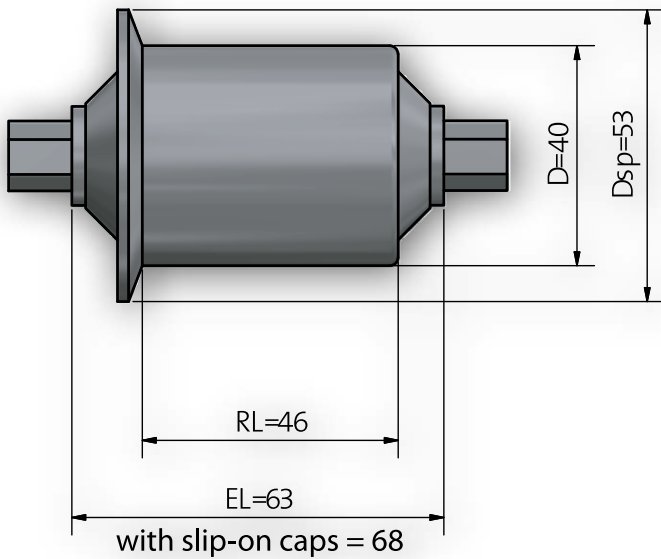


Order extension to be placed in front of roller type:

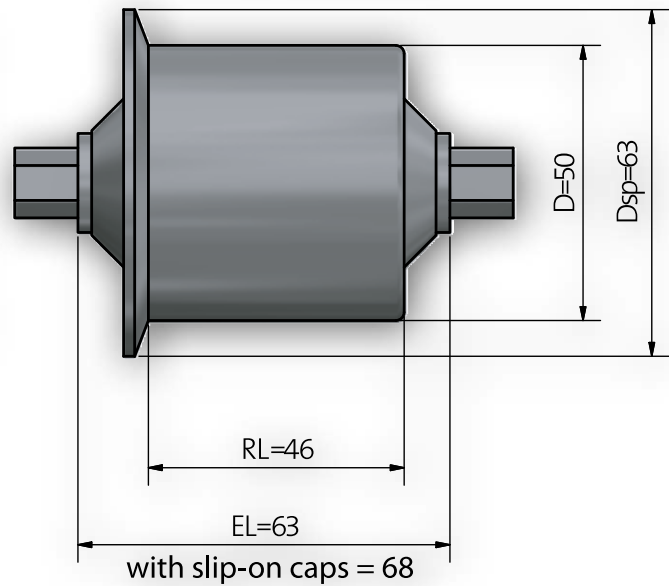
306 = 1 groove
307 = 2 grooves
308 = 3 grooves
309 = 4 grooves

Roller 320




Type 320-40 KS



Type 320-50 KS



Shaft dimensions

Order Specification		A...IGM...	A...glatt	A...SW...
Shaft-Ø	EL=			
8	RL+	17	17	17
10	RL+	17	17	17
S 11	RL+		17	
12	RL+	17	17	17
14	RL+	17	17	17

Roller 320

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearings (Series 6202) DIN 625 available in 2RS, ZZ Standard Series
6202ZZ - plastic distance bushings to get the shaft diameters

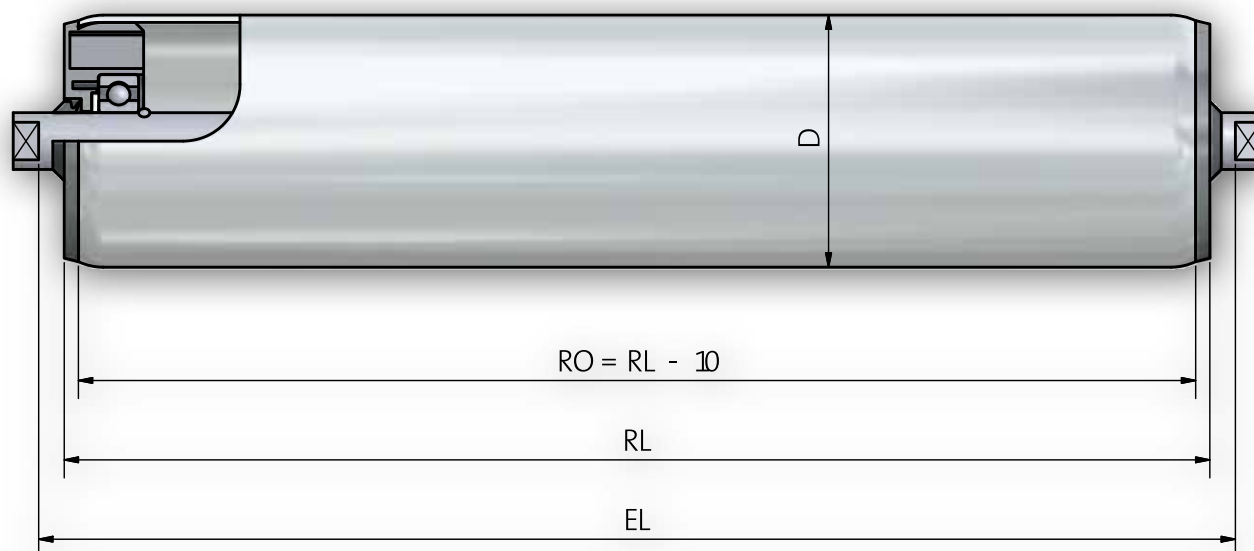
1.200N (depending upon the load limit of tube and shaft)

1,2 m/s





-5 to +50 C

For use as guide roller for Flat Belts.

Roller 400



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...SW...
Shaft-Ø	EL=				
20	RL+	24	6	6	6
25	RL+		6	6	6

Tube- and Shaft Combination

Tube dia.	A20	A25
50 x 2	x	
60 x 2	x	
63,5 x 2,9	x	
80 x 2	x	
80 x 3	x	
88,9 x 2,9	x	x
90 x 7	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 400

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearing (Series 6004, 6005, 6204, 6205) DIN 625 available in 2RS, ZZ - additional shelter with Felt Ring and V-Ring

3.600N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +60 C

For use as Belt Conveyor Roller.

Order Example

Type 400 RS - 88,9x2,9 STI A20 SW 15x10 EL=950mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

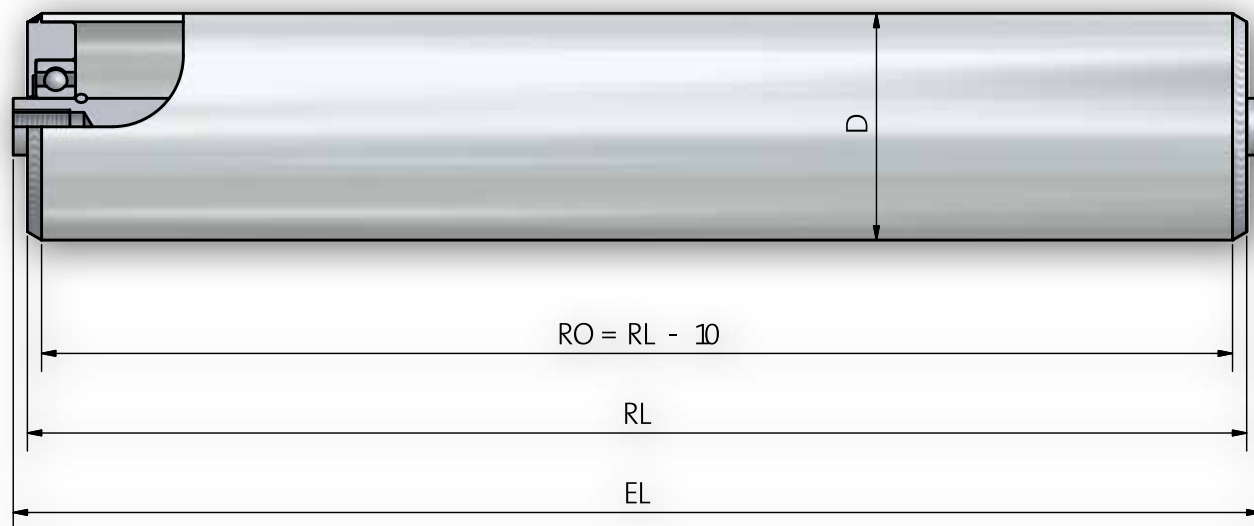
Tube quality |

Shaft-Ø |





Shaft Ends |

Installation length |

Roller 400 ST



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...SW...
Shaft-Ø	EL=				
20	RL+	26	6	6	6
25	RL+		6	6	6

Tube- and Shaft Combination

Tube dia.	A20	A25
63,5 x 2,9	x	x
80 x 3	x	x
88,9 x 2,9	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 400 ST

Bearing Type

Type of Bearing
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

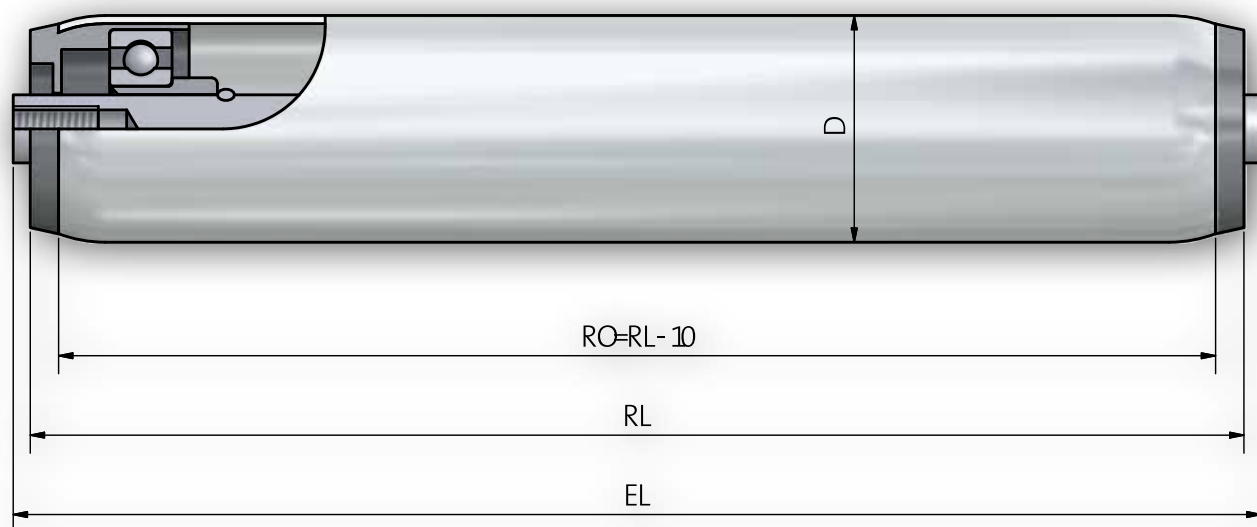
Steel housing with Precision Ball Bearing

Ball Bearing (Series 6004, 6005, 6204) DIN 625 available in 2RS, Z, ZZ
(depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
Type 400 N made of stainless steel
With special greasing even for use in Deep Freeze Areas (-28°C).
Steel housing welded to the tube.




Order Example

Type 400 ST RS - 88,9x2,9 ST A20 IGM 12x20 EL=950mm
Bearing Type
Ball bearing sealing.....
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 401



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...SW...
Shaft-Ø	EL=			
8	RL+	19		
10	RL+	18	6	6
12	RL+	20	6	6
14	RL+	22	6	6
17	RL+	22	6	6

Tube- and Shaft Combination

Tube dia.	A8	A10	A12	A14	A17
40 x 1,5	x	x	x	x	
50 x 2	x	x	x	x	x

Roller 401

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearing (Series 6003, 6202) DIN 625 available in 2RS, Z, ZZ Standard Series 6202ZZ

1.600N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +60 C

Even available with V-Ring shelter

Order Example

Type 401 ZZ - 50x1,5 STI A12 IGM 8x15 EL=450mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

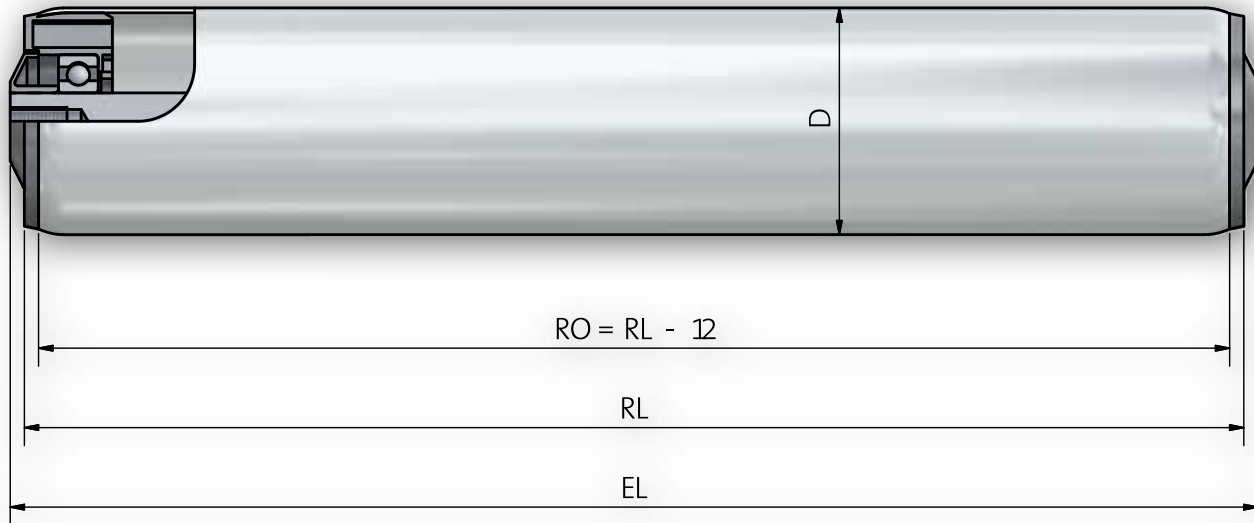
Tube quality |

Shaft-Ø |





Shaft Ends |

Installation length |

Roller 402



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...glatt	A...SW...
Shaft-Ø	EL=				
8	RL+	23		10	
10	RL+	22	10	10	10
12	RL+	24	10	10	10
14	RL+	26	10	10	10
17	RL+	26	10	10	10
20	RL+	28	10	10	10

Tube- and Shaft Combination

Tube dia.	A8	A10	A12	A14	A17	A20
40 x 1,5	x	x	x	x		
60 x 2					x	x
63,5 x 2,9					x	x
80 x 2					x	x
88,9 x 2,9					x	x
108 x 3,25					x	x

Roller 402

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Thermoplastic synthetic material - Bearing Site

Ball Bearing (Series 6002, 6204, 6303) DIN 625 available 2RS, ZZ

3.600N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +60 C

Shaft dia. 8 mm, 10 mm, 12 mm and 14 mm only available for Tube dia. 40 mm.

Load capacity for Tube dia. 40 mm max. 800N / Roller.

Cover caps for tube dia. 60 or higher.

Order Example

Type 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=950mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

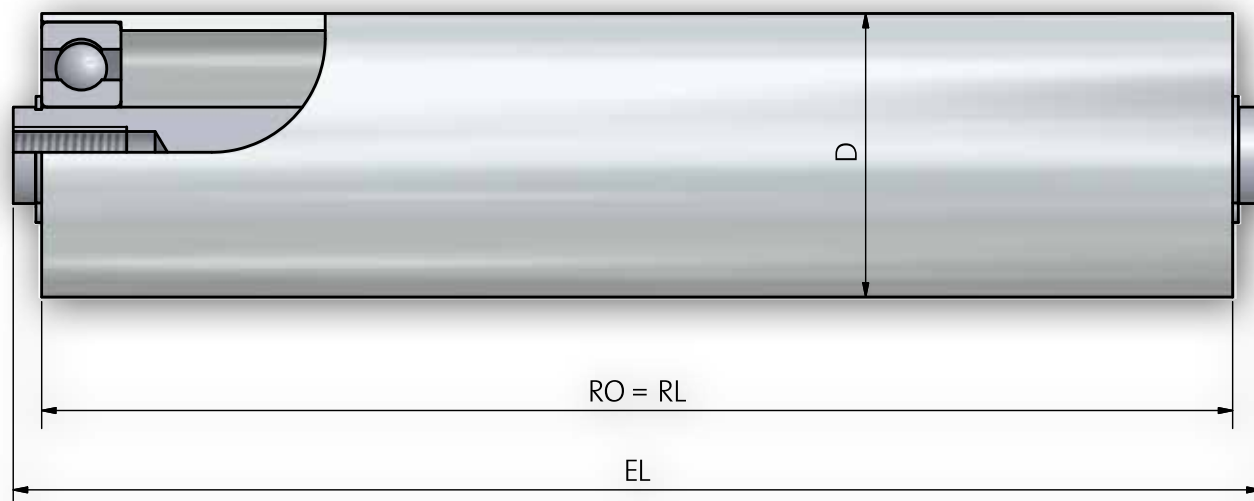
Tube quality |

Shaft-Ø |




Shaft Ends |

Installation length |

Roller 402 K



Shaft dimensions

Order Specification		A...AGM...	A...IGM...	A...SW...
Shaft-Ø	EL=			
15	RL+	10	10	10
17	RL+	10	10	10
20	RL+	10	10	10

Tube- and Shaft Combination

Tube dia.	A15	A17	A20
40 x 3	x	x	
50 x 3		x	x

Roller 402 K

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Ball Bearing Site lathed into the tube

Ball Bearing (Series 6003, 6202, 6204) DIN 625 available in 2RS, ZZ
(depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +80 C

With special greasing even for use in Deep Freeze Areas (-28°C).
Ball Bearing secured with snap rings on the shaft.

Order Example

Type 402 K RS - 50x3 STI A17 IGM 12x20 EL=950mm

Bearing Type |

Ball bearing sealing |

Tube-Ø and wall thickness |

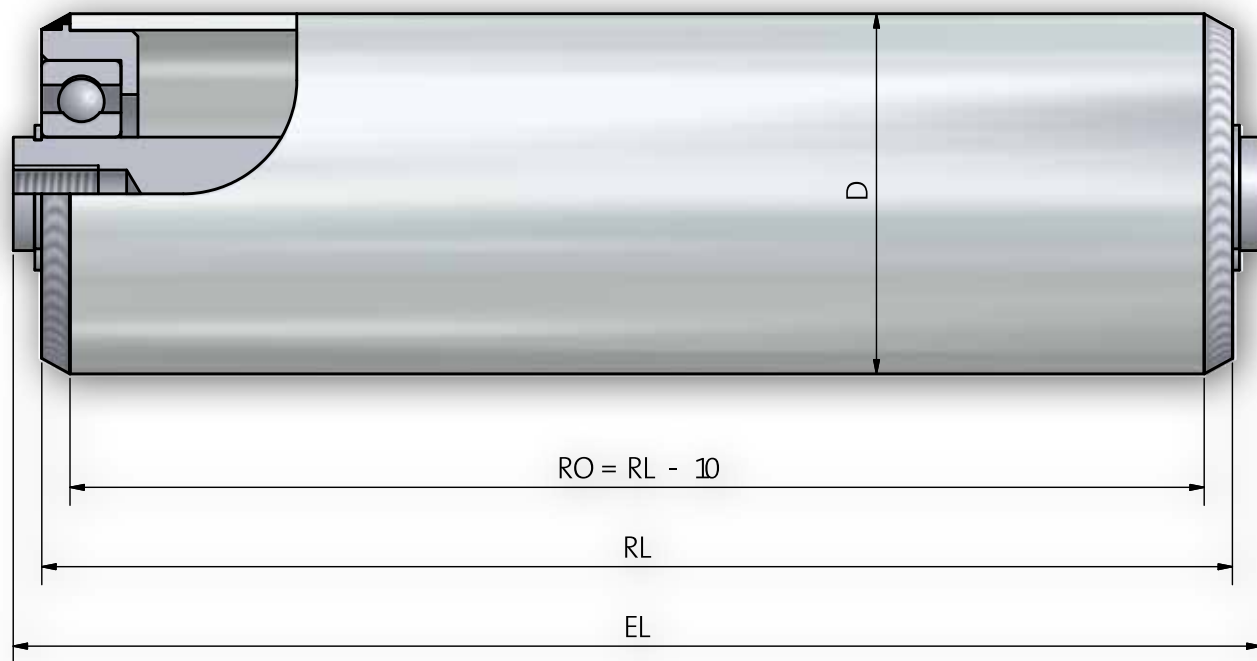
Tube quality |

Shaft-Ø |





Shaft Ends |

Installation length |

Roller 402 ST



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...SW...
Shaft-Ø	EL=				
20	RL+	26	6	6	6
25	RL+		6	6	6

Tube- and Shaft Combination

Tube dia.	A20	A25
63,5 x 2,9	x	x
80 x 3	x	x
88,9 x 2,9	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 402 ST

Bearing Type

Type of Bearing
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

Steel housing with Precision Ball Bearing

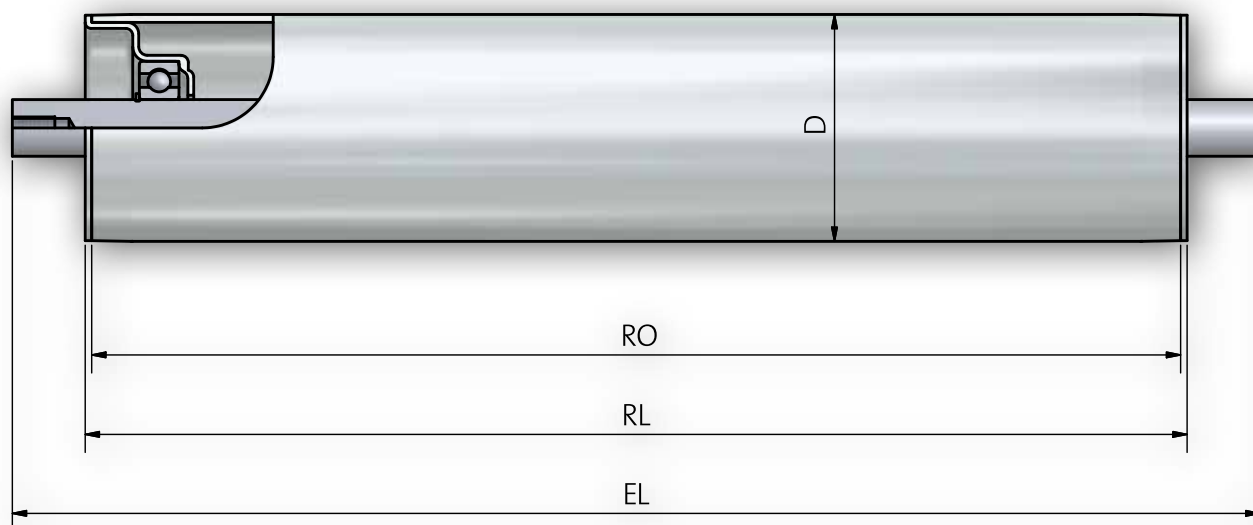
Ball Bearings (Series 6004, 6005, 6204) DIN 625 available 2RS, ZZ
(depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
402 N stainless steel 1.4305
With special greasing even for use in Deep Freeze Areas (-28°C).
Bearing housing welded to the tube.

Order Example




Type 402 ST RS - 88,9x2,9 ST A20 IGM 12x20 EL=950mm

Bearing Type
Ball bearing sealing.....
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 402 WT



Shaft dimensions

Order Specification		A...AGM...	A...IGM...	A...SW...
Shaft-Ø	EL=			
15	RL+	10	10	10
17	RL+	10	10	10
20	RL+	10	10	10

Tube- and Shaft Combination

Tube dia.	A15	A17	A20
50 x 1,5	x		
50 x 2	x		
60 x 2	x	x	
60 x 3	x	x	
63,5 x 2,9		x	x
80 x 2			x
80 x 3			x
88,9 x 2,9			x

Roller 402 WT

Bearing Type

Type of Bearing
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

Steel housing with Precision Ball Bearing

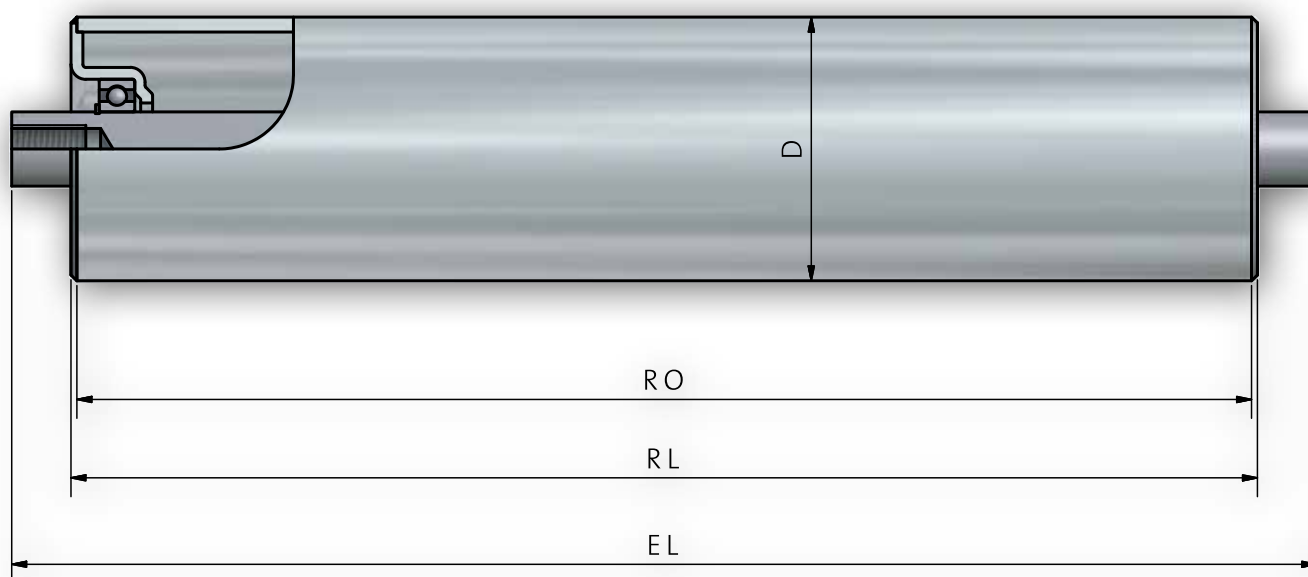
Ball Bearings (Series 6202, 6204) DIN 625 available in 2RS, ZZ
2.400N (depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
With special greasing even for use in Deep Freeze Areas (-28°C).

Order Example



Type 402 WT RS - 80x2 STI A20 IGM 12x20 EL=950mm

Bearing Type
Ball bearing sealing.....
Tube-Ø and wall thickness.....
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 402 WS



Shaft dimensions

Order Specification		A...IGM...	A...SW...
Shaft-Ø	EL=		
20	RL+	10	10
25	RL+	10	10

Tube- and Shaft Combination

Tube dia.	A20	A25
63,5 x 2,9	x	x
80 x 3	x	x
88,9 x 2,9	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 402 WS

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Optional

Note

Steel housing with Precision Ball Bearing

Ball Bearings (Series 6005, 6204) DIN 625 available in 2RS, ZZ

6.000N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +80 C

With special greasing even for use in Deep Freeze Areas (-28°C).
Bearing housing welded to the tube.

Order Example

Type 402 WS RS - 88,9x2,9 ST A20 IGM 12x20 EL=950mm

Bearing Type

Ball bearing sealing

Tube-Ø and wall thickness

Tube quality

Shaft-Ø



Shaft Ends

Installation length

Roller 402 WST



Shaft dimensions

Order Specification		A...IGM...	A...SW...
Shaft-Ø	EL=		
20	RL+	10	10
25	RL+	10	10

Tube- and Shaft Combination

Tube dia.	A20	A25
80 x 2	x	
80 x 3	x	x
88,9 x 2,9	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 402 WST

Bearing Type

Lagerung
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

Steel housing with Precision Ball Bearing

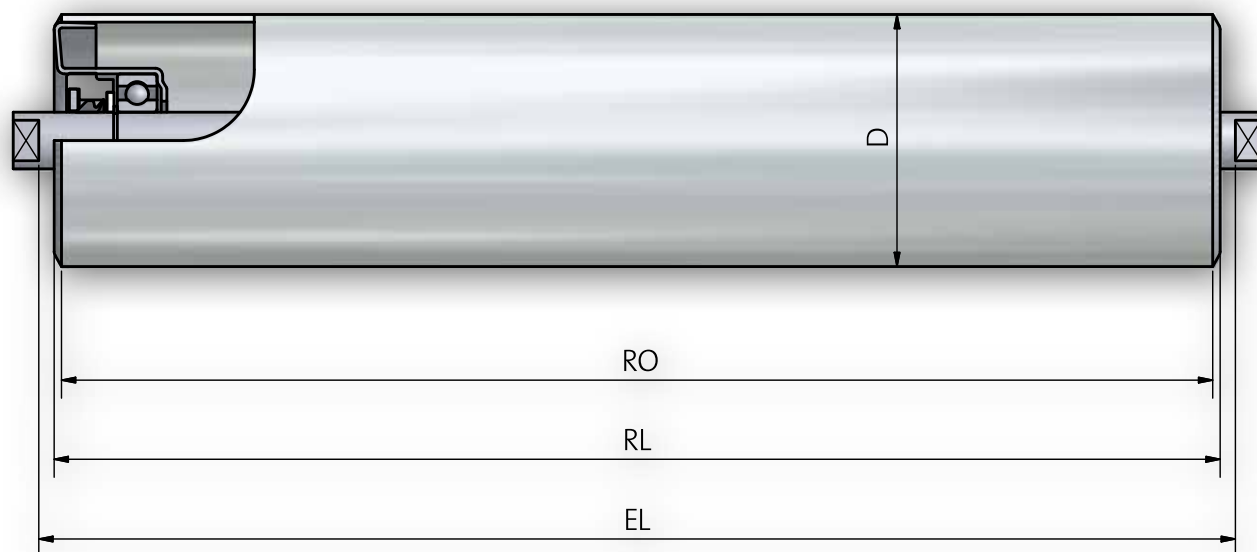
Ball Bearings (Series 6005, 6204) DIN 625 available in 2RS, ZZ
3.600N (depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
Available with labyrinth packing
With special greasing even for use in Deep Freeze Areas (-28°C).
Bearing housing welded to the tube.

Order Example



Type 402 WST RS - 88,9x2,9 ST A20 SW 15x10 EL=950mm

Bearing Type
Ball bearing sealing.....
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 402 WO



Shaft dimensions

Order Specification		A...IGM...	A...SW...
Shaft-Ø	EL=		
20	RL+	6	6
25	RL+	6	6

Tube- and Shaft Combination

Tube dia.	A20	A25
63 x 2,9	x	x
80 x 2	x	x
80 x 3	x	x
88,9 x 2,9	x	x
108 x 3,25	x	x
133 x 3,6	x	x

Roller 402 WO

Bearing Type

Type of Bearing
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Optional
Note

Steel housing with Precision Ball Bearing

Ball Bearings (Series 6204, 6205) DIN 625 available in 2RS, ZZ
3.600N (depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +80 C
Available with Labyrinth Packing
With special greasing even for use in Deep Freeze Areas (-28°C).
Bearing housing welded to the tube.

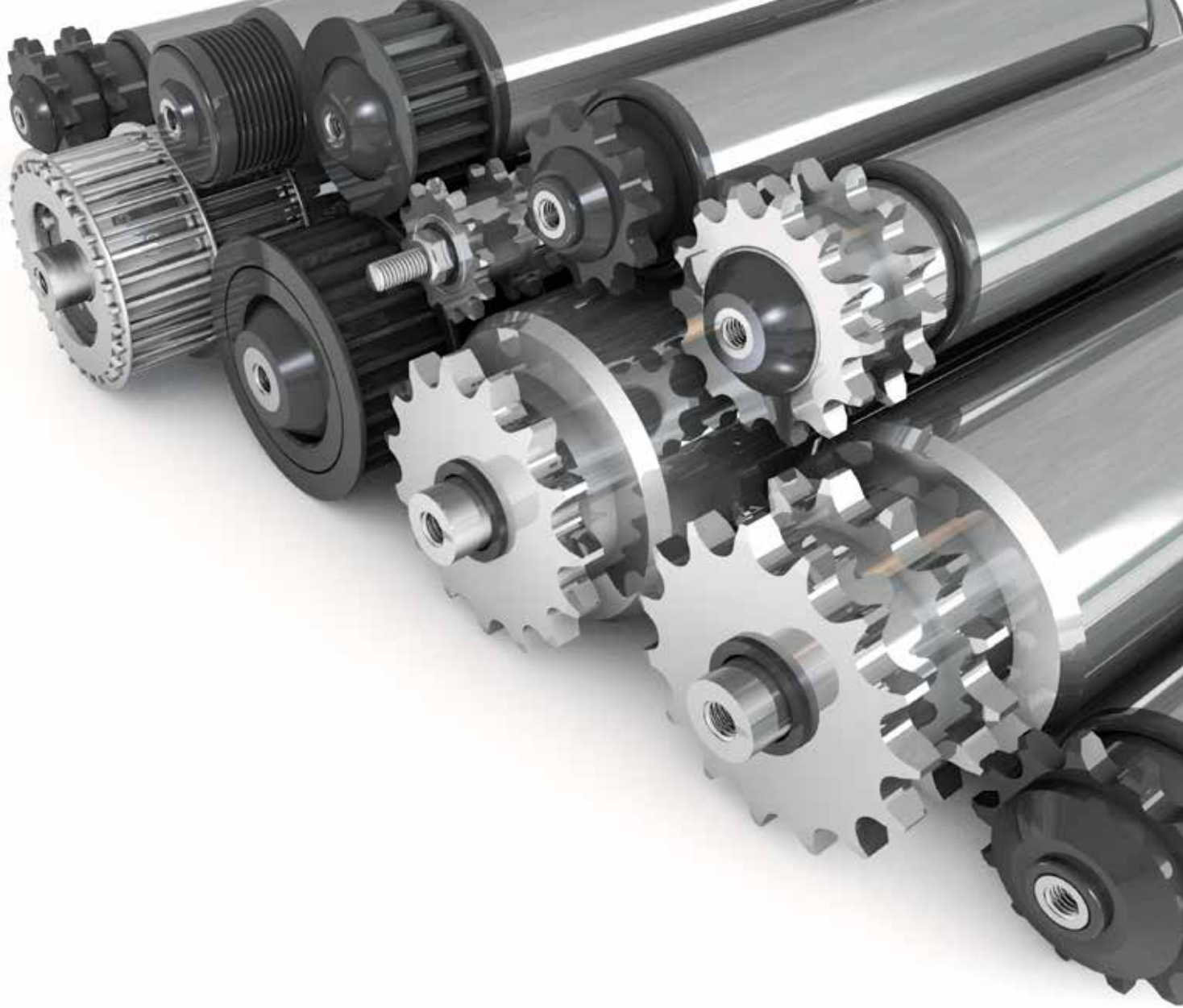
Order Example

Type 402 WO RS - 108x3,25 ST A20 SW 15x10 EL=950mm

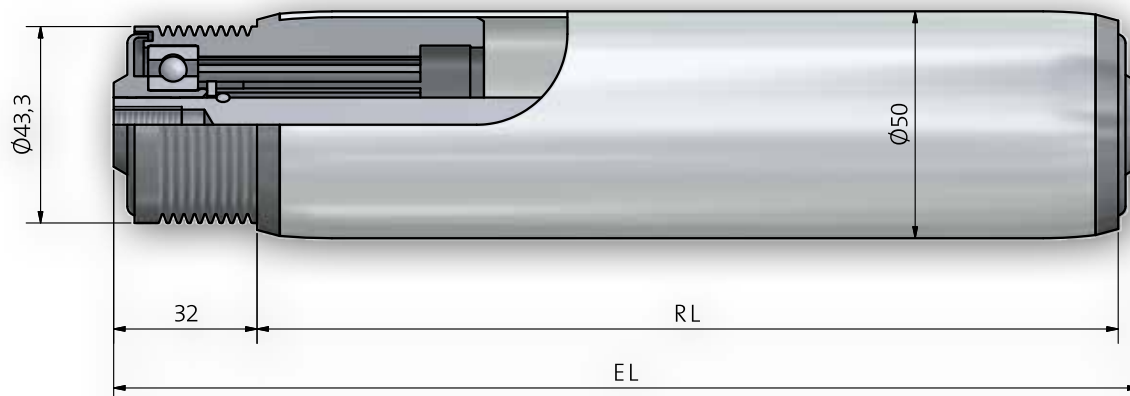
Bearing Type
Ball bearing sealing
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Driven Roller






Type	Description	Page
420	Thermoplastic synthetic material - Ripped-V-Belt PJ profile	72
421	Steel-Ripped-V-Belt PJ profile	74
423	Thermoplastic synthetic material - Round belt with two grooves	76
432 / 433	Steel double chain sprocket 3/8x7/32" z=12	78
435 / 436	Steel single chain sprocket 3/8x7/32" z=10	80
437 / 438	Steel single chain sprocket 3/8x7/32" z=10	82
445 / 446	Thermoplastic synthetic material - tooth belt wheel T8 z=20 Polychain	84
445 R	Steel-tooth belt wheel T8 z=20 Polychain	86
447	Steel-tooth belt wheel T8 z=20 Polychain	88
450 / 451	Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=11	90
452 / 453	Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=11	92
454 / 455	Steel single chain sprocket 1/2x5/16" z=11	94
454 R	Steel single chain sprocket 1/2x5/16" z=11	96
456	Steel single chain sprocket 1/2x5/16" z=11	98
457 / 458	Steel single chain sprocket 1/2x5/16" z=11	100
462 / 463	Steel single chain sprocket 5/8x3/8" z=12	102
462 R	Steel single chain sprocket 5/8x3/8" z=12	104
464	Steel single chain sprocket 5/8x3/8" z=12	106
470 / 471	Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=14	108
480 / 481	Thermoplastic synthetic material - double chain sprocket 1/2x5/16" z=14	110
500 / 501	Steel double chain sprocket 1/2x5/16" z=14	112
500 R	Steel double chain sprocket 1/2x5/16" z=14	114
502	Steel double chain sprocket 1/2x5/16" z=14	116
506 / 507	Steel single chain sprocket 1/2x5/16" z=14	118
506 R	Steel single chain sprocket 1/2x5/16" z=14	120
508	Steel single chain sprocket 1/2x5/16" z=14	122
510	Steel double chain sprocket 5/8x3/8" z=15	124
511	Steel single chain sprocket 5/8x3/8" z=15	126
512	Steel double chain sprocket 3/4x7/16" z=13	128
513	Steel single chain sprocket 3/4x7/16" z=13	130
516	Thermoplastic synthetic material - tooth belt wheel T8 z=30 Polychain	132
517 z24/25	Thermoplastic synthetic material - tooth belt wheel T8 z=24, 25 HTD	134
517 z30/34	Thermoplastic synthetic material - tooth belt wheel T8 z=30, 34 HTD	136
518	Thermoplastic synthetic material - double chain sprocket 5/8x3/8" z=18	138
519	Thermoplastic synthetic material - single chain sprocket 5/8x3/8" z=18	140
520	Steel double chain sprocket 5/8x3/8" z=15	142
520 R	Steel double chain sprocket 5/8x3/8" z=15	144
521	Steel single chain sprocket 5/8x3/8" z=15	146
521 R	Steel double chain sprocket 5/8x3/8" z=15	148
522	Thermoplastic synthetic material - double chain sprocket 5/8x3/8" z=15	150
523	Thermoplastic synthetic material - single chain sprocket 5/8x3/8" z=15	152
533 R	Steel-tooth belt wheel T8 z=30, 34 HTD	154
534	Steel-tooth belt wheel T8 z=30, 34 HTD	156
539	Steel-Ripped-V-Belt PK profile	158



Roller 420



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=					
10	RL+		37	37		37
S 11	RL+				37	37
12	RL+	51	37	37		37
14	RL+	53	37	37		37
15	RL+		37	37		

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	ASK11	A12	A14	A15
50 x 1,5	302	302	302	302	302

Roller 420

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Ripped-V-Belt PJ profile (DIN 7867)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

500N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +40 C

Permanent drive, driving element fit positively to the tube

Roller will be driven by belts with 2 or 3 ribs.

Antistatic version.

Order Example

Type

420 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm

Type Drive

Ball bearing sealing

Type of counter bearing

Ball bearing sealing

Tube-Ø and wall thickness

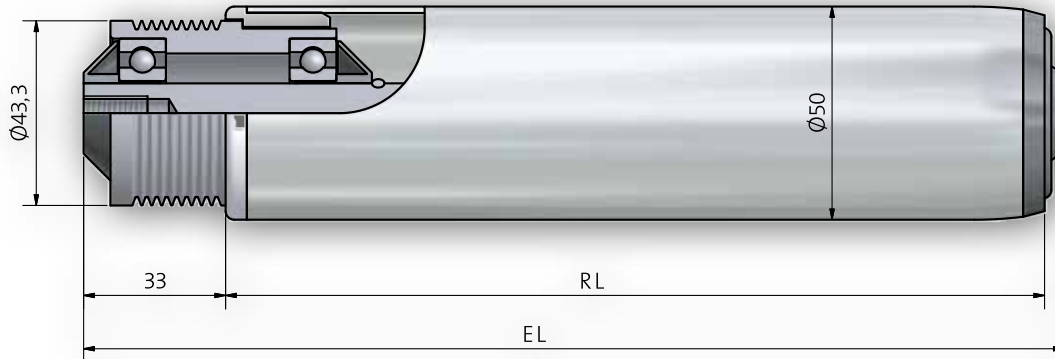
Tube quality

Shaft-Ø






Shaft Ends

Installation length

Roller 421ST



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=					
10	RL+		37	37		37
S 11	RL+				37	37
12	RL+	51	37	37		37
14	RL+	53	37	37		37
15	RL+		37	37		

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A15
50 x 1,5	302	302	302	302

Roller 421ST

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Steel - Ripped-V-Belt PJ profile (DIN 7867)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

500N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

Accumulation drive with a pressure of 5% of the loaded material weight.

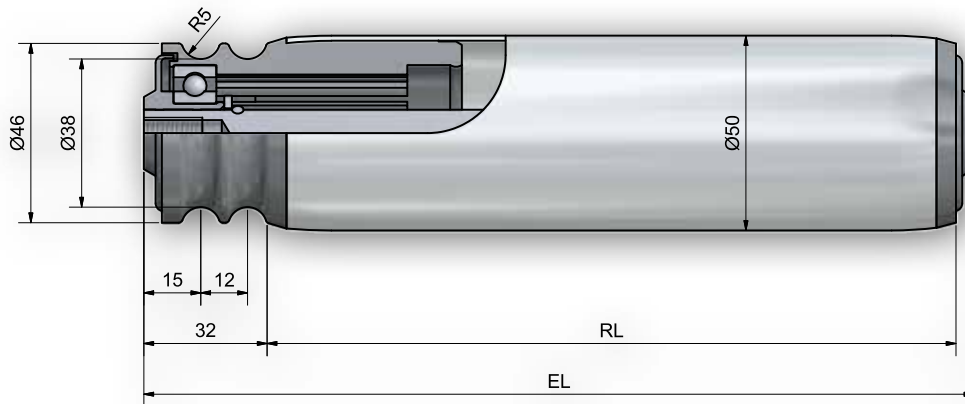
Roller will be driven by belts with 2 or 3 ribs.

Order Example






Type 421 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm

Type Drive
 Ball bearing sealing
 Type of counter bearing
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft Ends
 Installation length

Roller 423



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=					
10	RL+		37	37		37
S 11	RL+				37	37
12	RL+	51	37	37		37
14	RL+	53	37	37		37
15	RL+		37	37		

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	ASK11	A12	A14	A15
50 x 1,5	302	302	302	302	302

Roller 423

Drive Element

Bearing Type
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Type of Drive
Note

Thermoplastic synthetic material - Round belt with two grooves

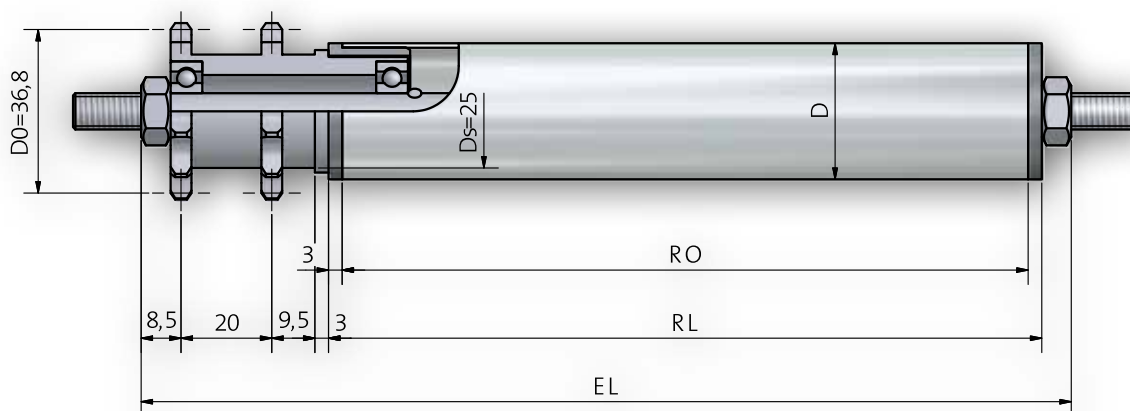
Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
300N (depending upon the load limit of tube and shaft)
1,2 m/s
-5 to +40 C
Permanent drive, driving element fit positivly to the tube
Roller will be driven by round belts Ø 5mm.
Antistatic version.

Order Example



Type 423 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm

Type Drive
Ball bearing sealing
Type of counter bearing
Ball bearing sealing
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Roller 432 / 433



Shaft dimensions

Order Specification		A...M...		A...IGM...	
Shaft-Ø	EL=				
		Type 50	Type 60	Type 50	Type 60
8	RL+	51	48	51	48

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
30 x 1	50 / 51 / 60
30 x 1,8 KB/KGH	50 / 51 / 60
32 x 2	50 / 51 / 60

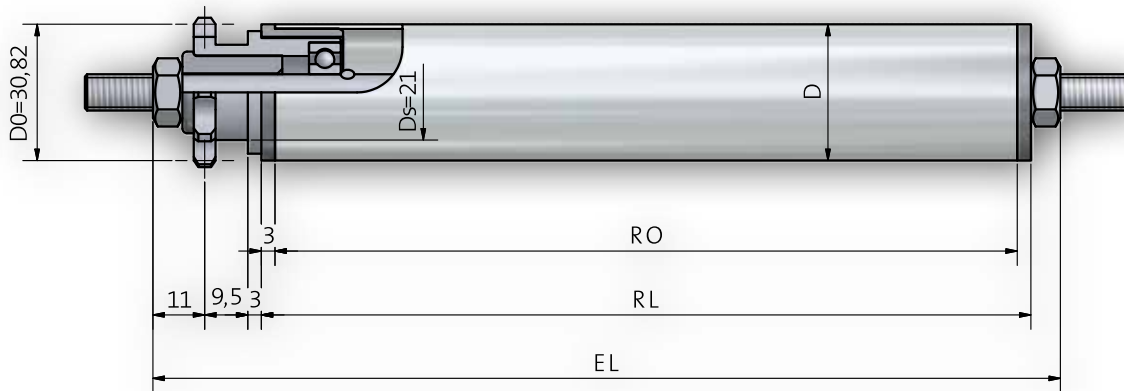
Roller 432 / 433

Drive Element	Steel - Double Sprocket 3/8" x 7/32" z=12
Bearing Type	Ball Bearing (Series 608) DIN 625 available in 2RS, ZZ Standard Series 608 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 432 Accumulation drive with a pressure of 5% of the loaded material weight Type 433 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.



Order Example

Type	432 ZZ / 60 ZZ - 30x1 STI A8 M8x15 EL=300mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 435 / 436



Shaft dimensions

Order Specification		A...M...		A...IGM...	
Shaft-Ø	EL=				
		Type 50	Type 60	Type 50	Type 60
8	RL+	33	30	33	30

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
30 x 1	50 / 51 / 60
30 x 1,8 KB/KGH	50 / 51 / 60
32 x 2	50 / 51 / 60

Roller 435 / 436

Drive Element	Steel - Single Sprocket 3/8" x 7/32" z=10 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 608) DIN 625 available in 2RS, ZZ Standard Series 608 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 435 Accumulation drive with a pressure of 5% of the loaded material weight Type 436 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.

Order Example

Type	435 ZZ / 60 ZZ - 30x1 STI A8 M8x15 EL=300mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 437 / 438



Shaft dimensions

Order Specification		A...M...	
Shaft- ϕ	EL=		
		Type 50	Type 60
8	RL+	33	30

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
30 x 1	60
30 x 1,8 KB/KGH	60
32 x 2	60

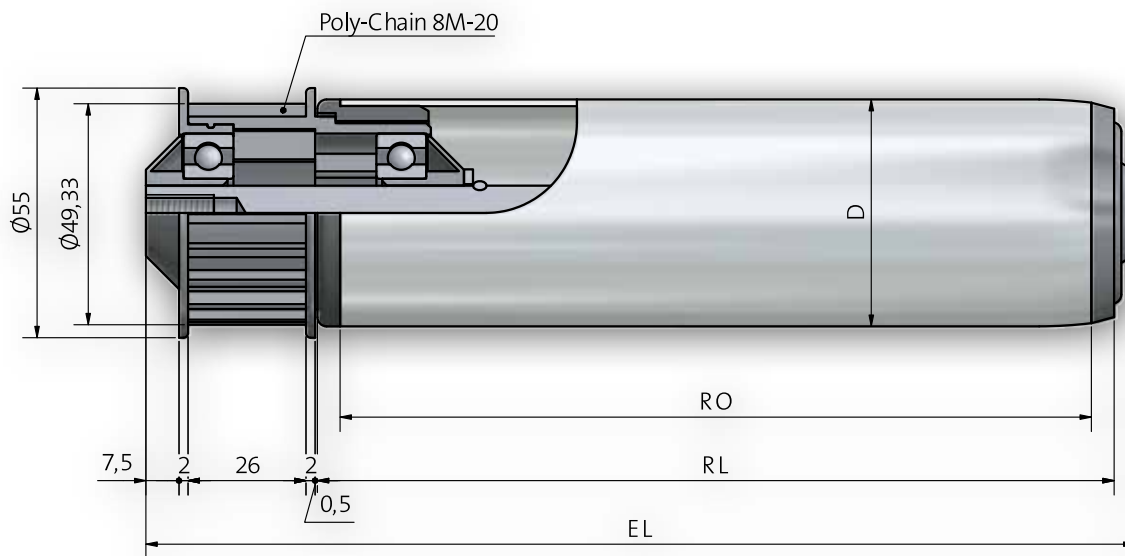
Roller 437 / 438

Drive Element	Steel - Single Sprocket 3/8" x 7/32" z=10 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 608) DIN 625 available in 2RS, ZZ Standard Series 608 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 437 Accumulation drive with a pressure of 5% of the loaded material weight Type 438 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.



Order Example

Type	437 ZZ / 60 ZZ - 30x1 STI A8 M8x15 EL=300mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 445 / 446



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
12	RL+	58	44
14	RL+	60	44
15	RL+	60	44

Range of counter bearings for tube- and shaft combinations

Tube dia.	A12	A14	A15
50 x 1,5	250 / 300 / 302	250 / 300 / 302	251 / 302
50 x 2	250 / 300	250 / 300	251
50 x 2,8 KB/KGH	300	300	
50 x 3	250 / 300	250 / 300	251
60,3 x 1,65	300	300	301
60 x 2	250 / 300 / 302	250 / 300 / 302	251 / 302
60 x 3	250 / 300	250 / 300	251
63 x 3 KB/KGH	300	300	
63,5 x 2,9	300	300	301
80 x 2	300	300	301

Roller 445 / 446

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Tooth Belt 8M z=20 (Poly-Chain)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

600N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +40 C

Type 445 Accumulation drive with a pressure of 5% of the loaded material weight

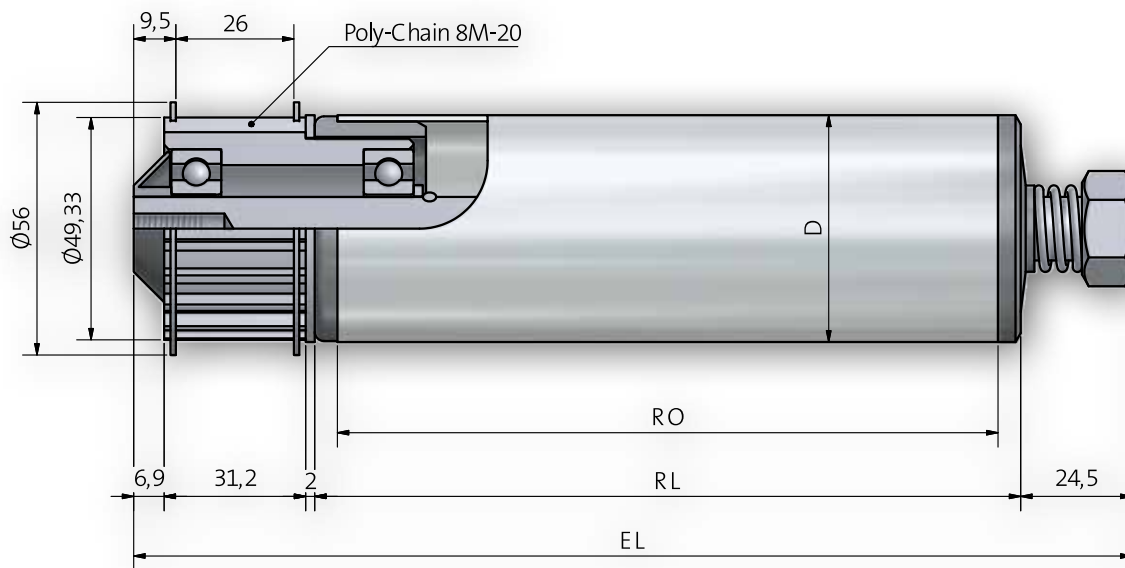
Type 446 Permanent drive, driving element fit positively to the tube by a bushing

Permanent drive only for continuous conveying - for Stop-And-Go use Type 447.
For rough materials use adjustable accumulation roller (Type 454R ST).

Order Example

Type	445 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 445R ST



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
15	RL+	64

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15
50 x 1,5	301 / 302 / 402WT
50 x 2	301
50 x 2,8 KB/KGH	301
50 x 3	301
60,3 x 1,65	301
60 x 2	301 / 302 / 402WT
60 x 3	301 / 402WT
63 x 3 KB/KGH	301
63,5 x 2,9	301 / 402WT
80 x 2	301 / 402WT

Optional Coatings Page 10

Roller 445R ST

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Steel - Tooth Belt 8M z=20 (Poly-Chain)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

1.000N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +40 C

Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment).

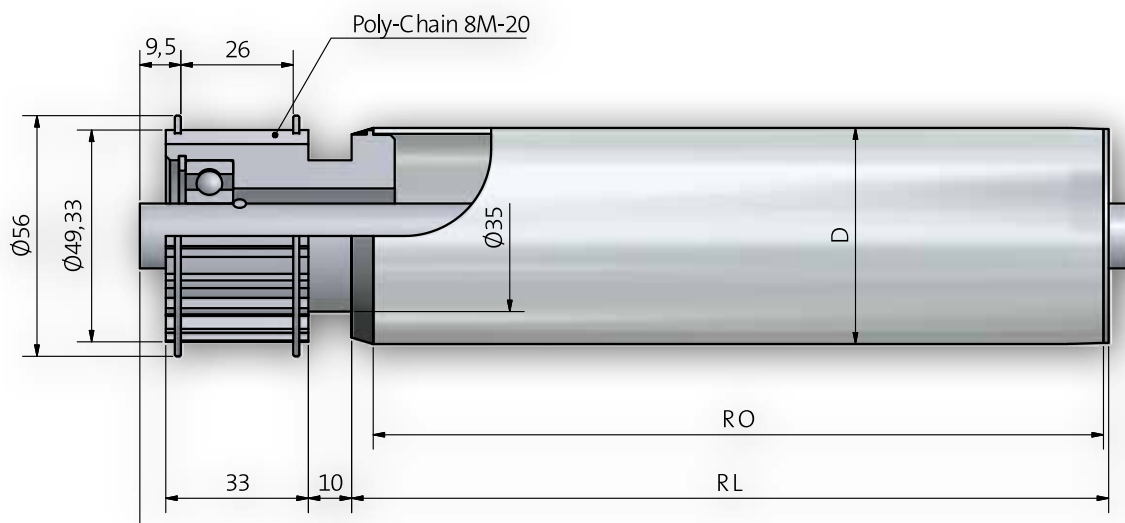
Accumulation pressure to be adjusted manually.

Order Example



Type 445R ST ZZ / 301 ZZ - 50x1,5 STI A15 IGM 10x15 EL=700mm

Type Drive
 Ball bearing sealing
 Type of counter bearing
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft Ends
 Installation length

Roller 447



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft- \varnothing	EL=		
15	RL+	70	54
17	RL+	70	54

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15	A17
50 x 1,5	250	250
50 x 2	250	250
50 x 3	250	250
60,3 x 1,65		
60 x 2	250	250
60 x 3	250	250
63,5 x 2,9		
80 x 2	250 / 260	250 / 260
80 x 3	250	250 / 260
88,9 x 2,9		260

Roller 447

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Steel - Tooth Belt 8M z=20 (Poly-Chain)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

1.500N (depending upon the load limit of tube and shaft)

1,2 m/s

-5 to +40 C

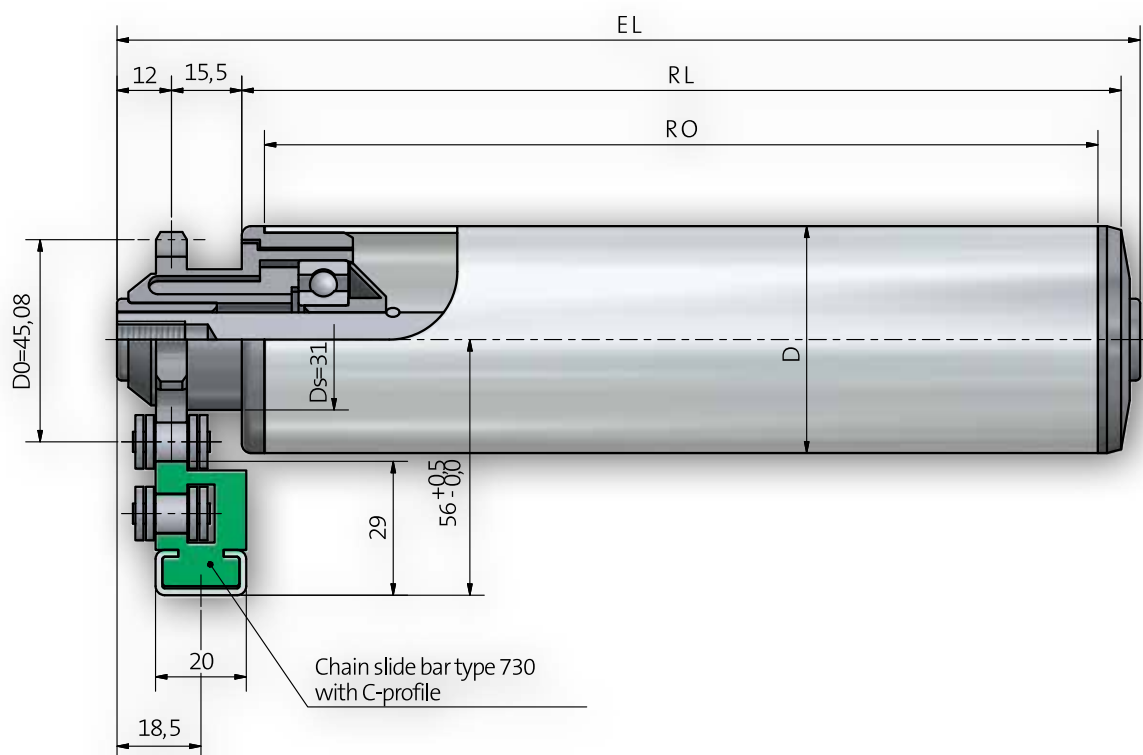
Permanent drive, driving element welded to the tube

With special Bearings these roller can even be used in deep freeze areas.
Please mention required features when placing order.

Order Example

Type	447 ZZ / 250 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 450 / 451



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	45	
12	RL+	47	33
14	RL+	49	33

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
50 x 2	250 / 300	250 / 300	250 / 300
50 x 2,8 KB/KGH	300	300	300
60,3 x 1,65	300	300	300
63 x 3 KB/KGH	300	300	300
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
70 x 2	300	300	300
80 x 2	250 / 300	250 / 300	250 / 300
90 x 7 KB/KGH	300	300	300

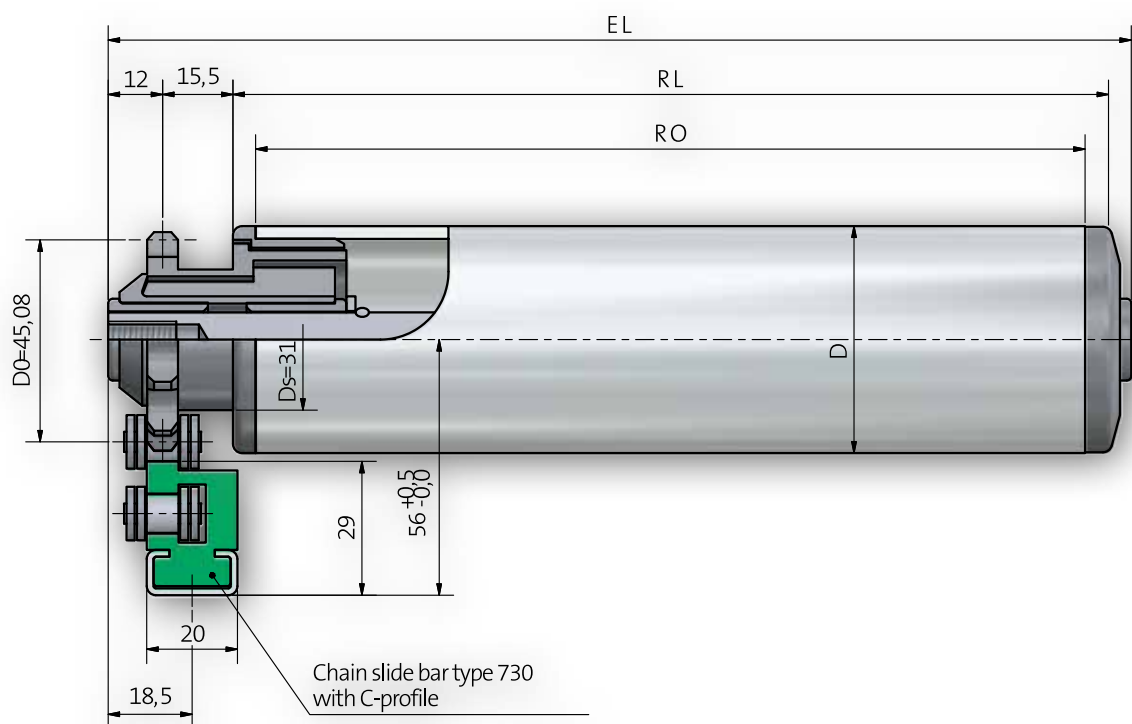
Roller 450 / 451

Drive Element	Thermoplastic synthetic material - Single Sprocket 1/2" x 5/16" z=11 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 450 Accumulation drive with a pressure of 5% of the loaded material weight Type 451 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.

Order Example

Type	450 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 452 / 453



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	45	
12	RL+	47	33
14	RL+	49	33

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50 x 1,5	150	150	150
50 x 2	150	150	150
50 x 2,8 KB/KGH	150	150	150
60,3 x 1,65	150	150	150
63 x 3 KB/KGH	150	150	150
60 x 2	150	150	150
70 x 2	150	150	150
80 x 2	150	150	150
90 x 7 KB/KGH	150	150	150

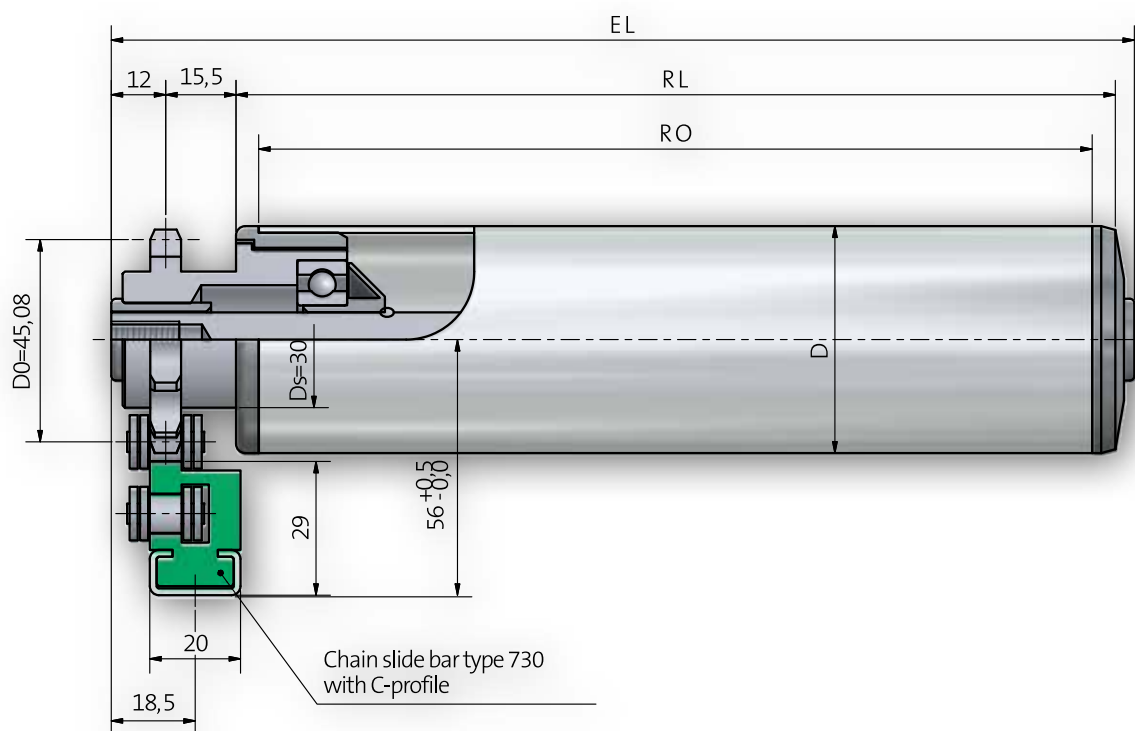
Roller 452 / 453

Drive Element	Thermoplastic synthetic material - Single Sprocket 1/2" x 5/16" z=11 Bolt Tooth Form
Bearing Type	Slide bearing bushes
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 452 Accumulation drive with a pressure of 5% of the loaded material weight Type 453 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.

Order Example

Type	452 / 150 ZZ - 50x1,5 STI A12 IGM 10x15 EL=700mm
Type Drive	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 454 / 455



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-φ	EL=		
10	RL+	45	
12	RL+	47	33
14	RL+	49	33
17	RL+	49	33

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301
50 x 2	250 / 300	250 / 300	250 / 300	301
50 x 2,8 KB/KGH	300	300	300	301
60,3 x 1,65	300	300	300	301
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301 / 402
60 x 3	250 / 300	250 / 300	250 / 300	301
63 x 3 KB/KGH	300	300	300	301
63,5 x 2,9	300	300	300	402
70 x 2	300	300	300	301
80 x 2	250 / 300	250 / 300	250 / 300	301 / 402
90 x 7 KB/KGH	300	300	300	

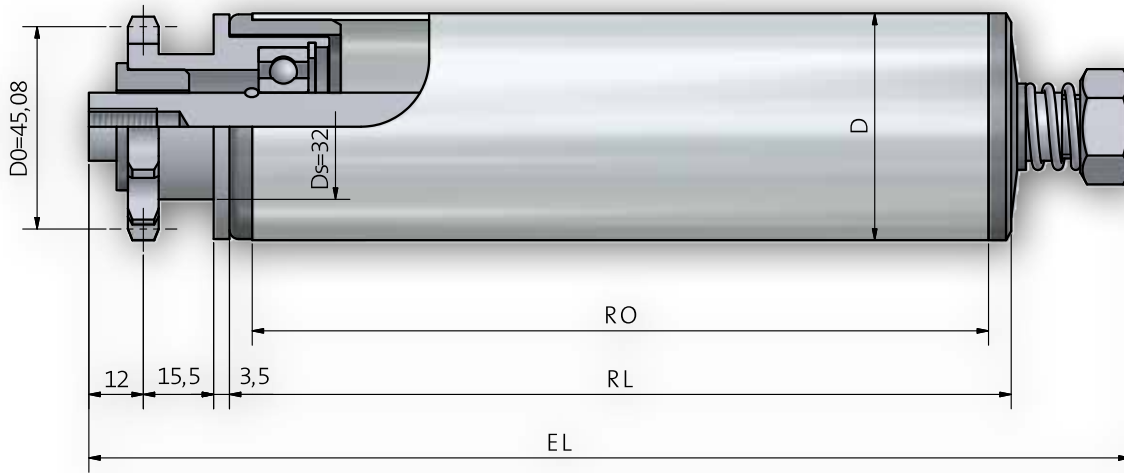
Roller 454 / 455

Drive Element	Steel - Single Sprocket 1/2" x 5/16" z=11 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 454 Accumulation drive with a pressure of 5% of the loaded material weight Type 455 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.

Order Example

Type	454 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 454R



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
15	RL+	56

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15
50 x 1,5	301 / 302 / 402WT
50 x 2	301
50 x 2,8 KB/KGH	301
50 x 3	301
60,3 x 1,65	301
60 x 2	301 / 302 / 402WT
60 x 3	301 / 402WT
63 x 3 KB/KGH	301
63,5 x 2,9	301 / 402WT
80 x 2	301 / 402WT

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Roller 454R

Drive Element

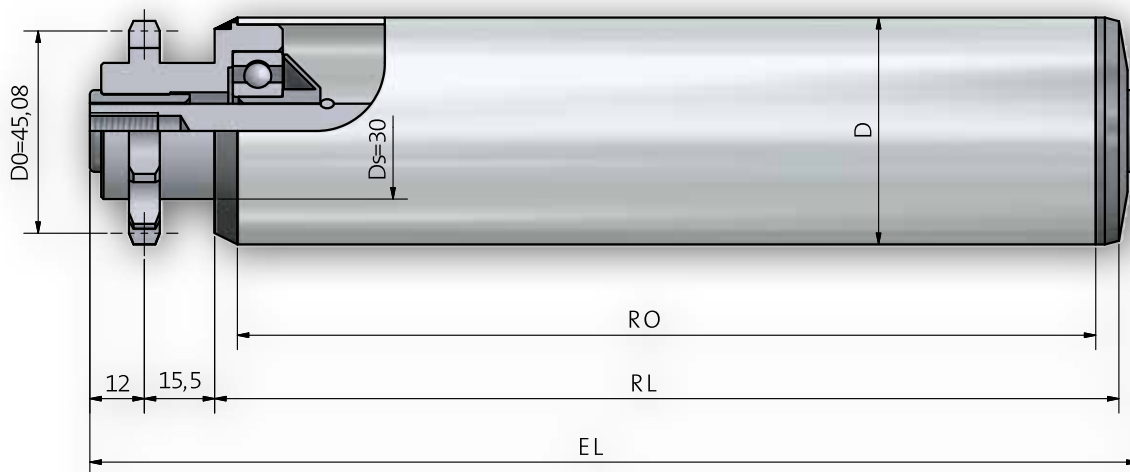
Steel - Single Sprocket 1/2" x 5/16" z=11 Bolt Tooth Form

Bearing Type	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment)
Note	Accumulation pressure to be adjusted manually.



Order Example

Type	454R ZZ / 301 ZZ - 50x1,5 STI A15 IGM 10x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 456



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	45	
12	RL+	47	33
14	RL+	49	33
17	RL+	49	33

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250
50 x 2	250 / 300	250 / 300	250 / 300	250
60,3 x 1,65	300	300	300	
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250 / 402
60 x 3	250 / 300	250 / 300	250 / 300	250
63,5 x 2,9	300	300		301
70 x 2	300	300	300	250
80 x 2	250 / 300	250 / 300	250 / 300	250 / 402

Roller 456

Drive Element

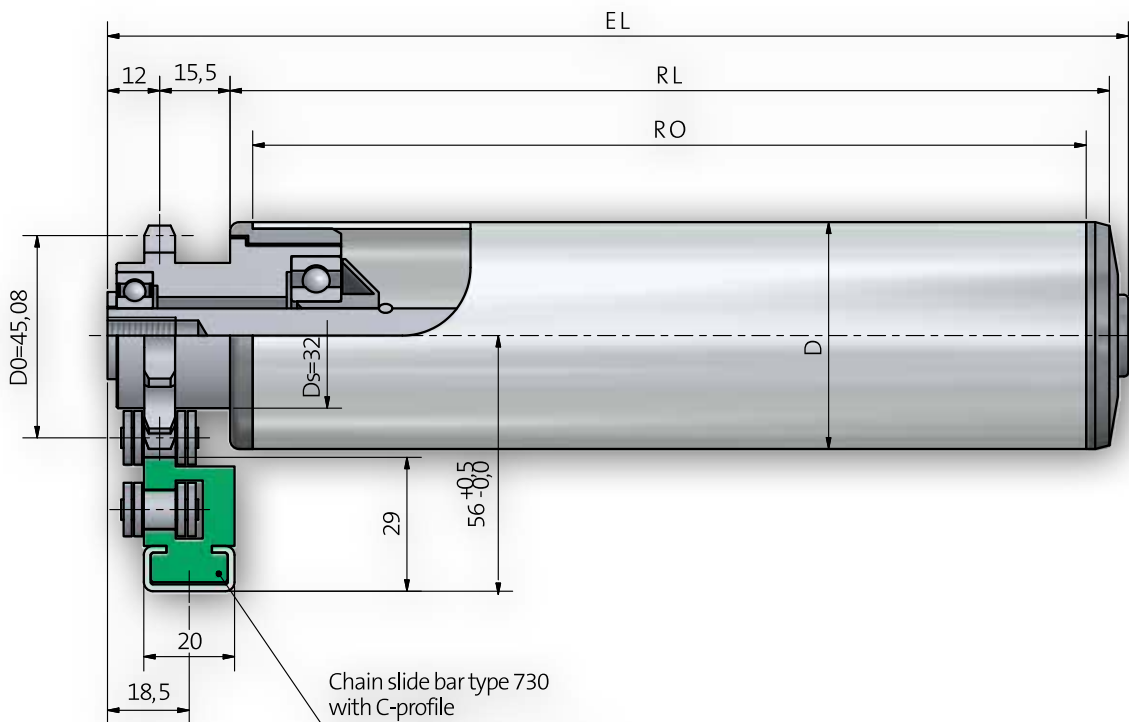
Steel - Single Sprocket 1/2" x 5/16" z=11 Bolt Tooth Form

Bearing Type	Ball Bearing (Series 6003, 6202, 6303) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Permanent drive, driving element welded to the tube
Note	With special Bearings these roller can even be used in deep freeze areas. Please mention required features when placing order.

Order Example

Type	456 ZZ / 300 ZZ - 60x2 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 457 / 458



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
12	RL+	47	33

Range of counter bearings for tube- and shaft combinations

Tube dia.	A12
50 x 1,5	250 / 300 / 302
50 x 2	250 / 300
50 x 2,8 KB/KGH	300
60,3 x 1,65	300
60 x 2	250 / 300 / 302
60 x 3	250 / 300
63 x 3 KB/KGH	300
63,5 x 2,9	300
70 x 2	300
80 x 2	250 / 300
90 x 7 KB/KGH	300

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Roller 457 /458

Drive Element

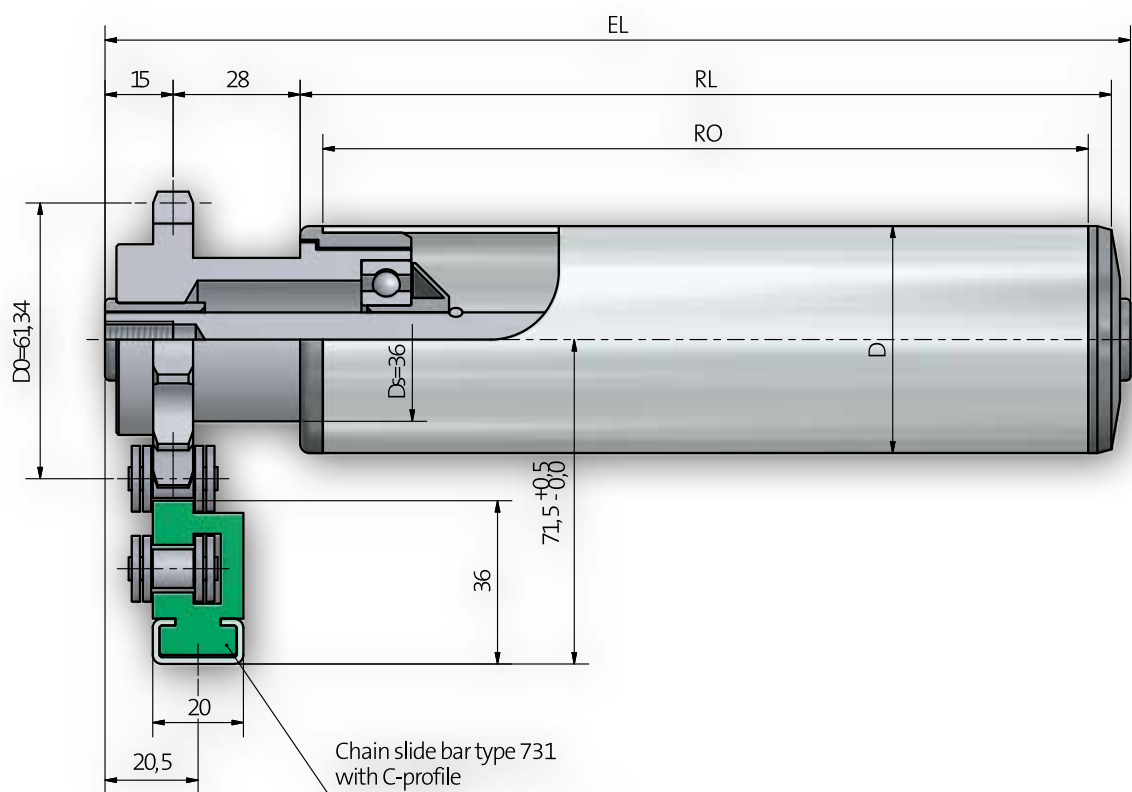
Steel - Single Sprocket 1/2" x 5/16" z=11

Bearing Type	Ball Bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 457 Accumulation drive with a pressure of 5% of the loaded material weight Type 458 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying. Roller can even be used as idler.

Order Example

Type	457 ZZ / 300 ZZ - 50x1,5 STI A12 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 462 / 463



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-φ	EL=		
10	RL+	61	
12	RL+	63	49
14	RL+	65	49
17	RL+	65	49

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301
50 x 2	250 / 300	250 / 300	250 / 300	301
50 x 2,8 KB/KGH	300	300	300	301
60,3 x 1,65	300	300	300	301
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301 / 402
60 x 3	250 / 300	250 / 300	250 / 300	301
63 x 3 KB/KGH	300	300	300	301
63,5 x 2,9	300	300	300	402
70 x 2	300	300	300	301
80 x 2	250 / 300	250 / 300	250 / 300	301 / 402
90 x 7 KB/KGH	300	300	300	

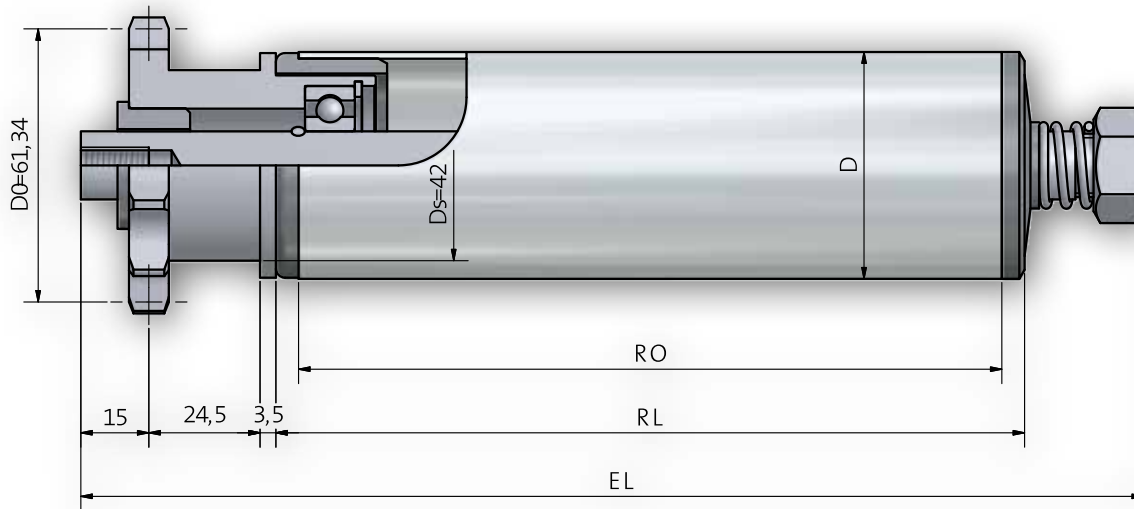
Roller 462 / 463

Drive Element	Steel - Single Sprocket 5/8" x 3/8" z=12 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 6003, 6202, 6303) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 462 Accumulation drive with a pressure of 5% of the loaded material weight Type 463 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying - for Stop-And-Go use Type 464. For rough materials use adjustable accumulation roller (Type 462R). Accumulation roller not with shaft dia. 17 mm.

Order Example

Type	462 ZZ / 300 ZZ - 60x2 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 462R



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
15	RL+	68

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15
50 x 1,5	301 / 302 / 402WT
50 x 2	301
50 x 2,8 KB/KGH	301
50 x 3	301
60,3 x 1,65	301
60 x 2	301 / 302 / 402WT
60 x 3	301 / 402WT
63 x 3 KB/KGH	301
63,5 x 2,9	301 / 402WT
80 x 2	301 / 402WT

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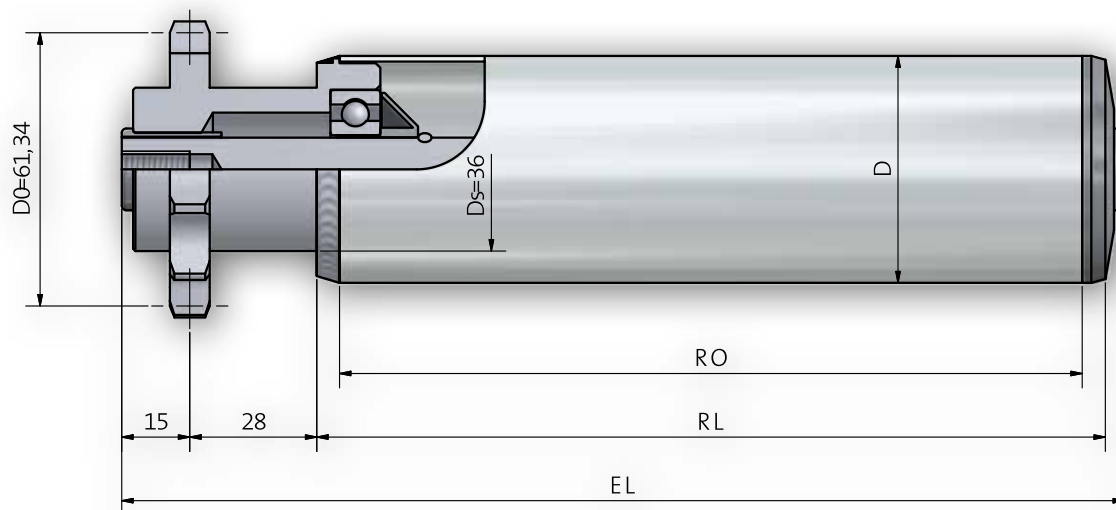
Roller 462R

Drive Element	Steel - Single Sprocket 5/8" x 3/8" z=12 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 6003, 6202, 6304) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment)
Note	Accumulation pressure to be adjusted manually.



Order Example

Type	462R ZZ / 301 ZZ - 60x2 STI A15 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 464



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	61	
12	RL+	63	49
14	RL+	65	49
17	RL+	65	49

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250
50 x 2	250 / 300	250 / 300	250 / 300	250
50 x 2,8 KB/KGH	300	300	300	
60,3 x 1,65	300	300	300	
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250 / 402
60 x 3	250 / 300	250 / 300	250 / 300	250
63 x 3 KB/KGH	300	300	300	
63,5 x 2,9	300	300	300	402 / 250
70 x 2	300	300	300	
80 x 2	250 / 300	250 / 300	250 / 300	250 / 402
90 x 7 KB/KGH	300	300	300	

Roller 464

Drive Element

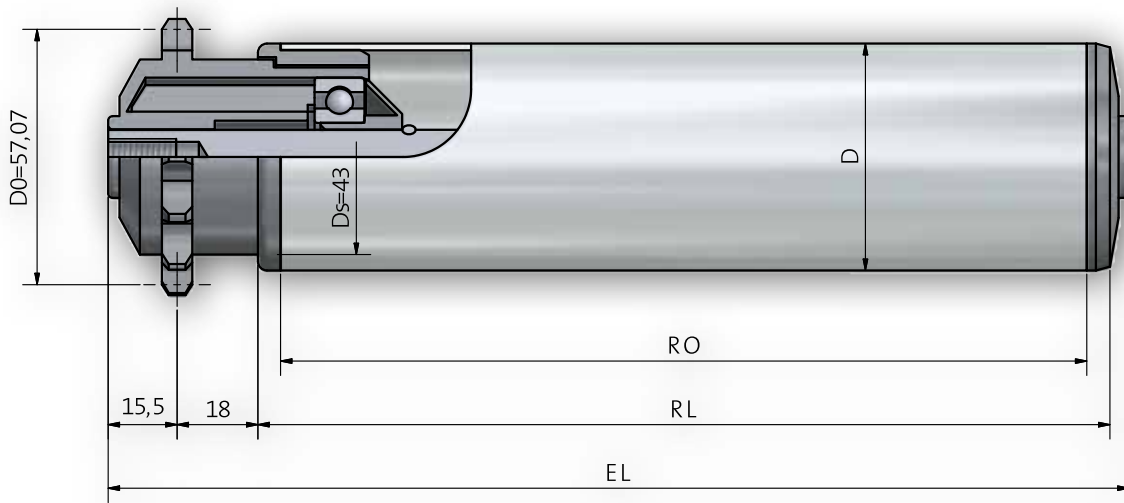
Steel - Single Sprocket 5/8" x 3/8" z=12 Bolt Tooth Form

Bearing Type	Ball bearing (Serie 6003, 6202, 6303) DIN 625 available in 2RS, ZZ Standard Serie 6202 ZZ
Load Capacity/Roller	1.500N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Permanent drive, driving element welded to the tube
Note	With special Bearings these roller can even be used in deep freeze areas. Please mention required features when placing order.



Order Example

Type	464 ZZ / 300 ZZ - 60x2 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 470 / 471



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	51	
12	RL+	53	39
14	RL+	55	39

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
50 x 2	250 / 300	250 / 300	250 / 300
50 x 2,8 KB/KGH	300	300	300
60,3 x 1,65	300	300	300
63 x 3 KB/KGH	300	300	300
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
70 x 2	300	300	300
80 x 2	250 / 300	250 / 300	250 / 300
90 x 7 KB/KGH	300	300	300

Roller 470 /471

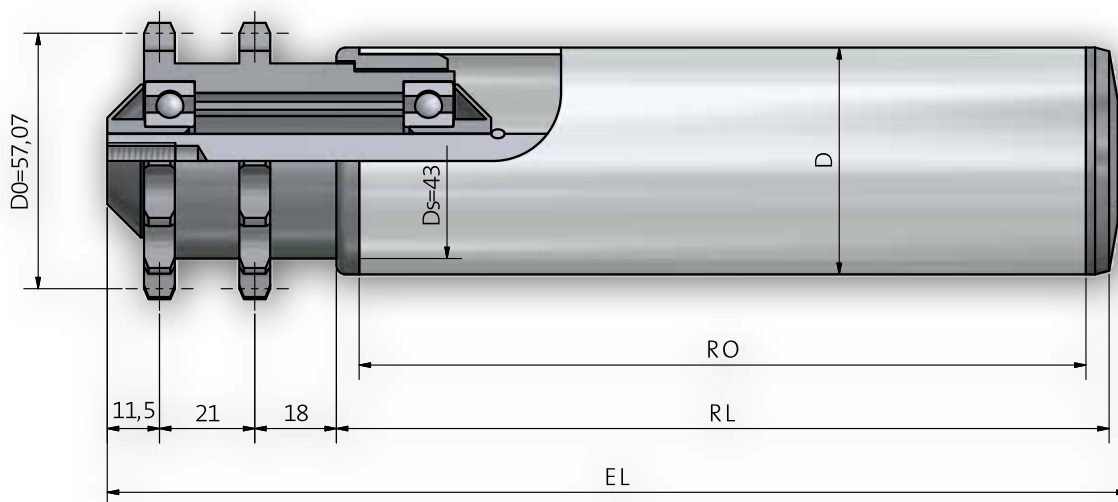
Drive Element

Bearing Type	Thermoplastic synthetic material - Single Sprocket 1/2" x 5/16" z=14 Bolt Tooth Form
Load Capacity/Roller	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Max. Speed	400N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,3 m/s
Type of Drive	-5 to +40 C
Note	Type 470 Accumulation drive with a pressure of 5% of the loaded material weight Type 471 Permanent drive, driving element fit positivly to the tube by a bushing Permanent drive only for continuous conveying - for Stop-And-Go use Type 508. For rough materials use adjustable accumulation roller (Type 506R).



Order Example

Type	470 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 480 / 481



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	69	
12	RL+	71	57
14	RL+	73	57

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
50 x 2	250 / 300	250 / 300	250 / 300
50 x 2,8 KB/KGH	300	300	300
60,3 x 1,65	300	300	300
63 x 3 KB/KGH	300	300	300
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302
70 x 2	300	300	300
80 x 2	250 / 300	250 / 300	250 / 300
90 x 7 KB/KGH	300	300	300

Roller 480 / 481

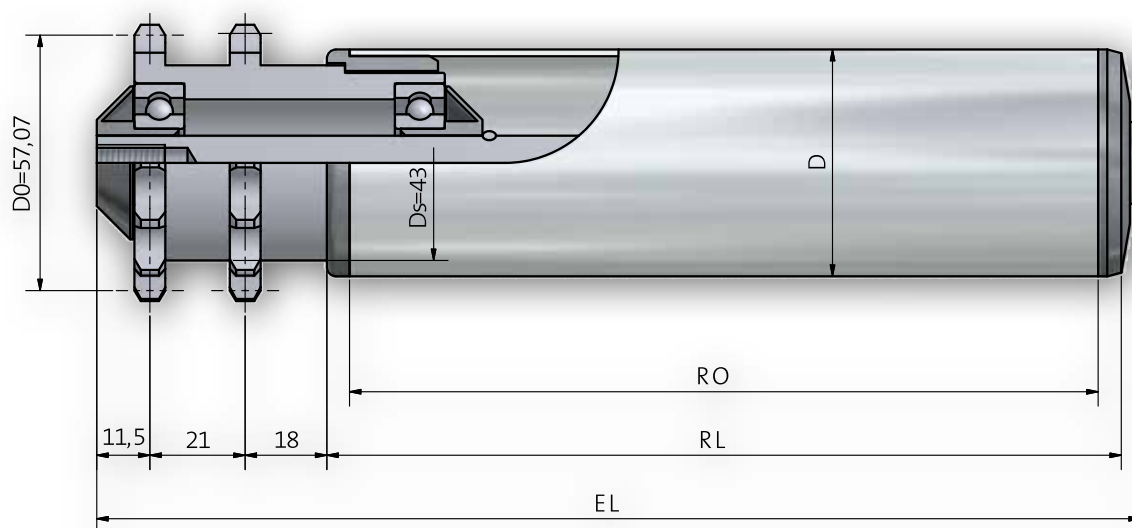
Drive Element

Bearing Type	Thermoplastic synthetic material - Double Sprocket 1/2" x 5/16" z=14
Load Capacity/Roller	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Max. Speed	400N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,5 m/s
Type of Drive	-5 to +40 C
Note	Type 480 Accumulation drive with a pressure of 5% of the loaded material weight Type 481 Permanent drive, driving element fit positively to the tube by a bushing Permanent drive only for continuous conveying - for Stop-And-Go use Type 502. For rough materials use adjustable accumulation roller (Type 500R).



Order Example

Type	480 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 500 / 501



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	69	
12	RL+	71	57
14	RL+	73	57
15	RL+	73	57
17	RL+	73	57

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301
50 x 2	250 / 300	250 / 300	250 / 300	301
50 x 2,8 KB/KGH	300	300	300	
60,3 x 1,65	300	300	300	
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	301 / 402
60 x 3	250 / 300	250 / 300	250 / 300	301
63 x 3 KB/KGH	300	300	300	
63,5 x 2,9	300	300	300	402
70 x 2	300	300	300	
80 x 2	250 / 300	250 / 300	250 / 300	301 / 402
90 x 7 KB/KGH	300	300	300	

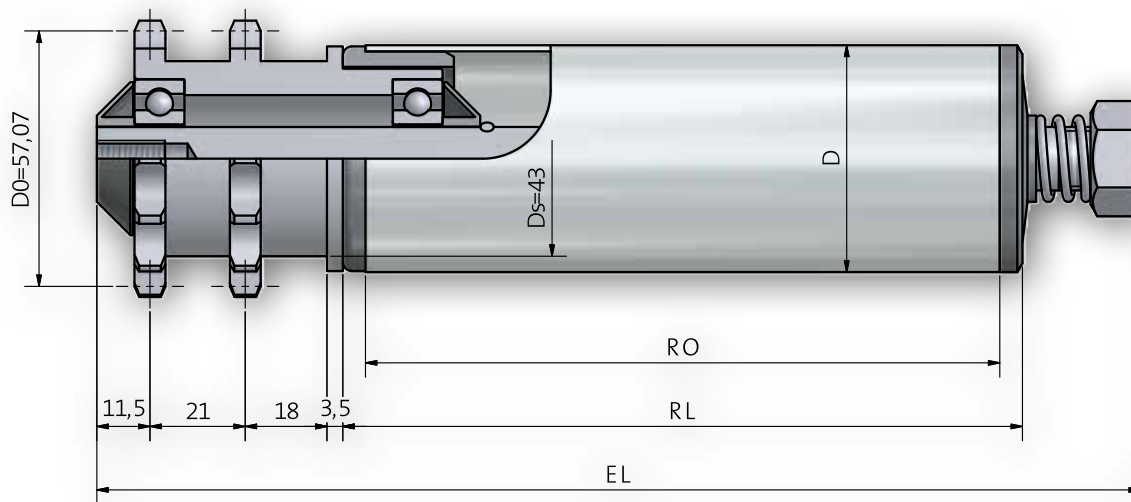
Roller 500 / 501

Drive Element	Steel - Double Sprocket 1/2" x 5/16" z=14
Bearing Type	Ball bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 500 Accumulation drive with a pressure of 5% of the loaded material weight Type 501 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying - for Stop-And-Go use Type 502. For rough materials use adjustable accumulation roller(Type 500R). Conveyor roller Type 500 is available as double friction roller Type 500DF.

Order Example

Type	500 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 500R



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
14	RL+	79
15	RL+	79

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15
50 x 1,5	301 / 302 / 402WT
50 x 2	301
50 x 2,8 KB/KGH	301
50 x 3	301
60,3 x 1,65	301
60 x 2	301 / 302 / 402WT
60 x 3	301 / 402WT
63 x 3 KB/KGH	301
63,5 x 2,9	301 / 402WT
70 x 2	301
80 x 2	301 / 402WT

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Roller 500R

Drive Element

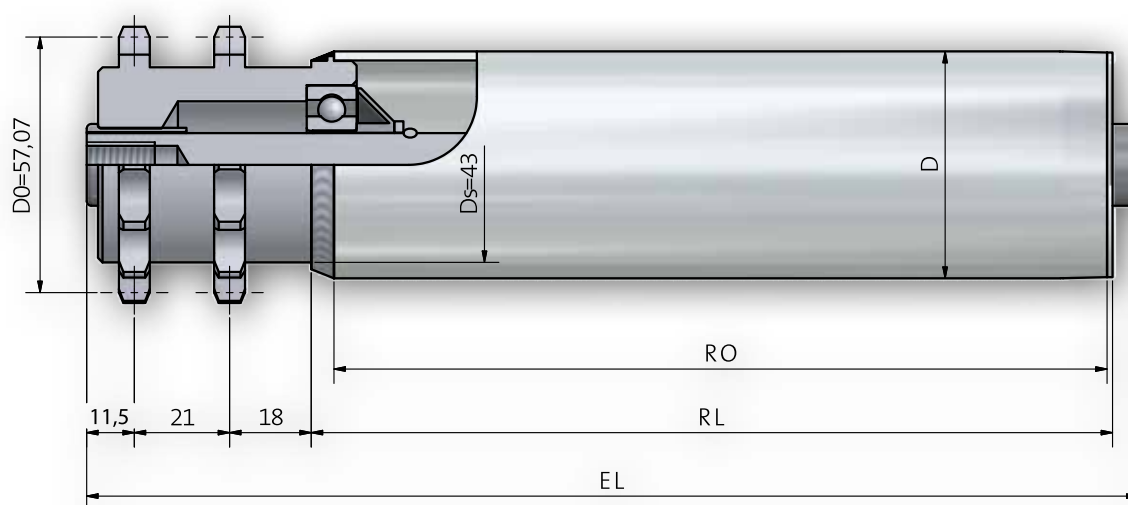
Steel - Double Sprocket 1/2" x 5/16" z=14

Bearing Type	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment)
Note	Accumulation pressure to be adjusted manually.



Order Example

Type	500R ZZ / 301 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 502



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	69	
12	RL+	71	57
14	RL+	73	57
15	RL+	73	57
17	RL+	73	57

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A15	A17	A20
40 x 1,5	290	250 / 290	290			
50 x 1,5	251	250 / 300 / 302	250 / 300 / 302	250 / 301 / 302	250	
50 x 2	250 / 300	250 / 300	250 / 300	250 / 301	250	
50 x 3	250 / 300	250 / 300	250 / 300	250 / 301	250	
60,3 x 1,65	300	300	300	301		
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250 / 301 / 302	250	
60 x 3	250 / 300	250 / 300	250 / 300	250 / 301	250	
63,5 x 2,9	300	300	300			260
70 x 2	300	300	300			
70 x 2,9						260
80 x 2	250 / 300	250 / 300	250 / 300	250 / 301	250	260
80 x 3	250 / 300	250 / 300	250 / 300	250 / 301	250	260
88,9 x 2,9					260	260

Roller 502

Drive Element

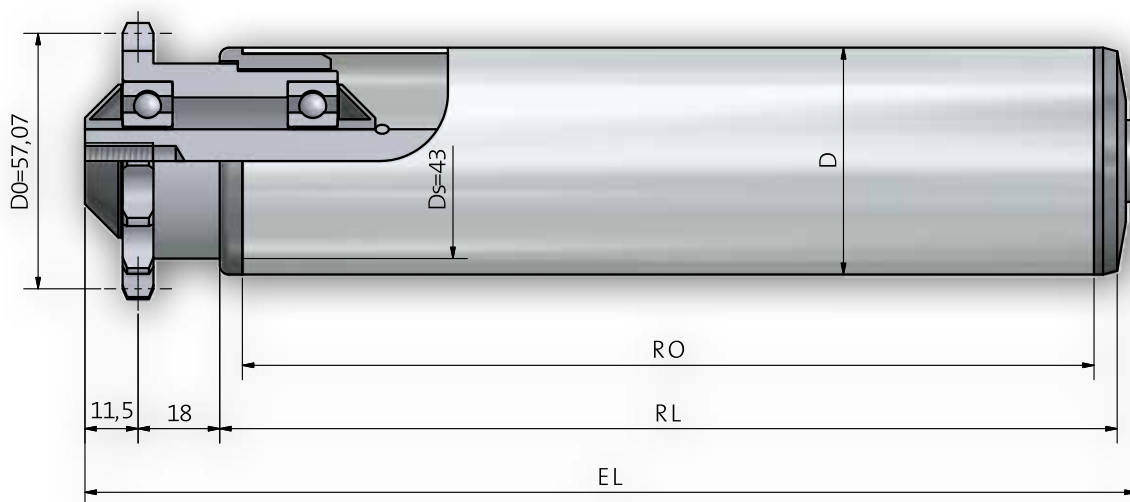
Steel - Double Sprocket 1/2" x 5/16" z=14

Bearing Type	Ball bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.500N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Permanent drive, driving element welded to the tube
Note	With special Bearings these roller can even be used in deep freeze areas. Please mention required features when placing order.



Order Example

Type	502 ZZ / 250 ZZ - 60x2 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 506 / 507



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	48	
12	RL+	50	36
14	RL+	52	36
15	RL+	52	36
17	RL+	52	36

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250
50 x 2	250 / 300	250 / 300	250 / 300	250
50 x 2,8 KB/KGH	300	300	300	
60,3 x 1,65	300	300	300	
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250 / 402
60 x 3	250 / 300	250 / 300	250 / 300	250
63 x 3 KB/KGH	300	300	300	
63,5 x 2,9	300	300	300	402
70 x 2	300	300	300	
80 x 2	250 / 300	250 / 300	250 / 300	250 / 402
90 x 7 KB/KGH	300	300	300	

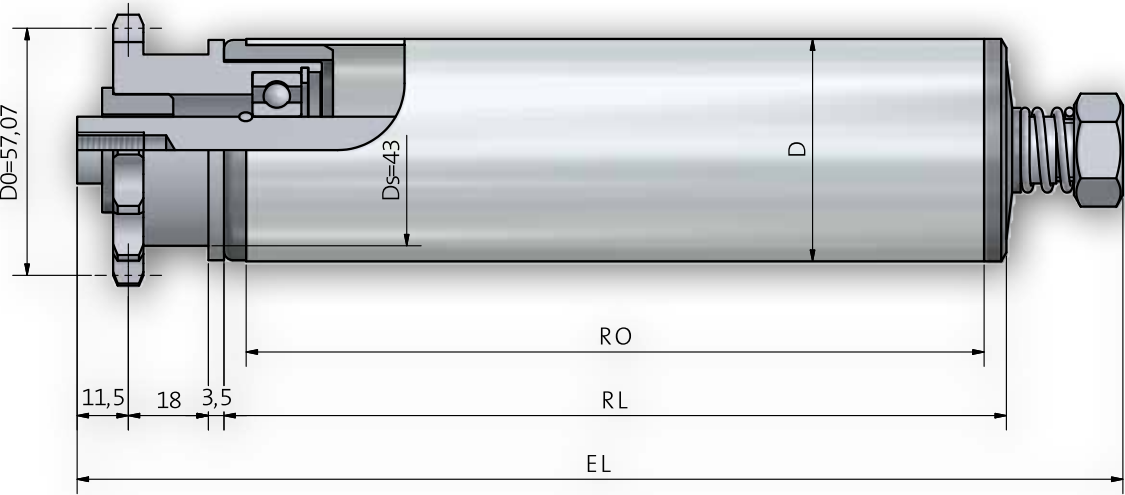
Roller 506 / 507

Drive Element	Steel - Single Sprocket 1/2" x 5/16" z=14 Bolt Tooth Form
Bearing Type	Ball bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Type 506 Accumulation drive with a pressure of 5% of the loaded material weight Type 507 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying - for Stop-And-Go use Type 508. For rough materials use adjustable accumulation roller(Type 506R). Conveyor roller Type 506 are even available as double friction roller Type 506DF.

Order Example

Type	506 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 506R



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
15	RL+	58

Range of counter bearings for tube- and shaft combinations

Tube dia.	A15
50 x 1,5	301 / 302 / 402WT
50 x 2	301
50 x 2,8 KB/KGH	301
50 x 3	301
60,3 x 1,65	301
60 x 2	301 / 302 / 402WT
60 x 3	301 / 402WT
63 x 3 KB/KGH	301
63,5 x 2,9	301 / 402WT
80 x 2	301 / 402WT

Optional	Coatings Page 10
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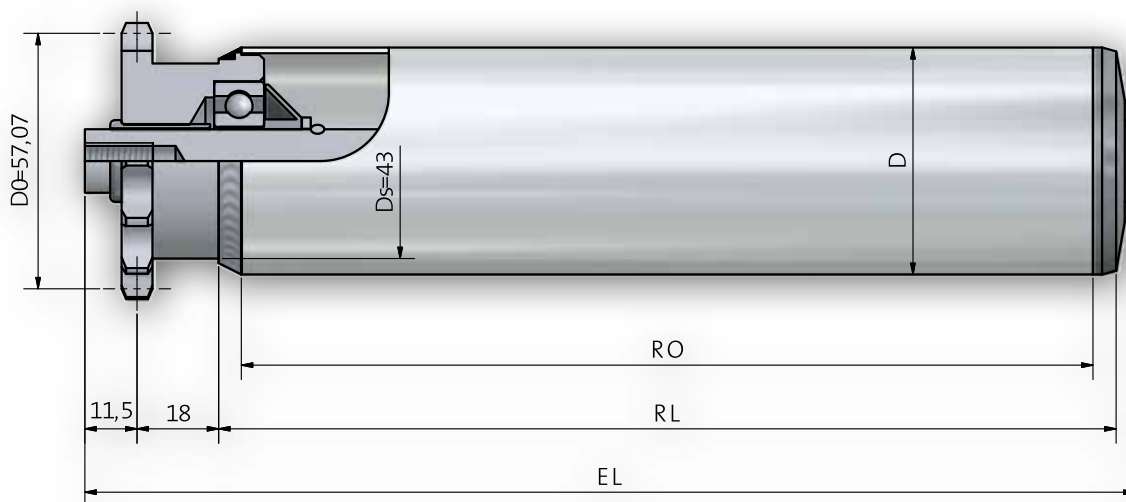
Roller 506R

Drive Element	Steel - Single Sprocket 1/2" x 5/16" z=14 Bolt Tooth Form
Bearing Type	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.000N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment).
Note	Accumulation pressure to be adjusted manually.



Order Example

Type	506R ZZ / 301 ZZ - 50x1,5 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 508



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	48	
12	RL+	50	36
14	RL+	52	36
15	RL+	52	36
17	RL+	52	36

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14	A17
50 x 1,5	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250
50 x 2	250 / 300	250 / 300	250 / 300	250
60,3 x 1,65	300	300	300	
60 x 2	250 / 300 / 302	250 / 300 / 302	250 / 300 / 302	250 / 402
60 x 3	250 / 300	250 / 300	250 / 300	250
63,5 x 2,9	300	300	300	402
70 x 2	300	300	300	
80 x 2	250 / 300	250 / 300	250 / 300	250 / 402

Roller 508

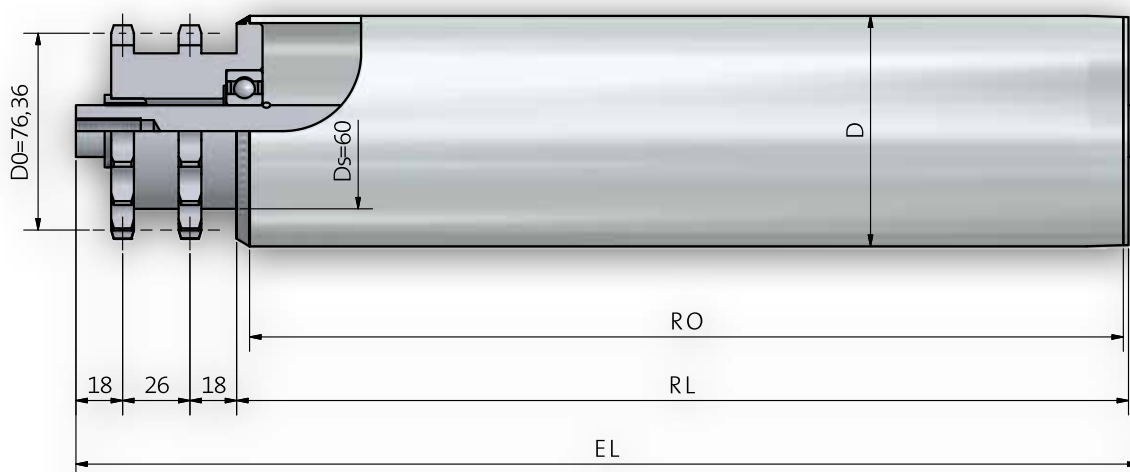
Drive Element

Bearing Type	Steel - Single Sprocket 1/2" x 5/16" z=14 Bolt Tooth Form Ball bearing (Series 6202, 6003) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	1.500N (depending upon the load limit of tube and shaft)
Max. Speed	0,3 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Permanent drive, driving element welded to the tube
Note	With special Bearings these roller can even be used in deep freeze areas. Please mention required features when placing order.



Order Example

Type	508 ZZ / 250 ZZ - 60x2 STI A14 IGM 8x15 EL=700mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 510



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
20	RL+	85	67
25	RL+		67

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20	A25
63,5 x 2,9	260	
80 x 2	260	260
80 x 3	260	260
88,9 x 2,9	260	260
108 x 3,25	260	260
133 x 3,6	402WO	402WO

Roller 510

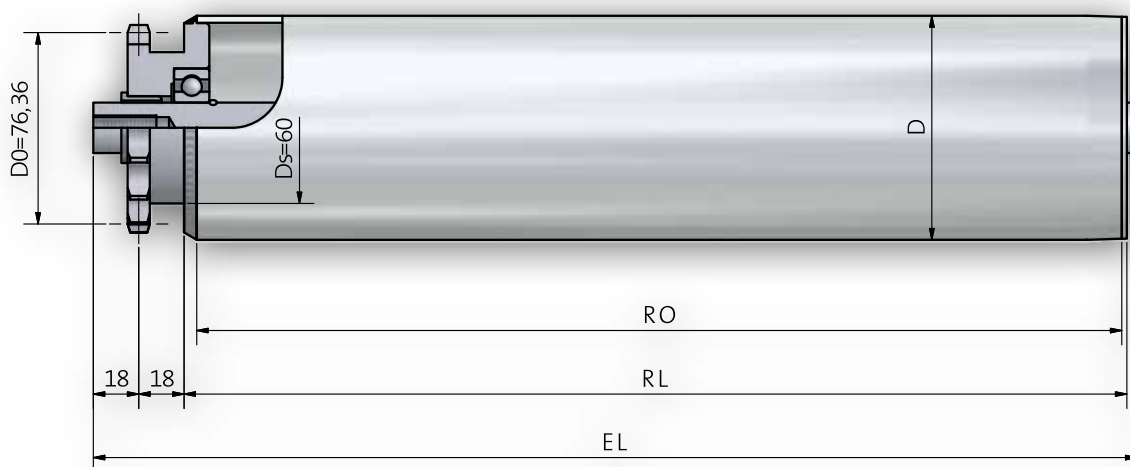
Drive Element

Bearing Type	Steel - Double Sprocket 5/8" x 3/8" z=15
Load Capacity/Roller	Ball Bearing (Series 6004, 6204, 6005) DIN 625 available in 2RS, ZZ
Max. Speed	3.400N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,5 m/s
Type of Drive	-5 to +80 C
Note	Permanent drive, driving element welded to the tube
	With special Bearings these roller can even be used in deep freeze areas.
	Please mention required features when placing order.



Order Example

Type	510 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 511



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft- ϕ	EL=		
20	RL+	59	41
25	RL+		41

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20	A25
63,5 x 2,9	260	
80 x 2	260	260
80 x 3	260	260
88,9 x 2,9	260	260
108 x 3,25	260	260
133 x 3,6	402WO	402WO

Roller 511

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Steel - Single Sprocket 5/8" x 3/8" z=15 Bolt Tooth Form

Ball Bearing (Series 6004, 6204, 6005) DIN 625 available in 2RS, ZZ

3.400N (depending upon the load limit of tube and shaft)

0,3 m/s

-5 to +80 C

Permanent drive, driving element welded to the tube

With special Bearings these roller can even be used in deep freeze areas.
Please mention required features when placing order.

Order Example

Type 511 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive

Ball bearing sealing

Type of counter bearing

Ball bearing sealing

Tube-Ø and wall thickness

Tube quality

Shaft-Ø



Shaft Ends

Installation length

Roller 512



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
20	RL+	89	71
25	RL+		71

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20	A25
80 x 2	260	260
80 x 3	260	260
88,9 x 2,9	260	260
108 x 3,25	260	260
133 x 3,6	402WO	402WO

Roller 512

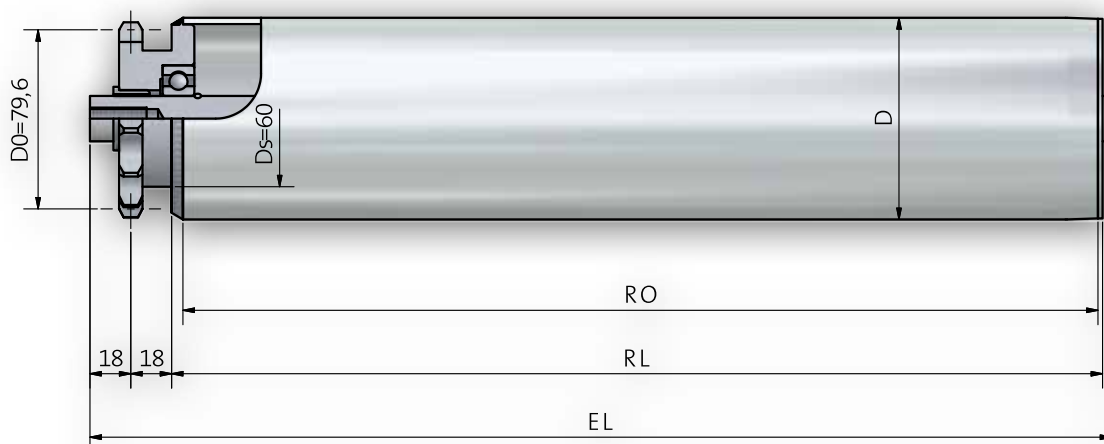
Drive Element

Bearing Type	Steel - Double Sprocket 3/4" x 7/16" Z=13
Load Capacity/Roller	Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ
Max. Speed	4.000N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,5 m/s
Type of Drive	-5 to +80 C
Note	Permanent drive, driving element welded to the tube
	With special Bearings these roller can even be used in deep freeze areas.
	Please mention required features when placing order.



Order Example

Type	512 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 513



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft- \varnothing	$E_L=$		
20	RL+	59	41
25	RL+		41

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20	A25
80 x 2	260	260
80 x 3	260	260
88,9 x 2,9	260	260
108 x 3,25	260	260
133 x 3,6	402WO	402WO

Roller 513

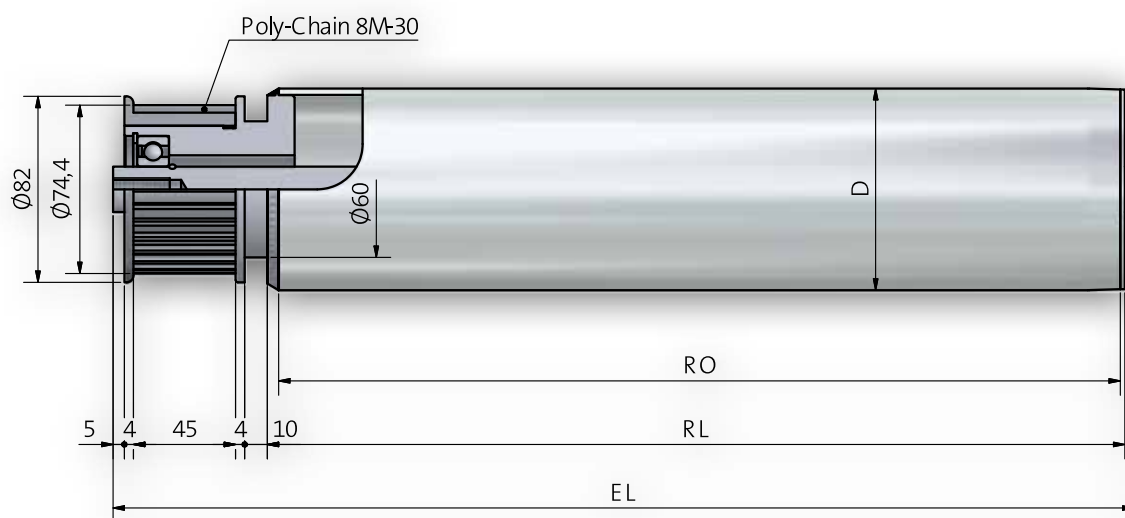
Drive Element

Bearing Type	Steel - Single Sprocket 3/4" x 7/16" Z=13 Bolt Tooth Form
Load Capacity/Roller	Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ
Max. Speed	4.000N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,3 m/s
Type of Drive	-5 to +80 C
Note	Permanent drive, driving element welded to the tube
	With special Bearings these roller can even be used in deep freeze areas.
	Please mention required features when placing order.

Order Example

Type	513 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 516



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	73

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	260
80 x 3	260
88,9 x 2,9	260
108 x 3,25	260

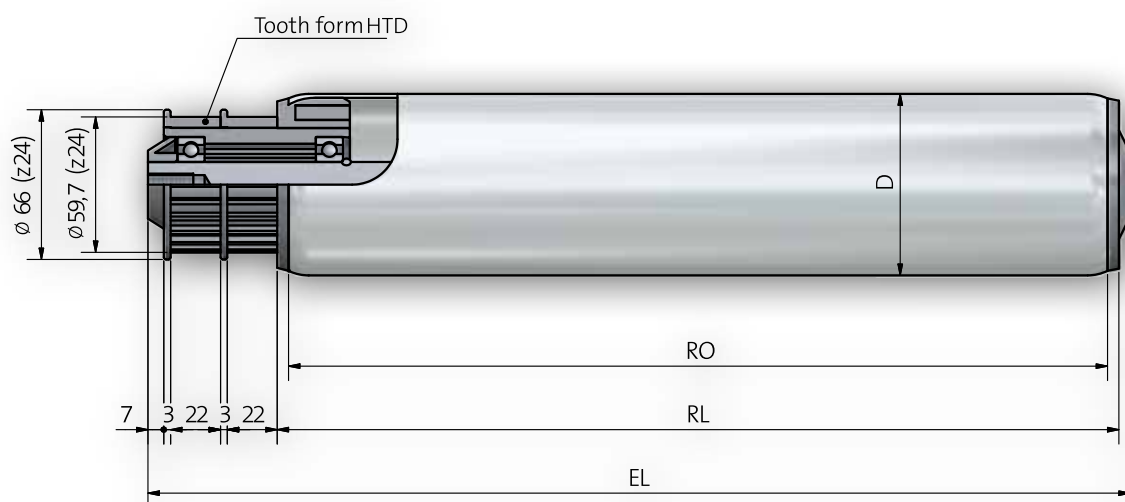
Roller 516

Drive Element	Thermoplastic synthetic material - Tooth Belt Wheel 8M z=30 (Poly-Chain)
Bearing Type	Ball Bearing (Series 6204) DIN 625 available in 2RS, ZZ
Load Capacity/Roller	1.800N (depending upon the load limit of tube and shaft)
Max. Speed	0,8 m/s
Range of Temperature Celcius	-5 to +80 C
Type of Drive	Permanent drive, welded steel core with thermoplastic synthetic tooth element fit positivly
Note	Roller will be driven by a 21mm wide tooth belt (Poly Chain).

Order Example

Type	516 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 517 z24 / z25



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	62

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402
108 x 3,25	402

Roller 517 z24 / z25

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Tooth Belt Wheel 8M z=24/z=25 (HTD)

Ball Bearing (Series 6204) DIN 625 available in 2RS, ZZ

1.200N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

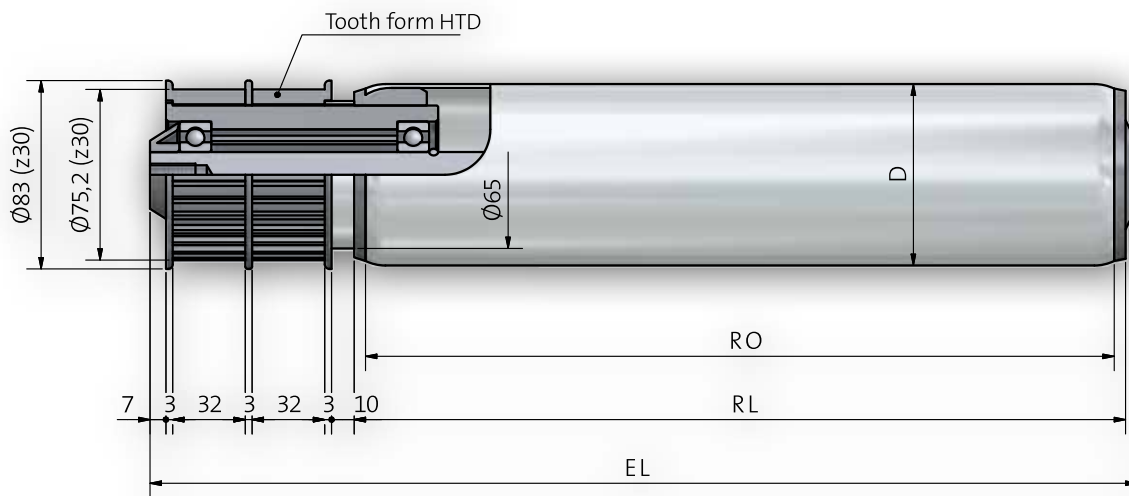
Roller will be driven by a 20mm wide tooth belt (HTD).

Order Example

Type 517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm

Type Drive	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Ball bearing sealing	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Type of counter bearing	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Ball bearing sealing	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Tube-Ø and wall thickness	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Tube quality	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Shaft-Ø	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Shaft Ends	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm
Installation length	517z24 RS / 402 RS - 80x2 STI A20 IGM 12x20 EL=1100mm

Roller 517 z30 / z34



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	95
25	RL+	95

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402

Roller 517 z30 / z34

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Tooth Belt Wheel 8M z=30/z=34 (HTD)

Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ

1.800N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

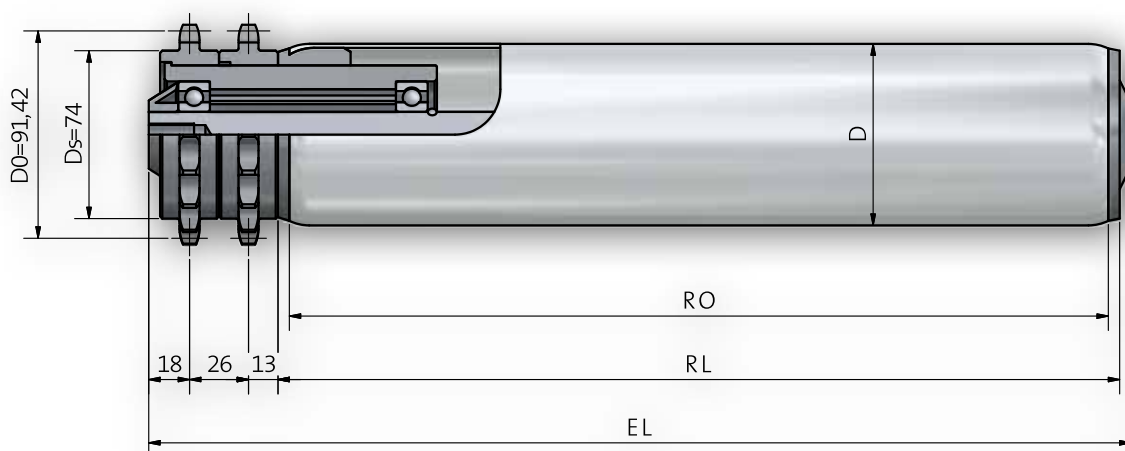
Roller will be driven by a 30mm wide tooth belt (HTD).

Order Example

Type 517z30 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive
 Ball bearing sealing
 Type of counter bearing
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft Ends
 Installation length

Roller 518



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
20	RL+	62

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402
108 x 3,25	402

Roller 518

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Double Sprocket 5/8" x 3/8" z=18

Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ

1.800N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

Order Example

Type 518 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive |

Ball bearing sealing |

Type of counter bearing |

Ball bearing sealing |

Tube-Ø and wall thickness |

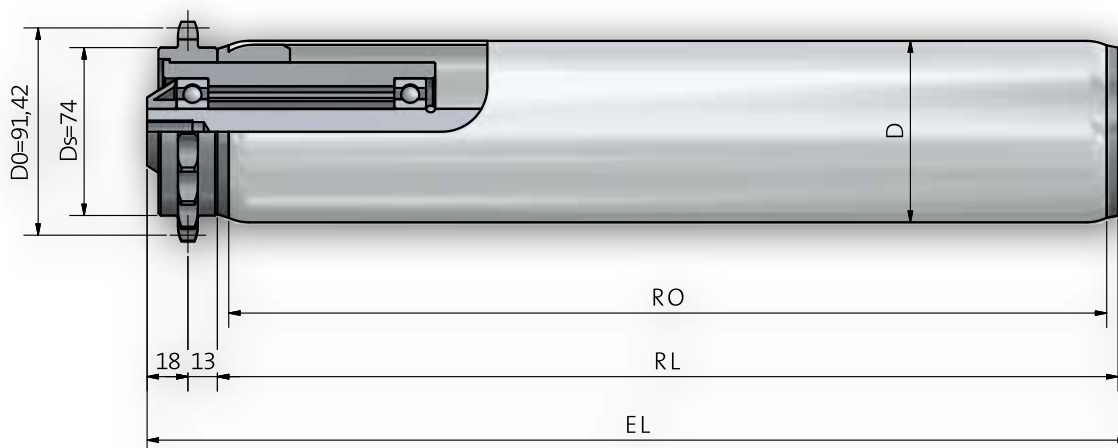
Tube quality |

Shaft-Ø |

Shaft Ends |

Installation length |

Roller 519



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
20	RL+	36

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402
108 x 3,25	402

Roller 519

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Single Sprocket 5/8" x 3/8" z=18

Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ

1.800N (depending upon the load limit of tube and shaft)

0,3 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

Driving element has normal tooth form.

Order Example

Type 519 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive |

Ball bearing sealing |

Type of counter bearing |

Ball bearing sealing |

Tube-Ø and wall thickness |

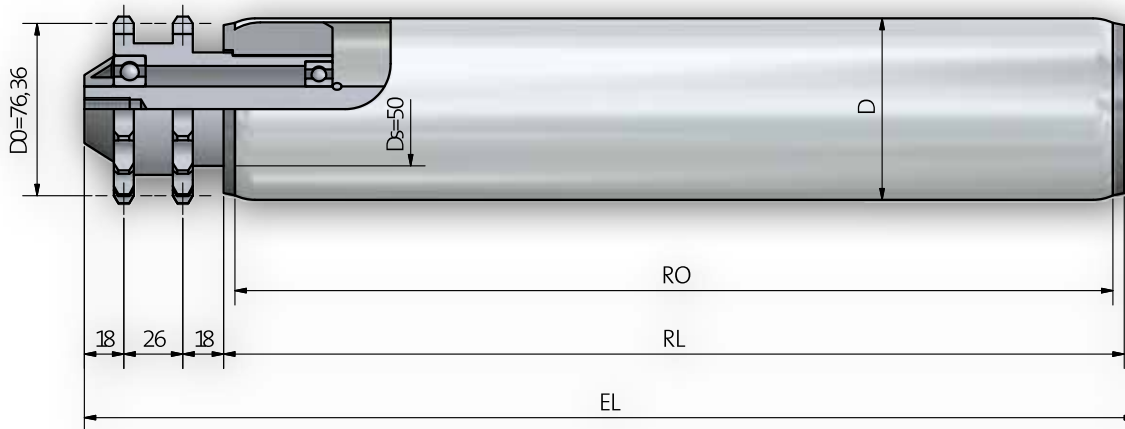
Tube quality |

Shaft-Ø |

Shaft Ends |

Installation length |

Roller 520



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	67

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402
108 x 3,25	402

Roller 520

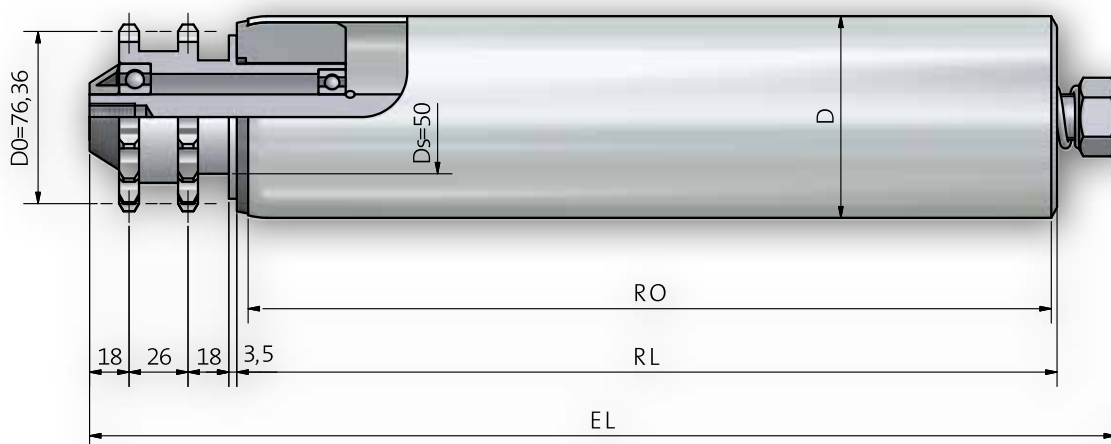
Drive Element

Bearing Type	Steel - Double Sprocket 5/8" x 3/8" z=15
Load Capacity/Roller	Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ
Max. Speed	1.800N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,5 m/s
Type of Drive	-5 to +40 C
Note	Accumulation drive with a pressure of 5% of the loaded material weight
	For rough materials use adjustable accumulation roller(Type 520R).


Order Example

Type	520 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 520R



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	EL=	
20	RL+	89

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402WO / 402WT
88,9 x 2,9	402WO / 402WT
108 x 3,25	402WO / 402WT

Roller 520R

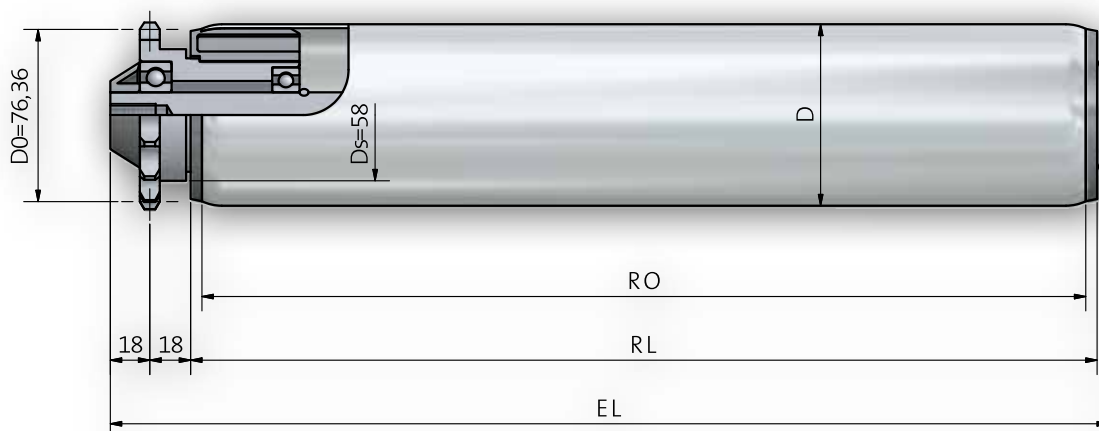
Drive Element

Bearing Type	Steel - Double Sprocket 5/8" x 3/8" z=15
Load Capacity/Roller	Ball Bearing (Series 6004, 6204) DIN 625 available in 2RS, ZZ
Max. Speed	1.800N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,5 m/s
Type of Drive	-5 to +40 C
Note	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment).
	Accumulation pressure to be adjusted manually.



Order Example

Type	520R RS / 402WTI RS - 88,9x2,9 STI A20 M20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 521



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft- ϕ	EL=		
20	RL+	59	41

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402
108 x 3,25	402

Roller 521

Drive Element

Bearing Type	Steel - Single Sprocket 5/8" x 3/8" z=15 Bolt Tooth Form
Load Capacity/Roller	Ball Bearing (Series 6004, 6204) DIN 625 available in 2RS, ZZ
Max. Speed	1.800N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,3 m/s
Type of Drive	-5 to +40 C
Note	Accumulation drive with a pressure of 5% of the loaded material weight
	For rough materials use adjustable accumulation roller(Type 521R).

Order Example

Type	521 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 521R



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	63

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402WO / 402WT
88,9 x 2,9	402WO / 402WT
108 x 3,25	402WO / 402WT

Roller 521R

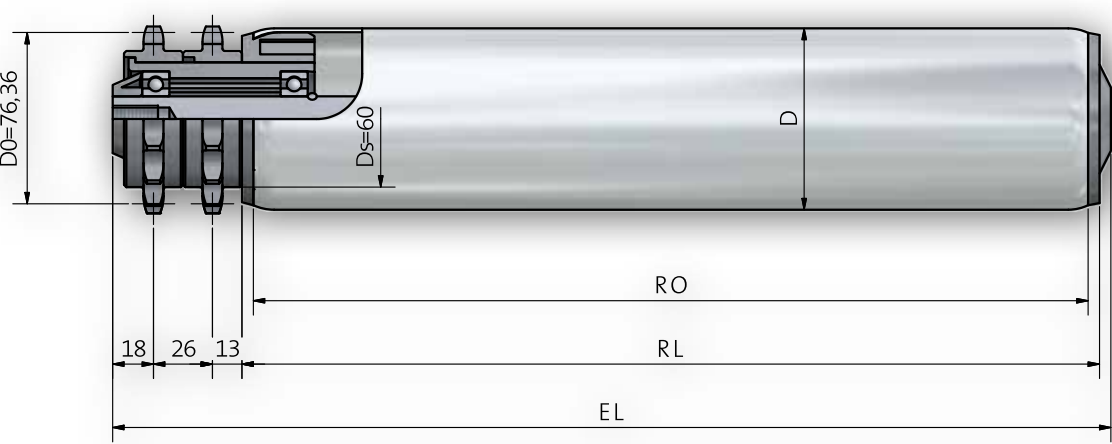
Drive Element

Bearing Type	Steel - Single Sprocket 5/8" x 3/8" z=15 Bolt Tooth Form
Load Capacity/Roller	Ball Bearing (Series 6004, 6204) DIN 625 available in 2RS, ZZ
Max. Speed	1.800N (depending upon the load limit of tube and shaft)
Range of Temperature Celcius	0,3 m/s
Type of Drive	-5 to +40 C
Note	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment).
	Accumulation pressure to be adjusted manually.

Order Example

Type	521R RS / 402WTI RS - 88,9x2,9 STI A20 M20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 522



Shaft dimensions

Order Specification		A...IGM...
Shaft-Ø	EL=	
20	RL+	62

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402

Roller 522

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Double Sprocket 5/8" x 3/8" z=15

Ball Bearing (Series 6004) DIN 625 available in 2RS, ZZ

1.200N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

Order Example

Type 522 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive |

Ball bearing sealing |

Type of counter bearing |

Ball bearing sealing |

Tube-Ø and wall thickness |

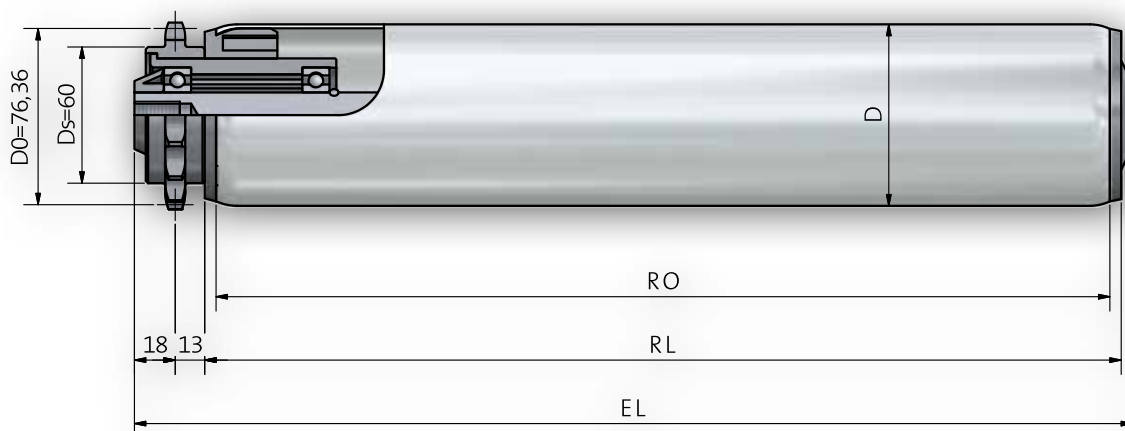
Tube quality |

Shaft-Ø |

Shaft Ends |

Installation length |

Roller 523



Shaft dimensions

Order Specification		A...IGM...
Shaft- ϕ	$E_L=$	
20	R_L+	36

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402
88,9 x 2,9	402

Roller 523

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Thermoplastic synthetic material - Single Sprocket 5/8" x 3/8" z=15

Ball Bearing (Series 6004) DIN 625 available in 2RS, ZZ

800N (depending upon the load limit of tube and shaft)

0,3 m/s

-5 to +40 C

Permanent drive, tooth element fit positively to the tube

Driving element has normal tooth form.

Order Example

Type 523 RS / 402 RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive |

Ball bearing sealing |

Type of counter bearing |

Ball bearing sealing |

Tube-Ø and wall thickness |

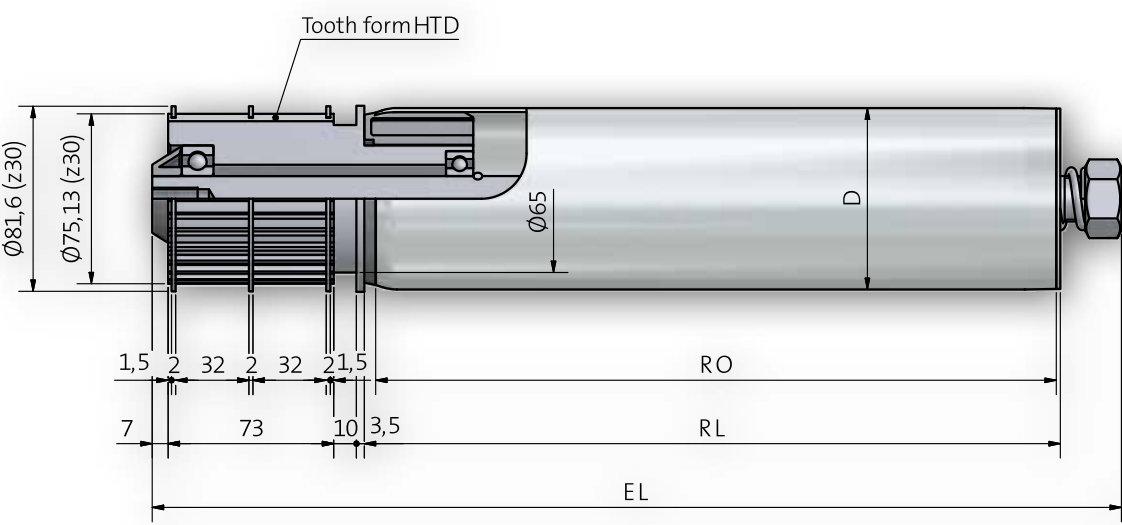
Tube quality |

Shaft-Ø |

Shaft Ends |

Installation length |

Roller 533R z30 / z34



Shaft dimensions

Order Specification		A...IGM...
Shaft- \varnothing	EL=	
20	RL+	114

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	402WO / 402WT
88,9 x 2,9	402WO / 402WT
108 x 3,25	402WO / 402WT

Roller 533R z30 / z34

Drive Element

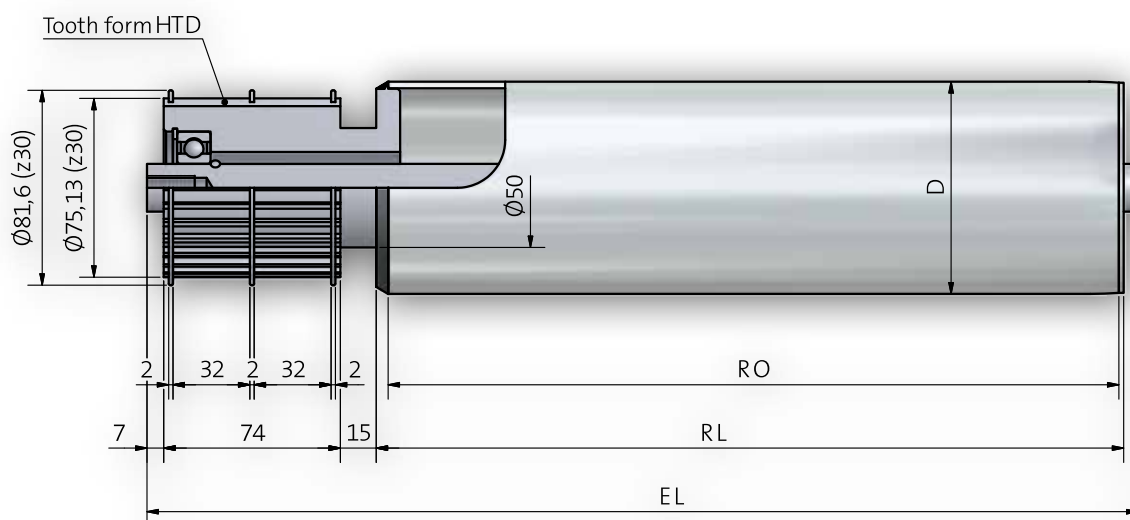
Steel - Tooth Belt Wheel 8M z=30/z=34 (HTD)

Bearing Type	Ball Bearing (Series 6204) DIN 625 available in 2RS, ZZ
Load Capacity/Roller	1.800N (depending upon the load limit of tube and shaft)
Max. Speed	0,8 m/s
Range of Temperature Celcius	-5 to +40 C
Type of Drive	Accumulation drive with a pressure of 5% of the loaded material weight (depending on adjustment).
Note	Accumulation pressure to be adjusted manually.

Order Example

Type	533R z30 RS / 402WTI RS - 88,9x2,9 STI A20 M20 IGM 12x20 EL=1100mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Roller 534 z30 / z34



Shaft dimensions

Order Specification		A...IGM...
Shaft- \varnothing	EL=	
20	RL+	101
25	RL+	101

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20	A25
88,9 x 2,9	260	260
108 x 3,25	260	260
133 x 3,6	402WO	402WO

Roller 534 z30 / z34

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celcius

Type of Drive

Note

Steel- Tooth Belt Wheel 8M z=30/z=34 (HTD)

Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ

2.000N (depending upon the load limit of tube and shaft)

0,8 m/s

-5 to +40 C

Permanent drive, driving element welded to the tube

Roller will be driven by a 30mm wide tooth belt (HTD).

Order Example

Type 534z34 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive

Ball bearing sealing

Type of counter bearing

Ball bearing sealing

Tube-Ø and wall thickness

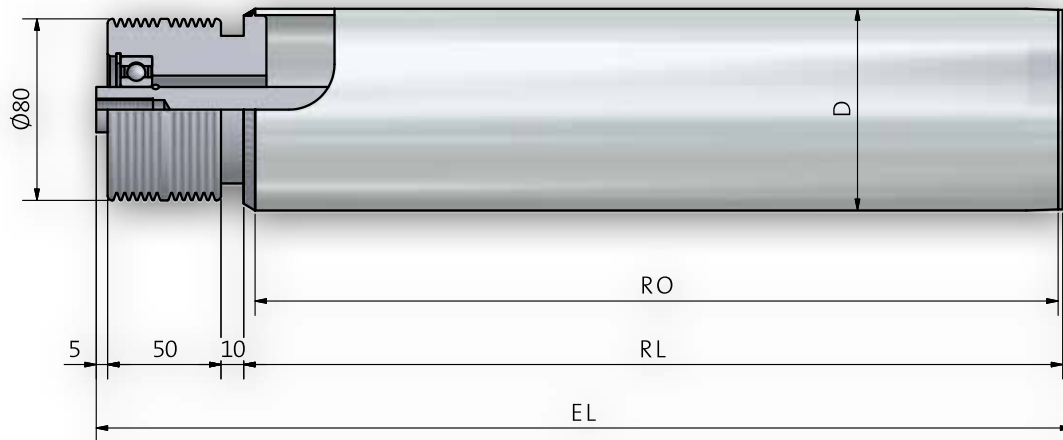
Tube quality

Shaft-Ø

Shaft Ends

Installation length

Roller 539



Shaft dimensions

Order Specification		A...IGM...
Shaft- \varnothing	EL=	
20	RL+	70

Range of counter bearings for tube- and shaft combinations

Tube dia.	A20
80 x 2	260
80 x 3	260
88,9 x 2,9	260
108 x 3,25	260

Roller 539

Drive Element

Bearing Type
Load Capacity/Roller
Max. Speed
Range of Temperature Celcius
Type of Drive
Note

Steel-Ripped-V-Belt - PK profile (DIN 9982)

Ball Bearing (Series 6204, 6005) DIN 625 available in 2RS, ZZ
2.000N (depending upon the load limit of tube and shaft)
0,8 m/s
-5 to +40 C
Permanent drive, driving element welded to the tube
Roller will be driven by belts with 6 or 8 ribs.

Order Example

Type 539 RS / 260I RS - 88,9x2,9 STI A20 IGM 12x20 EL=1100mm

Type Drive
Ball bearing sealing
Type of counter bearing
Ball bearing sealing
Tube-Ø and wall thickness
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Conical Roller

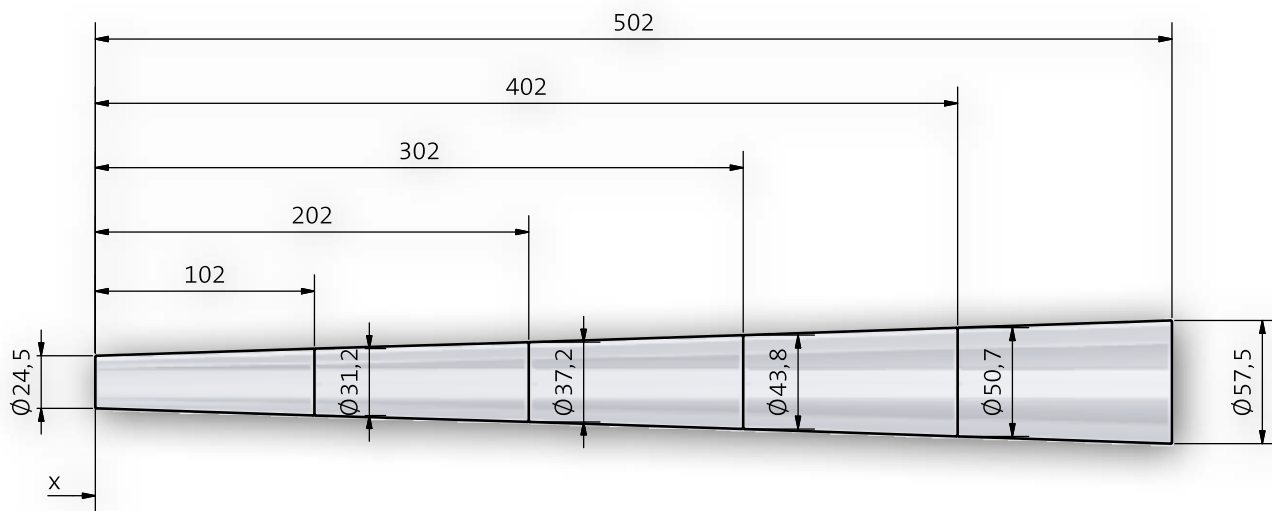
Type	Description	Page
	Conicities	162
540 / 541	Thermoplastic synthetic material - Double chain sprocket 1/2x5/16" z=14	164
542 / 543	Thermoplastic synthetic material - Single chain sprocket 1/2x5/16" z=14	166
550 / 551	Steel Double chain sprocket 1/2x5/16" z=14	168
552 / 553	Steel Single chain sprocket 1/2x5/16" z=14	170
563	Steel Double chain sprocket 3/8x7/32" z=12	172
566 / 567	Steel Double chain sprocket 3/8x7/32" z=12	174
568	Thermoplastic synthetic material - Ripped-V-Belt PJ profile	176
570	Thermoplastic round belt pulley with 2 grooves	178
600	Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	180
601	Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	182
602	Thermoplastic syntethic material - Steel housing with Precision Ball Bearing	184



Conicities

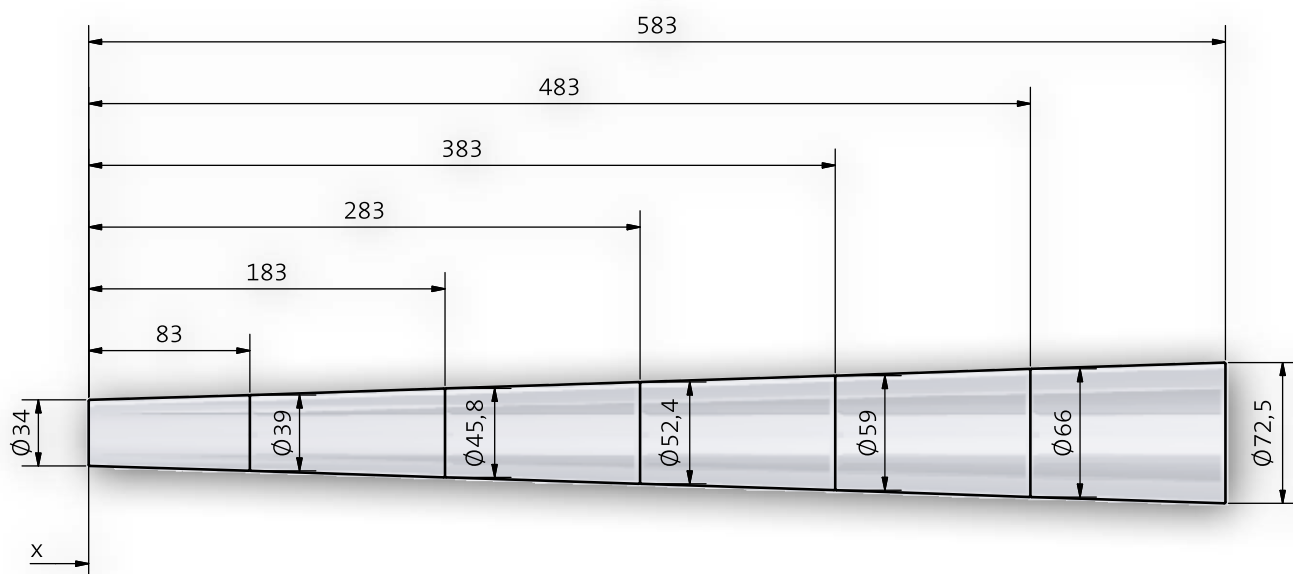
1. Conical Elements

Type 563, 601



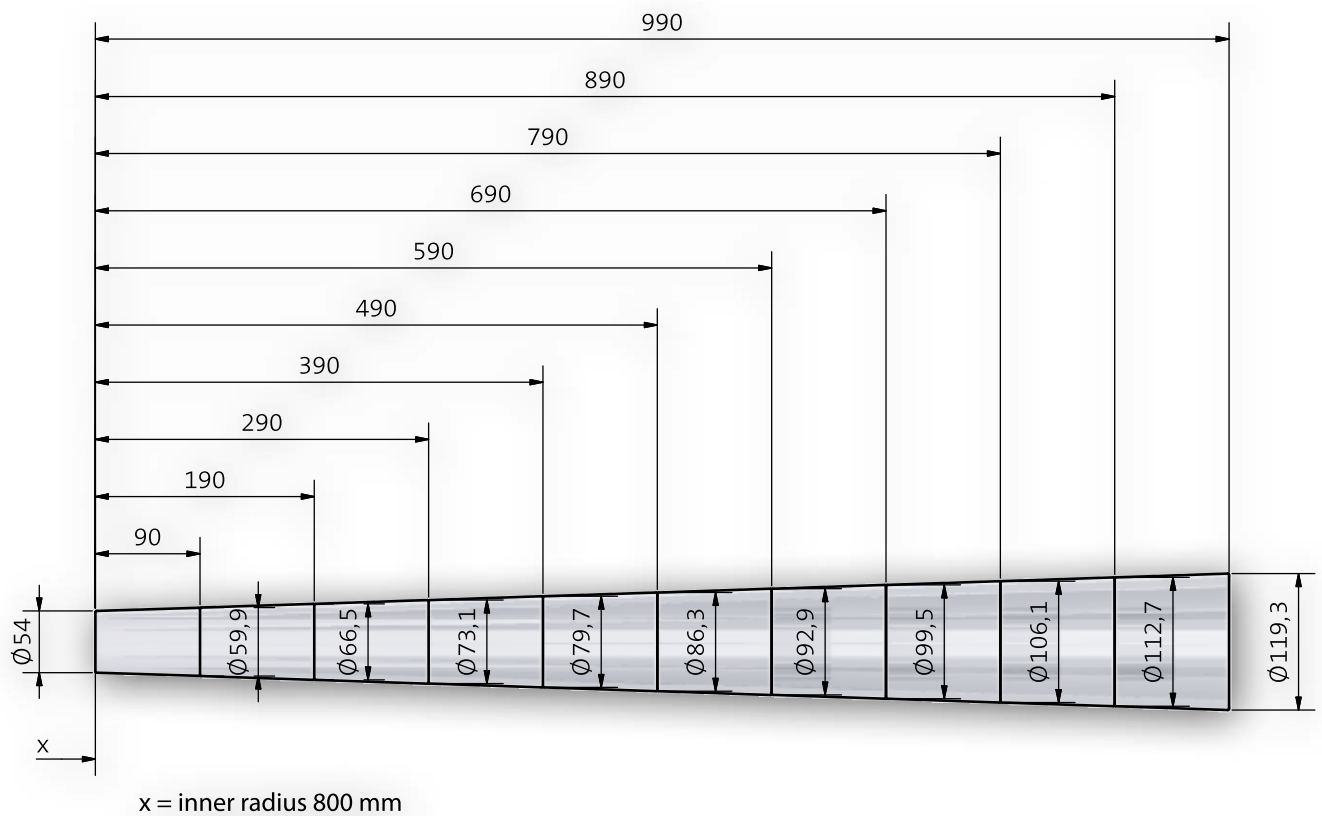
x = inner radius 373 mm

Type 566, 567, 602



x = inner radius 500 mm

Type 540, 541, 542, 543, 550, 551, 552, 553, 568, 600

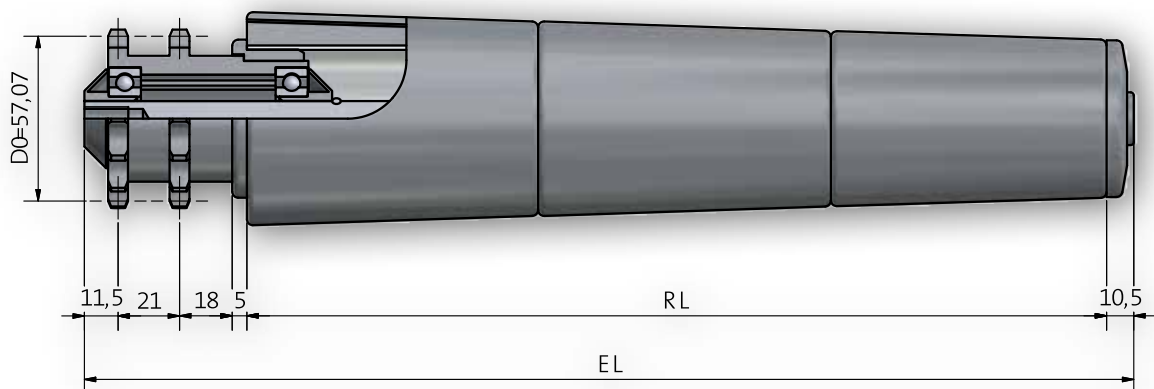


2. Conical Roller with PUR-RIM coating, 73° Shore D upon cylindrical roller



The available conicities of the coating you will receive upon request.

The coating is not antistatic and not heat resistant.

Conveyor Roller 540 / 541



Shaft dimensions

Description		A...M...	A...IGM...
Shaft- ϕ	EL=		
10	RL+	79	
12	RL+	81	67
14	RL+	83	67

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50	300	300	300

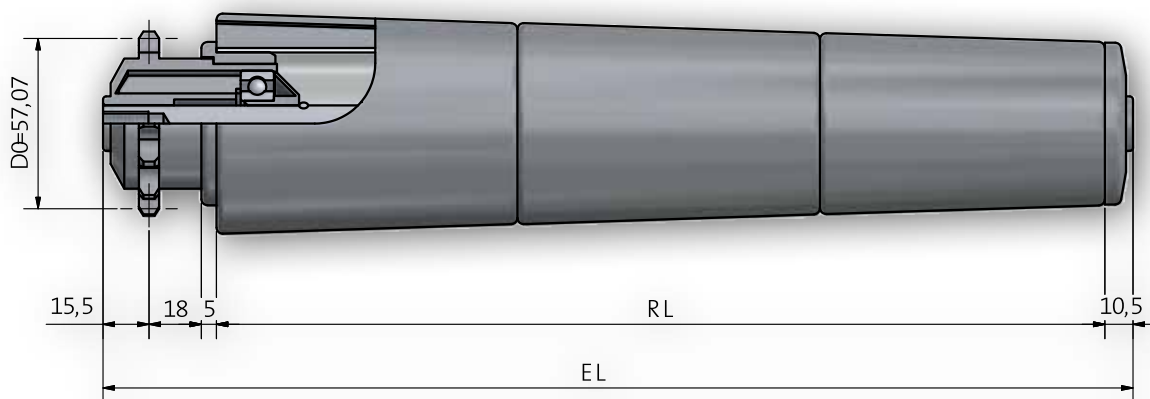
Conveyor Roller 540 / 541

Drive Element	Thermoplastic synthetic material - Double sprocket 1/2" x 5/16" z=14
Bearing	Type Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celsius	-5 to +40 C
Type of Drive Type	Type 540 Accumulation drive with a pressure of 5% of the loaded material weight Type 541 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.



Order Example

Type	541 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=557mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 542 / 543



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	62	
12	RL+	64	50
14	RL+	66	50

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50	300	300	300

Conveyor Roller 542 / 543

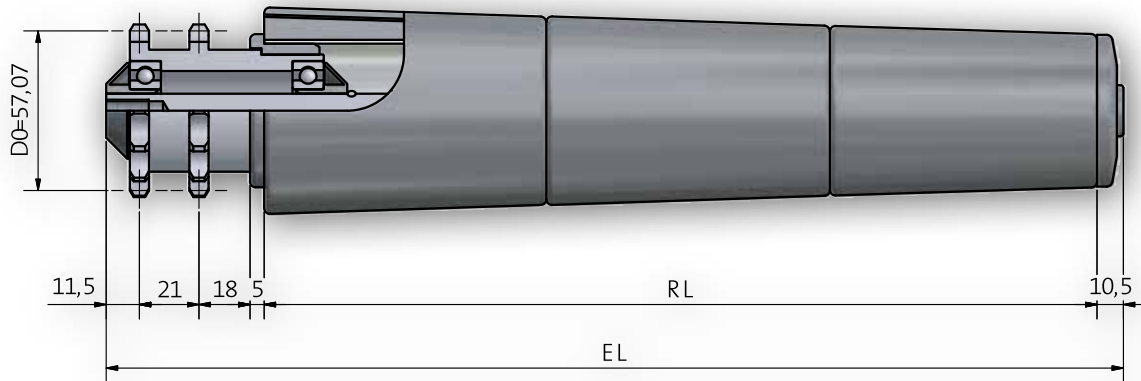
Drive Element

Bearing Type	Thermoplastic synthetic material - Single Sprocket 1/2" x 5/16" z=14
Load Capacity/Roller	Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Max. Speed	400N (depending upon the load limit of tube and shaft)
Range of Temperature Celsius	0,5 m/s
Type of Drive	-5 to +40 C
Note	Type 542 Accumulation drive with a pressure of 5% of the loaded material weight
	Type 543 Permanent drive, driving element fit positively to the tube by a bushing
	Permanent drive only for continuous conveying.



Order Example

Type	543 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=540mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 550 / 551



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	79	
12	RL+	81	67
14	RL+	83	67

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50	300	300	300

Conveyor Roller 550 / 551

Drive Element

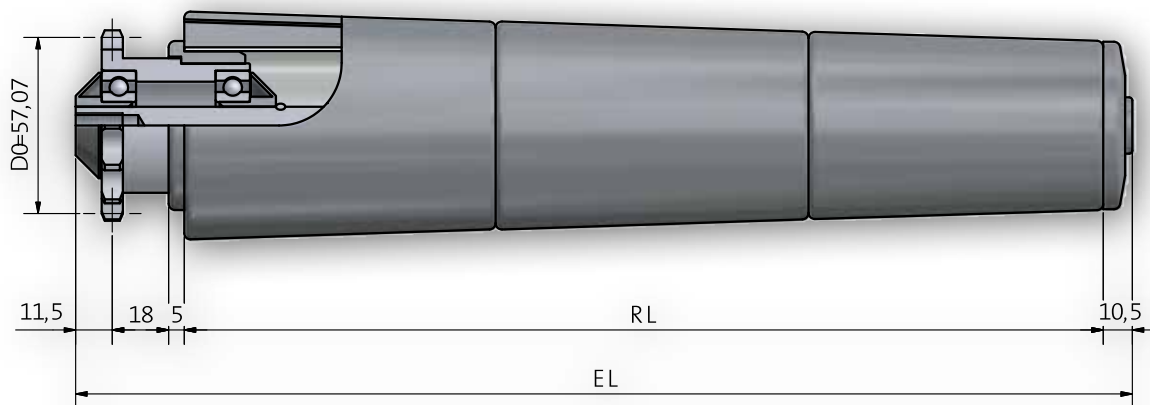
Steel - Double Sprocket 1/2" x 5/16" z=14

Bearing Type	Ball bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celsius	-5 to +40 C
Type of Drive	Type 550 Accumulation drive with a pressure of 5% of the loaded material weight Type 551 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying. Optional Type 555 (accumulation drive) and Type 556 (permanent drive) even available with PU-RIM: Coated tube for other inner circles or tube diameters.



Order Example

Type	551 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=557mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 552 / 553



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft- ϕ	EL=		
10	RL+	58	
12	RL+	60	46
14	RL+	62	46

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50	300	300	300

Conveyor Roller 552 / 553

Drive Element

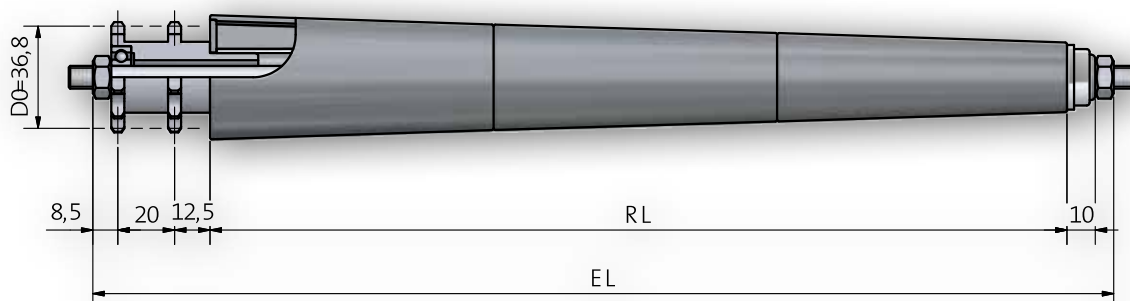
Steel - Single Sprocket 1/2" x 5/16" z=14

Bearing Type	Ball bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ
Load Capacity/Roller	400N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celsius	-5 to +40 C
Type of Drive	Type 552 Accumulation drive with a pressure of 5% of the loaded material weight Type 553 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying. Optional Type 557 (accumulation drive) and Type 558 (permanent drive) even available with PU-RIM: Coated tube for other inner circles or tube diameters.



Order Example

Type	553 ZZ / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=540mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 563



Shaft dimensions

Order Specification		A...M...	A...FA...
Shaft-Ø	EL=		
8	RL+	59	52

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
20	51B

Conveyor Roller 563

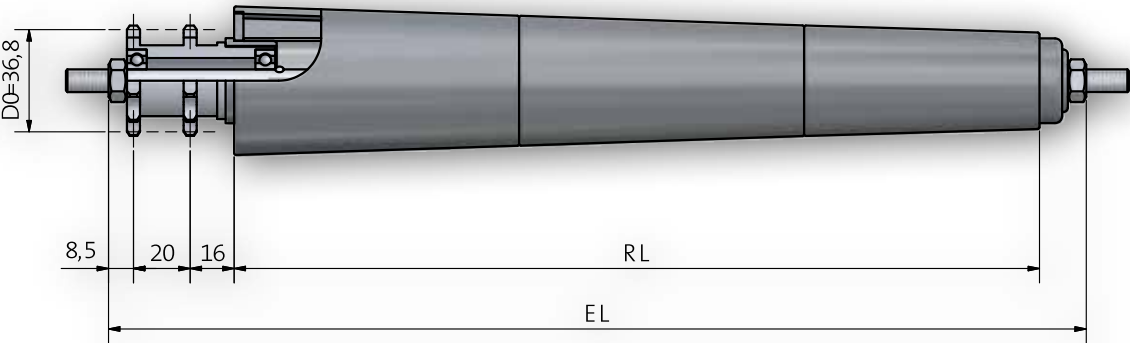
Drive Element

Bearing Type	Steel - Double Sprocket 3/8" x 7/32" z=12
Load Capacity/Roller	Ball Bearing (Series 608) DIN 625 available in 2RS, ZZ
Max. Speed	100N (depending upon the load limit of tube and shaft)
Range of Temperature Celsius	0,5 m/s
Type of Drive	-5 to +40 C
Note	Type 563 Permanent drive, driving element fit positively to the tube by a bushing
	Permanent drive only for continuous conveying.



Order Example

Type	563 ZZ / 51B - 20x1,5 STI A8 M8x15 EL=631mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 566 / 567



Shaft dimensions

Order Specification		A...M...		A...FA...	
Shaft-Ø	EL=				
		Type 51	Type 60	Type 51	Type 60
8	RL+	62	55	62	55

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
30	51 / 60

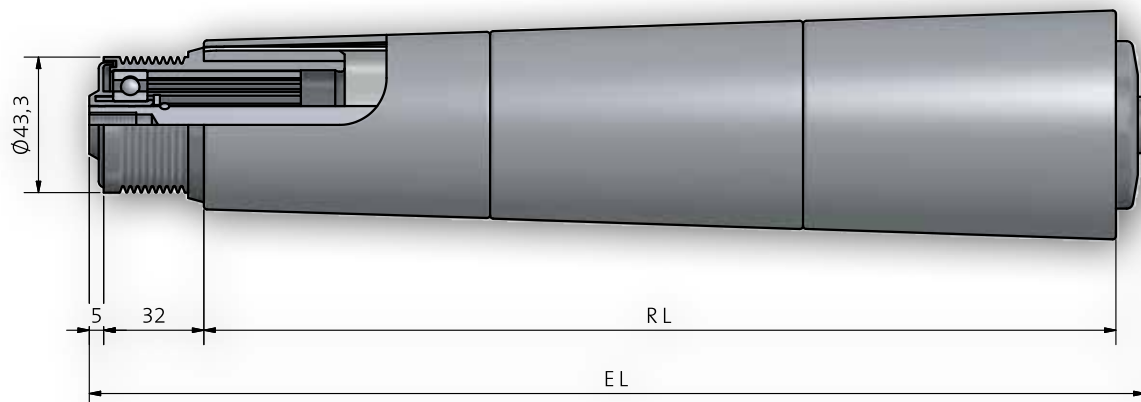
Conveyor Roller 566 / 567

Drive Element	Steel - Double Sprocket 3/8" x 7/32" z=12
Bearing Type	Ball Bearing (Series 608) DIN 625 available in 2RS, ZZ
Load Capacity/Roller	200N (depending upon the load limit of tube and shaft)
Max. Speed	0,5 m/s
Range of Temperature Celsius	-5 to +40 C
Type of Drive	Type 566 Accumulation drive with a pressure of 5% of the loaded material weight Type 567 Permanent drive, driving element fit positively to the tube by a bushing
Note	Permanent drive only for continuous conveying.






Order Example

Type	567 ZZ / 51B - 30x1 STI A8 M8x15 EL=438mm
Type Drive	
Ball bearing sealing	
Type of counter bearing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 568



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=					
10	RL+		47	47		47
S 11	RL+				47	47
12	RL+	61	47	47		47
14	RL+	63	47	47		47
15	RL+		47	47		

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	ASK11	A12	A14
50	302	302	302	302

Conveyor Roller 568

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celsius

Type of Drive

Note

Thermoplastic synthetic material - Ripped-V-Belt PJ profile (DIN 7867)

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

400N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

Type 568 Permanent drive, driving element fit positively to the tube

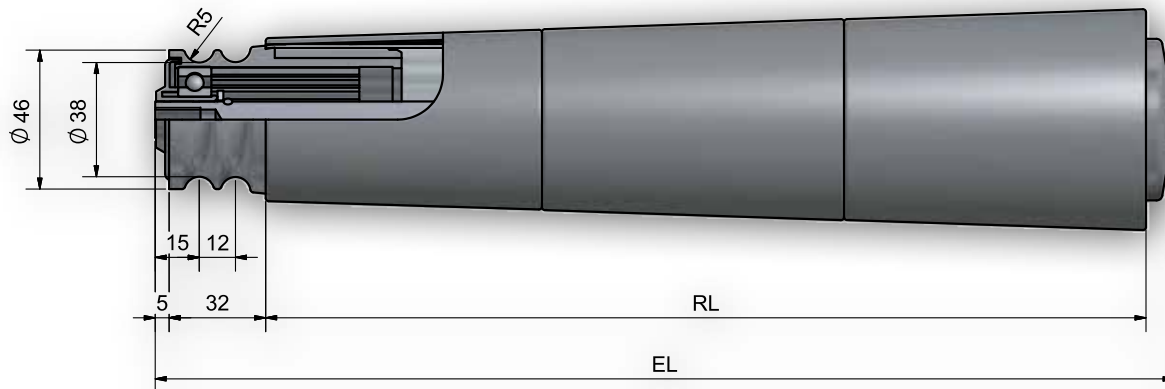
Roller will be driven by belts with 2 ribs.

Order Example






Type 568 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=540mm

Type Drive
 Ball bearing sealing.....
 Type of counter bearing
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft ending
 Installation length.....

Conveyor Roller 570



Shaft dimensions

Order Specification		A...M...	A...AGM...	A...IGM...	A...glatt	A...FA...
Shaft-Ø	EL=					
10	RL+		47	47		47
S 11	RL+				47	47
12	RL+	61	47	47		47
14	RL+	63	47	47		47
15	RL+		47	47		

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	ASK11	A12	A14
50	302	302	302	302

Conveyor Roller 570

Drive Element

Bearing Type

Load Capacity/Roller

Max. Speed

Range of Temperature Celsius

Type of Drive

Note

Thermoplastic round belt pulley with 2 grooves

Ball Bearing (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

300N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

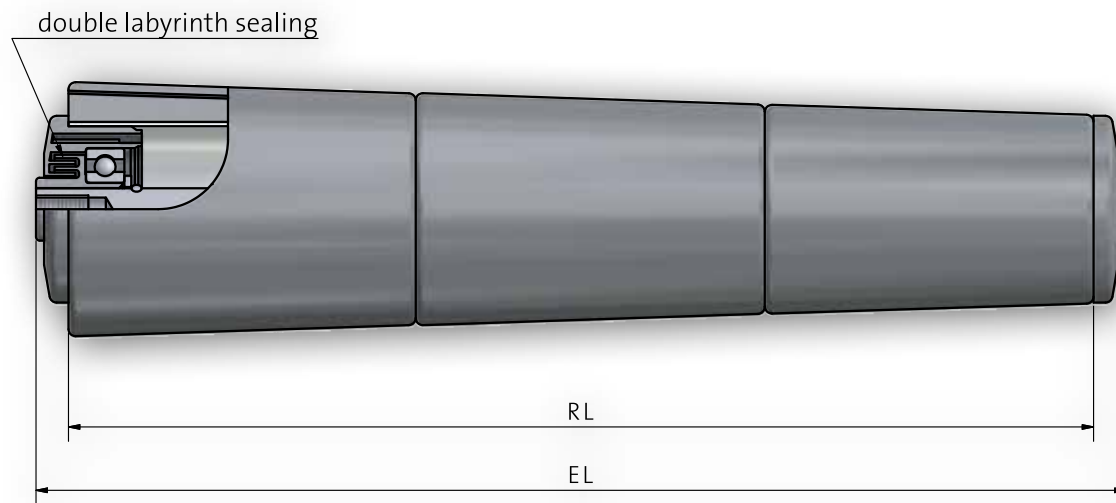
Type 570 Permanent drive, driving element fit positively to the tube

Supporting rollers are driven with a round belt Ø 5mm.



Order Example

Type	570 ZZ / 302 ZZ - 50x1,5 STI A14 IGM 10x15 EL=540mm
Type Drive	
Ball bearing sealing.....	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft ending	
Installation length	

Conveyor Roller 600



Shaft dimensions

Order Specification		A...M...	A...IGM...
Shaft-Ø	EL=		
10	RL+	32	20
12	RL+	34	20
14	RL+	36	20

Range of counter bearings for tube- and shaft combinations

Tube dia.	A10	A12	A14
50	300 / 302	300 / 302	300 / 302

Conveyor Roller 600

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celsius

Note

Thermoplastic syntethic material - Steel housing with Precision Ball Bearing

Ball Bearings (Series 6202) DIN 625 available in 2RS, ZZ Standard Series 6202 ZZ

400N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

For use as driven roller.

Optional Type 605 even available with PU-RIM coated tube for other inner circles or tube diameter.

Order Example

Type 600 / 300 ZZ - 50x1,5 STI A14 IGM 10x15 EL=557mm

Type Drive |

Bearing |

Ball bearing sealing |

Tube-Ø and wall thickness |

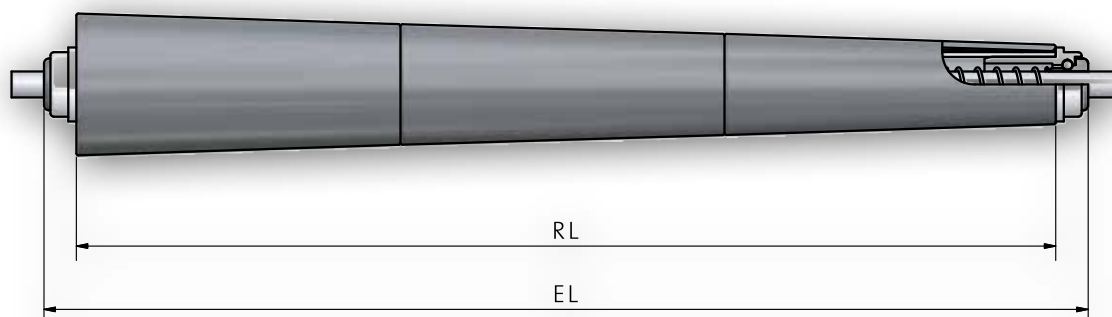
Tube quality |

Shaft-Ø |




Shaft ending |

Installation length |

Conveyor Roller 601



Shaft dimensions

Order Specification		A...M...	A...IGM...	A...FA...
Shaft-Ø	EL=			
8	RL+	34	21	21

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8
20	51B

Conveyor Roller 601

Bearing Type

Type of Bearing

Load Capacity/Roller

Max. Speed

Range of Temperature Celsius

Note

Thermoplastic syntethic material - Steel housing with Precision Ball Bearing

Ball Row

100N (depending upon the load limit of tube and shaft)

0,5 m/s

-5 to +40 C

Gravity Roller - not for use as driven roller

Order Example

Type 601 / 51B - 20x1,5 STI A8 M8x15 EL=422mm

Type Drive |

Bearing |

Tube-Ø and wall thickness |

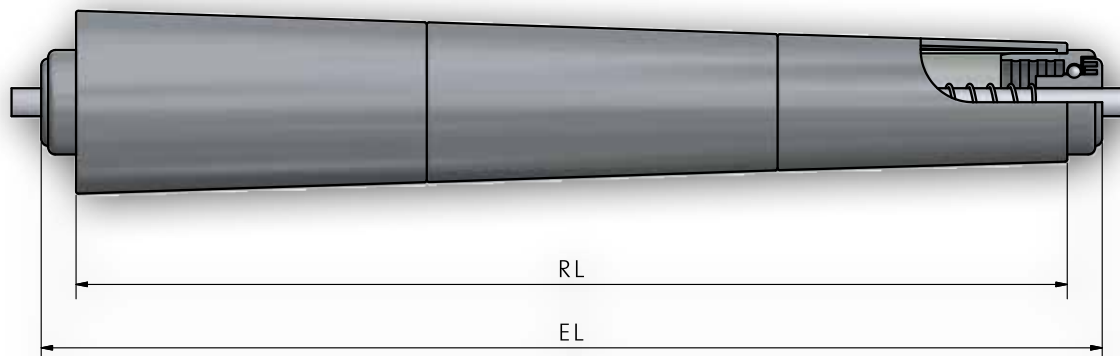
Tube quality |

Shaft-Ø |



Shaft ending |

Installation length |

Conveyor Roller 602



Shaft dimensions

Order Specification		A...M...		A...FA...	
Shaft-Ø	EL=				
		Type 51	Type 60	Type 51	Type 60
8	RL+	34	19	21	-
10	RL+	33	18	21	-

Range of counter bearings for tube- and shaft combinations

Tube dia.	A8	A10
30	51 / 60	51 / 60

Conveyor Roller 602

Bearing Type

Thermoplastic syntethic material - Steel housing with Precision Ball Bearing

Type of Bearing

With bearing Type 60: Ball Bearing (Series 608,6000), 6202 DIN 625 available in 2RS, ZZ Standard Series 608ZZ

With bearing Type 50/51: Ball Row

Load Capacity/Roller

100N (depending upon the load limit of tube and shaft)

Max. Speed

0,5 m/s

Range of Temperature Celsius

-5 to +40 C

Note

Type 60: can be used as driven roller.

Type 50/51: Gravity Roller - not for use as driven roller.

Order Example

Type **602 / 60 ZZ - 30x1 STI A8 M8x15 EL=403mm**

Type Drive
 Bearing
 Ball bearing sealing
 Tube-Ø and wall thickness
 Tube quality
 Shaft-Ø
 Shaft ending
 Installation length

Zero Pressure Conveying System

Type	Description	Page
	Introduction	188
530	Clutch up to 10.000N	191
531	Clutch up to 1.200N	192
530L / 531L	Light sensor/light barrier with integrated logic	193
530Z / 531Z	Pneumatic cylinder	195
536E	Electromagnetic Clutch 24V DC	197
Drive System	Electronical module for contactless conveying	199
RMD-Card	Rollex Multi-Drive Card	203

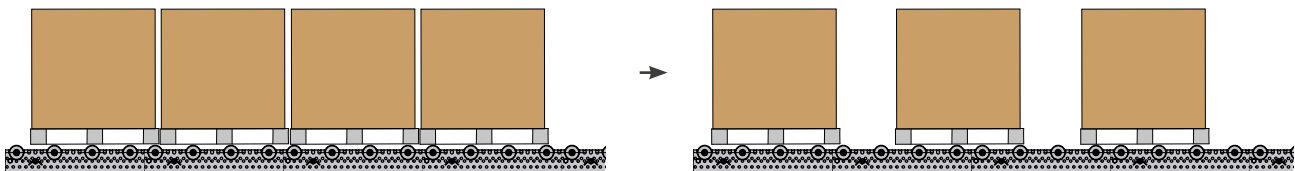
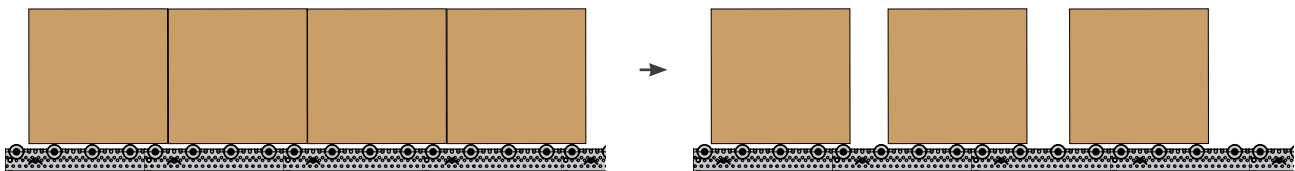


Zero Pressure Conveying System

Rollex zero pressure systems are used in conveyor systems, if goods are not allowed to contact.

Advantages:

- No dynamic pressure
- Easy removal
- Several sections are driven by only one motor
- Easy controlling via intelligent parts



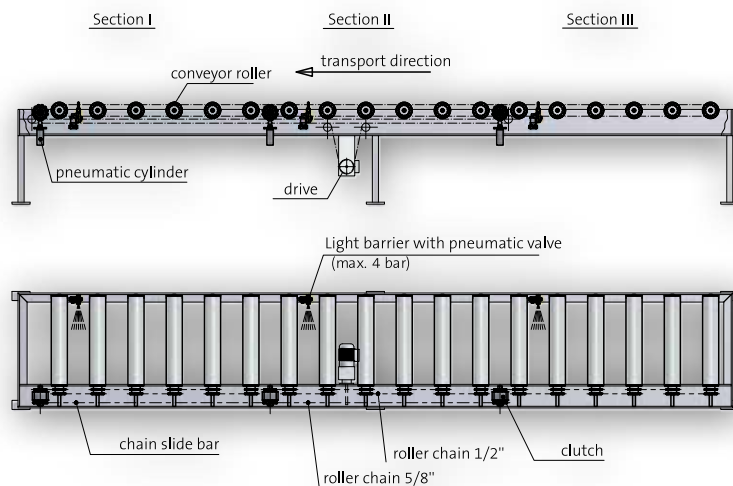
Contactless Conveying

Rollex offers several different possibilities to integrate zero pressure systems into your conveyors.

Type 530 / Type 531

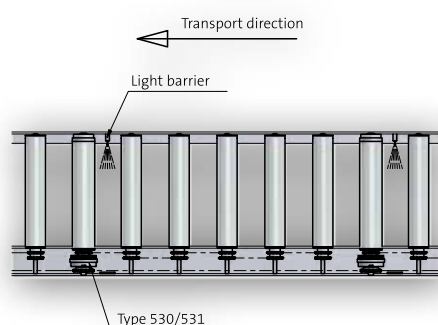
These types are mechanical clutch systems. Typ 530 are driven by a 5/8" tangential an Typ 531 are driven by a 1/2" tangential chain with one motor. Every connected or disconnected section is combined with the tangential chain by a clutch. Beside the tangential 5/8" sprocket the clutch has a 1/2" chain on the side of the section. So a power transmission to each section can be connected or disconnected.

The system is controlled by an electro pneumatic light sensor with integrated logic, but the clutching is done by a pneumatic cylinder. The cylinder stops the clutch and disconnects the required section.



Type 536E

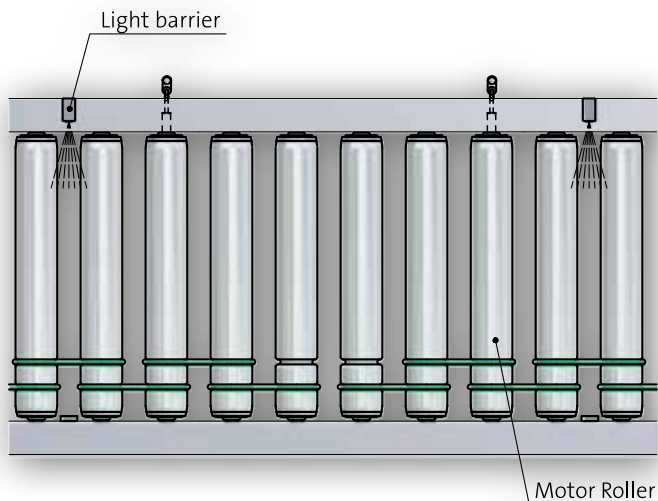
This type is an electro magnetic clutch system. The motor driven 5/8" tangential chain drives the primary sprocket of the clutch. The clutching is done by the Rollex Drive System and disconnects the required section. A magnetic brake, opposite the drive, avoids an overrun of the transported material.



Contactless Conveying

Type 840-50

Type 840-50 is a 24V DC Motor Roller, than can be used as a drive concept for zero pressure systems by the means of intelligent light barriers, the RMD-Card , the Rollex Drive System or other control modes.



Accessories

In addition to the drive components Rollex offers following accessories:

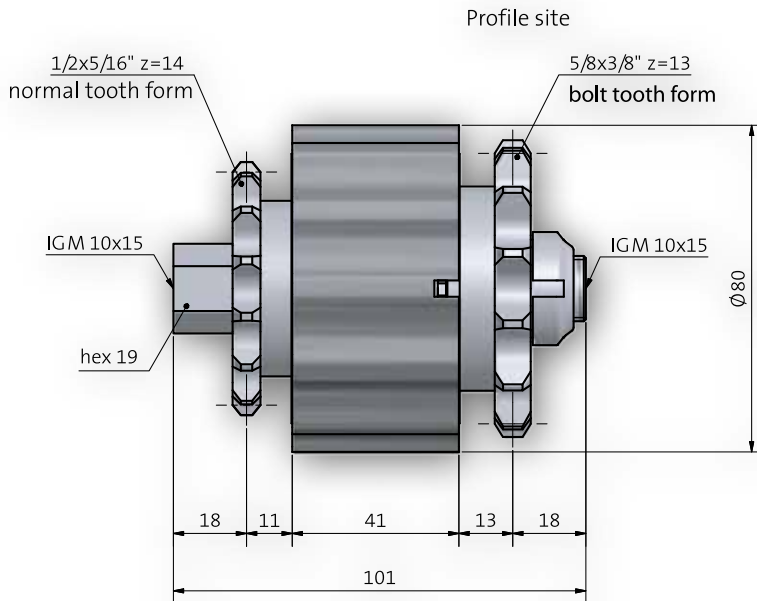
- Electropneumatic light sensor with integrated logic
- Electropneumatic light barrier with integrated logic and mirror
- Rollex Drive System with integrated logic, light barrier and mirror
- Pneumatic cylinder

Contactless Conveying

Type 530

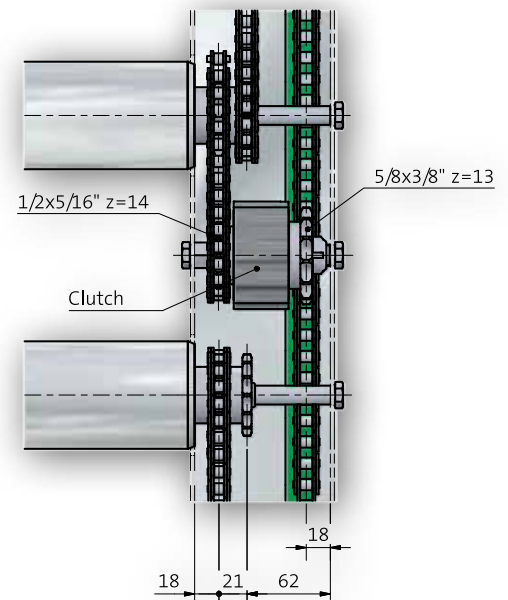
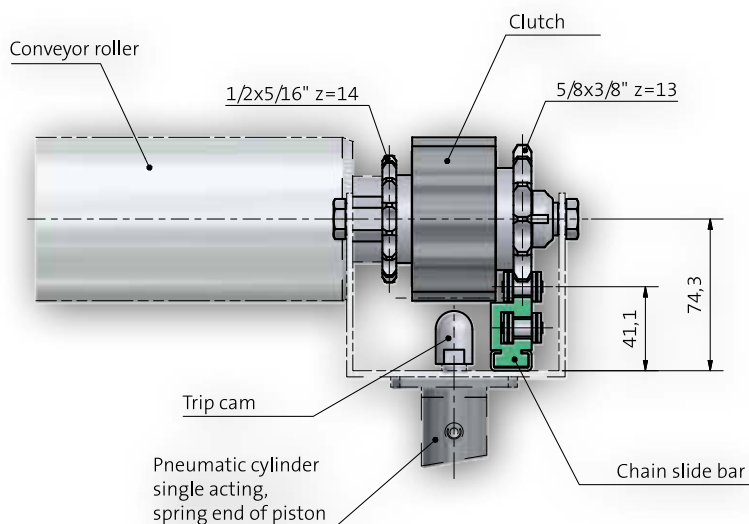
The clutch system Type 530 is made for transport of goods up to 10.000N. On one side the clutch has a sprocket $5/8 \times 3/8"$ z13 with Bolt Tooth Form for tangential drive.

On the other side there is a chain $1/2 \times 5/16"$ z14, that transmits the power to the driven section.



Note:

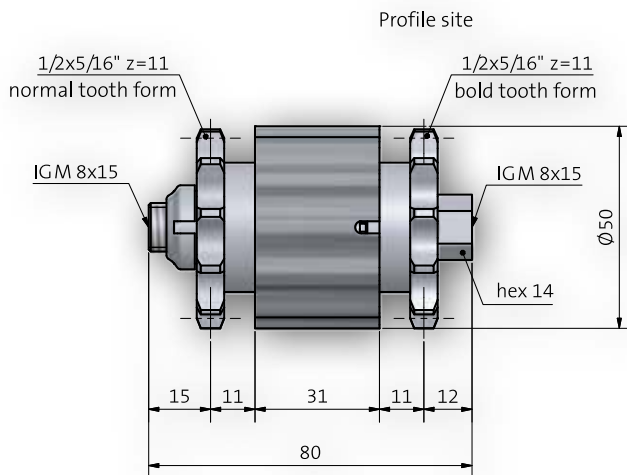
- max. load capacity 10.000N
- max. speed 0,2m/s
- please consider the breaking load of the $5/8"$ chain when dimensioning the pallet places
- overrun for 10.000N is around ca. 200mm
- not to be combined with Drive System or RMD-Card



Contactless Conveying

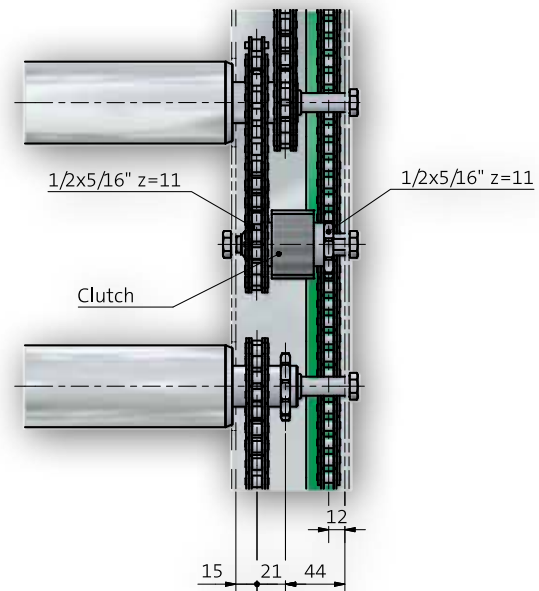
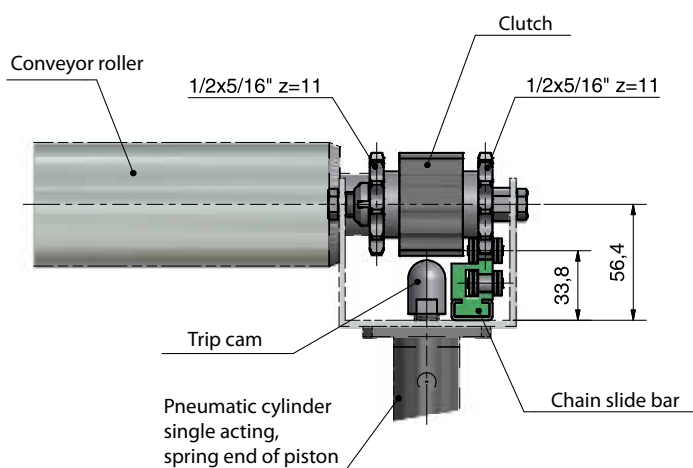
Type 531

The clutch system Type 531 is made for transport of goods up to 1.200N. On one side the clutch has a sprocket $1/2 \times 5/16"$ z=11 with Bolt Tooth Form for tangential drive. On the other side there is a chain $1/2 \times 5/16"$ z=11, that transmits the power to the driven section.



Note:

- max. load capacity 1.200N
- max. speed 0,3m/s
- please consider the breaking load of the $1/2"$ chain when dimensioning the pallet places
- overrun for 1.200N is around ca. 100 mm
- not to be combined with Drive System or RMD-Card

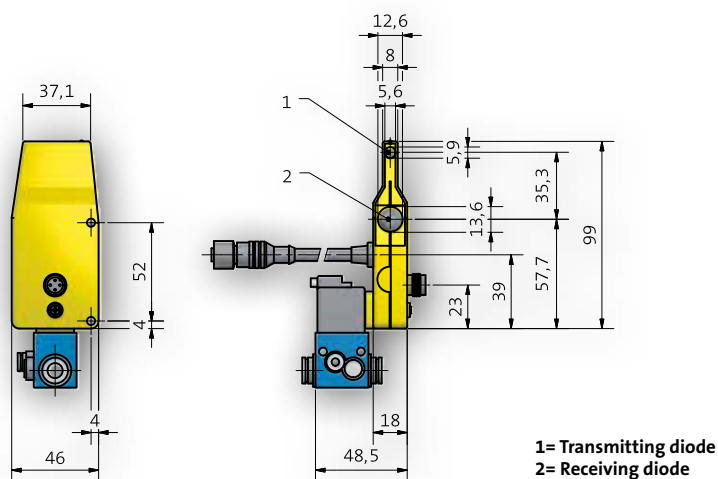


Contactless Conveying

Accessories for Type 530/531

Type 530 – Light Sensor

Retro-Reflex Sensor for Conveyor Systems



- integrated logic
- electrical background suppression
- scaled switching distance adjuster
- fully encapsulated

Optical Data	
Range	550 mm
Potentiometer min	220...270 mm
Potentiometer center	320...400 mm
Potentiometer max	550...630 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Wave Length	880 nm
Service Life (Tu = +25°C)	10000 h
Max Ambient Light	10000 Lux
Opening Angle	5°

Mechanical Data	
Range 550 mm	Housing Plastic
Full Encapsulation	yes
Protection Mode	IP 65
Connection	M 12x1
Cable Length	88 cm

Electronical Data	
Supply Voltage	18...30 V DC
Current Consumption Sensor (Ub = 24V)	< 30 mA
Switching Frequency	100 Hz
Response Time	5 ms
Temperature Drift	< 10 %
Temperature Range	-15...50°C
Switching Outputs	1
Switching Output Voltage Drop	< 0.8 V
PNP Switching Output/Switching Current	200 Ma
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	yes
Block Discharge	yes
Valve Control	yes

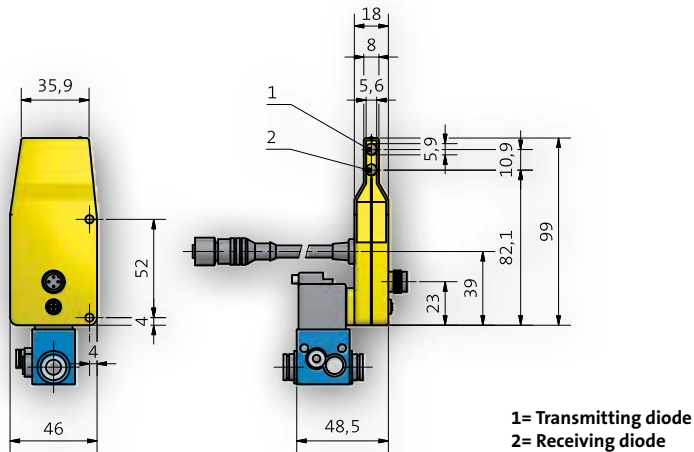
Pneumatic Solenoid Valve Unit	
Valve No.	K04
Supply Voltage Valve	19.2...28.8 V
Current Consumption Valve	86 mA
Operating Pressure	0.5...7 bar
Nominal Width	0.8 nn
Nominal flow rate	1 -> 2 20 NI/min
Nominal flow rate	2 -> 3 100 NI/min
Supply line connector pipe	2x 8x1
Working line connector pipe	4x1
Switching function	NC

Contactless Conveying

Accessories for Type 530/531

Type 530 – Light Sensor

Reflex Sensor for Conveyor Systems



- integrated logic
- recognition of high-gloss and jet black objects
- large Working Range
- fully encapsulated

Optical Data	
Range	6500 mm
Reference Reflector	RQ100BA
Min Distance on Reflector	100 mm
Switching Hysteresis	< 15 %
Light Source	Red Light
Polarization Filter	yes
Service Life (Tu = +25°C)	10000 h
Max Ambient Light	10000 Lux
Opening Angle	5°

Mechanical Data	
Housing	Plastic
Full Encapsulation	yes
Protection Mode	IP 65
Connection	M 12x1
Cable Length	88 cm

Electronical Data	
Supply Voltage	18...30 V DC
Current Consumption Sensor (Ub = 24V)	< 25 mA
Switching Frequency	100 Hz
Operating Pressure	0.5...7 bar
Temperature Drift	< 10 %
Temperature Range	-15...50°C
Switching Outputs	1
Switching Output Voltage Drop	< 0.8 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Logic	yes
Block Discharge	yes
Valve Control	yes

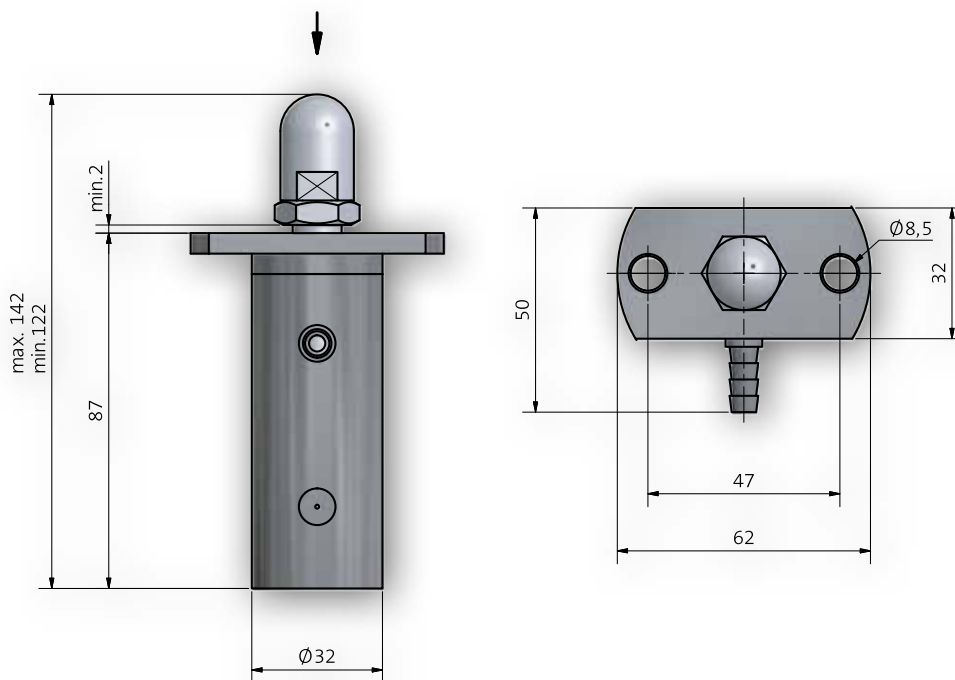
Pneumatic Solenoid Valve Unit	
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Current Consumption Valve	86 mA
Operating Pressure	0.5...7 bar
Nominal Width	0.8 nn
Nominal flow rate	1 -> 2 20 NI/min
Nominal flow rate	2 -> 3 100 NI/min
Supply line connector pipe	2x 8x1
Working line connector pipe	4x1
Switching function	NC

Contactless Conveying

Accessories for Type 530/531

Type 530 Z / 531 Z

Pneumatic Cylinder



Datas

Material	Plastic black
Cylinder rod	Stainless Steel with shift cam
Connector	Plastic Tube (Connecting to Light Barrier by reducing) (from 6 to 4 mm)
Lift	20 mm
max. Pressure	4 bar

Function

Resting position without air:

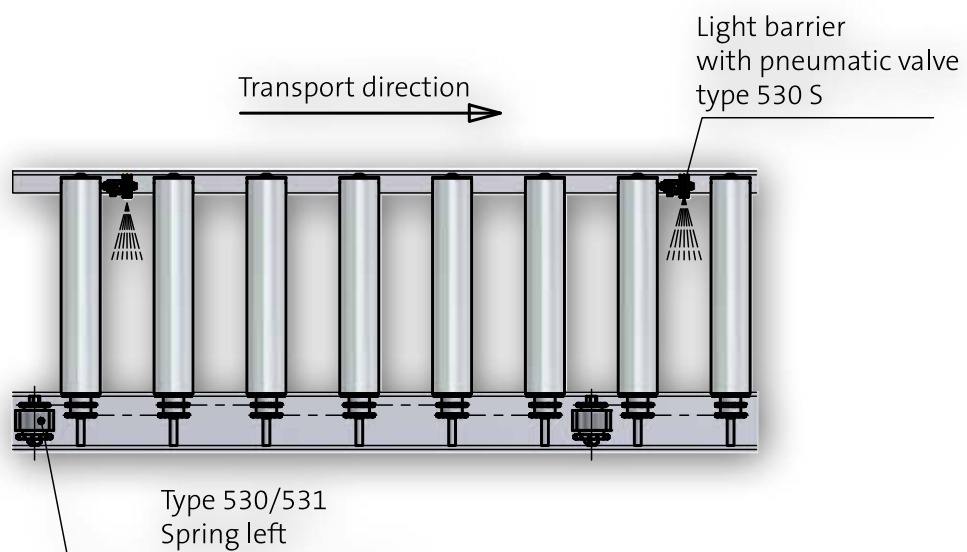
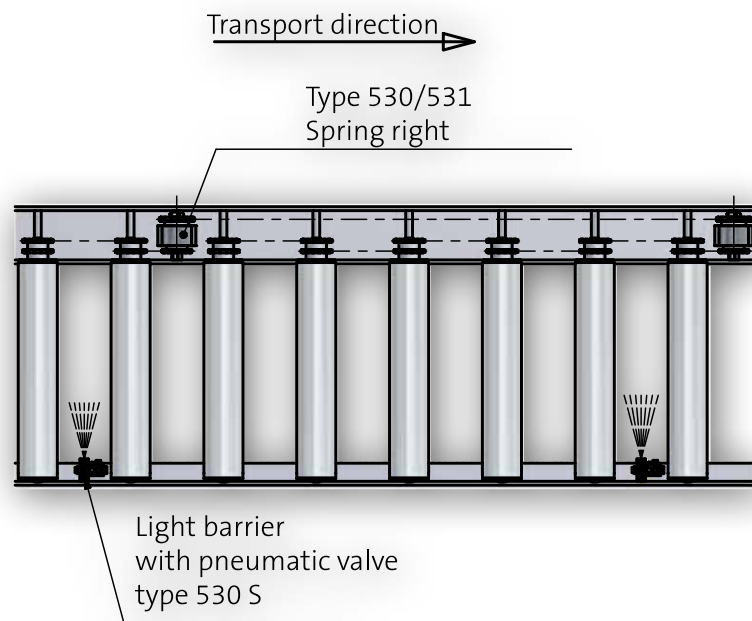
- Cylinder rod out
- Clutch latched off
- Section standing

with air:

- Cylinder rod in
- Clutch latched in
- Section running

Contactless Conveying

Construction Advice

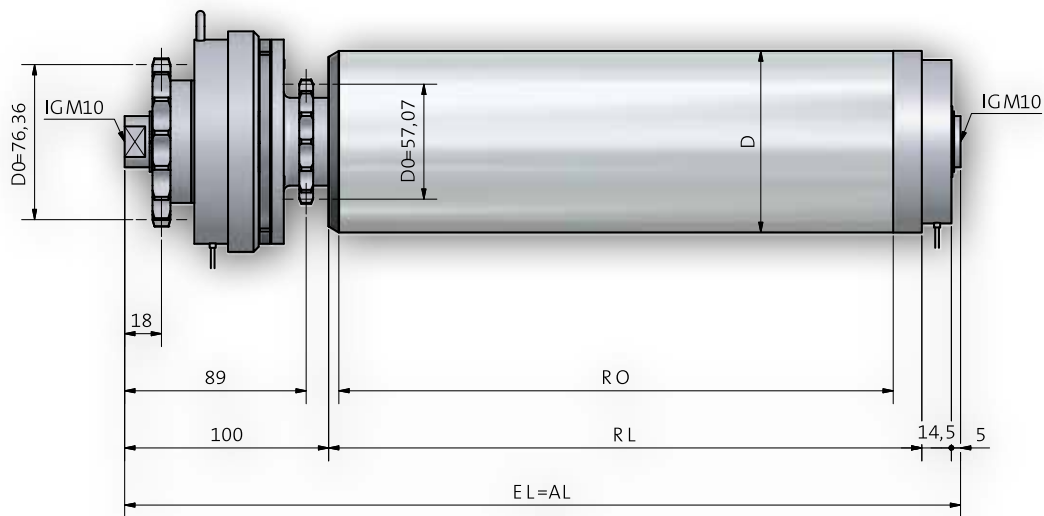


Contactless Conveying

Type 536E

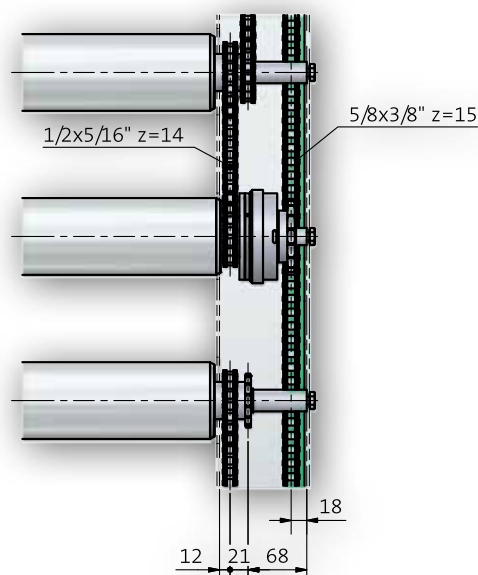
The clutch system Type 536E is made for transport of goods up to 10.000N. On one side the clutch has a sprocket 5/8 x 3/8" z15 with Bolt Tooth Form for tangential drive.

On the other side there is a chain 1/2 x 5/16" z14, that transmits the power to the driven section.



Type 536e can be used together with Rollex Drive System.

Order Specification		A...IGM...
Shaft-Ø	EL=	
25	RL+	120



Contactless Conveying

Type 536E

Clutch element

Bearing Type
Load Capacity/Roller
Range of Temperature Celcius
Nominal Power
Max. Rating

Nominal Torque
Nominal Current

Power Range
Ampacity
Insulation Group
Note
Max. Speed

Electromagnetic Clutch 24V DC

Ball Bearing DIN 625
2.000N (to depending upon the load limit of tube and shaft)
-5 to +40°C
24 VDC +/- 10%
Clutch: 48 W
Brake: 24 W

40 Nm
Clutch: 2,02 A
Brake: 1,02 A

24 - 27 VDC
3,04 A
B
Avoid contact with oil and grease on the clutch.
0,3 m / sec.

Order Example

Type 536E/536B-88.9x2.9 ST A 25 IGM 10x15 SW 15x10 EL 995mm

Type Drive
Type Brake
Tube dimension
Tube quality
Shaft-Ø
Shaft Ends
Installation length

Contactless Conveying

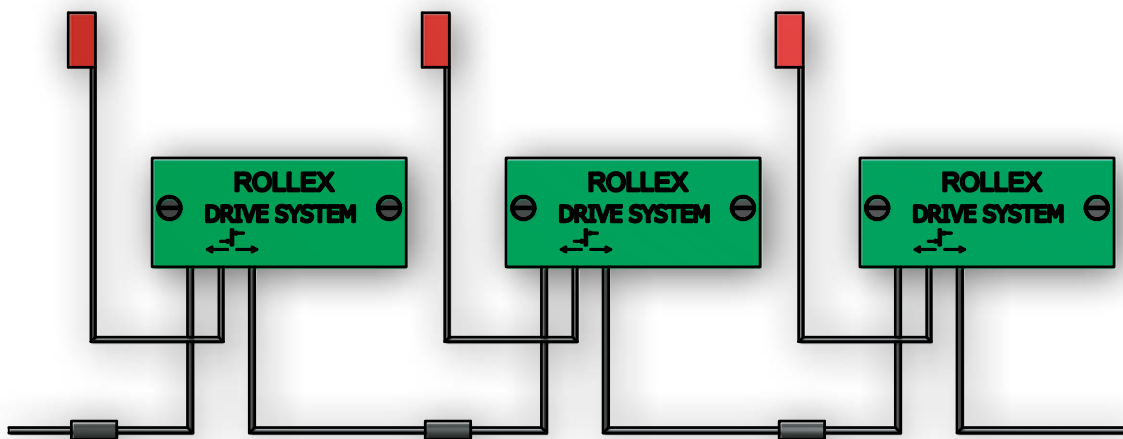
Accessories for Type 536E

Drive System

The Rollex Drive System makes the use of contactless conveying systems easy. By combination of single components with the Drive System (construction kits) complex systems can be installed very simply and with low costs.

The Drive System has an integrated logic. The System can communicate with other sectors and regulates the material flow. The drive is only added if a transportation good passes the light barrier. After leaving the drive it automatically stops.

So you can divide long track into short, automatic switch on and switch off devices.

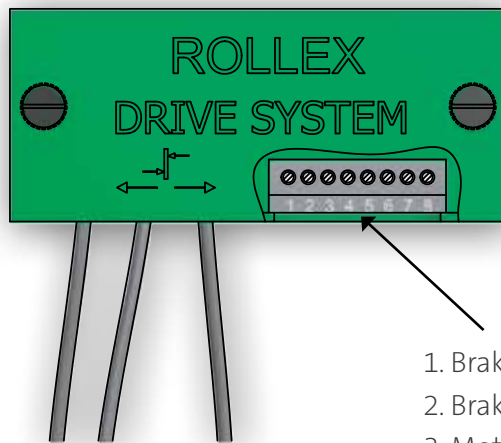


Contactless Conveying

Accessories Type 536E

Drive System

The connection of the system cards happens by means of M8-Clamps to the pre-and after-sections. The power supply can be made separately. For power supply through the Card all 14 to 20 Cards have to be feed new re the drive concept.



1. Brake+
2. Brake-
3. Motor / Clutch +
4. Motor / Clutch -
5. Power Supply 24 VDC +
6. Power Supply 24 VDC +
7. Power Supply 24 VDC -
8. Power Supply 24 VDC -

Rollex Drive System can be used together with motor roller 840-50 or clutch system 536E

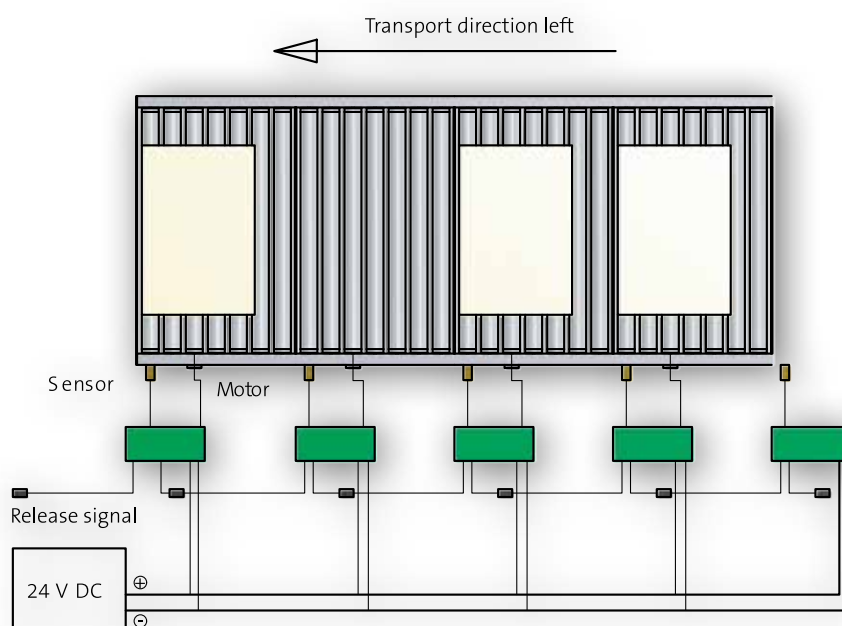
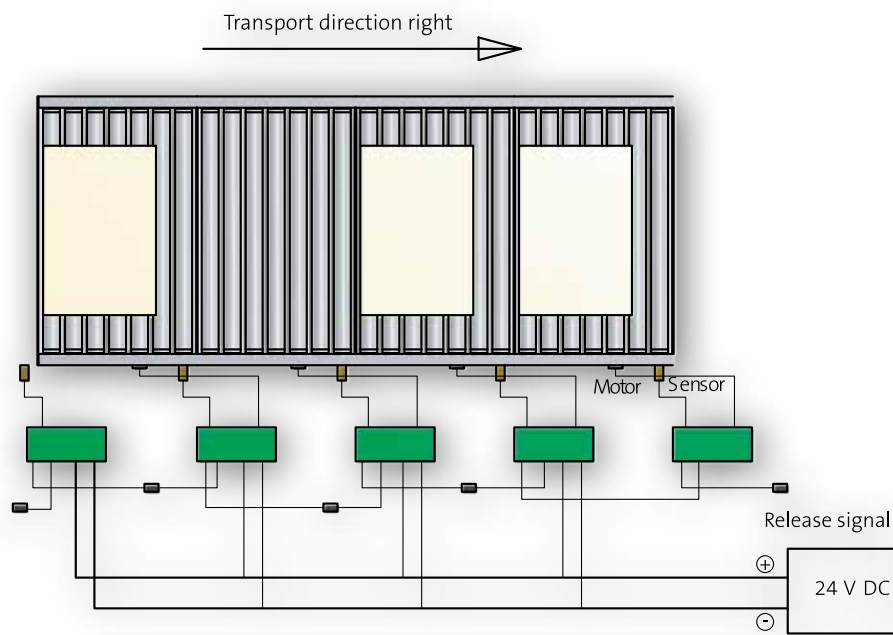
Technical Data

Power Supply	24 VDC		
Temperature	-5°C to 40°C		
Fuse	3,15 A		
Current Limiter	Motor/Clutch	Starting Current	2,02 A
		Continuous Load	2,02 A
	Brake	Starting Current	1,8 A / 200ms
		Continuous Load	1,2 A

Contactless Conveying

Accessories for Type 536E

Drive System – Basic construction depending on transport direction



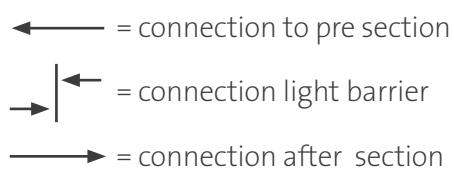
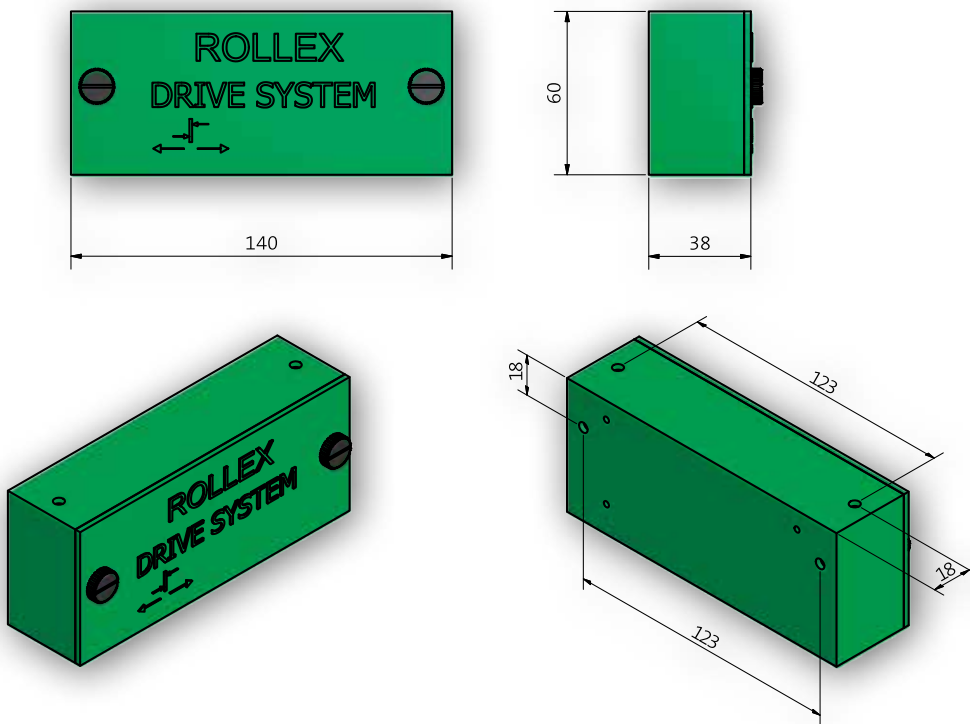
Contactless Conveying

Accessories for Type 536E

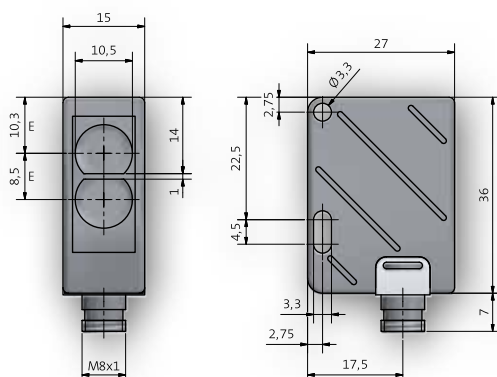
Drive System – Construction Advice

The Rollex Drive System Card is protected by a plastic box.

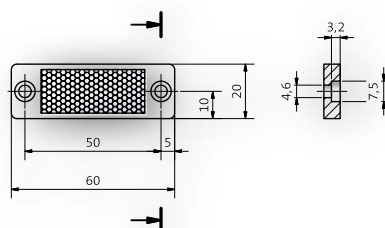
The box can be mounted to the track profile by means of M4 Screws.



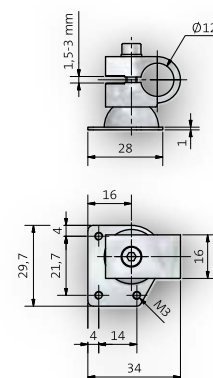
Light barrier:



Reflector:



Clamp of light barrier:



Rollex-Multi-Drive Card (RMD-Card) for Type 840-50

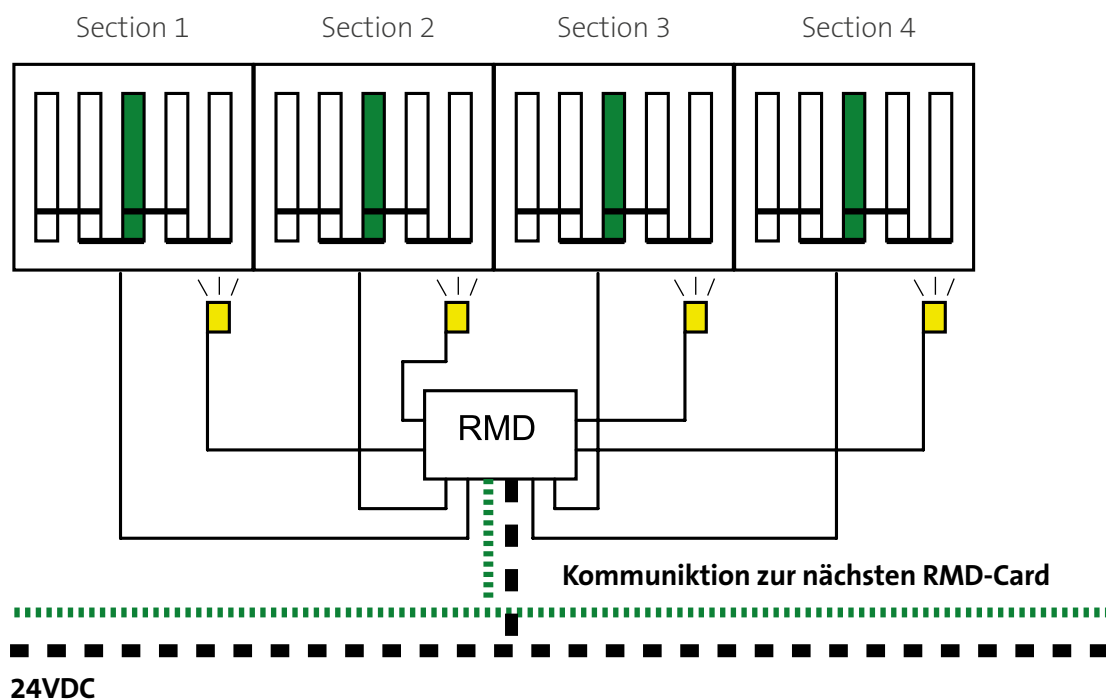
The **Rollex-Multi-Drive-Card (RMD-Card)** simplifies the use of Zero Pressure Conveying Systems. With zero pressure systems the goods are transported contactless - the goods do not touch each other on the track.

By easily combining single components with the Card (construction kits) complex systems can be installed very simple and with low costs.

With the RMD-Card large systems can be made, i. e. multiple cards can be installed in a row.

The Card has an integrated logic which enables communication with other sections and thus regulation of the material flow. The drive is only active if the transportation good passes the light barrier. After leaving, the drive automatically stops.

The RMD-Card contains all intelligent functions, which are necessary for contactless conveying.



- possible connection of up to 4 pcs. 24VDC Rollex Motor Roller Type 840
- possible connection of up to 4 pcs. Light Barriers
- adjustment of speed and direction
- Interface Module for standardised BUS-Systems

Function

The **Rollex-Multi-Drive-Card (RMD-Card)** controls up to 4 motors and transports the goods contactless within 4 sections. The control systems allows to regulate between 1 and 4 motors.

The **RMD-Card** is build up modular and can be enlarged user-defined, i. e. means several **RMD-Cards** can be connected and they communicate together. So a cost-effective construction for contactless conveying of goods is possible.

The detection of the single goods is done by photoelectrical sensors. A change of the switching output is not necessary as standardised PNP and NPN exits can be used. The transport direction can be controlled by a joint signal. The direction of logic changes than automatically. But the direction can even be adjusted in advance by a rotary switch.

After initialisation the motor starts for 3 sec. to move goods, which are placed in areas between the light barriers, into their sections. So the **RMD-Card** can “see” if a section is full or not, when the track is started. If goods are placed within the next section, the roller of this section does not start.

If a transport good is placed to any section of the track, the section starts conveying (no normal start).

The motor function has a run time monitoring system (block protection). The switch off time is around 10 sec. If a motor is switched off by the run time monitoring system, it is blocked until clearance of the according light barrier. The error message generated by the motor (current limiting, lower voltage) will be provided as collective report potential-free.

As an option a standardised BUS-System (e. g. Profibus) can be used.

The **RMD-Card** uses a micro controller, that is decisive for the logical work. Simultaneously the micro controller provides all information to a BUS-system via. the RS-485-interface. Advantage of the RS-485-interface is the high speed data transfer even when high cable length is used.

The information will be stored with an external processor (interface adaptor) and can be imported and exported. The information can be read via an RJ45-interface. So different BUS protocols can be realised via a protocol-converter (from various manufacturers). As a master e. g. an SPS controller can be used.

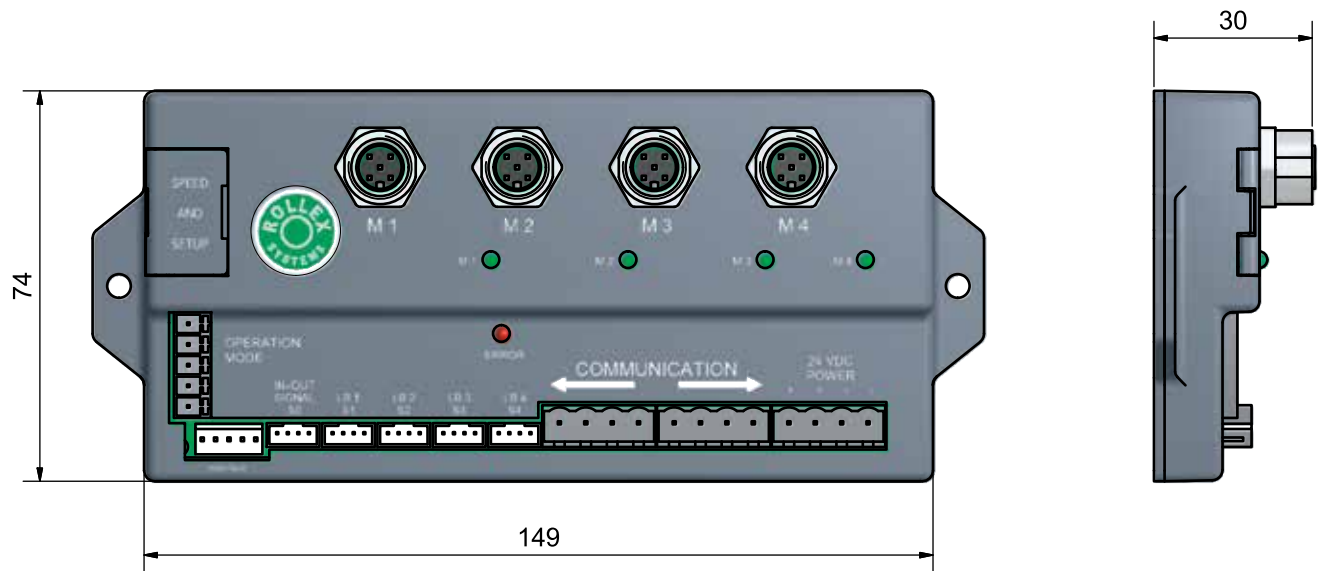
All motors and sensors can be visualised.

Technical Data

Rollex-Multi-Drive-Card

Box Sizes:

Width	=	149 mm (without fastening)
Height	=	74 mm
Depth	=	30 mm (with connection)
		67 mm (with right-angle plug M12)



Power supply:	24 VDC
Voltage range:	20 - 28V
Current with 2 motors:	5 A
Current with 3 motors:	7,5 A
Current with 4 motors:	10A
Protection class:	IP 20
Temperature:	-5 to +40 deg Celsius
Recommended cable cross section:	1,5 mm ²

Motorrolle 840-50:

Power supply:	24VDC
Power range:	18–28 VDC
Nominal rating:	40W
Nominal current:	2,5A
Nominal current (neutral gear):	0,3 A
Starting current (neutral gear):	0,5 A
Nominal Revolution:	2400 RPM

The **Rollex-Multi-Drive-Card (RMD-Card)** can only be used with Rollex Motor Roller Type 840-50.

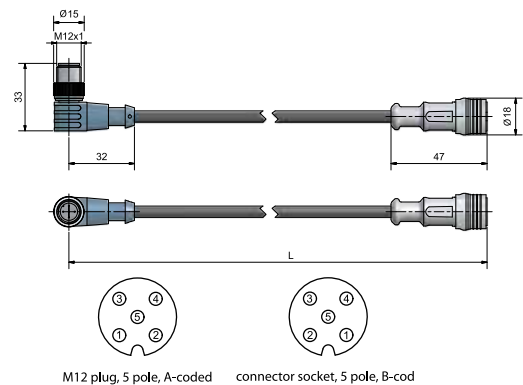
Optional Accessories

Extension cable RMD-Card to motor 800mm

M12 Push-Pull-Plug 5-terminal – M12 right-angle plug.

Extension cable RMD-Card to Motor 1.600mm

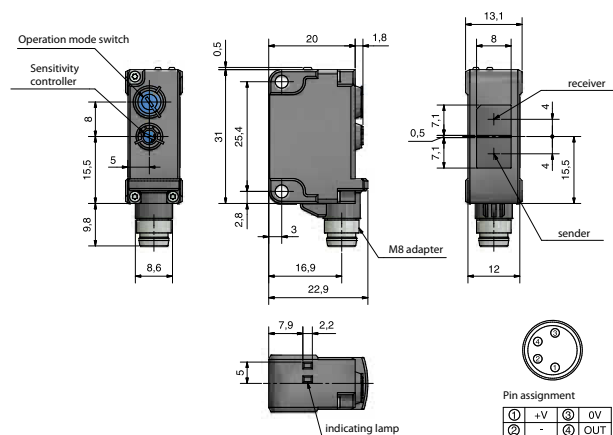
M12 Push-Pull-Plug 5-terminal – M12 right-angle plug.



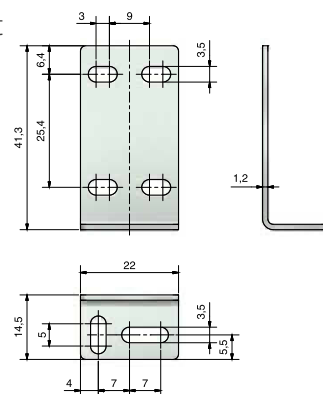
Light Barrier

Photoelectric sensor with M8 plug 4-terminal, adjusting by help of red LED.

Polarizing reflection optic(no problems with metallic goods).



Mounting part

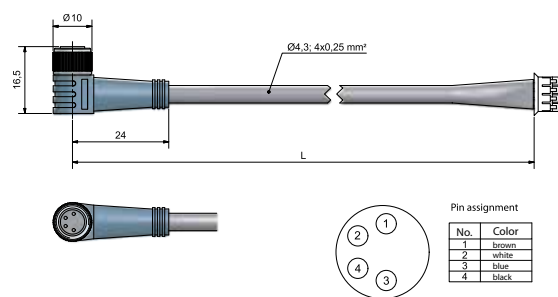


Extension cable RMD-Card to Light Barrier 2000mm

Jack M8 5-terminal right-angle plug – JST jack

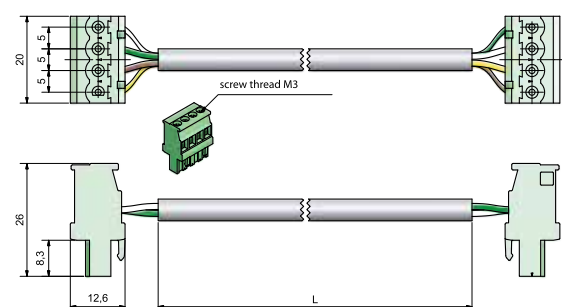
Extension cable RMD-Card to Light Barrier 1000mm

Jack M8 5-terminal right-angle plug – JST jack



Communication Cable(free length)

4-terminal plug on both sides

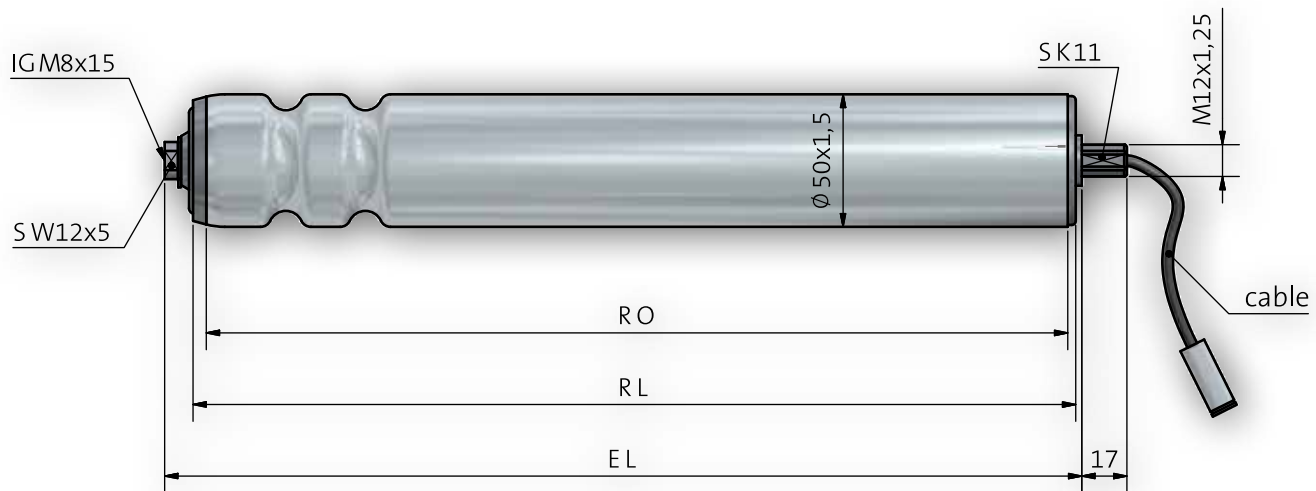


Motor Roller

Type	Description	Page
840-50	Motor Roller 24VDC	210
850-89	Motor Roller / Drum Motor Type 850-89	214



Motor Roller 840-50

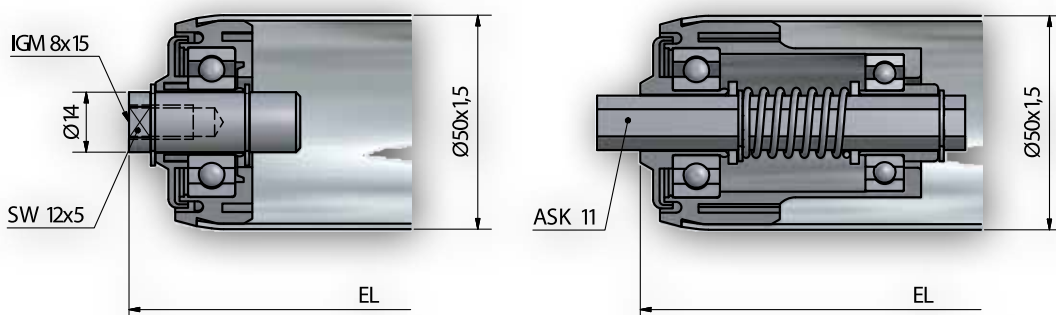


Variation	Gear	Speed in m/s	Torque in Nm	Engine Revolution in RPM
I	i=26,67	0,20 - 0,48	1,8	2.000 - 4.800
II	12,65:1	0,51 - 0,77	0,9	1.500 - 3.700
III	i=7,51	0,76 - 1,30	0,6	1.500 - 3.700

Possible variations for the counterbearing:

Tube dia.	A11 SK	A 14
50 x 1,5	302 / 306 / 307 600	302 / 306 / 307 600

Shaft dimensions:



Motor Roller 840-50

Drive:

Type of Bearing
Load Capacity/Roller
Range of Temperature Celcius
Min. Installation Length (EL)

24 V DC Motor brushless

Ball Bearing (Serie 6202) DIN 625 Standard 6202 2RS
500 N (depending upon the load limit of tube and shaft)
-5 to +40 C
840/302: 320 mm
840/302: 375 mm (spring loaded shaft)
840/420: 405 mm
840/423: 370 mm

Motor Exit
Nominal Power
Power Range
Nominal Rating
Nominal Current
Nominal Current (neutral gear)
Starting Current (neutral gear)

Male Thread M12 x 1,25 with hexagonal SK 11
24 VDC
18 - 28 VDC
40 W
2,5 A
0,1 - 0,4 A
0,5 A

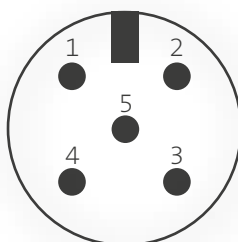
Protective Function:

Over- or Lower voltage
Over Temperature
Over Current
Blocking Protection

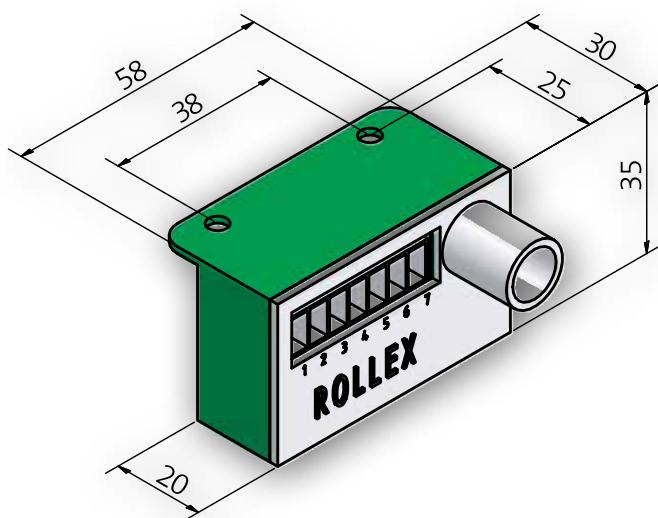
Drive stops if voltage is lower than 17,5V and higher than 30,5V
Drive stops if temperature is higher than 100° C
Drive stops if current is higher than 5A
Motor stops if suddenly blocked and starts again after 3 sec.

Technical Data Motor Plug

1 - 24 VDC
2 - Direction
3 - GND (Ground)
4 - Failure
5 - Rotation speed set value



Motor Roller 840-50



Connection on the Card

- 1 - Failure exit -
- 2 - Failure exit +
- 3 - GND (entry direction and start)
- 4 - Entry direction
- 5 - Entry start
- 6 - Nominal Voltage GND
- 7 - Nominal Voltage +24 VDC

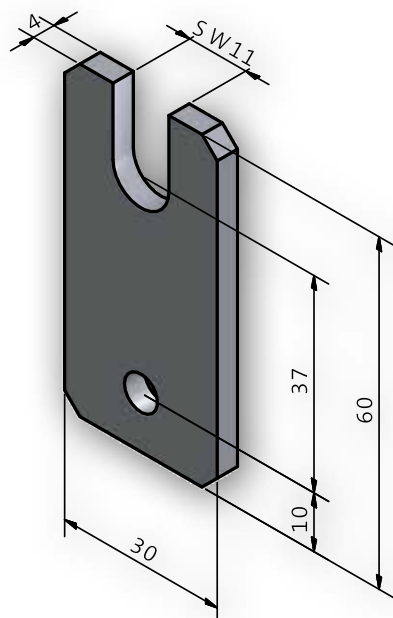
Speed and direction can be controlled by the rotary switch.

Following settings are possible:

Switch	Speed (m/s)			Direction
	i = 7,51	i = 12,65	i = 26,67	
0	1,30	0,77	0,48	Left-turn
1	1,19	0,71	0,44	
2	1,08	0,64	0,40	
3	0,97	0,58	0,36	
4	0,87	0,51	0,32	
5	0,76	0,45	0,28	
6	0,65	0,39	0,24	
7	0,54	0,32	0,20	
8	1,30	0,77	0,48	Right-turn
9	1,19	0,71	0,44	
A	1,08	0,64	0,40	
B	0,97	0,58	0,36	
C	0,87	0,51	0,32	
D	0,76	0,45	0,28	
E	0,65	0,39	0,24	
F	0,54	0,32	0,20	

Motor Roller 840-50

For securing the Motor Roller a torque bracket is added.



Accessories:

The motor cable can be extended by an additional cable.

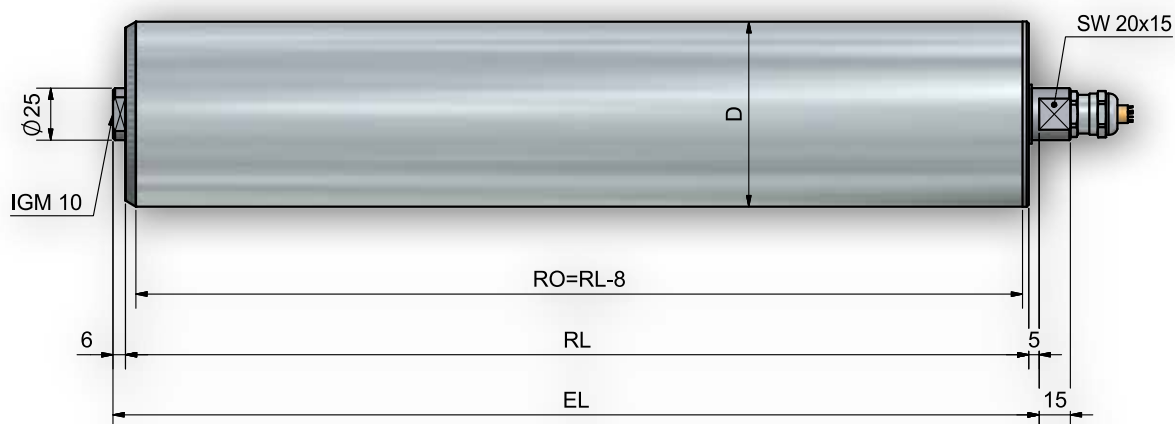
Extension Cable 0,8m

Extension Cable 1,6m

Order Example

Type	840V1/302 RS - 50x1,5 STI A14 IGM 8x15 SW 12x15 EL=700mm
Type Drive	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

Motor Roller 850-89

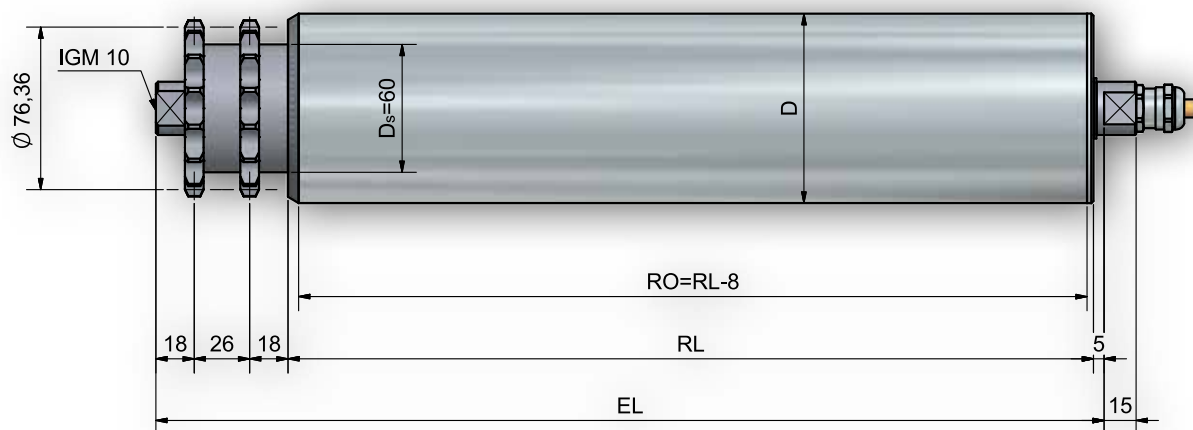


Variation	Peripheral Force in kW	Voltage in V	Rated Current in A	Frequency in Hz	Speed in m/s	Nominal torque in Nm	Starting torque in Nm
I / i=70:1	0,12	230/400	0,66/0,38	50	0,18	29	94
II / i=40:1	0,12	230/400	0,66/0,38	50	0,32	17	54

Possible variations for the counterbearing/drive element:

Tube dia.	A20	A25
88,9 x 2,9	402ST / 502 510 / 512 / 534	402ST / 510 512 / 534

Shaft dimensions:



Motor Roller 850-89

Drive:

Bearing Type

Load Capacity/Roller

Max. Transportation Weight

Range of Temperature Celcius

Min. Installation Length (EL)

Motor Exit

Asynchronous Motor

Ball Bearing (Series 6005, 6204, 6205) DIN 625

2.000N (depending upon the load limit of tube and shaft)

V1 (70:1) 15.000N (depending on the construction of the conveyor)¹

V2 (40:1) 10.000N (depending on the construction of the conveyor)²

0°C to +40°C

Type 402ST: 520 mm

Type 510: 580 mm

Shaft dia. 25mm with key flat SW 20 x 15

Nominal Power

3x230V / 400V AC

Nominal Force

850V1: 650 N

850 V2: 400 N

Nominal Rating

0,12 kW

Nominal Current

0,66 / 0,38A

Nominal Current (neutral gear)

0,36 / 0,21 A

Nominal Frequency

50 Hz

Nominal Speed

2.700 RPM

Number of Poles

2

Gears

2

Insulation Class

F³

IP protection class

IP 52

Note

If the motor is connected to a single phase converter with 230 V power, the motor power has to be 230V.

¹ when having 7 starts per minute (loaded 7s, Pause 1,5 s)

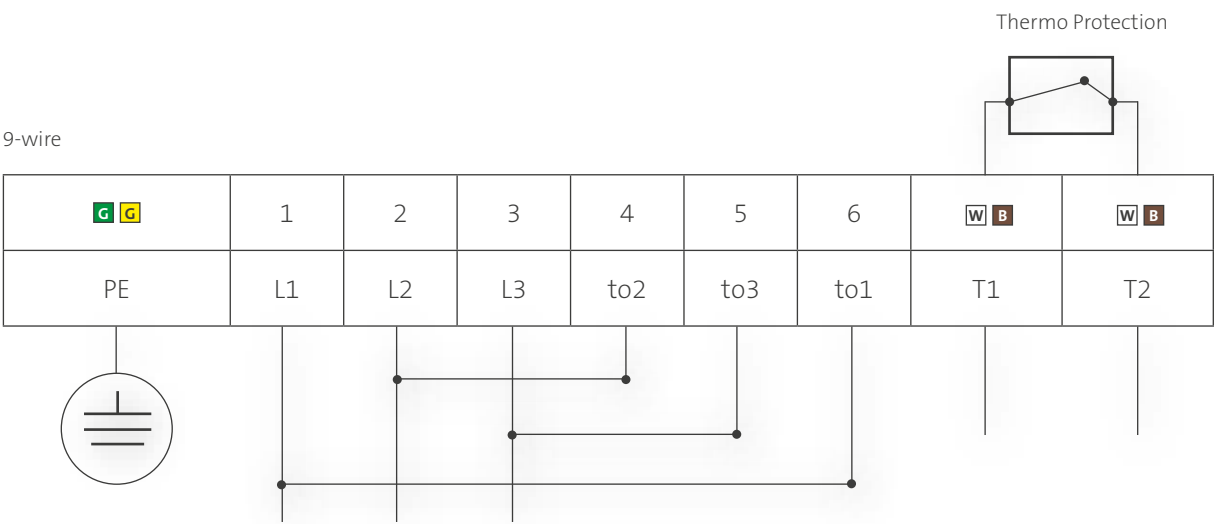
² when having 6 starts per minute (loaded 5s, Pause 5 s)

³ thermal protection

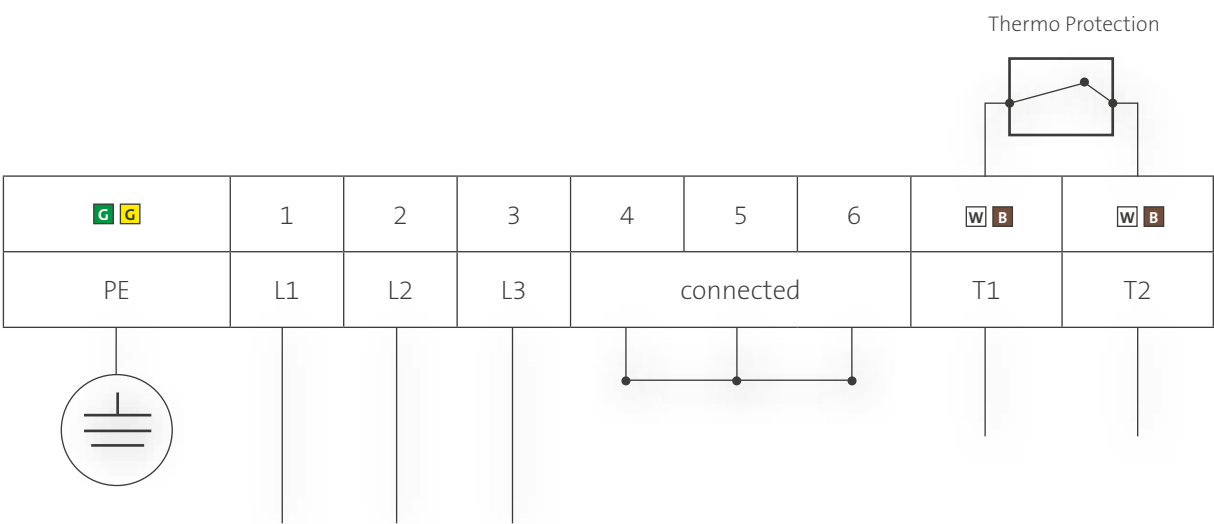
Motor Roller 850-89

The Motor Roller is connected regarding the following scheme:

Delta (Δ) Connection

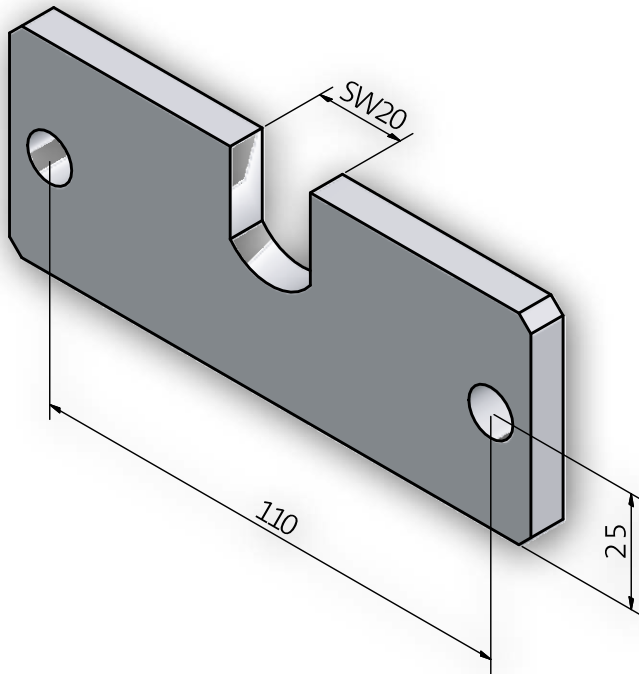


Star (Y) Connection



Motor Roller 850-89

For securing the Motor Roller a torque bracket is added.



Order Example

Type	850V1/ 534 RS - 88,9x2,9 STI A25 SW20 IGM 12x20 EL=1.000mm
Type Drive	
Type of counter bearing	
Ball bearing sealing	
Tube-Ø and wall thickness	
Tube quality	
Shaft-Ø	
Shaft Ends	
Installation length	

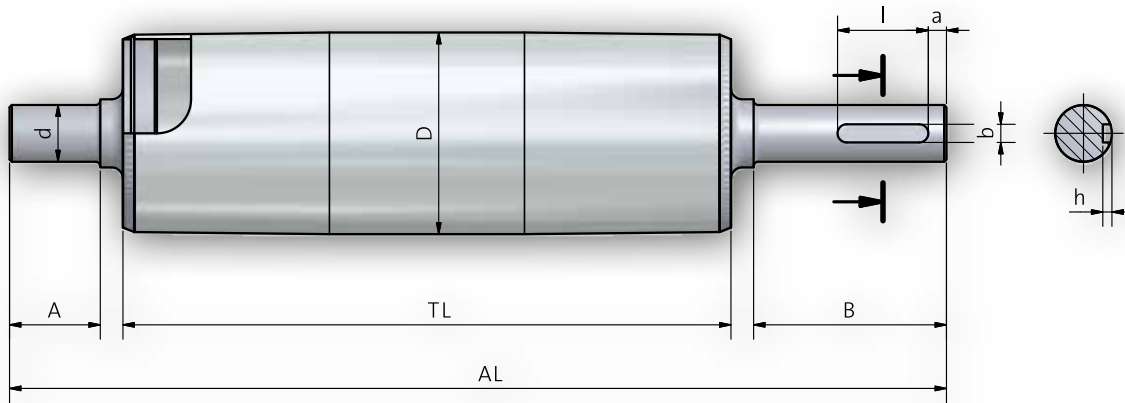
Conveyor Belt Drums, Conveyor Belt Roller, Conveyor Belt Stations

Type	Description	Page
400A	Belt Drum	220
402ST	Idler	220
Belt Station	Belt Stations	221
400	Belt Roller	222
402WO	Belt Roller	222

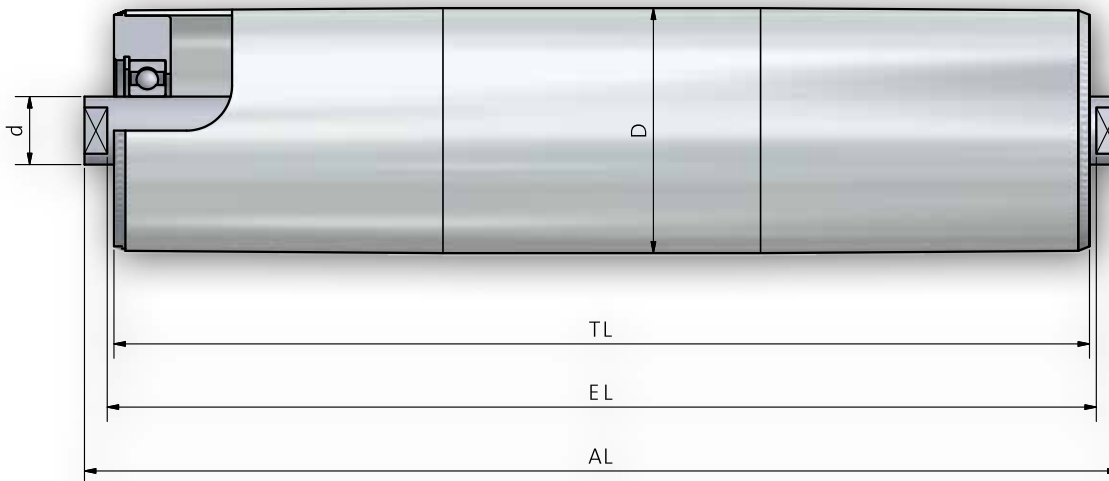


Conveyor Belt Drums

Type 400 A



Type 402 ST

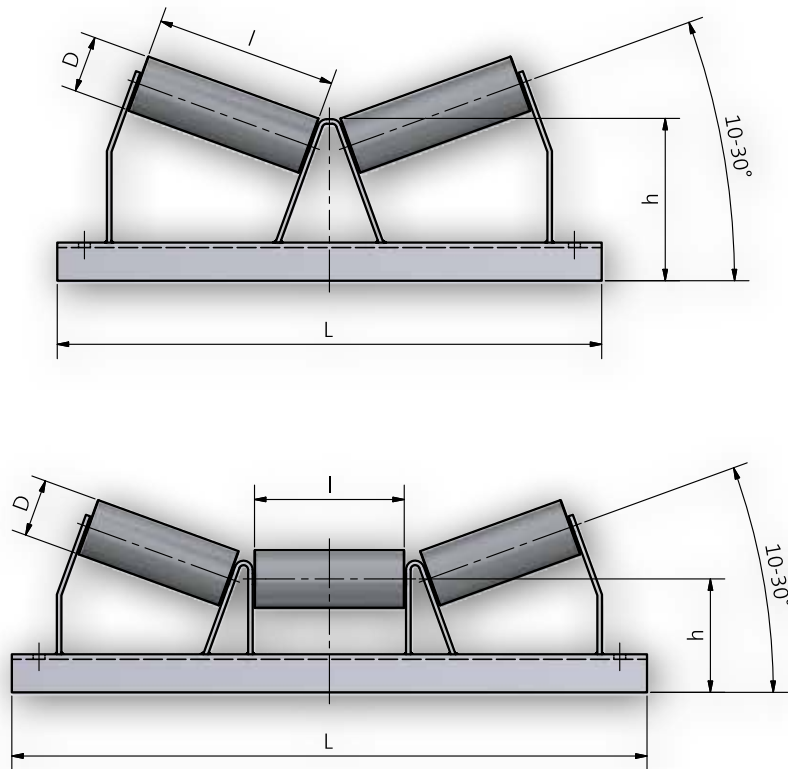


Possible Layouts:

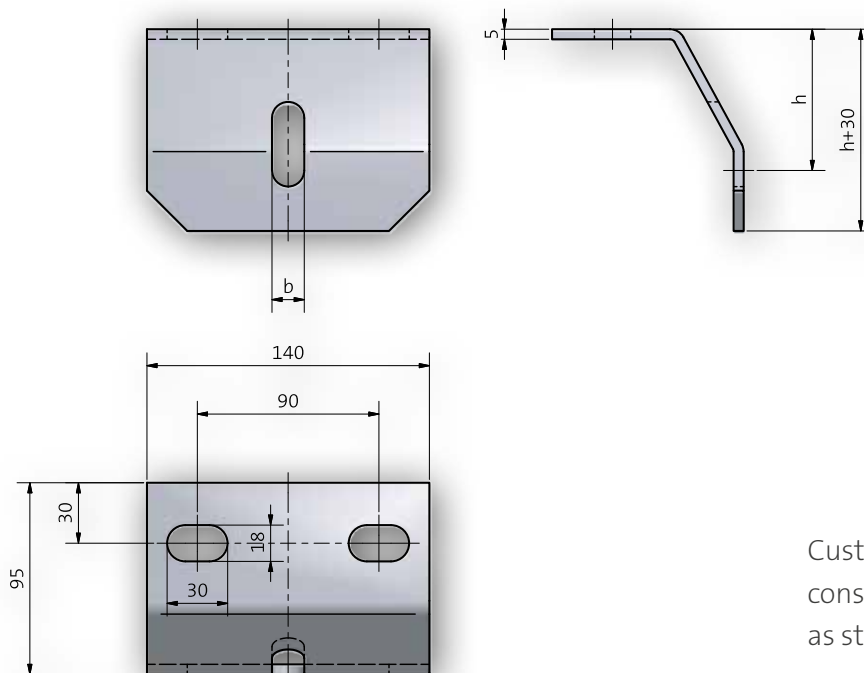
- Polyurethane
- fiber-glass reinforced Polyester
- Stainless Steel
- cylindrical or crowned

Conveyor Belt Stations

High- and Low-Conveyor Station



Made from U-structural steel DIN 59413



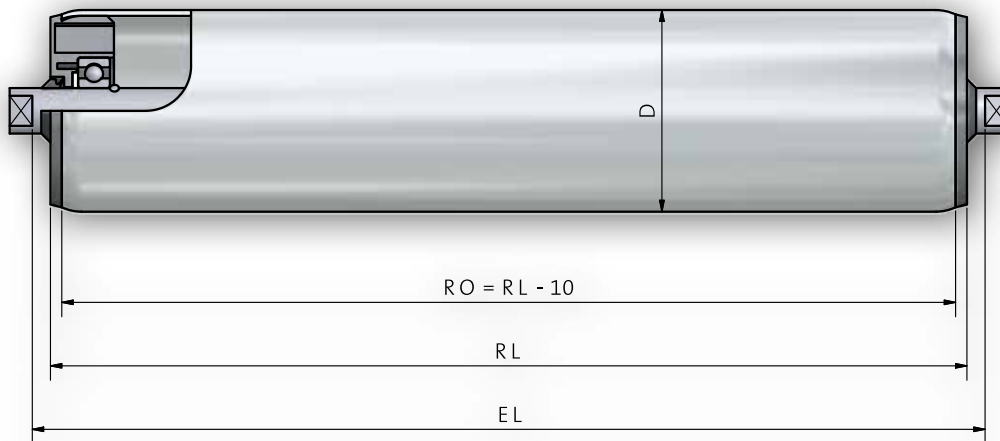
Customer Information! Various constructions and dimensions as well as steering and flat belt stations upon request.

Conveyor Belt Roller

Roller for Conveyor Belt Stations

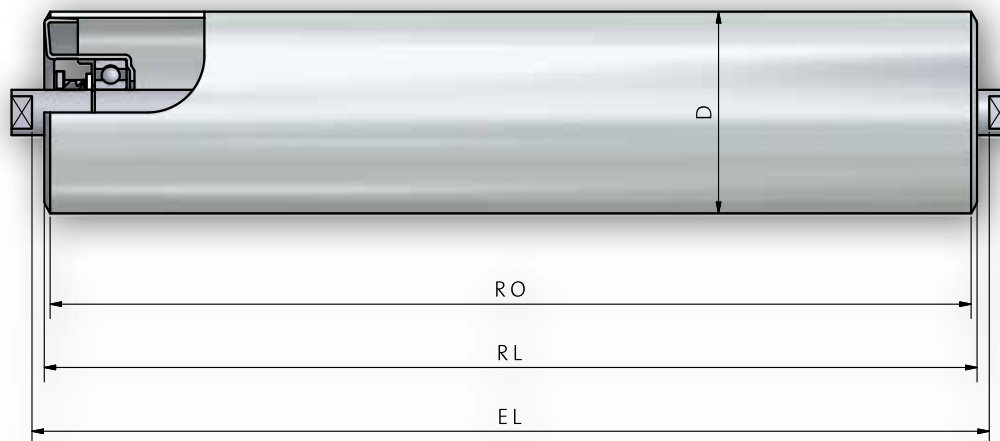
Roller Type 400

Tube-Ø 50, 60, 63.5, 80, 88.9, 90, 108, 133



Roller Type 402 WO

Tube-Ø 80, 88.9, 108, 133



The above shown roller is best for use in Conveyor Belt Stations.

Details please see Chapter 2 „Gravity -Roller / Conveyor-Roller“, page 50 and 68.

Conveyor Belt Roller

End of shaft constructions: \varnothing 20 old standard SW 15 x 10/13
 \varnothing 25 old standard SW 18 x 10/13
 \varnothing 20 new standard SW 14 x 10/13

Orders without specifications will be supplied with “old” standard.

Upper conveyor roller									
Tube- \varnothing	Shaft- \varnothing	Roller length in, EL = RL + 6 mm							
63,5	20	132	165	200	250	315	380	465	530
80	20		165	200	250	315	380	465	530
88,9	20 + 25		165	200	250	315	380	465	530
108	20 + 25		165	200	250	315	380	465	530
133	20 + 25				250	315	380	465	530

Lower conveyor roller									
Tube- \varnothing	Shaft- \varnothing	Roller length in mm, EL = RL + 6 mm							
63,5	20	400	500	600	750	950	1150	1400	
80	20	400	500	600	750	950	1150	1400	
88,9	20 + 25	400	500	600	750	950	1150	1400	1600
108	20 + 25	400	500	600	750	950	1150	1400	1600
133	20 + 25	400	500	600	750	950	1150	1400	1600

Belt pulley will be delivered with one roller housing end closed.

Various shaft- or tube-sizes and shafts with male or female thread available.

Selection table		Roller length re DIN 22107 in mm							
With of belt in mm	300	400	500	650	800	1000	1200	1400	
Lower conveyor roller	400	500	600	750	950	1150	1400	1600	
Upper conveyor roller, two pieces	200	250	315	380	465	600	700		
Upper conveyor roller, three pieces	132	165	200	250	315	380	465	530	

Conveyor belt stations upon request (see page 213).

SW 30 as plastic slip-on cap for shaft- \varnothing 20 SW 15 (see page 13).

Back-up and buffer-rings in all sizes and variations (see page 229).

Brake [conveyor] roller

Type	Description	Page
	Introduction	226
700	Brake conveyor roller	227
710-86 / 710-120	Brake roller	228



Brake [conveyor] roller

Brake (conveyor) rollers regulate the speed on the roller conveyor; they keep the charge at a constant velocity.

This is done by a planet gear pressing centrifugal brake shoes against the tube body – actually with a brake-force proportional to the applied rotation.

The distance of the brake rollers and the appropriate type of brake roller are determined by several factors:

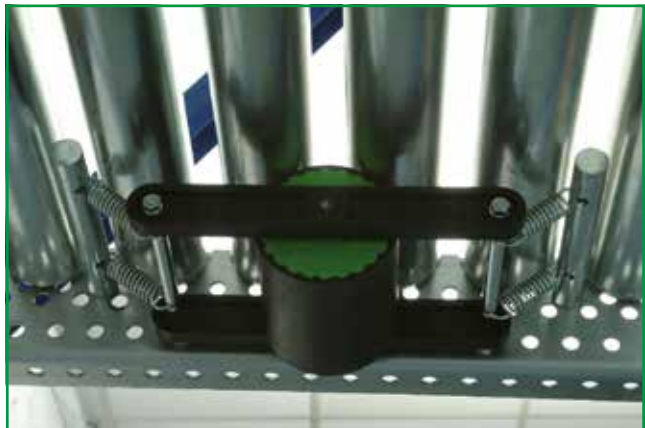
- design and functional performance of the roller conveyor
- inclination of the roller conveyor
- character of the charge (size, weight, sensitivity, material of the runners)
- inherent mechanical resistance of the brake roller
- environmental conditions like wetness, cold or heat

One brake roller is required per pallet place; by this a regulated speed can be achieved. The processing velocity should not exceed 0,3 m/sec.

With appropriate position of the brake rollers it will reach only 0,1 - 0,2 m/sec.

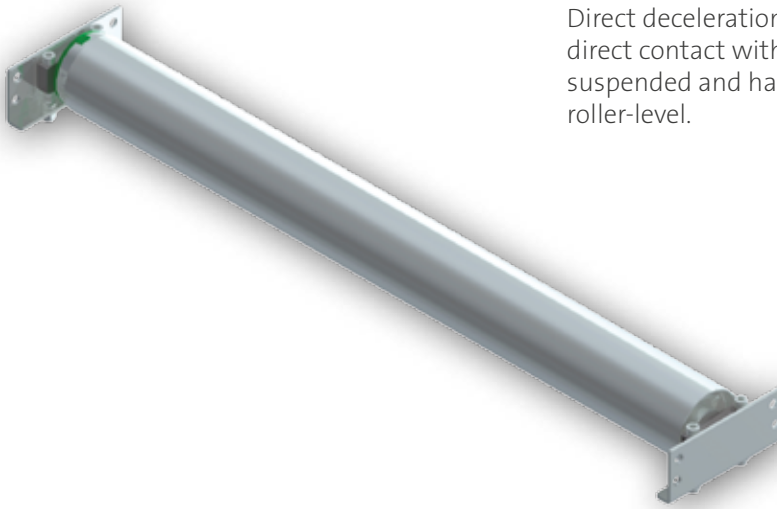


Type 700

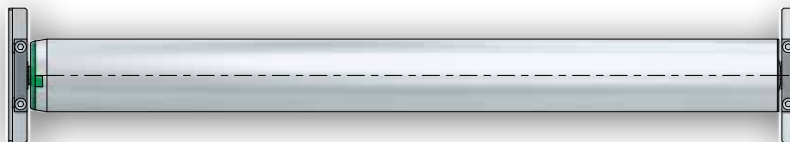
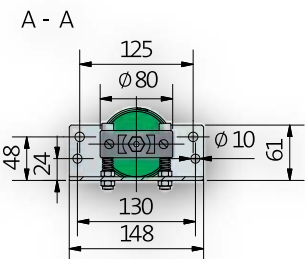
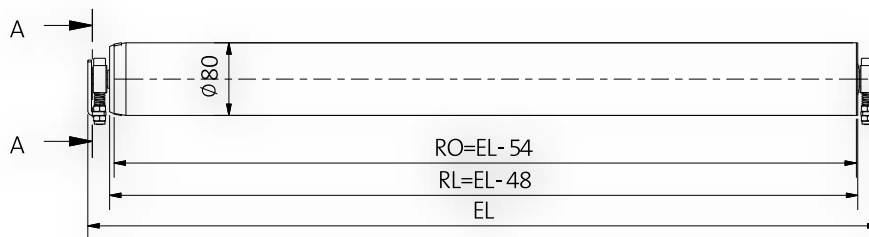


Type 710

Brake roller 700

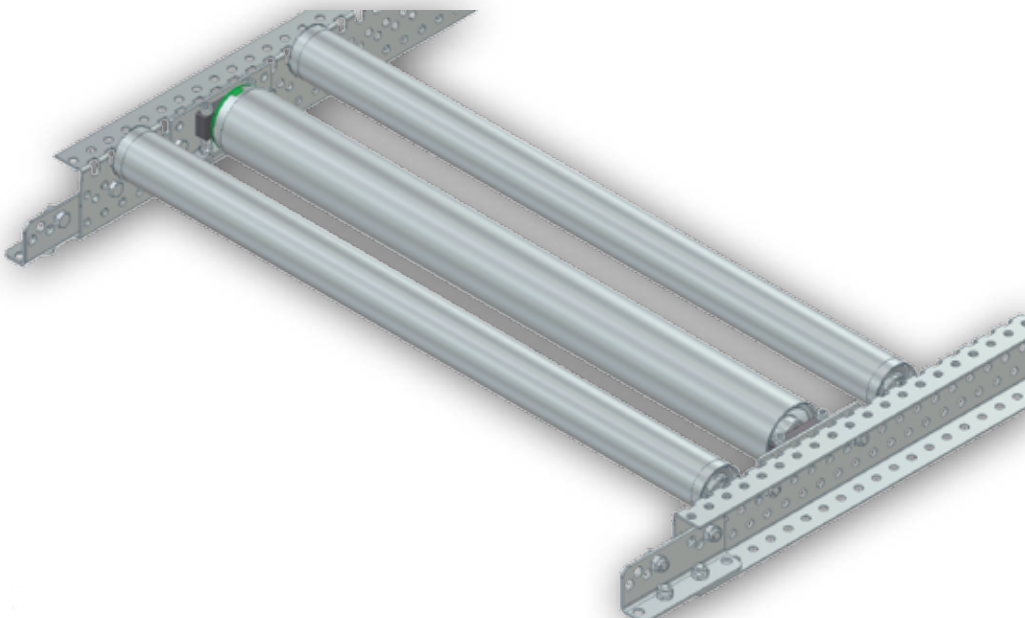


Direct deceleration means that the brake roller is in direct contact with the charge. The brake roller is spring suspended and has to protrude approx. 2 mm beyond the roller-level.



Max. decelerated weight at approx. 3,75% inclination
Type **700-80**: 10.000 N.

Mounting example

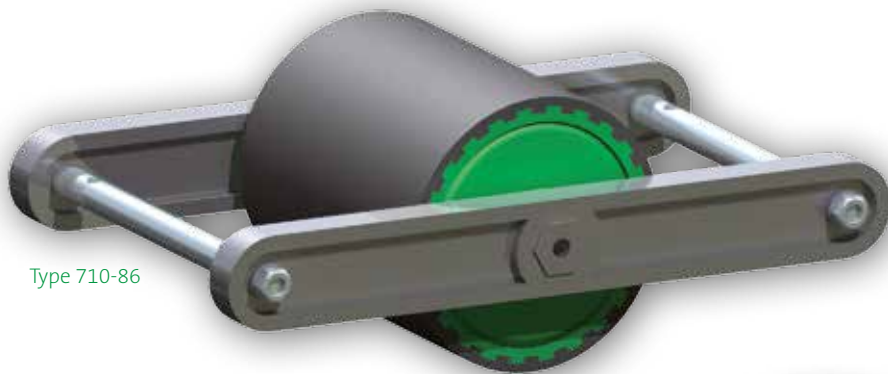


Brake roller Type 710

The indirect deceleration is preferable in many cases, since the contact to the pallet is generated by two conveyor rollers.

Four springs ensure this contact.

To establish a better contact between brake roller, conveyor roller and pallet a friction-tape can be applied to the conveyor rollers in the range of the brake roller.



Type 710-86



Type 710-120

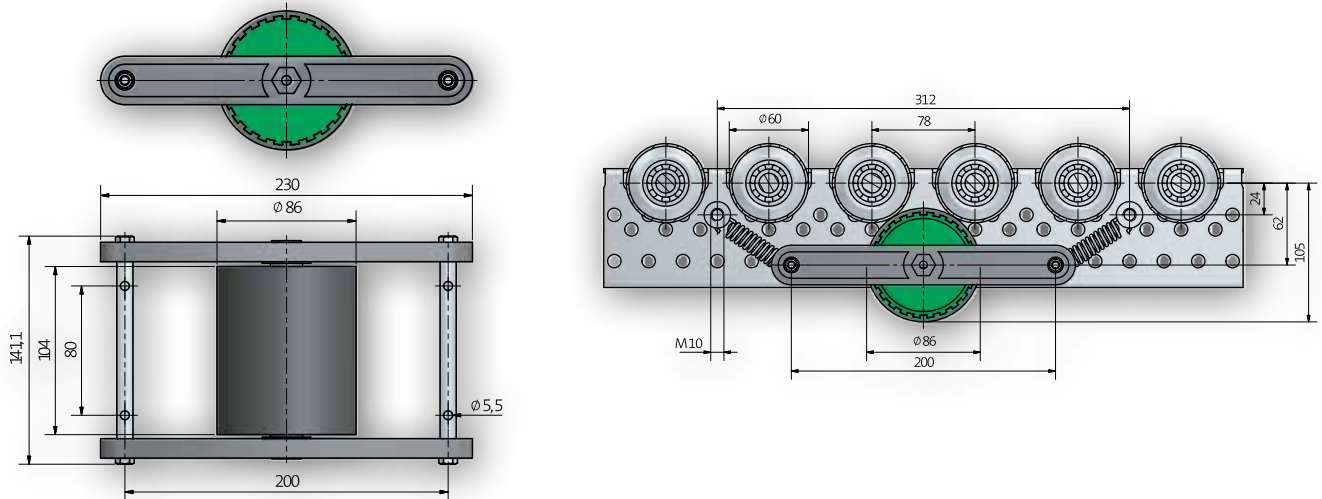
Brake roller Type 710

Type 710-86

Max. decelerated weight at approx. 3,75% inclination with Type 710-86: 5.000 N.

To ensure the proper function of the brake roller, weights of not less than 800 N should be decelerated.

Order example: 710-86

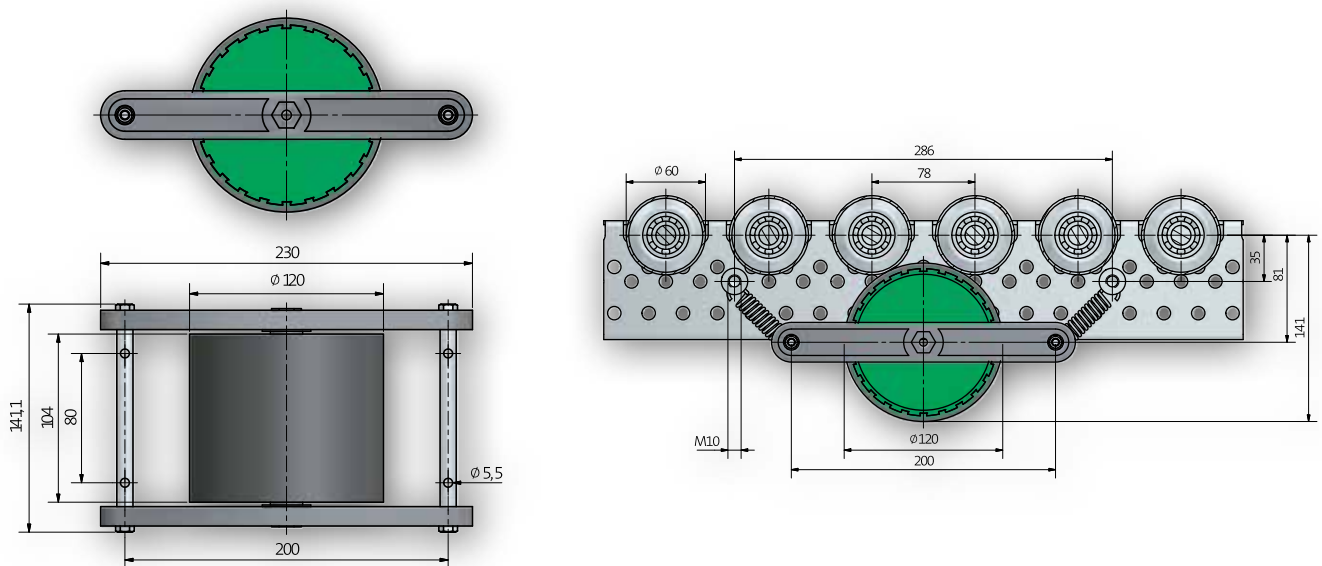


Type 710-120

Max. decelerated weight at approx. 3,75% inclination with Type 710-120: 10.000 N.

To ensure the proper function of the brake roller, weights of not less than 800 N should be decelerated.

Order example: 710-120



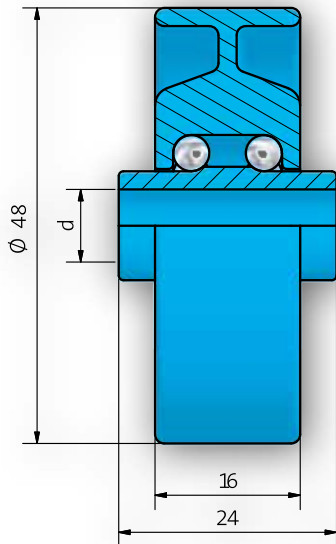
Accessories

Type	Description	Page
610 / 611	Plastic skate wheel D=48mm	232
612	Steel skate wheel D=48mm	232
620	Universal roller single part	234
625	Universal roller double part	234
div.	Guide Flanges	236
div.	Back Up Rings	237
div.	Buffer Rings	237
720	Pallette rail	238
723	Roller rail	242
726	Minirail	244

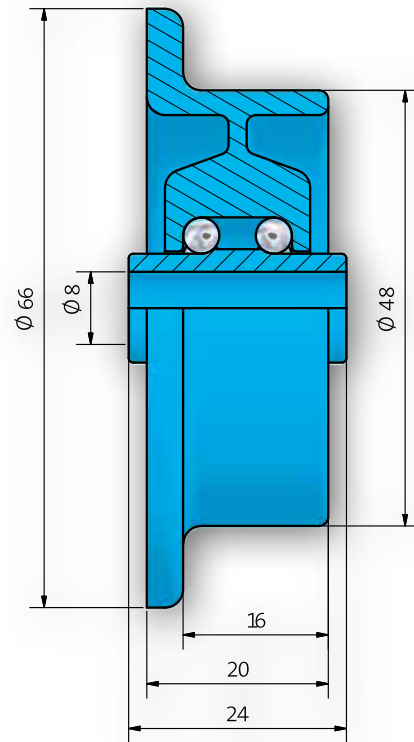


Type 610 / 611

Type 610 Plastic

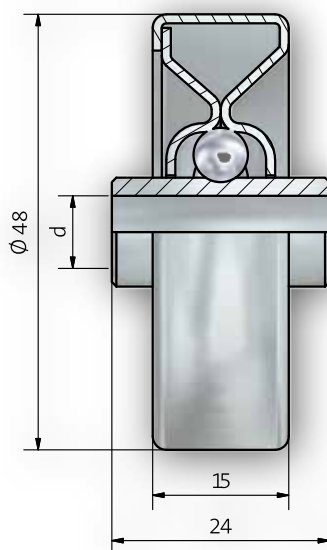


Type 611 Plastic



Type 612

Type 612 Steel galvanized



Type 610 / 611 / 612

Plastic Wheels Type 610 and 611 (guide flange) have a load capacity of 100 N.

Steel Wheels Type 612 with or without guide flange have a load capacity 200 N.

Available for shaft diameter 6 mm or 8 mm.

Wheels of the Types 610/611/612 are used in all areas of conveyor- and storage-technology for

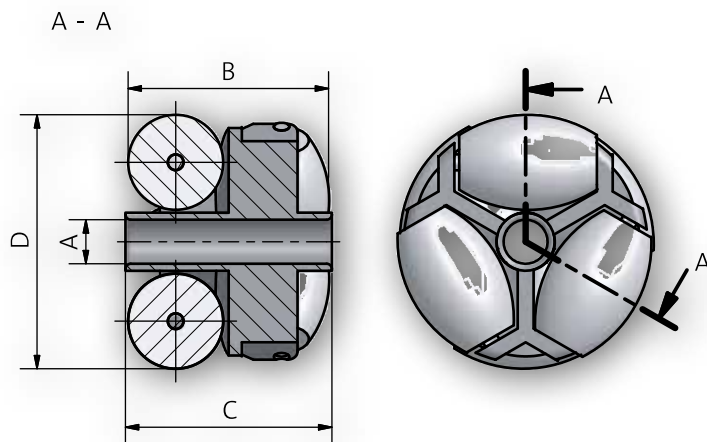
- Flow-Trough Tracks
- Guide tracks, side deflector and load tracks in conveying systems
- Roller tracks for the combination of two workstations
- Packing machines
- Guide for driving belts

Order Example

610-A6

Type
 shaft hole diameter

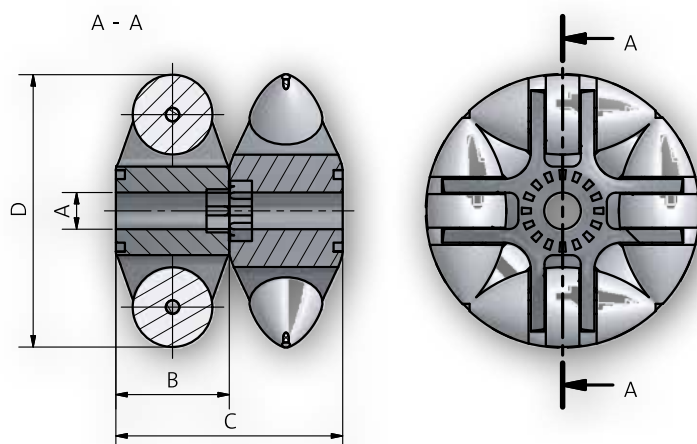
Type 620



Plastic, one piece

D	40	48	60	80
A	8	8	8	8
B	26	37	47	60
C	29	39	48	64

Type 625



Plastic, two pieces

D	50	60	80
A	8	8	8
B	19,5	25	30
C	39	51	60

Type 620 / 625

Universal roller are used where packing drums, load carrier, packages, cartons or work pieces have to be turned, assorted, diverted, supplied or commissioned.

The size and the weight of the load regulate the pitch. Table surfaces of any sizes can be equipped with Universal Roller.

The following individual load capacities per roller should not be exceeded:

- Ø 50 mm: 100 N
- Ø 60 mm: 200 N
- Ø 80 mm: 400 N

The universal roller can be used at a temperature range between -12° C and +80°C.

The universal rollers always have to be installed in main transport direction, as the resistance of the other direction is slightly higher.

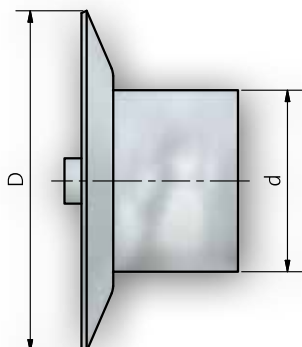
If equal resistances should be received in all directions, wheels have to be mounted staggered at 90°.

Order Example

620-D=48

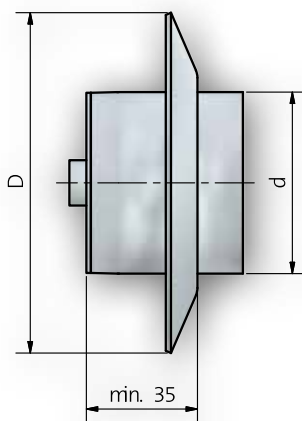
Type
 External diameter

Flange Type A



	d	D
A	30	60
	40	60
	50	70

Flange Type B



	d		D		
B	50	70			
	60	95	110	120	
	63,5	130			
	80	130	135	140	150
	88,9	30	135	140	150
	108	160			

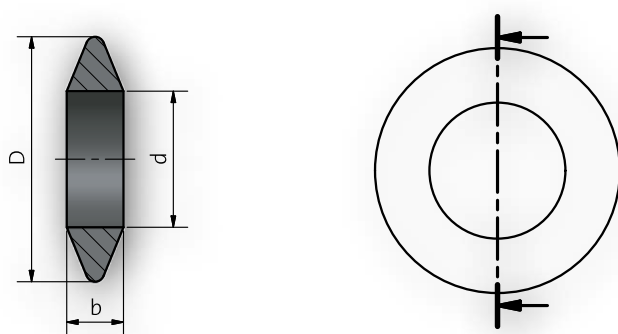
Special dimensions upon request.

Order Example

Flange Type B d=88,9 mm D=140 mm

Type
 Inner diameter
 External diameter

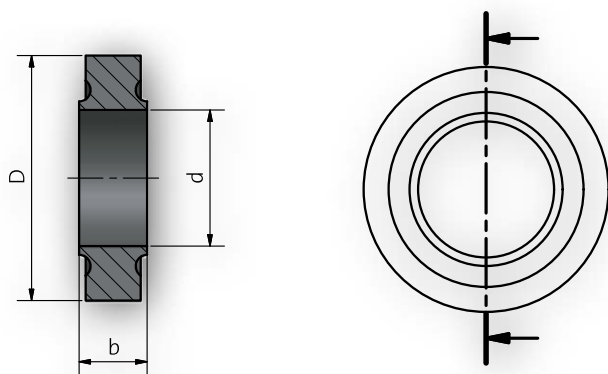
Back up ring



Tube-Ø	d	D	b
63,5	60	108	25
	60	133	30
88,9	85	133	30
	85	159	30
108	104	159	30

Special dimensions upon request.

Buffer ring



Tube-Ø	d	D	b
50	48	89	30
63,5	60	89	25
	60	108	30
88,9	86	133	35
	86	159	35

Order Example

Back up ring d=63,5mm D=108mm

Type
 Inner diameter
 External diameter

Type 720

The pallet rail Type 720 is a universal roller rail which is frequently used for pallet transport. Roller tracks for euro-pallets, boxes and other carriers with roller rail approved surface are simply built of this item.

Equally for intralogistic, linking workspace or lateral guide – the pallet rail Type 720 is of versatile use.

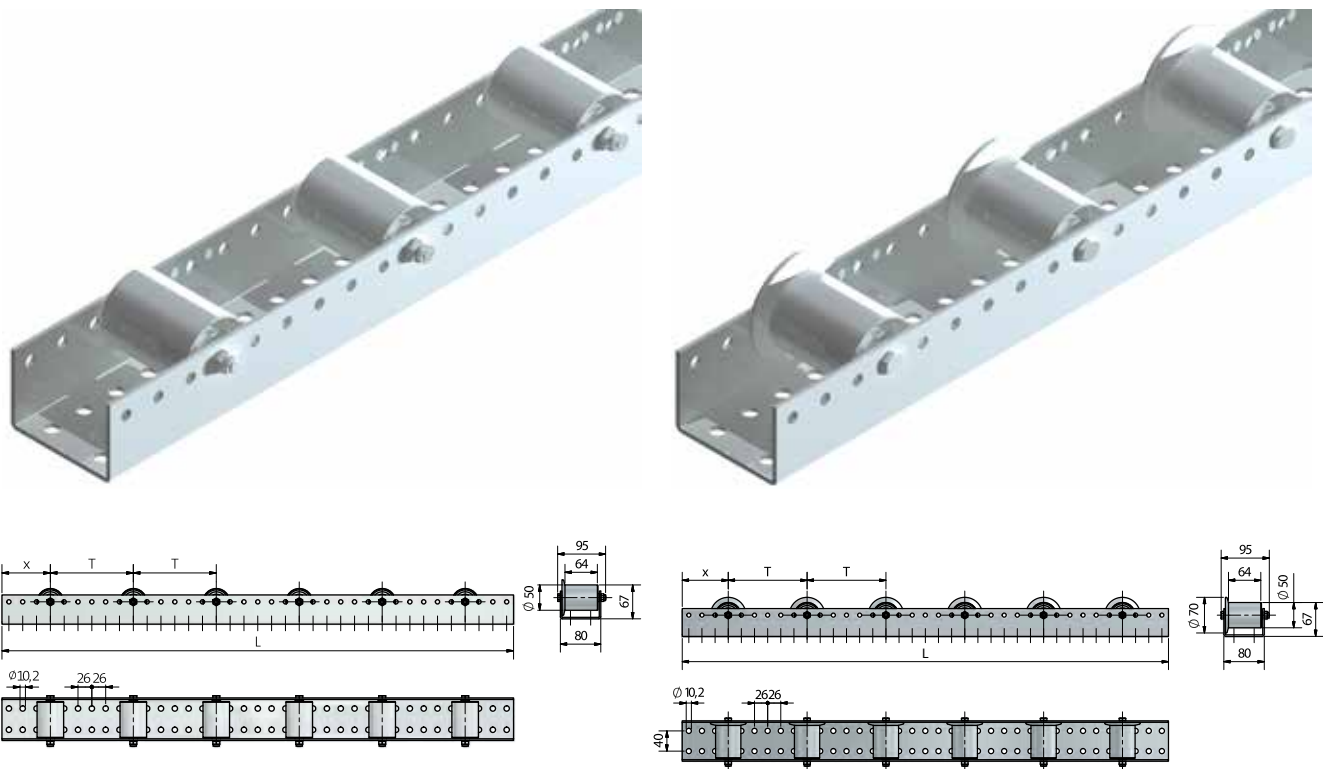
The pallet rail consists of a galvanized U-profile, 55 mm high and 80 mm in width. The profiles are equipped with rollers $\varnothing 50$ mm in a pitch of 52, 78, 104, 130, 156 mm etc.

Two additional holes in the bottom serve for mounting the rail onto a frame or directly to the ground.

Wy: 4,6 cm³

ly: 17 cm⁴

Available up to 6.006 mm increment 26 mm, intermediate on request (surcharge).



Pallet rail Type 720 – Technical Data

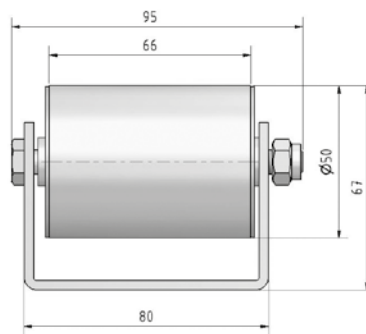
Applications	Pallettransport, intralogistic, linking of workspace, lateral guide
Rail material	galvanized U-profile
Load capacity per roller	steel roller 150 kg/pcs.
Moment of resistance – in cm ³	4,6
Diameter in mm	50
Pitch in mm	52, 78, 104, 130, 156, etc.

Type 720 - Accessories

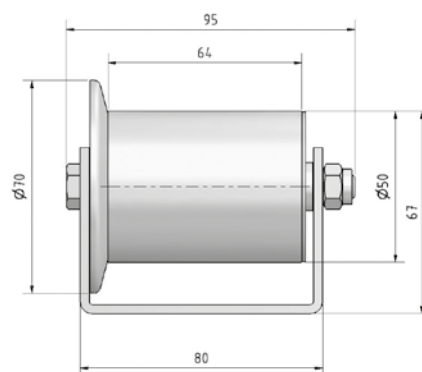
720 Profile
Order example: 720 Profile L = 2.444



720 - 200-50x1.5 STI



720 - 200-50x1.5 STI SK



Type 720

Pitch

52, 78, 104, 130, 156
increment 26 mm

Roller type

SK – flanged roller
without designation – standard

Length

available up to 6.006 mm,
increment 26 mm

Order example

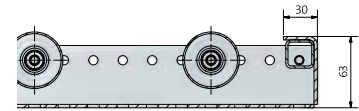
720-156 SK 2.444

Profile
Pitch T
Type of Roller
Length

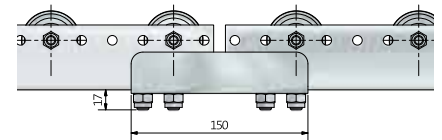


Type 720 - Accessories

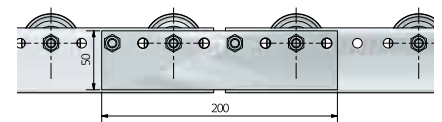
720
Roller protection



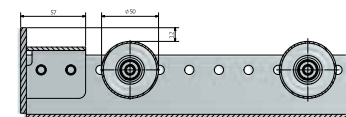
720
Connector U



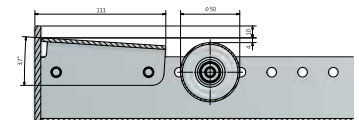
720
Connector side



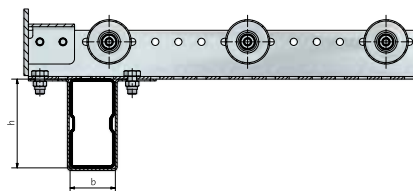
720
End stopper



720
End stopper friction

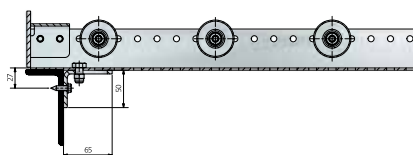


720
Fixing clip



Please give dimensions of rack beam when ordering e.g.: Fixing clip 100 x 50 for a beam with $h = 100$ mm and $b = 50$ mm (required when ordering, if req. drawing of beam)

720
Fixing angle



Type 723

The roller rails consists of a cold-rolled, galvanized steel profile of 2 mm thickness. The profile has laterally two distinct series of holes at different heights with a pitch of 25 mm. The diameter is 8,1 mm.

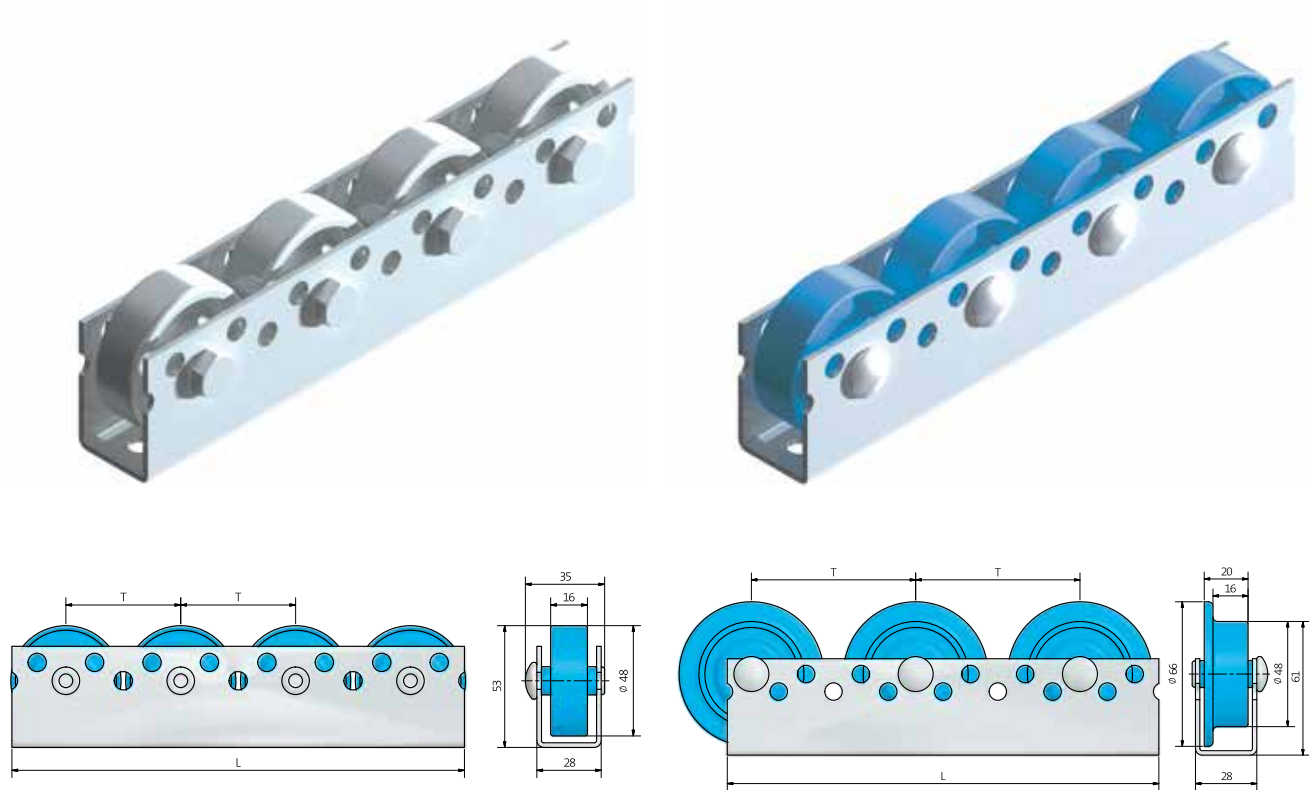
The design of the rail allows to fix the Ø 48 mm roller either with tubular rivets (standard) or bolts M8 in a screen width of 50 mm, 75 mm, 100 mm etc.

Several rollers can be placed side by side in one, two, three or more rails. Furthermore the rollers can be placed with offset and different roller types can be combined.

Available up to 6.000 mm

Increment 25 mm – 3 mm offcut

Intermediate on request (surcharge)



Roller rail Type 723 – Technical Data

Applications	carton- & plastic box transport, flow-through-rack, commissioning store, guide, assembly machines
Rail material	galvanized steel profile
Load capacity per roller	plastic roller 10 kg steel roller 20 kg
Moment of resistance – in cm ³	2,2
Diameter in mm	48
Length in mm	6.000
Pitch in mm	50, 75, 100, usw.

Type 723

Pitch:

50, 75, 100, 125, 150
increment 25 mm

Roller type:

A – All-side roller
K – plastic roller
SPK – flanged roller - plastic
SPS – flanged roller - steel
w. d.* – steel roller

Position hole series

O – upper series
w. d.* – lower series
(Standard, except for flanged rollers)

Length

Available up to 6.000 mm
Total length: $x \times 25 \text{ mm} - 3 \text{ mm offcut}$

* without designation

Order number

723-150 K O 2.447

Profile
Pitch T
Type of Roller
hole series
Length

723 Profile



723 End stopper



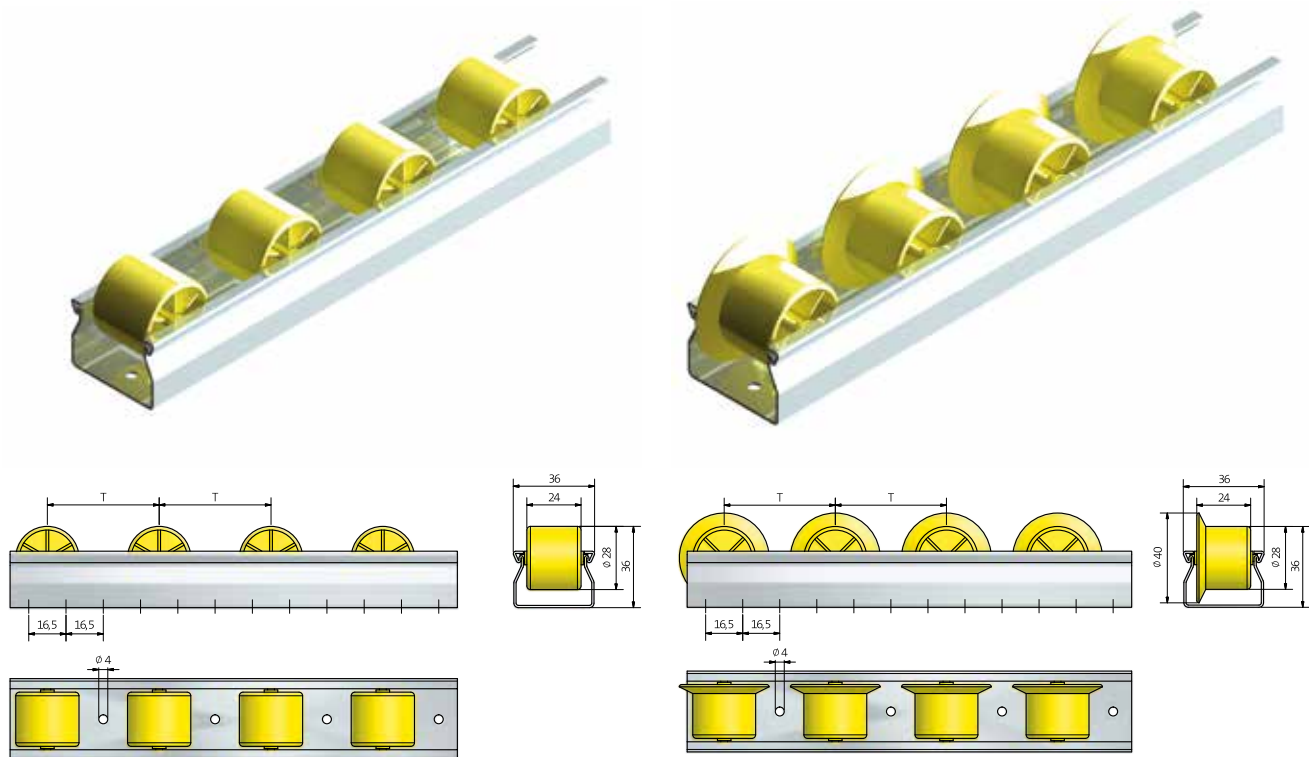
Type 726

The main field for minirails is the use in flow through-racks. Also, the stable running of transport boxes and cartons allows various application

- guiding rails for conveyors
- rail-tracks and rail-carpets for linking workstations
- Packing and commissioning tables
- assembly aid, e. g. in wood-processing and window production

The steel shaft of the wheel warrants high load capacity and a very low frictional resistance. The wheels consists of high-quality thermoplastic resin, which is impact-resistant. The material is resistant against acids and lyes and does not absorb moisture.

The torsion-resistant minirail-profile is a rolled galvanized steel-sheet and has its edges rounded in all directions. Due to application different pitches (33 mm, 50 mm, 66 mm, 83 mm, 100 mm etc.) as well as flanged or standard wheels may be applied.



Minirail Type 726 – Technical Data

Applications	rail-tracks, rail-carpets, guide, worktable, linking worktables
Rail material	Steel profile
Load capacity per wheel	plastic wheel 2 kg/pcs.
Moment of resistance – in cm ³	0,5
Diameter in mm	28
Pitch in mm	33, 50, 66, 83, 100, usw.
temperature range (°Celsius)	-30 to +80

Type 726

Pitch:

33, 50, 66, 83, 100
increment 16,5 mm

Wheel type:

w.d* – plastic wheels
SPK – flanged wheels - plastic
G – split wheels
TK – deep-freeze
L – conductive

Length

Available up to 4.500 mm
Increment 16,5 mm

* without designation

Order example

726-50 SPK 2.447
Profile
Pitch T
Wheel type
Length

The minirail with steel shaft for smooth material flow and noiseless transport is:

- strong and tough
- economic and reasonably-priced
- variably deployable

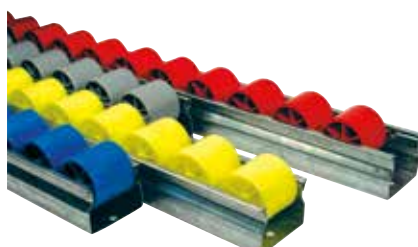
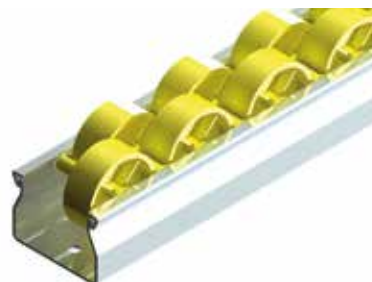
Wheels available for deep-freeze **T** and conductive **A**
– various colours on request

Available up to 4.500 mm
increment 16,5 mm, intermediate on request

726 Profile

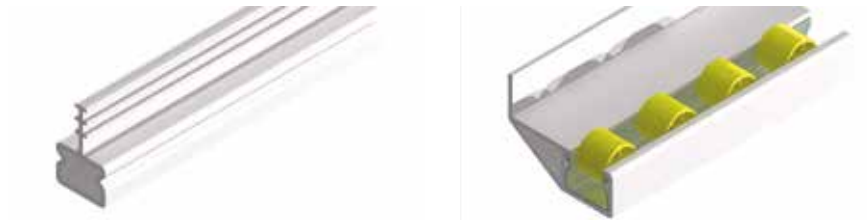


726 Profile - split wheel



Type 726 - Accessories

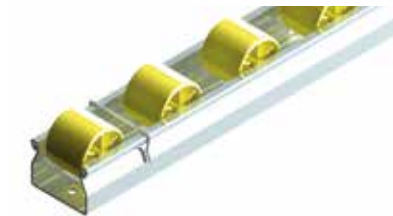
Plastic guide central / lateral
order example: 726-plastic
guide central



Braking ramp
order example: 726-braking ramp



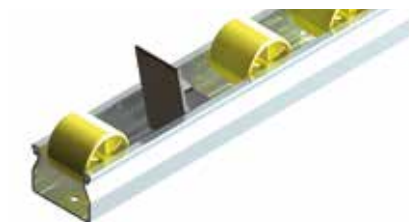
Anti-opening clip
order example: 726-anti
opening clip



Holding clip
order example: 726-holding clip



End stopper / anti-return buffer
order example: 726-end stopper



Conditions of sale and delivery

§ 1 General

1. Our terms and conditions of business shall apply exclusively: These conditions of supply and payment apply for all deliveries. Any different conditions on the part of the customer only apply in so far as they are expressly recognised by us in writing. A contract is established when Rollex issues the written confirmation of order, unless otherwise agreed.

Written order confirmation of Rollex is decisive in regards to the scope. Changes and additions must be made in writing. This also applies if this requirement for written form is to be waived.

Rollex retains title and copyright in samples, cost estimates, drawings and other information, both tangible and intangible, including in electronic form; such items may not be made accessible to third parties. Rollex will only make information and documents which are marked as confidential by the customer available to third parties with the agreement of the customer.

§ 2 Price and payment

The prices shown in the order confirmation apply ex works in the absence of express agreement to the contrary, without packaging, free on truck or rail, without transport insurance. The valid legal rate of VAT is to be added. In the absence of agreement to the contrary, payment shall be made on account without any deduction, due on delivery. The right to withhold payment or to offset counterclaims is only available to the customer in so far as his counterclaims are undisputed or legally established.

§ 3 Time of delivery, Delay in delivery

The time and period of delivery result from the agreements between the contractual partners. Fulfilment of the agreements on the part of Rollex assume that all commercial and technical questions between the parties have been clarified and the customer has also fulfilled all his obligations, such as for example provision of the necessary official approvals or certificates and payment of a deposit if so agreed. If this is not the case, the delivery period shall be prolonged correspondingly, or alternatively by an appropriate period. This does not apply if the delay is due to the supplier. Fulfilment of the period of delivery is subject to correct and timely supply of goods by the supplier's subcontractors. Any delays which are anticipated must be communicated by Rollex as soon as possible.

The delivery period is considered fulfilled if the object of the delivery has left Rollex's factory by the end of the period. If despatch or acceptance of the object of the delivery is delayed for reasons which are due to the customer any costs accruing from the delay shall be charged to the customer, starting one month after reporting of the readiness for despatch or acceptance.

If non-fulfilment of the delivery period is due to force majeure, labour conflicts or other events outside the sphere of influence of the supplier, the period of delivery shall be prolonged accordingly. Rollex will inform the customer of the start and end of such circumstance. Page The customer can withdraw from the contract if the entire performance becomes impossible for Rollex before transfer of risk.

The customer can also withdraw from the contract in case execution of a part of the delivery becomes impossible, and he has a justified interest in refusing the partial delivery. If this is not the case, the customer must pay the contractual price which is due for the partial delivery. The same applies if Rollex cannot supply the performance.

§ 4 Transfer of risk, acceptance

The risk is transferred to the customer when the object of delivery has left the factory, even if partial deliveries take place or Rollex has taken over other performance, e.g. despatch costs or delivery and erection. If an acceptance procedure has to be implemented, acceptance is decisive for transfer of risk. It must be carried out immediately at the acceptance date or alternatively after report by the supplier that the item is ready for acceptance. The customer may not refuse acceptance in the case of non-serious fault. Partial deliveries are permissible in so far as reasonable for the customer.

§ 5 Retention of title

Rollex retains the title to the object of delivery until all payments arising from the supply contract have been met. The customer may neither sell nor pledge the object of delivery nor offer it as security. The customer must inform the supplier immediately in case of pledge or seizure or other similar actions affecting the goods on the part of third parties.

If the customer behaves in such a way as to infringe the contract, in particular in case of delay of payment, Rollex is entitled to take back the object of delivery after issuing a warning and the customer must return the goods. Based on his retention of title, the supplier can only demand return of the goods when he has withdrawn from the contract. Application for opening of insolvency proceedings on the part of the customer entitles Rollex to withdraw from the contract and to request immediate return of the object of delivery.

§ 6 Claims resulting from defects

Rollex provides warranty for defects as to the quality of the goods or for defect of title, excluding further claims.

Defects in quality:

All parts which prove defective as a result of circumstances lying before the time of acceptance must be repaired or replaced by perfect goods at the discretion of the supplier. Any faults which are discovered must be communicated to Rollex immediately in writing.

The customer must agree on the time needed for repairs and replacement and accord Rollex such time and also opportunity; otherwise Rollex is freed from liability for any resulting consequences. Only in cases where operational safety is at stake or in order to prevent disproportionate damage, has the customer the right to repair defects himself or have them repaired by third parties and to demand compensation for the resulting costs. The supplier must be informed immediately. Any immediate costs resulting from the repair or replacement shall be paid by Rollex, in so far as the complaint proves to be justified, including costs of the replacement and despatch. Rollex shall not bear the cost for dismantling and installing the part or costs for supply of the necessary operators and auxiliary workers, including travel costs.

Within the framework of the legal regulations, the customer has the right to withdraw from the contract if Rollex allows a suitable period for repair or replacement of an item which exhibits quality defects to pass without action, taking legal exceptions into consideration. If only a slight defect is present, the customer only has the right to reduction of the contractual price. The right to reduce the contractual price is otherwise excluded.

In particular, no warranty is accepted in the following cases: unsuitable or improper use, incorrect assembly or commissioning by the customer or a third party, natural wear and tear, incorrect or careless treatment, improper maintenance or repair, use of unsuitable operating materials, unsuitable construction work, unsuitable building land, chemical, electro-chemical or electrical influences in so far as they do not lie within the sphere of responsibility of Rollex. If the customer or third party carries out unsuitable repairs, Rollex shall not be responsible for any consequences which may result. The same applies for changes to the object of delivery carried out without the prior agreement of the supplier.

§ 7 Liability

In case of liability which is legally specified and which does not depend on blame or fault, in particular for liability resulting from guarantee or from product liability law, Rollex shall accept unlimited liability. In the case of other infringements of obligations, Rollex shall only be liable for deliberate intent and gross negligence. This limitation shall also apply for legal representatives, employees, staff and vicarious representatives of Rollex. In so far as any obligation is infringed which is of particular significance for fulfilment of the contractual goals (cardinal duty), Rollex shall also accept liability in cases of slight negligence. However, liability for indirect and unforeseeable damages as well as for damages consequential upon defects and loss of profit, savings which have not been achieved, damage to assets because of claims of third parties or other consequential damage, Rollex shall only be liable for infringement of a cardinal obligation in cases of intent and gross negligence.

The liability of Rollex is limited to three times the net invoiced amount of the goods or services giving rise to the claim.

§ 8 Period of limitation

All claims of the customer based on any legal grounds whatsoever, lapse regarding to statute of limitations according to the laws of the BGB. They also apply for defects in a building or for objects of delivery which are used corresponding to their general use for a building and which have caused defects in the building.

§ 9 Governing law, legal venue

All legal and contractual relationships between Rollex and the Customer shall be regulated by the governing law of the Federal Republic of Germany. The Uniform Law regarding International Sale of Goods of 17.07.1973, BGBII1856-EKAG is excluded. The legal venue shall be the court responsible for the registered office of Rollex.

§ 10 Validity of Contract

If any provision of this contract should be currently invalid or incapable of implementation or should prove so in future, the validity of the remaining provisions shall not be affected.



FR = Friction roller
KR = Plastic tube

FE = Fixed drive roller
FG = Speed

FRE = Friction roller adjustable

	Page	Type				Description	Capacity max. [N]	Tube diameter									
	SK	FR	FE	FRE	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						
	24	60				Bearing housing with Ball Bearing	600			x	x	x					
	26	100				Bearing housing with Ball Row	200								x		x
	28	150				Bearing housing with Slide Bearing	150					x	x	x	x		x
	30	200				Steel housing with Ball Row	1600			x		x	x				
	32	220				Steel housing with Ball Row	2400					x	x				
	34	250				Steel housing with Precision Ball Bearing	2400					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		x	x
	46	306				Bearing housing with Ball Bearing				x		x	x	x		x	
	48	320				Bearing housing with Ball Bearing	600					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
	86				445 R ST	Steel - tooth belt wheel T8 z=20 Polychain	1000							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
	92		452	453		Thermoplastic synthetic material - single chain sprocket 1/2x5/16" z=11	400							x	x	x	x
	94		454	455		Steel single chain sprocket 1/2x5/16" z=11	1000							x	x	x	x
	96				454 R	Steel single chain sprocket 1/2x5/16" z=11	1000							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
	102		462	463		Steel single chain sprocket 5/8x3/8" z=12	1000							x	x	x	x
	104				462 R	Steel single chain sprocket 5/8x3/8" z=12	1000							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
	110		480	481		Thermoplastic synthetic material - double chain sprocket 1/2x5/16" z=14	400							x	x	x	x
	112		500	501		Steel double chain sprocket 1/2x5/16" z=14	1000							x	x	x	x
	114				500 R	Steel double chain sprocket 1/2x5/16" z=14	1000							x	x	x	x
	116			502		Steel double chain sprocket 1/2x5/16" z=14	1500							x	x	x	x
	118		506	507		Steel single chain sprocket 1/2x5/16" z=14	1000							x	x	x	x
	120				506 R	Steel single chain sprocket 1/2x5/16" z=14	1000							x	x	x	x
	122			508		Steel single chain sprocket 1/2x5/16" z=14	1500							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											
Motor Roller	203					Rollex-Multi-Drive Card											
	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					Palette rail											
	242					Roller rail											



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
- 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 central
- In accumulating roller the accumulation bush should be covered.
This is to prevent contamination between the drive element and accumulation bush.

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	4500	3500		
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

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