Universal Conveyor Roller Series 1700

Features
- The roller for virtually any application
- Many different types of ball bearings available
- Low-noise running due to the use of polyamide bearing housings and seals
- Secured bearing seat
- Integrated seal in front of the ball bearing to protect against coarse dirt, and water repelling groove to protect the ball bearing against splashes of water
- Rounded roller ends for easy sliding of items onto the conveyor laterally

Load capacity
- Up to 2,000 N
- Up to 3,000 N with precision ball bearing 6003
- Up to 300 N with grooves

Dimensions

Tube

- Highly impact-resistant special PVC-Copolymer in stone grey (RAL 7030) with an outer diameter of 50, 63 or 90 mm
- Zinc-plated steel to DIN 2394 with an outer diameter of 20, 30, 40, 50, 51, 60 or 80 mm
- Stainless steel to DIN 2463 with an outer diameter of 50 mm
- Aluminium with an outer diameter of 50 mm
- Elastic PVC sleeve for 30, 40, 50 or 60 mm tube diameters
- Grooves for tubes, 50 or 60 mm

Spindle

- Bright steel or stainless steel
- Spring-loaded spindle, diameter 8, 10, 12, 14 mm or 8 and 11 mm hexagonal
- Spindle with milled flats, diameter 10, 12, 14 or 17 mm
- Male threaded spindle, diameter 8, 10, 12 or 14 mm
- Female threaded spindle
  Ø 8 mm: M5 x 12
  Ø 12 and 14 mm: M8 x 15
  Ø 17 mm: M12 x 20
- 8 mm hexagonal spindle with spring-loaded tapered spindle shuttle for 11 mm hexagonal holes in the conveyor profile

Bearing

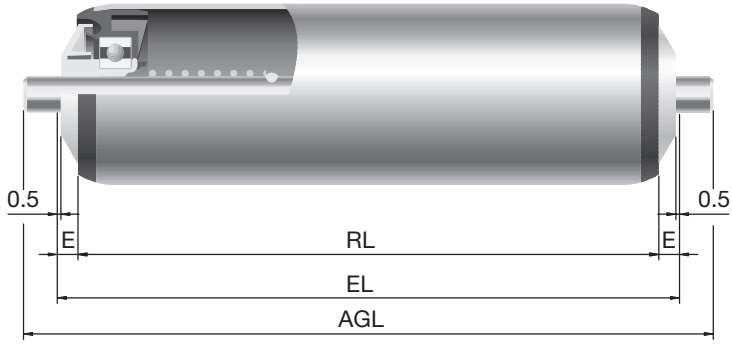
- Bearing housing made of polyamide (black)
- Bearing seal made of polypropylene (yellow)
- Types of bearing:
  – Interroll ball bearing
  – Interroll stainless steel ball bearing
  – Precision ball bearing 6002 2Z, greased
  – Precision ball bearing 6002 2Z, oil-lubricated
  – Precision ball bearing 6003 2Z for a spindle diameter of 17 mm
  – Precision ball bearing 689 2Z, greased, for a roller diameter of 30 mm
  Conveyor speeds:
  – For rollers with 30 mm diameter, depending on RL, max. 1.2 m/s
  – For rollers with 50 mm and 60 mm diameter with precision ball bearing, depending on RL, max. 2.0 m/s (0.8 m/s with Interroll ball bearing)

Options, see page 141

- Flanges
- Antistatic version (page 63)
- Rubberised version
- Hardened tube
- Version without spindle

■ = STANDARD

Spring-loaded spindle roller



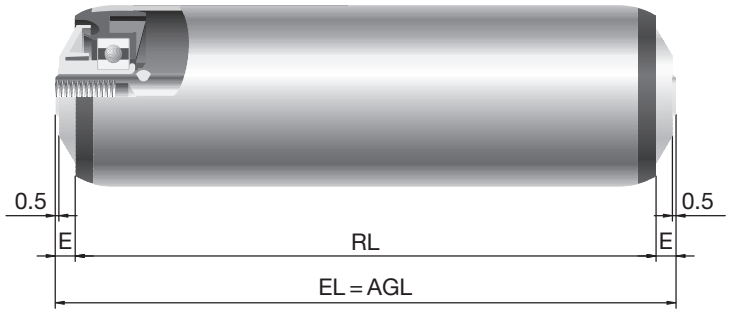
Series 1700

Spindle Ø mm	Roller Ø mm	RL = EL– mm	AGL = EL+ mm	E mm
8	30	5	10	2.5
8	40/50	10	16	5
10	40/50/60	10	20	5
12	50/60	10	24	5
11 hex.	50/60	10	22	5

Tube	Tube size Ø mm	Type of bearing	Spring-loaded spindle Ø 8 mm	Ø 10 mm	Ø 12 mm	11 hex.
PVC	50 x 2.8	ITRL ball bearing	1.7AX.SAA.EAB	1.7AY.SAA.HAC		
		ITRL stainless steel ball bearing	1.7GM.SAA.GAB	1.7GF.SAA.KAC		
Zinc-plated steel	30 x 1.2	Precision ball bearing	1.73H.J31.EAN			
	40 x 1.5	ITRL ball bearing		1.7VG.JF4.HA1		
	40 x 1.5	Precision ball bearing		1.7VS.JF4.HA1	1.7VT.JF4.LAC	
	50 x 1.5	ITRL ball bearing		1.7AB.JAA.HAC	1.7AC.JAA.LAC	1.7AE.JAA.VAB
	50 x 1.5	Precision ball bearing		1.7L6.JAA.HAC	1.7L7.JAA.LAC	1.7L9.JAA.VAB
	60 x 1.5	ITRL ball bearing		1.7AJ.JAB.HAC	1.7AK.JAB.LAC	1.7AM.JAB.VAB
	60 x 1.5	Precision ball bearing		1.7MD.JAB.HAC	1.7ME.JAB.LAC	1.7MG.JAB.VAB
Stainless steel	50 x 1.5	ITRL stainless steel ball bearing		1.7FU.NAA.KAC	1.7FV.NAA.MB0	
Zinc-plated steel with 1 groove	50 x 1.5	Precision ball bearing		1.7L6.JAD.HAC	1.7L7.JAD.LAC	1.7L9.JAD.VAB
Zinc-plated steel with 2 grooves	50 x 1.5	Precision ball bearing		1.7L6.JAE.HAC	1.7L7.JAE.LAC	1.7L9.JAE.VAB
Zinc-plated steel with 2 mm PVC sleeve	50 x 1.5	ITRL ball bearing		1.7AB.J72.HAC	1.7AC.J72.LAC	1.7AE.J72.VAB
Zinc-plated steel with 5 mm PVC sleeve	40 x 1.5	Precision ball bearing	1.7UL.JBZ.EA1	1.7VS.JF5.HA1	1.7VT.JF5.LA1	1.7VV.JF5.VA1
Zinc-pl. st. w. 2 grooves + 2 mm PVC sleeve	50 x 1.5	Precision ball bearing		1.7L6.JCG.HAC	1.7L7.JCG.LAC	1.7L9.JCG.VAB

Relief cut measurement for sleeve and dimensioning of the rollers with grooves on pages 63/64

Female threaded spindle



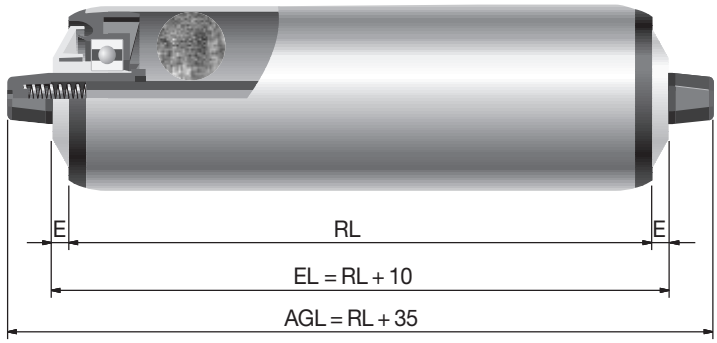
Series 1700

Spindle Ø mm	Thread mm	Roller Ø mm	RL = EL– mm	E mm
8	M5 x 12	30	5	2.5
12	M8 x 15	40/50/60	10	5
14	M8 x 15	50/60/80	10	5
14	M10 x 20	50/60/80	10	5
17	M12 x 20	50/60	10	5

Tube	Tube size Ø mm	Type of bearing	Female threaded spindle Ø 8 mm	Ø 12 mm	Ø 14 mm	Ø 17 mm
Zinc-plated steel	30 x 1.2	Precision ball bearing	1.73H.J31.EAJ			
	40 x 1.5	Precision ball bearing		1.7VT.JF4.LA2	1.7VU.JF4.NAE	
	50 x 1.5	Precision ball bearing		1.7L7.JAA.LAE	1.7L8.JAA.NAE	1.75A.JAA.RAA
	60 x 1.5	Precision ball bearing		1.7ME.JAB.LAE	1.7MF.JAB.NAE	
	60 x 3	Precision ball bearing				1.75C.J63.RAA
Zinc-plated steel with 1 groove	50 x 1.5	Precision ball bearing		1.7L7.JAD.LAE	1.7L8.JAD.NAE	
Zinc-plated steel with 2 grooves	50 x 1.5	Precision ball bearing		1.7L7.JAE.LAE	1.7L8.JAE.NAE	
Zinc-plated steel with 2 mm PVC sleeve	50 x 1.5	Precision ball bearing		1.7L7.J72.LAE	1.7L8.J72.NAE	
Zinc-plated steel with 5 mm PVC sleeve	40 x 1.5	Precision ball bearing		1.7VT.JF5.LA2	1.7VU.JF5.NAE	
Zinc-pl. st. w. 2 grooves + 2 mm PVC sleeve	50 x 1.5	Precision ball bearing		1.7L7.JCG.LAE	1.7L8.JCG.NAE	

Relief cut measurement for sleeve and dimensioning of the rollers with grooves on pages 63/64

Tapered spindle shuttle



Series 1700

Spindle Ø mm	Shuttle mm	Roller Ø mm	RL = EL– mm	AGL = EL+ mm	E mm
8 hex.	11 hex.	50	10	25	5

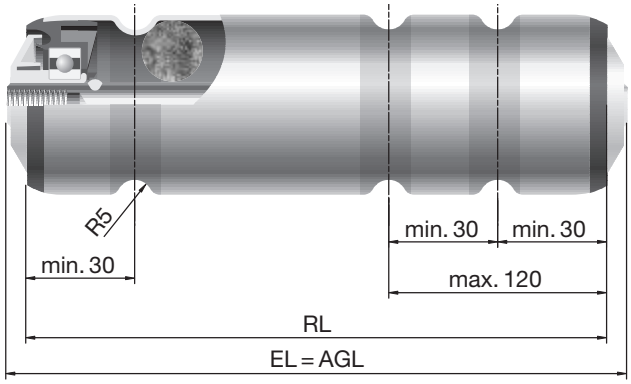
Tube	Tube size Ø mm	Parts number
Zinc-plated steel	50 x 1.5	1.7D1.JX5.V8T
Zinc-plated steel with 1 groove	50 x 1.5	1.7D1.JAD.V8T
Zinc-plated steel with 2 grooves	50 x 1.5	1.7D1.JAE.V8T
Zinc-pl. steel w. 2 grooves and 2 mm PVC sleeve	50 x 1.5	1.7D1.JCG.V8T

Relief cut measurement for sleeve and dimensioning of the rollers with grooves on pages 63/64

This roller is ideal for all motor-driven applications, especially if low-noise is required simultaneously with high output. The spring-loaded tapered spindle shuttle allows the roller to be mounted free of play in conveyor profiles with 11 (+0.3/+0.8) mm hexagonal holes. The roller is thus likewise fixed in position just as a screwed-in roller with female threaded spindle.

Additional properties:

- Spindle shuttle made of conductive material in order to disperse static charge
- Both spindle ends are inserted by pressing in
- Shuttles are aligned opposite to one another
- Installation of the roller in the conveyor profile is the same as for standard spring-loaded spindles
- Very low-noise running due to tapered plastic shuttle
- No wear due to play-free seat of the shuttle in the profile
- Bearing version 6002 2Z, greased
- Max. roller length RL = 1,000 mm
- Max. load of 350 N



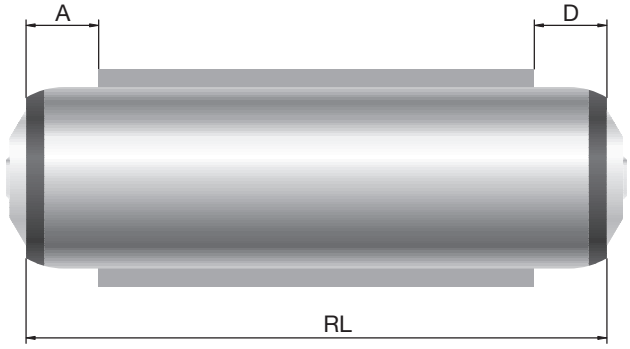
Series 1700 with grooves

Version for round belt drive
Series 1700 with grooves

- To prevent electrostatic charges, an antistatic roller version is supplied as standard
- The load capacity per roller is limited to 300 N – due to the driving force of the round belt.

The actual load capacity of the roller with steel tube falls below this value only at lengths greater than 1,400 mm

- It is advisable to select a type of spindle which is protected against torsion (e.g. female threaded spindle)

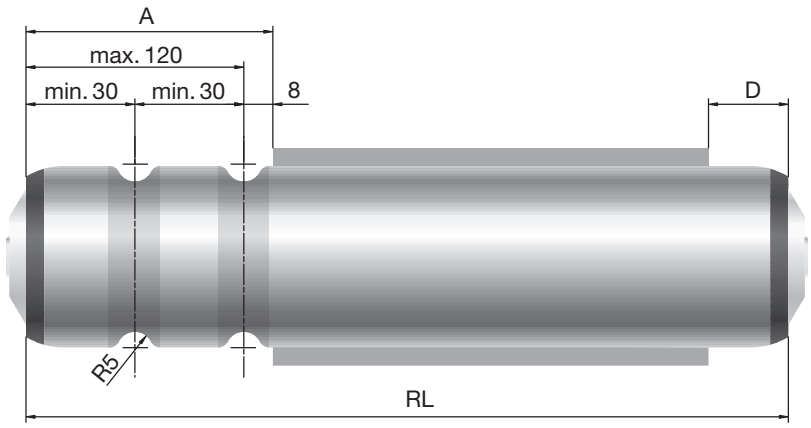


Series 1700 with PVC sleeve

50 mm steel roller version with PVC sleeve, Series 1700

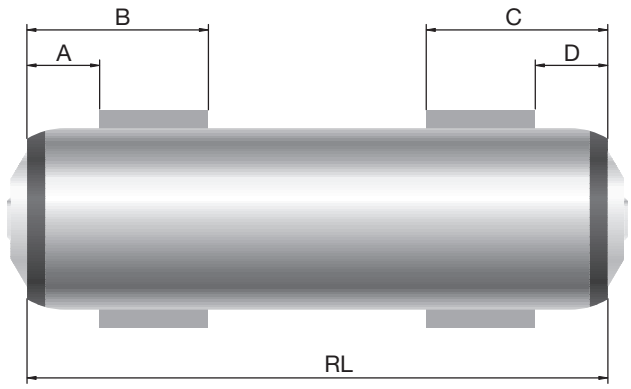
In order to transport sensitive goods or lower the noise level (from conveyed goods on the roller), steel rollers covered with a PVC sleeve in grey (RAL 7037) are used. The sleeve has a 58° shore hardness and is 2 mm thick.
Only galvanised steel pipes or stainless steel pipes may be used.

As a rule, portions of the sleeve are removed in order to, for example, make space for the drive belts. When ordering, the respective dimensions should be specified, otherwise the sleeve will be cut off at the end of the steel tube. The minimum width of the sleeve is 50 mm. In the event of axial forces on the sleeve, such as arise from shifting or lateral channelling, the minimum width may in individual cases be insufficient for ensuring a secure sleeve fit.



Series 1700 with PVC sleeve

The drawing above shows the standard sleeve section in connection with grooves. If measurement “A” is not specified, the sleeve is always severed at 8 mm from the centre of the groove. A shorter distance is not possible. If a distance of more than 8 mm to the centre of the groove is desired, measurement “A” must be specified.



Series 1700

Load capacity [N] for
- dynamic load
- area load

EL [mm]	Steel tube Ø 30 x 1.2 mm Fitted loosely / Fixed Spindle Ø 8 mm
100 – 600	150

EL [mm]	Steel tube, ITRL ball bearing, Fitted loosely						
	Ø 40 x 1.5 mm Spindle Ø 10/12 mm	Ø 50 x 1.5 mm Spindle Ø 10 mm	Ø 50 x 1.5 mm Spindle Ø 12 mm	Ø 50 x 1.5 mm Spindle 11 hex.	Ø 60 x 1.5 mm Spindle Ø 10 mm	Ø 60 x 1.5 mm Spindle Ø 12 mm	Ø 60 x 1.5 mm Spindle 11 hex.
200	800	1600	1600	1600	1600	1600	1600
300	800	1600	1600	1600	1600	1600	1600
400	800	1250	1600	1600	1250	1600	1600
600	800	830	1600	1540	810	1600	1490
800	730	620	1380	1170	610	1300	1120
1000	490	500	1140	960	485	1055	900
1300	330	400	660	660	380	835	710
1600		325	440	440	310	690	590

EL [mm]	PVC tube ITRL ball bearing Fitted loosely	Steel tube, Precision ball bearing, Fitted loosely					
	Ø 50 x 2.8 mm Spindle Ø 8/10 mm	Ø 50 x 1.5 mm Spindle Ø 10 mm	Ø 50 x 1.5 mm Spindle Ø 12 mm	Ø 50 x 1.5 mm Spindle 11 hex.	Ø 60 x 1.5 mm Spindle Ø 10 mm	Ø 60 x 1.5 mm Spindle Ø 12 mm	Ø 60 x 1.5 mm Spindle 11 hex.
200	790	1800	2000	2000	1630	2000	2000
300	310	1140	2000	2000	1130	2000	2000
400	800	840	1800	1640	830	1740	1500
600	165	560	1200	1020	540	1160	1000
800	70	420	920	780	400	870	740
1000		340	760	640	320	700	600
1300		260	620	520	250	580	475
1600		220	520	440	200	460	390

EL [mm]	Steel tube, Precision ball bearing, Fixed				
	Ø 40 x 1.5 mm Spindle Ø 12 mm	Ø 50 x 1.5 mm Spindle Ø 12/14 mm	Spindle Ø 17 mm	Ø 60 x 1.5 mm Spindle Ø 12/14 mm	Ø 60 x 3 mm Spindle Ø 17 mm
200	800	2000	3000	2000	3000
300	800	2000	3000	2000	3000
400	800	2000	3000	2000	3000
600	800	2000	3000	2000	3000
800	800	1770	1770	2000	3000
1000	560	1120	1120	2000	3000
1300	330	660	660	1160	2140
1600		440	440	760	1400

Detailed calculations for the entire roller can also be determined with the calculation program for rollers. Specifications for chain drives, toothed drives and round belt drives are also made here. The calculation program can be downloaded under www.interroll.com/ D&R/ Rollen/Rollenberechnungsprogramm.