

ROLLERS SERIES 1450

Heavy-duty universal conveyor roller



Application area

Driven and particularly non-driven conveying systems, such as transport of cardboards, containers, barrels, wheels, pallets or steel containers. Thanks to a carrying capacity of up to 5,000 N, the product can be used as universal conveyor roller for very high loads. The roller series can also be used for the implementation of gravity roller conveyors. The version with steel bearing housing is designed for use in freezer applications or applications with very high ambient temperature.

Low-noise

The use of precision ball bearings, Technopolymer bearing housings and seals result in very quiet running.

Lateral loading

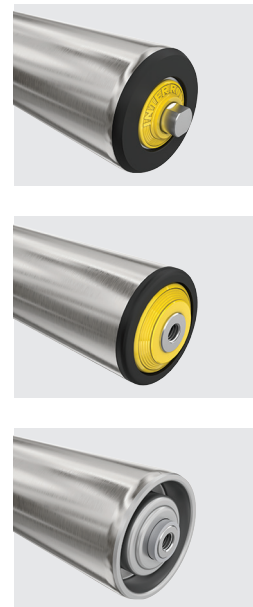
The tube ends are rounded, thereby allowing materials to be easily moved on from the side.

Axial loading capacity

Forces acting in axial direction are removed through ball bearings and seals.

Robust construction

To obtain an axial fixing of bearing housing, ball bearing and seal against escaping, the bearing housing is not only pressed into the tube, but also flanged.



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Technical data

General technical data		
Platform	1450	1450
Max. load capacity	5000 N	2500 N
Max. conveyor speed	0.8 m/s	0.8 m/s
Anti-static version	Override	(< 10 ⁶ Ω)
Temperature range	-5 to +40 °C	-28 to +80 °C
Material		
Tube	Zinc-plated steel, stainless steel	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel	Uncoated steel, zinc-plated steel, stainless steel
Seal	Polyamide, RAL1021 (rape yellow)	Steel
Bearing housing	Polyamide, RAL9005 (jet black)	Zinc-plated steel
Bearing version	For Ø80, Ø89: Precision ball bearing steel 6205 2RZ, bearing play C3, greased For Ø60: Precision steel ball bearing 6204 2RZ, bearing play C3, greased	Precision steel ball bearing 6204 1Z, greased

Design versions

Tube sleeves	For shell with Ø 60 and 80 mm PVC tube (page 31) Lagging (page 34)
Anti-static version	(< 10 ⁶ Ω) Standard design for rollers with grooves or tube sleeves
Shafts	The following are available in addition to the variants listed in the load capacity tables: <ul style="list-style-type: none"> • With variable length • Different design of both shaft ends
Tube	The following are available in addition to the variants listed in the load capacity tables: <ul style="list-style-type: none"> • With flanges welded on • With grooves for guiding round belts (only for tube with Ø 80 x 2 mm)

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Load capacities of series 1450 with screw-connected installation

The load capacity table refers to a temperature range of +5 to +40 °C.
Valid for the following shaft designs: female thread or male thread.

Bearing: 6205 2RZ.

Tube material	Ø Tube / thickness [mm]	Ø Shaft [mm]	Maximum static load [N] for installation length [mm]						
			200	1000	1200	1400	1600	1800	2000
Steel	60 x 3	20	5000	3635	2515	1840	1405	1105	895
	80 x 2	20	5000	5000	4285	3135	2395	1890	1525
	80 x 3	20	5000	5000	5000	4530	3460	2725	2205
	89 x 3	20	5000	5000	5000	5000	4815	3800	3070

Load capacities of series 1450 with screw-connected installation and freezer design

The load capacity table refers to a temperature range of -28 to +80 °C.
Valid for the following shaft designs: female thread or male thread.

Bearing: 6204 1Z.

Tube material	Ø Tube / thickness [mm]	Ø Shaft [mm]	Maximum static load [N] for installation length [mm]						
			200	1000	1200	1400	1600	1800	2000
Steel	80 x 2	20	2500	2500	2140	1565	1200	945	760
	80 x 3	20	2500	2500	2500	2265	1730	1360	1100
	89 x 3	20	2500	2500	2500	2500	2400	1900	1535

Load capacities of series 1450 with loose installation

The load capacity table refers to a temperature range of +5 to +40 °C.
Valid for the following shaft designs: fixed shaft or flatted shaft.

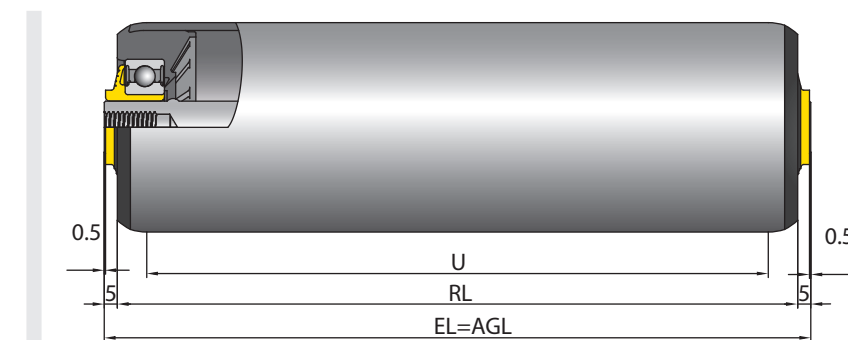
Tube material	Bearings	Ø Tube / thickness [mm]	Ø Shaft [mm]	Maximum static load [N] for installation length [mm]						
				200	1000	1200	1400	1600	1800	2000
Steel	6204 2RZ	60 x 3 standard/seamless	20	5000	3635	2515	1840	1405	1105	895
	6205 2RZ	80 x 2	20	5000	5000	4285	3135	2395	1890	1525
		80 x 3	20	5000	5000	5000	4530	3460	2725	2205
		89 x 3	20	5000	5000	5000	4465	4005	3655	3070

Dimensions

The dimensions of the conveyor roller depend on the shaft version. A sufficient axial play is already taken into account, so that only the actual lane width between side profiles is required for ordering.
Ordering dimensions for tube sleeves, e.g. PVC sleeves, see page 31, and for flanges see page 36.

- RL = Reference length / ordering length
- EL = Installation length, inside diameter between side profiles
- AGL = Total length of shaft
- U = Usable tube length: Length without bearing housing and for flanged metal tube without length of flanging

Roller, Ø 80 and Ø 89 mm, with polyamide bearing housing



Ø Tube [mm]	Ø Shaft [mm]	EL [mm]	AGL [mm]	U [mm]
80 x 2; 80 x 3; 89 x 3	20	RL + 10	RL + 10	RL - 26

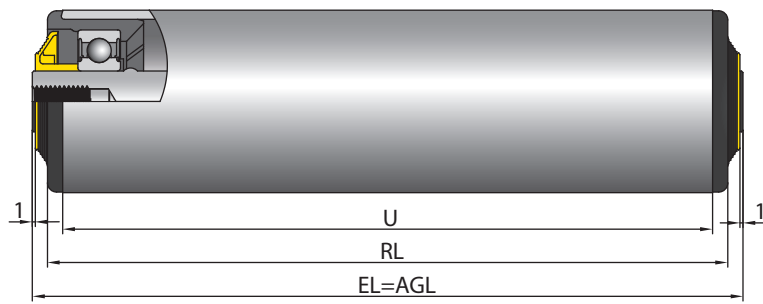
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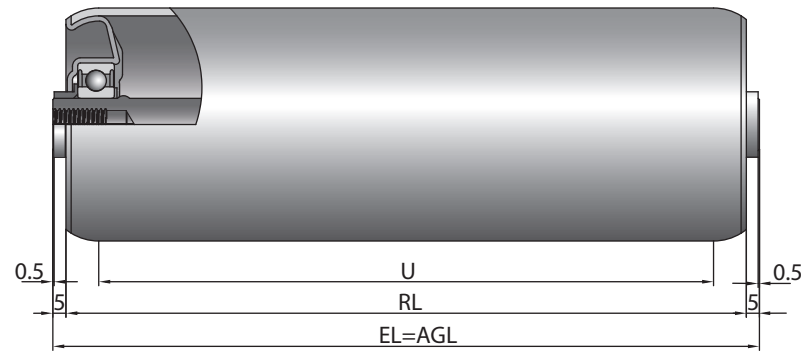


Roller, Ø 60 mm, with polyamide bearing housing



Ø Tube [mm]	Ø Shaft [mm]	EL [mm]	AGL [mm]	U [mm]
60 x 3	20	RL + 10	RL + 10	RL - 10

Roller, Ø 80 and Ø 89 mm, with steel bearing housing



Ø Tube [mm]	Ø Shaft [mm]	EL [mm]	AGL [mm]	U [mm]
80 x 2; 80 x 3; 89 x 3	20	RL + 10	RL + 10	RL - 26

Detailed product specifications are available on request.