

ROLLERS & DRIVE ROLLERS

CONVEYOR ROLLERS · ROLLER DRIVES · DRUM MOTORS

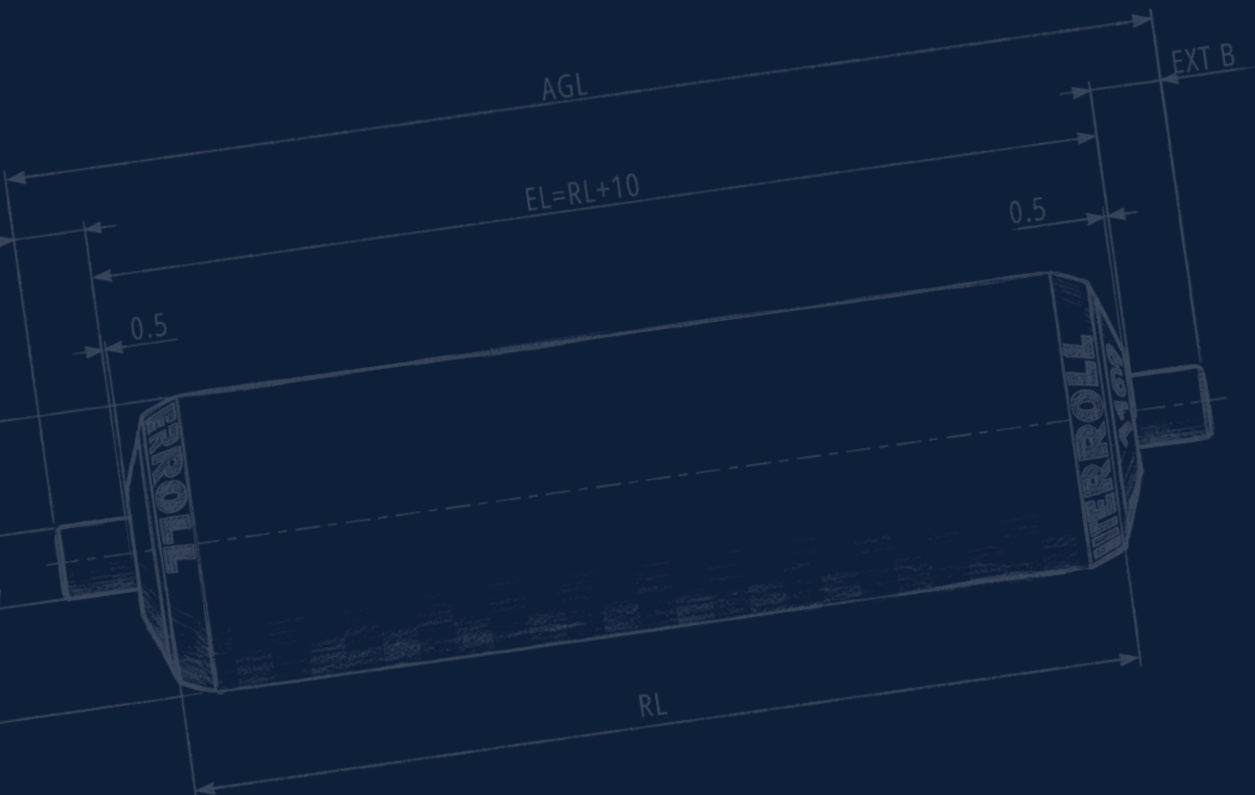
INTERROLL

CONVEYOR ROLLERS

ROLLER DRIVES

DRUM MOTORS

GRAVITY & DRIVEN



UNIKING CANADA INC.

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TABLE OF CONTENTS

CONVEYOR ROLLERS

Series 1100 — Gravity Conveyor Roller	03
Series 1200 — Steel Conveyor Roller	04
Series 1450 — Heavy-duty universal conveyor roller	05
Series 1500 / 1520 — Slide bearing conveyor roller	06
Series 1700 Light — Universal conveyor roller	07
Series 1700 — Universal Conveyor Roller	08
Series 1700 KXO — Tapered universal conveyor roller	10
Series 1700 Heavy — Universal conveyor roller	11
Series 3950 — Heavy-duty conveyor roller	12
Series MSC 50 — Magnetic Speed Controller	13

ROLLER DRIVES

Series 3500 Light — Fixed drive conveyor roller	14
Series 3500 — Fixed drive conveyor roller	15

Series 3500 KXO Light — Fixed Drive Curve Roller	17
Series 3500 KXO — Fixed drive curve roller	18
Series 3500 Heavy — Fixed drive conveyor roller	19
Series 3800 Light — Friction Conveyor Roller / Double Friction Conveyor Roller	20
Series 3800 — Friction conveyor roller	21
Series 3870 — Double friction conveyor roller	23

DRUM MOTORS

DL 0080 — Drum Motor — DL Series	24
DL 0113 — Drum Motor — DL Series	25
DM 0080 — Drum Motor — DM Series	26
DM 0113 — Drum Motor — DM Series	27
DM 0138 — Drum Motor — DM Series	28
DM 0165 — Drum Motor — DM Series	29
DM 0217 — Drum Motor — DM Series	30
DP 0080 / 0089 — Drum Motor — DP Pallet Drive	31

SERIES 1100

Gravity Conveyor Roller – Interroll

Series 1100 is a gravity conveyor roller for internal conveyor systems, particularly suited to cost-efficient gravity and push conveyors. The FDA-compliant bearing grease makes it fit for the food-processing sector. Rounded tube ends let product transfer on from the side, and smooth surfaces resist contamination.



Cutaway — spring-loaded bearing

- › **High corrosion resistance** Stainless material throughout; stainless steel balls available on request.
- › **Resistant to contamination** Smooth surfaces protect against dirt accumulation.
- › **Lateral loading** Rounded tube ends let material be moved on easily from the side.
- › **Robust construction** PVC bearing assemblies from Ø 30 mm are secured with an internal press-in edge in addition to the press fit.

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]											
mm	mm	100	200	300	400	500	600	700	800	900	1000	1100	1200
ALUMINUM													
20 × 1.5	6	90	90	90	90	85	60	45	35	–	–	–	–
50 × 1.5	10, 12	350	350	350	350	350	350	350	350	350	350	310	260
PVC													
20 × 1.5	6	90	20	10	5	–	–	–	–	–	–	–	–
30 × 1.8	8	120	90	35	20	15	–	–	–	–	–	–	–
40 × 2.3	8, 10	180	180	130	70	40	25	20	15	10	–	–	–
50 × 2.8	8, 10, 11 HEX, 12	350	350	275	150	95	70	50	35	30	25	20	15
STEEL													
20 × 1.5	6	90	90	90	90	90	90	90	90	75	60	50	45
30 × 1.2	8	120	120	120	120	120	120	120	120	120	120	120	120
50 × 1.5	8, 10, 11 HEX, 12	350	350	350	350	350	350	350	350	350	350	350	350

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]											
mm	mm	100	200	300	400	500	600	700	800	900	1000	1100	1200
ALUMINUM													
20 × 1.5	6	90	90	90	90	85	60	45	35	–	–	–	–
50 × 1.5	8	350	350	350	350	350	345	295	260	230	210	190	180
50 × 1.5	10	350	350	350	350	350	350	350	350	350	350	310	260
PVC													
16 × 1	5	35	7	–	–	–	–	–	–	–	–	–	–
20 × 1.5	6	90	20	10	–	–	–	–	–	–	–	–	–
30 × 1.8	6, 8	120	90	35	20	15	–	–	–	–	–	–	–
40 × 2.3	8, 10	180	180	115	65	40	25	20	15	10	–	–	–
50 × 2.8	8, 10, 11 HEX, 12	350	350	275	150	95	65	50	35	30	25	20	15
STEEL													
16 × 1	5	50	50	50	50	50	50	45	35	25	20	20	15
20 × 1.5	6	90	90	90	90	90	90	90	90	75	60	50	45
30 × 1.2	8	120	120	120	120	120	120	120	120	120	120	120	120
50 × 1.5	8	350	350	350	350	350	330	280	245	220	195	180	165
50 × 1.5	10, 11 HEX, 12	350	350	350	350	350	350	350	350	350	350	350	350

Maximum static load in newtons over a temperature range of +5 to +40 °C. Bearing: guided balls, no precision ball bearing. Screw-connected ratings assume a female- or male-thread shaft; loose-installation ratings assume a spring-loaded, fixed or flatted shaft.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Anti-static	Standard for rollers with tube sleeves (< 10 ⁶ Ω)
Surface treatment	Carbonitriding available
Shafts	Spring on both sides, variable length, or differing end designs
Noise reduction	For tube with Ø 50 mm

ORDERING DIMENSIONS

RL	Reference / ordering length
EL	Installation length — inside width between side profiles
AGL	Total length of shaft
U	Usable tube length (without bearing housing)

Dimensions depend on the shaft version; axial play is already accounted for, so only the lane width between side profiles is needed to order. Female-threaded and spring-loaded shaft designs are available.

SERIES 1200

Steel Conveyor Roller – Interroll

Series 1200 is a driven unit-handling conveyor roller for the transport of cardboard cartons, containers, barrels or tires, suitable for implementing gravity or push conveyors. The solid steel roller is designed for a very broad temperature range from -30 to +80 °C. The version with steel bearing housing is designed for use in deep-freeze applications or applications with very high ambient temperature.



Cutaway — hardened metal ball bearing

- › **High reliability** The solid steel roller distinguishes itself with distinct longevity and high resilience, thanks to pressed and zinc-plated bearing shells with hardened running grooves.
- › **Lateral loading** The tube ends are rounded, thereby allowing materials to be easily moved on from the side. Axial forces are removed through ball bearings and seals.
- › **Particularly robust** The shape of the ball bearings used is optimized for use in conveyor rollers so that large bearing deflections are possible.

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]												
mm	mm	100	200	300	400	500	600	700	800	900	1000	1200	1400	1600
STEEL														
30 × 1.2	8, 10	300	300	300	300	300	300	300	292	230	186	129	94	72
40 × 1.5	10, 12	800	800	800	800	800	800	800	800	685	555	385	280	215
50 × 1.5	10, 12	1200	1200	1200	1200	1200	1200	1200	1200	1200	1110	765	560	430
60 × 1.5	10, 12, 14	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	985	755
80 × 2	12, 14	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]												
mm	mm	100	200	300	400	500	600	700	800	900	1000	1200	1400	1600
STEEL														
30 × 1.2	8, 10	300	300	300	300	300	300	300	290	230	185	130	95	70
40 × 1.5	8	800	800	800	735	585	490	420	370	330	300	255	225	200
40 × 1.5	10, 12	800	800	800	800	800	800	800	800	685	555	385	280	215
50 × 1.5	8	1200	1200	975	720	575	475	410	355	320	285	240	210	185
50 × 1.5	10	1200	1200	1200	1200	1200	1200	1050	925	830	750	640	560	430
50 × 1.5	11 SK, 12	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1110	765	430
51 × 2	10	1200	1200	1200	1200	1200	1190	1025	900	805	730	615	535	475
51 × 2	12	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1055	775	590
60 × 1.5	10	1200	1200	1200	1200	1200	1175	1010	885	790	715	600	520	460
60 × 1.5	12, 14	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	985	755
80 × 2	14	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

Maximum static load in newtons over a temperature range of -5 to +40 °C with a hardened metal ball bearing; screw-connected ratings assume a female- or male-thread shaft, loose-installation ratings a spring-loaded, fixed or flatted shaft.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Shafts	Spring on both sides, variable length, or differing design of both shaft ends
Tube	With flanges welded on
Noise reduction	For tube with Ø 50 mm

ORDERING DIMENSIONS

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

The dimensions of the conveyor roller depend on the shaft version; sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES 1450

Heavy-duty universal conveyor roller – Interroll

Series 1450 is a heavy-duty universal conveyor roller for driven and particularly non-driven conveying systems, such as the transport of cardboards, containers, barrels, wheels, pallets or steel containers. Thanks to a carrying capacity of up to 5,000 N it suits very high loads and can also be used to build gravity roller conveyors. The version with a steel bearing housing is designed for deep-freeze applications or applications with very high ambient temperatures.



Cutaway — flanged bearing housing

- › **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.

TECHNICAL DATA

Platform	1450
Max. load capacity	5000 N / 2500 N (deep freeze)
Max. conveyor speed	0.8 m/s
Anti-static version	Optional / < 10 ⁶ Ω (deep freeze)
Temperature range	-5 to +40 °C / -30 to +80 °C (deep freeze)

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated, zinc-plated or stainless steel
Seal	Polyamide RAL1021 (rape yellow); steel for deep freeze
Bearing housing	Polyamide RAL9005 (jet black); zinc-plated steel for deep freeze
Bearing version	Ø80/Ø89: precision ball bearing 6205 2RZ, Ø60: 6204 2RZ (play C3, greased); 6204 1Z for deep freeze

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

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

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION – DEEP-FREEZE DESIGN

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm	mm	200	1000	1200	1400	1600	1800	2000
STEEL								
80 × 2	20	2500	2500	2140	1565	1200	945	760
80 × 3	20	2500	2500	2500	2265	1730	1360	1100
89 × 3	20	2500	2500	2500	2500	2400	1900	1535

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm	mm	200	1000	1200	1400	1600	1800	2000
STEEL								
60 × 3 standard/seamless	20	5000	3635	2515	1840	1405	1105	895
80 × 2	20	5000	5000	4285	3135	2395	1890	1525
80 × 3	20	5000	5000	5000	4530	3460	2725	2205
89 × 3	20	5000	5000	5000	4465	4005	3655	3070

Maximum static load in newtons over a temperature range of +5 to +40 °C (-30 to +80 °C for the deep-freeze design); screw-connected ratings are valid for female- or male-thread shafts, loose-installation ratings for fixed or flatted shafts.

DESIGN VERSIONS

Tube sleeves	For shell with Ø 60 and 80 mm PVC tube; lagging
Anti-static version	< 10 ⁶ Ω; standard design for rollers with grooves or tube sleeves
Shafts	Also available with variable length or a different design of both shaft ends
Tube	Also available with flanges welded on, or with grooves for guiding round belts (only for tube with Ø 80 x 2 mm)

ORDERING DIMENSIONS

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

The dimensions of the conveyor roller depend on the shaft version; sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES 1500 / 1520

Slide bearing conveyor roller – Interroll

Series 1500 / 1520 is a slide bearing conveyor roller for non-driven container conveyor systems, generally used to convey packaged or unpackaged food products. Because it meets high cleanliness requirements, the roller can be used in moist areas and wet-cleaned. Series 1500 uses a Ø 6 mm stainless-steel shaft pin with 11 mm hexagon fastening holes, while series 1520 uses a Ø 12 mm stainless-steel shaft pin with an M8 female thread and a round hole for an M8 screw.



Cutaway — slide bearing assembly

- Long service life** Smooth-running, wear-resistant slide bearings that do not let grease be washed out are installed in series 1500. Stainless-steel shaft pins ensure high corrosion resistance, and pressed-in bearing housings prevent foreign bodies from penetrating into the roller.
- Easy cleaning** Contaminations can be removed with commercial cleaning agents; for particularly thorough cleaning the roller can easily be removed and reinstalled.
- Simple installation** Slide bearing bushings allow engaging in a side profile with a maximum wall thickness of 2.5 mm and hexagon holes (does not apply to series 1520).
- Robust construction** For axial fixation of the bearing housing, the bearing assemblies for PVC tubes are secured with an internal press-in edge in addition to the press fit.

TECHNICAL DATA

Platform	1500 / 1520
Max. load capacity	120 N (1500) / 1100 N (1520)
Max. conveyor speed	0.8 m/s
Anti-static version	No
Temperature range	–5 to +40 °C; –30 to +40 °C (for steel tubes). PVC tube: with increased ambient temperature (from +30 °C) and high continuous static load over hours, a permanent deformation of the rollers cannot be ruled out.
Shaft release	Shaft pin, Ø 6 mm, stainless steel (1500) / Shaft pin, Ø 12 mm, stainless steel, M8 female thread (1520)
Fastening holes	Hexagon, 11 mm, +0.3/+0.8 mm (1500) / Round hole for M8 screw (1520)

MATERIALS

Tube	1500: Zinc-plated steel, stainless steel, aluminum; PVC RAL7030 (stone gray), RAL5015 (sky blue) for Ø 50 mm. 1520: Stainless steel; PVC RAL7030 (stone gray), RAL5015 (sky blue) for Ø 50 mm
Shaft, permanently connected to bearing housing	Yes, stainless steel (1500)
Bearing housing	Polypropylene, RAL1023 (traffic yellow) (1500) / Polyoxymethylene, RAL9005 (jet black) (1520)
Slide bearing bushing	Polymethylene, RAL7030 (stone gray) (1500)
Bearing version	Slide bearing

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall mm	Shaft Ø mm	Maximum static load [N] – installation length [mm]							
		100	200	300	400	500	600	700	800
PVC									
30 × 1.8	6	50	50	35	20	12	–	–	–
50 × 2.8	6	120	120	120	120	95	65	48	35
STEEL									
30 × 1.2	6	50	50	50	50	50	50	50	50
50 × 1.5	6	120	120	120	120	120	120	120	120

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall mm	Shaft Ø mm	Maximum static load [N] – installation length [mm]							
		200	300	400	600	800	1000	1300	1600
PVC									
50 × 2.8	12	500	250	150	65	36	–	–	–
STEEL									
50 × 1.5	12	1100	1100	1100	1100	1100	1100	650	400

Maximum static load in newtons with a slide bearing, referring to –5 to +20 °C for PVC tubes and –30 to +40 °C for steel tubes; load_rows_screw holds series 1500 with fixed shaft (installation lengths in load_lengths), while load_rows_loose holds series 1520 with shaft pin (M8 female thread), which uses the separate installation-length headers in load_lengths_loose.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Special tube surface treatment	Carbonitriding
Series 1500	Roller with and without slide bearing bushing
Noise reduction	For tube with Ø 50 mm

ORDERING DIMENSIONS

RL	Reference length / ordering length
EL	Installation length — inside width between side profiles
U	Usable tube length — length without bearing housing and, for flanged metal tube, without length of flanging
Stub	Shaft pin
HEX	Hexagon

A sufficient axial play is already taken into account, so that only the actual lane width between the side profiles is required to order.

SERIES 1700 LIGHT

Universal conveyor roller – Interroll

Series 1700 Light is a universal conveyor roller for the internal transport of small materials and for use on assembly or packaging machines. It is well suited to implementing gravity roller conveyors. Precision ball bearings and Technopolymer bearing housings deliver quiet running, while diameters of 20 and 30 mm allow small roller pitches.



Cutaway — spring-loaded shaft and precision ball bearing

- › **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 forces are removed through ball bearings and seals.
- › **Small roller pitches** Small roller pitches can be implemented by using rollers with a diameter of 20 or 30 mm.
- › **Robust construction** To achieve a high axial load capacity, particularly of bearing housings, ball bearings and seal, the bearing housing is not only pressed into the tube for the versions with metal tube, but also flanged. The bearing assemblies of the PVC tubes with a diameter of 30 mm are secured not only with a press fit, but also with an internal press-in edge.

TECHNICAL DATA

Platform	1700
Max. load capacity	150 N
Max. conveyor speed	1.5 m/s
Temperature range	–30 to +40 °C (PVC tube: minimum –5 °C; above +30 °C under high continuous static load, permanent deformation cannot be ruled out)

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum; PVC: RAL7030 (stone gray), RAL7024 (dark gray) for tube with Ø 20 mm
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polypropylene, RAL1021 (rape yellow) for Ø 20 mm tube; Polyamide, RAL1021 (rape yellow) for Ø 30 mm tube
Bearing version	Sealed precision ball bearing, steel 689 2Z, bearing play C0

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall mm	Shaft Ø mm	Maximum static load [N] – installation length [mm]					
		100	200	300	400	500	600
PVC							
20 × 1.5	8	80	19	–	–	–	–
30 × 1.8	8	150	80	35	20	–	–
ALUMINUM							
20 × 1.5	8	150	150	150	129	82	57
STEEL							
20 × 1.5; 30 × 1.2	8	150	150	150	150	150	150

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall mm	Shaft Ø mm	Maximum static load [N] – installation length [mm]					
		100	200	300	400	500	600
PVC							
20 × 1.5	6, 8	80	19	–	–	–	–
30 × 1.8	6, 8	150	80	35	20	12	–
ALUMINUM							
20 × 1.5	6	150	150	150	129	82	57
STEEL							
20 × 1.5; 30 × 1.2	6, 8	150	150	150	150	150	150

Maximum static load in newtons for a temperature range of +5 to +40 °C (maximum static load at –30 °C to –6 °C is 40 N); bearing 689 2Z; screw-connected ratings apply to female- or male-thread shafts and loose-installation ratings to spring-loaded, fixed or flatted shafts.

DESIGN VERSIONS

Tube sleeves	PVC sleeve for rollers with zinc-plated tubes or stainless steel tubes (page 23)
Anti-static version	(<10 ⁹ Ω) Standard design for rollers with grooves or tube sleeves, cannot be used for PVC tube
Special tube surface treatment	Carbonitriding
Lubrication options for ball bearing	Greased for an ambient temperature from –30 to +40 °C (standard)
Shafts	In addition to the variants in the load tables: with spring on both sides, with variable length, or different design of both shaft ends

ORDERING DIMENSIONS

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

The dimensions of the conveyor roller depend on the shaft version; a sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES 1700

Universal Conveyor Roller – Interroll – 1 of 2

Series 1700 is a universal conveyor roller for driven and non-driven conveying systems, such as the transport of cardboards, containers, barrels or wheels. It suits gravity and push conveyors and can also be used as a belt bearing roller without deflection. Proven millions of times, it combines high functional dependability with quiet running from precision ball bearings and Technopolymer bearing housings.



Cutaway — precision ball bearing

- › **Highest reliability** This roller series has been proven millions of times and offers a very high degree of functional dependability.
- › **Low-noise** Precision ball bearings, Technopolymer bearing housings and seals result in very quiet running.
- › **Good protection against dirt and water** The roller excels with good protection against coarse dirt and dripping water; an integrated groove ensures that water can be rejected.
- › **Lateral loading** The tube ends are rounded, allowing materials to be moved on easily from the side; axial forces are removed through ball bearings and seals.
- › **Extremely soft starting** If an oiled precision ball bearing is used, the roller will start particularly easily.
- › **Robust construction** For a high axial load capacity the bearing housing is pressed into and flanged in metal tubes; PVC-tube bearing assemblies are secured with a press fit plus an internal press-in edge.

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]							
mm	mm	200	300	400	600	800	1000	1300	1600
PVC									
50 × 2.8	8, 10, 12, 14	660	275	150	65	35	–	–	–
63 × 3.0	12, 14	1445	605	330	145	80	50	30	20
STEEL									
40 × 1.5	8	1190	1160	1150	1135	870	555	325	215
40 × 1.5	10, 11 HEX, 12, 14	2000	2000	2000	1570	870	555	325	215
50 × 1.5	8	915	885	870	860	855	850	660	430
50 × 1.5	10	1790	1730	1700	1680	1665	1120	660	430
50 × 1.5	11 HEX, 12, 14	2000	2000	2000	2000	1765	1120	660	430
50 × 3	10	1790	1730	1700	1680	1665	1650	1200	790
50 × 3	12, 14	2000	2000	2000	2000	2000	2000	1200	790
51 × 2	12, 14	2000	2000	2000	2000	1875	1190	700	460
60 × 1.5	10	1790	1730	1700	1680	1665	1660	1155	760
60 × 1.5	12, 14	2000	2000	2000	2000	2000	1965	1155	760
60 × 2.0	12, 14	2000	2000	2000	2000	2000	2000	1500	985
60 × 3.0	12, 14	2000	2000	2000	2000	2000	2000	2000	1405
80 × 2.0	11 HEX, 12, 14	2000	2000	2000	2000	2000	2000	2000	2000
ALUMINUM									
50 × 1.5	12, 14	2000	2000	2000	1060	590	375	219	145

TECHNICAL DATA

Platform	1700
Max. load capacity	2000 N
Max. conveyor speed	2.0 m/s
Temperature range	–30 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum; PVC in RAL7030 (stone gray), RAL5015 (sky blue) for Ø 50 mm tubes
Shaft	Uncoated steel, zinc-plated steel, stainless steel; tapered shaft-shuttle: Polyamide (antistatic design)
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polypropylene, RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 6002 2RZ, precision stainless steel ball bearing 6002 2RZ, bearing play each C3

SERIES 1700 (CONTINUED)

Universal Conveyor Roller – Interroll – 2 of 2

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]							
mm	mm	200	300	400	600	800	1000	1300	1600
PVC									
50 × 2.8	8, 10, 11 HEX, 12	660	275	150	65	35	–	–	–
63 × 3.0	8	835	580	330	145	80	50	–	–
63 × 3.0	10, 11 HEX, 12	1445	605	330	145	80	50	–	–
STEEL									
40 × 1.5	8	940	600	450	300	225	180	140	120
40 × 1.5	10	2000	1540	1150	790	615	515	325	215
40 × 1.5	11 HEX, 12, 14	2000	2000	2000	1570	870	560	330	215
50 × 1.5	8	735	465	340	220	165	130	100	70
50 × 1.5	10	1630	1145	840	555	415	335	260	220
50 × 1.5	11 HEX	2000	2000	1545	1030	785	645	515	430
50 × 1.5	12	2000	2000	1805	1210	925	765	615	430
50 × 1.5	14	2000	2000	2000	2000	1765	1130	660	430
51 × 2	12	2000	2000	1770	1175	890	725	575	485
51 × 2	14	2000	2000	2000	2000	1805	1510	905	595
50 × 3	10	1630	1135	830	540	400	320	250	205
50 × 3	11 HEX	2000	2000	1500	990	745	600	470	390
50 × 3	12	2000	2000	1750	1155	870	700	550	460
50 × 3	14	2000	2000	2000	2000	1700	1400	1150	790
60 × 1.5	10	1630	1135	830	540	405	325	250	205
60 × 1.5	12	2000	2000	1755	1160	870	705	555	465
60 × 1.5	11 HEX	2000	2000	1510	995	745	605	470	390
60 × 1.5	14	2000	2000	2000	2000	1730	1430	1155	760
60 × 2.0	11 HEX	2000	2000	1500	980	735	590	460	380
60 × 2.0	12	2000	2000	1740	1140	855	690	540	445
60 × 2.0	14	2000	2000	2000	2000	1670	1365	1090	924
60 × 3.0	10	1630	1130	825	535	400	315	245	200
60 × 3.0	11 HEX	1000	1000	1485	970	725	580	450	370
60 × 3.0	12	2000	2000	1725	1130	840	675	525	430
60 × 3.0	14	2000	2000	2000	2000	1615	1310	1030	860
80 × 2.0	11 HEX	2000	2000	1475	960	715	570	440	355
80 × 2.0	12	2000	2000	1710	1115	830	660	510	415
80 × 2.0	14	2000	2000	2000	2000	1565	1255	975	800
ALUMINUM									
50 × 1.5	8	745	470	345	230	175	140	110	90
50 × 1.5	10	1630	1200	900	610	480	375	220	145
50 × 1.5	11 HEX	2000	2000	1750	1060	590	375	220	145
50 × 1.5	12, 14	2000	2000	2000	1060	590	375	220	145

Maximum static load in newtons for a temperature range of –5 to +40 °C on a tube without grooves (max. static load at –30 °C to –6 °C is 350 N); the series prints three load tables — screw-connected installation (female/male thread), loose installation (spring-loaded, fixed or flatted shaft) and a small tapered shaft-shuttle table — the first two of which are captured here.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Anti-static version	(< 10 ⁶ Ω) Standard design for rollers with grooves or tube sleeves; cannot be used for PVC tube
Special tube surface treatment	Carbonitriding
Lubrication options for ball bearing	Greased for –5 to +40 °C; oiled for –30 to +20 °C
Shafts	With spring on both sides, with variable length, or different design of both shaft ends
Tube	With grooves for metal tubes; for Ø 50 mm non-flanged bearing housings as an option; with flanges welded on
Noise reduction	For tube with Ø 50 mm

ORDERING DIMENSIONS

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

The dimensions depend on the shaft version; sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES 1700 KXO

Tapered universal conveyor roller – Interroll

Series 1700 KXO is a driven tapered conveyor roller for the curve sections of unit-handling conveyors, used to convey cardboards, containers or tires. It implements gravity or driven roller curves, with tight curve radii possible when tapered elements of 2.2° conicity are selected. Proven millions of times, its tapered elements are secured against shifting for a very high degree of functional dependability.



Cutaway — tapered polypropylene elements on precision ball bearing

- **Application area** Driven unit-handling conveying in the curve section, e.g. of cardboards, containers or tires; suitable for implementing gravity or driven roller curves, with tight curve radii possible if tapered elements with a conicity of 2.2° are used.
- **High reliability** This roller series has been proven millions of times; contrary to conventional curve rollers, the elements are secured against shifting, allowing a very high degree of functional dependability.
- **Low-noise** The use of precision ball bearings, Technopolymer bearing housings and seals result in very quiet running.
- **Good protection against dirt and water** The roller excels with good protection against coarse dirt and dripping water; an integrated groove ensures that water can be rejected.
- **Good running properties** The tapered elements made of polypropylene have a low net weight so that good startup properties can be achieved.
- **Robust construction** Robust tapered elements are abrasion-proof, noise-reducing, impact-resistant and excel through high weather-resistance.

TECHNICAL DATA

Differentiation of tapered elements	Conicity 1.8° / gray; Conicity 1.8° / black; Conicity 2.2° / gray
Inner curve radius	800/850 mm (1.8°); 690 mm (2.2°)
Platform	1700
Max. load capacity	500 N
Max. conveyor speed	2 m/s
Anti-static version (< 10⁶ Ω)	No (gray elements); Yes (black elements)
Impact-resistant version	Yes
Temperature range	–30 to +40 °C; for rollers used in deep freeze areas, oiled ball bearings are recommended

MATERIALS

Tube	Zinc-plated steel, stainless steel or aluminum
Shaft	Uncoated steel, zinc-plated steel or stainless steel
Color of tapered elements	RAL7030 (stone gray) or RAL9005 (jet black)
Tapered cone material	Polypropylene
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polypropylene, RAL1021 (rape yellow)
End cover of the last tapered element	Polypropylene, RAL1021 (rape yellow); metal disk (not completely closing) on the 2.2° gray version
Bearing version	Precision steel ball bearing 6002 2RZ, precision stainless steel ball bearing 6002 2RZ, bearing play each C3

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm	mm	200	300	400	600	800	900	1000
STEEL								
50 × 1.5	11 HEX, 12, 14	500	500	500	500	500	500	500
ALUMINUM								
50 × 1.5	14	500	500	500	500	500	500	500

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm	mm	200	300	400	600	800	900	1000
STEEL								
50	8	500	465	340	220	165	145	130
50	10	500	500	500	500	415	370	335
50	11 HEX, 12	500	500	500	500	500	500	500

Maximum static load in newtons for a temperature range of –5 to +40 °C and a tube without grooves; the maximum static load at –30 °C is 350 N. Bearing: 6002 2RZ. Table columns are installation lengths [mm]; screw-connected ratings apply to female- or male-thread shafts, and loose-installation ratings to spring-loaded, fixed or flatted shafts. HEX = hexagon.

DESIGN VERSIONS

Lubrication options for ball bearing	Greased for an ambient temperature from –5 to +40 °C (standard); oiled for an ambient temperature from –30 to +20 °C
Shafts	In addition to the load-table variants: with spring on both sides, with variable length, or different design of both shaft ends
Tube	In addition to the load-table variants: with grooves, e.g. for guiding round belts

ORDERING DIMENSIONS

RL	Reference length / ordering length
EL	Installation length — inside diameter between side profiles
AGL	Total length of shaft
U	Usable tube length — length of tapered elements

The dimensions of the conveyor roller depend on the shaft version; sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

Reference lengths with tapered elements: for a higher tube surface with respect to the tapered elements, different reference lengths are also available. The specified minimum diameters refer to the smallest diameter of the first tapered element. Reference lengths 150 mm and 200 mm as well as 950 mm and 1000 mm do not receive an end cover. Gray tapered elements with 2.2° are not shown but follow the dimensional specifications (RL/EL) of the 1.8° elements.

SERIES 1700 HEAVY

Universal conveyor roller – Interroll

Series 1700 Heavy is a driven universal conveyor roller for conveying and driven conveyor systems handling medium-heavy to heavy materials such as cardboards, containers, barrels, pallets or rims. It is suitable for implementing gravity or gravity roller conveyors and is also usable for mechanical engineering applications. The version with steel tube in dimension 60 x 3 mm can also be used as a belt idler.



Cutaway — flanged bearing housing

- › **Highest reliability** This roller series has been proven millions of times. The roller offers a very high degree of functional dependability.
- › **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 forces 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.

LOAD CAPACITIES

Tube Ø - wall	Shaft Ø	Maximum static load [N] – installation length [mm]							
mm	mm	200	300	400	600	800	1000	1300	1600
ZINC-PLATED STEEL, STAINLESS STEEL									
50 × 1.5	17	3000	3000	3000	3000	1760	1120	655	430
51 × 2.0	17	3000	3000	3000	3000	2420	1540	905	595
60 × 3.0, standard/seamless	17	3000	3000	3000	3000	3000	3000	2135	1405

Maximum static load in newtons for a temperature range of -5 to +40 °C and a tube without grooves, valid for female- or male-thread shaft designs with a 6003 2RZ bearing (max. static load at -30 °C to -6 °C is 600 N).

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Anti-static version	(<10 ⁶ Ω) Standard design for rollers with grooves or tube sleeves
Special tube surface treatment	Carbonitriding (only for tube with Ø 50 x 1.5 mm)
Shafts	In addition to the load-table variants: with variable length, or different design of both shaft ends
Tube	In addition to the load-table variants: with flanges welded on; seamless version for Ø 60 x 3 mm noise-optimized as idler pulley; with grooves, e.g. for guiding round belts (does not apply to Ø 60 x 3 mm)
Noise reduction	For tube with Ø 50 mm

TECHNICAL DATA

Platform	1700
Max. load capacity	3000 N
Max. conveyor speed	2 m/s
Temperature range	-30 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polyamide, RAL1021 (rape yellow)
Bearing version	Precision steel and stainless steel ball bearing 6003 2RZ, bearing play C3, greased

ORDERING DIMENSIONS

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

Dimensions depend on the shaft version; a sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES 3950

Heavy-duty conveyor roller — Interroll

Series 3950 is a fixed-drive heavy-duty conveyor roller with a particularly stable, robust construction for driven handling of heavy materials such as containers, barrels, wheels, pallets or steel containers. Its steel sprockets are permanently welded on, and numerous sprocket heads allow roller-to-roller chains or tangential chain drives. Rounded tube ends let material transfer on easily from the side, with axial forces taken up by ball bearings and seals.



Cutaway — welded steel sprocket head

- **Application area** Driven unit handling conveying of heavy materials, such as transport of containers, barrels, wheels, pallets or steel containers.
- **Robust construction** Fixed drive conveyor roller with a particularly stable, robust construction. The sprockets are made of steel and are permanently welded.
- **Numerous drive types** Numerous sprocket heads are available. Chains from roller to roller or tangential chain drives can optionally be used.
- **Lateral loading** The tube ends are rounded, thereby allowing materials to be easily moved on from the side. Axial forces are removed through ball bearings and seals.

TECHNICAL DATA

Platform	1450
Max. load capacity	5000 N (standard) / 2500 N (deep freeze)
Max. conveyor speed	0.5 m/s
Anti-static version	Yes (via sprocket head)
Temperature range	-5 to +40 °C (standard) / -30 to +40 °C (deep freeze)

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black); deep freeze: zinc-plated steel
Drive head	Uncoated steel (sprocket heads incl. tube zinc-plated after welding on), stainless steel
Seal drive side	Polyamide, RAL1021 (rape yellow); deep freeze: polyamide/steel
Seal on non-driven side	Polyamide, RAL1021 (rape yellow); deep freeze: zinc-plated steel
Bearing version	Precision steel ball bearing 6205 2RZ, bearing play C3, greased; deep freeze: 6205 2RZ (C3) and 6204 1Z, greased

LOAD CAPACITIES

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]							
mm		mm	200	400	600	800	1000	1200	1400	1600
STEEL										
80 × 2	Welded steel sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	4340	3170	2420
80 × 2	Welded steel double sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	4340	3170	2420
80 × 3	Welded steel sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	5000	4580	3490
80 × 3	Welded steel double sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	5000	4580	3490
89 × 3	Welded steel sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	5000	5000	4865
89 × 3	Welded steel double sprocket head 5/8", T15 and T18	20	5000	5000	5000	5000	5000	5000	5000	4865

LOAD CAPACITIES DEEP-FREEZE DESIGN

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]							
mm		mm	200	400	600	800	1000	1200	1400	1600
STEEL										
80 × 2	Welded steel sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2170	1585	1210
80 × 2	Welded steel double sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2170	1585	1210
80 × 3	Welded steel sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2500	2290	1745
80 × 3	Welded steel double sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2500	2290	1745
89 × 3	Welded steel sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2500	2500	2432.5
89 × 3	Welded steel double sprocket head 5/8", T15 and T18	20	2500	2500	2500	2500	2500	2500	2500	2432.5

Maximum static load in newtons for female- or male-thread shaft designs with a 6205 2RZ bearing; the standard table applies over +5 to +40 °C and the deep-freeze table over -30 to +40 °C.

DESIGN VERSIONS

Tube sleeves	For tube with Ø 80 x 2 mm with sprocket head with 15 teeth: PVC sleeve (page 23); Lagging (page 26)
Anti-static version	(<10 ⁶ Ω) Standard design for rollers with tube sleeves
Tube	In addition to the load-capacity-table variants: with flanges welded on

ORDERING DIMENSIONS

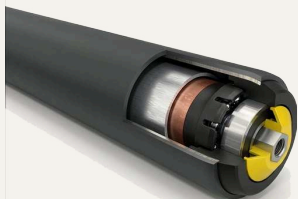
RL	Reference length / ordering length
EL	Installation length — inside diameter between side profiles
AGL	Total length of shaft
U	Usable tube length — length without bearing housing, and for flanged metal tube without length of flanging

The dimensions depend on the shaft version and a sufficient axial play is already taken into account, so only the actual lane width between side profiles is required for ordering.

SERIES MSC 50

Magnetic Speed Controller – Interroll

Series MSC 50 is a magnetic speed controller that decelerates conveyed goods on gravity, spiral and end-point sorter conveyors. A contact-free eddy-current brake acts on a gearless rotor, so the roller controls speed purely mechanically with no cabling, no control system and no wearing parts. Materials from about 500 grams start softly and units up to 35 kg can be reliably slowed, while no magnetic emissions escape to the outside.



Cutaway — eddy-current brake with neodymium magnets

- **Application area** Perfectly suited for use in gravity conveyors, in end points at sorters and spiral conveyors.
- **Purely mechanical solution** The purely mechanical solution renders a cabling or control redundant.
- **Maintenance and wear-free brake function** The contact-free eddy current brake operates maintenance and wear-free. It features the same high service life like a standard conveyor roller.
- **Soft startup** The gearless construction enables a softer startup which is already suitable for materials starting at 500 grams.
- **High braking power** Materials up to 35 kg can be decelerated. The tube diameter of 51 mm provides the necessary higher surface to rollers with a 50-mm tube diameter given the same fastening height and allows optimal braking.
- **Easy installation** The fastening holes of the conveyor rollers can be used so that no fastening holders with additional profile holes have to be used. The direction-independent function rules out assembly errors.
- **No impact on sensitive materials** No emissions to the outside are being generated, such as magnetism, which allows conveying even sensitive materials, such as electronic components.
- **Conveyance with ease of smooth containers** The design with PU sleeve also decelerates critical materials in a reliable way.

LOAD CAPACITIES

Tube Ø - wall	Shaft Ø	Specification		
mm	mm	Shaft design	PU sleeve	Max. static load [N]
ZINC-PLATED STEEL, STAINLESS STEEL				
51 × 2	11 HEX	Spring-loaded shaft	None	350
50 × 1.5	11 HEX	Spring-loaded shaft	With	350
51 × 2	11 HEX	Fixed shaft	None	350
50 × 1.5	11 HEX	Fixed shaft	With	350
51 × 2	11 HEX, M8	Female thread	None	350
50 × 1.5	11 HEX, M8	Female thread	With	350

Load capacities of series MSC 50. Maximum static load in newtons over a temperature range of 0 to +40 °C. Bearing: 6002 2RZ. Values are listed by shaft design and by whether a PU sleeve is fitted; the tube outer diameter is 51 × 2 mm without a sleeve and 50 × 1.5 mm with a sleeve. HEX = hexagon.

DESIGN VERSIONS

Tube sleeves PU sleeve (page 25)

TECHNICAL DATA

Platform	1700
Max. load capacity	350 N
Max. conveyor speed	2 m/s
Min. length	210 mm
Max. length	1400 mm
Temperature range	0 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polyamide, RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 6002 2RZ, bearing play C3, oiled
Magnets	Neodyme N45
Anti-static version	Yes

ORDERING DIMENSIONS

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

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. For Ø 51 mm with spring-loaded or fixed shaft: $U = RL - 28$, $EL = RL + 10$, $AGL = EL + 22$. For Ø 54 mm (PU sleeve) with female-threaded shaft: $U = RL - 26$, $EL = AGL = RL + 10$. Ordering dimensions for PU sleeve, see page 25.

SERIES 3500 LIGHT

Fixed drive conveyor roller – Interroll

Series 3500 Light is a driven unit-handling roller for conveying and transporting cardboards or containers with small dimensions, suited to the packaging industry, assembly machines and the implementing of machine chains. It is available in numerous chain drive versions that allow wrapping and tangential chain drives, and runs on sealed precision ball bearings of type 689 2Z. Rounded tube ends let materials transfer on from the side, while a Ø 30 mm tube enables small roller pitches.



Cutaway — welded steel sprocket drive head

- › **Flexible design** The product is available in numerous chain drive versions. This allows implementing wrapping and tangential chain drives.
- › **High-quality bearing** Sealed precision ball bearings of type 689 2Z are used.
- › **Lateral loading** The tube ends are rounded, thereby allowing materials to be easily moved on from the side. Axial forces are removed through ball bearings and seals.
- › **Small roller pitches** Small roller pitches can be implemented by using rollers with a diameter of 30 mm.

LOAD CAPACITIES

Tube Ø - wall	Shaft Ø	Maximum static load [N] — installation length [mm]		
mm	mm	200	400	600
STEEL				
30 × 1.2	Ø8 · Welded steel sprocket head 3/8", T12	150	150	150
30 × 1.2	Ø8 · Welded steel double sprocket head 3/8", T12	150	150	150

Maximum static load in newtons for the installation lengths shown, over a temperature range of +5 to +40 °C (40 N at –30 to –6 °C), valid for female-thread or male-thread shaft designs with bearing 689 2Z; each row is keyed by the welded steel drive head named in the shaft column, and despite the screwed-on shaft bolts the connection is loose in character so side profiles are not held together by this roller.

DESIGN VERSIONS

Drive heads	Welded steel sprocket head 3/8", 12 teeth (T12); or welded steel double sprocket head 3/8", 12 teeth (T12)
Chain drives	Numerous chain drive versions for implementing wrapping and tangential chain drives
Tube sleeves	PVC sleeve (page 23)
Anti-static version	(< 10 ⁶ Ω) Standard design for rollers with grooves or tube sleeves
Shafts	In addition to the variants listed in the load capacity tables: with variable length, or different design of both shaft ends

TECHNICAL DATA

Platform	1700
Max. load capacity	150 N
Max. conveyor speed	0.5 m/s
Temperature range	–30 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Drive head	Uncoated steel (the sprocket heads including tube are zinc-plated after welding them on)
Seal	Polyamide on drive side each in RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 689 2Z, greased

ORDERING DIMENSIONS

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
T	Number of teeth

A sufficient axial play is already taken into account, so that only the actual lane width between side profiles is required; the dimensions of the conveyor roller depend on the shaft version and the drive element.

SERIES 3500

Fixed drive conveyor roller – Interroll – 1 of 2

Series 3500 is a fixed drive conveyor roller for driven unit-handling conveying, such as the transport of cardboards, containers, barrels or tires. A permanently installed bearing housing for Ø 50 and 60 mm tubes accepts interchangeable, insertable polyamide drive heads — sprocket, toothed-belt and flat-belt heads — that can also be swapped with friction heads. Numerous drive versions are available with flat, PolyVee, round or toothed belts as well as chains, and polyamide drive heads give very quiet running.



Cutaway — polyamide PolyVee drive head

- › **Low-noise** The use of polyamide drive heads results in very quiet running.
- › **Lateral loading** The tube ends are rounded, allowing materials to be easily moved on from the side; axial forces are removed through the ball bearings and seals.
- › **Robust construction** The bearing assembly on the non-drive side is axially fixed in several ways: pressed in and flanged for steel tube, engaged on a press-in edge in an internal groove for PVC tube, and pressed in and flanged for PolyVee and round-belt designs.
- › **Modular construction** For Ø 50 and 60 mm tubes the permanently installed bearing housing takes interchangeable insertable polyamide drive heads (sprocket, toothed-belt, flat-belt) that can also be exchanged with friction heads.
- › **Round belt drive head** Separates the drive section from the conveying section so goods are not shifted by batching belts; grooves in the metal tube raise friction and belt conveyance, though belt wear is higher if the round belts slip.
- › **PolyVee drive head** The nine grooves accept 2-rib, 3-rib or 4-rib PolyVee belts; a 2-rib belt transfers roughly twice the torque of a round belt.

TECHNICAL DATA

Platform	1700
Max. load capacity	2000 N
Max. conveyor speed	2.0 m/sec (0.5 m/sec with chain)
Temperature range	–30 to +40 °C (rollers with toothed-belt drive –5 to +40 °C; IP55 variant 0 to +40 °C); for PolyVee or round-belt heads in deep-freeze areas select oiled ball bearings; PVC tube min. –5 °C and may deform permanently above +30 °C under high continuous static load

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum; PVC RAL7030 (stone gray), RAL5015 (sky blue) for Ø 50 mm tubes
Shaft	Uncoated, zinc-plated or stainless steel; tapered shaft-shuttle in polyamide (antistatic design)
Bearing housing	Polyamide, RAL9005 (jet black)
Drive head	Polyamide RAL9005 (jet black), polyoxymethylene RAL9005 (jet black) or steel
Seal	Polypropylene on non-drive side, polyamide on drive side, each RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 6002 2RZ or precision stainless steel ball bearing 6002 2RZ, bearing play each C3

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm		mm	200	400	600	800	1000	1200	1400
ALUMINUM									
50 × 1.5	PolyVee drive head	12, 14	350	350	350	350	350	255	190
50 × 1.5	Round belt drive head	12, 14	350	350	350	350	350	255	190
PVC									
50 × 2.8	Polymer sprocket head 1/2", T14	12	1060	185	75	40	–	–	–
50 × 2.8	Polymer double sprocket head 1/2", T14	12	935	215	80	45	–	–	–
50 × 2.8	Polymer sprocket head 1/2", T9 and T11	14	300	185	75	40	–	–	–
50 × 2.8	Polymer sprocket head 1/2", T14	14	1060	185	75	40	–	–	–
50 × 2.8	Polymer double sprocket head 1/2", T14	14	1475	215	80	45	–	–	–
63 × 3	Polymer sprocket head 1/2", T14	14	2100	410	165	90	–	–	–
63 × 3	Polymer double sprocket head 1/2", T14	14	1485	470	180	95	–	–	–
STEEL									
40 × 1.5	Polymer double sprocket head 1/2", T14	12	935	770	685	655	640	430	310
40 × 1.5	Polymer sprocket head 1/2", T9	14	300	300	300	300	300	300	300
40 × 1.5	Polymer toothed belt drive head 8, T18	14	1500	1500	1450	975	600	410	300
50 × 1.5	Polymer PolyVee drive head (IP55)*	–	350	350	350	350	350	350	350
50 × 1.5	Polymer sprocket head 1/2", T14	12	1320	975	915	885	870	830	600
50 × 1.5	Polymer double sprocket head 1/2", T14	12	935	770	685	655	640	630	620
50 × 1.5	PolyVee drive head	12	350	350	350	350	350	350	350
50 × 1.5	Round belt drive head	12	350	350	350	350	350	350	350
50 × 1.5	Polymer flat belt drive head 38 mm	14	2000	1510	1405	1360	1220	830	601
50 × 1.5	Polymer sprocket head 1/2", T9 and T11	14	300	300	300	300	300	300	300
50 × 1.5	Polymer sprocket head 1/2", T13 and T14	14	1500	1500	1450	1405	1215	825	600
50 × 1.5	Polymer double sprocket head 3/8", T20	14	1500	1500	1450	1405	1215	825	600
50 × 1.5	Polymer toothed belt drive head 8, T18	14	1500	1500	1450	1405	1215	825	600
50 × 1.5	Polymer double sprocket head 1/2", T14	14	1485	1222	1090	1040	1015	860	620
50 × 1.5	PolyVee drive head	14	350	350	350	350	350	350	350
50 × 1.5	Round belt drive head	14	350	350	350	350	350	350	350
50 × 1.5	Welded steel sprocket head 1/2", T14	14	2000	2000	2000	1760	1120	775	565
50 × 1.5	Welded steel double sprocket head 1/2", T14	14	2000	2000	2000	1760	1120	775	565
60 × 1.5	Polymer sprocket head 1/2", T14	12	1320	975	915	885	870	860	855
60 × 1.5	Polymer double sprocket head 1/2", T14	12	935	770	685	655	640	630	620
60 × 1.5	Polymer flat belt drive head 38 mm	14	2000	1510	1405	1360	1340	1325	1055

SERIES 3500 (CONTINUED)

Fixed drive conveyor roller – Interroll – 2 of 2

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION (CONTINUED)

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm		mm	200	400	600	800	1000	1200	1400
STEEL									
60 x 1.5	Polymer sprocket head 1/2", T9 and T11	14	300	300	300	300	300	300	300
60 x 1.5	Polymer sprocket head 1/2", T14	14	1500	1500	1450	1405	1385	1370	1050
60 x 1.5	Polymer double sprocket head 3/8", T20	14	1500	1500	1450	1405	1385	1370	1050
60 x 1.5	Polymer toothed belt drive head 8, T18	14	1500	1500	1450	1405	1385	1370	1050
60 x 1.5	Polymer double sprocket head 1/2", T14	14	1485	1220	1090	1040	1015	1000	990
60 x 1.5	Welded steel sprocket head 1/2", T14	14	2000	2000	2000	2000	1960	1355	990
60 x 1.5	Welded steel double sprocket head 1/2", T14	14	2000	2000	2000	2000	1960	1355	990
60 x 2	Polyamide PolyVee drive head Ø 43 mm	14	550	550	550	550	550	550	550
60 x 2	Welded steel PolyVee drive head Ø 56 mm	14	2000	2000	2000	2000	2000	1750	1280
60 x 2	Welded steel double sprocket head 5/8", T13	14	2000	2000	2000	2000	2000	1750	1280

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm		mm	200	400	600	800	1000	1200	1400
STEEL									
50 × 1.5	PolyVee drive head	11 HEX	350	350	350	350	350	350	350
50 × 1.5	Round belt drive head	11 HEX	350	350	350	350	350	350	350
50 × 1.5	PolyVee drive head	11 TH	350	350	350	350	350	350	350
50 × 1.5	Round belt drive head	11 TH	350	350	350	350	350	350	350
60 × 2	PolyVee drive head	11 HEX	550	550	550	550	550	550	550

Maximum static load [N] over a temperature range of +5 to +40 °C (max. 350 N at –30 °C to –6 °C), bearing 6002 2RZ; the series prints two load tables keyed by drive element — the screw-connected table (valid for female- or male-thread shafts) in load_rows_screw and the loose-installation table (spring-loaded, fixed, flattened or tapered shaft-shuttle) in load_rows_loose.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Anti-static version	< 10 ⁸ Ω; standard for rollers with grooves or tube sleeves; not for PVC tube or the IP55 variant
Special tube surface treatment	Carbonitriding
Lubrication options	Greased for –5 to +40 °C (standard); oiled for –30 to +20 °C
Shafts	Spring on both sides, variable length, differing end designs, or both sides with shaft bolt (IP55 variant only)
Tube	With flanges welded on
Drives	Technopolymer round-, PolyVee- and toothed-belt heads available with an additional internal form-fit fixation for temperature-sensitive (deep-freeze) applications
Noise reduction	For tube with Ø 50 mm
PolyVee drive head	Nine grooves for 2-rib, 3-rib or 4-rib PolyVee belts; polymer Ø 43 mm or welded steel Ø 56 mm
Round belt drive head	Grooved metal tube separating drive and conveying sections
Flat belt drive head	38 mm wide
Toothed belt drive head	8 mm pitch, 18 teeth (recommended max. belt width 12 mm, poly chain GT gearing)
Polymer sprocket head 1/2"	9, 11, 13 or 14 teeth
Polymer double sprocket head	1/2" with 14 teeth or 3/8" with 20 teeth
Welded steel sprocket head 1/2"	14 teeth, single or double
Welded steel double sprocket head 5/8"	13 teeth

ORDERING DIMENSIONS

RL	Reference length / ordering length
EL	Installation length — inside width between side profiles
AGL	Total length of shaft
U	Usable tube length (without bearing housing; for flanged metal tube without the flanging length)
T	Number of teeth
HEX	Hexagon
TH	Tapered hexagon

Sufficient axial play is already accounted for, so only the actual lane width between side profiles is needed; the roller dimensions depend on the shaft version and the drive element.

SERIES 3500 KXO LIGHT

Fixed Drive Curve Roller — Interroll

Series 3500 KXO light is a driven, fixed-drive curve (tapered) roller for handling and conveying small cardboards or containers. It is designed for implementing driven roller curves in the packaging industry, for assembly machines and for realizing machine chains. Tapered elements made of polypropylene keep the net weight low while remaining abrasion-proof, noise-reducing and weather-resistant.



Exploded drive head — taper disks, ball socket and hex bolt

- **Application area** Driven unit handling conveying, such as transport of small cardboards or containers; suitable for driven roller curves in the packaging industry and for assembly machines as well as machine chains.
- **Good starting properties** Since the tapered elements are made of polypropylene, the net weight is low.
- **Tight curve radii** Using elements with a conicity of 1.8° allows implementing curve radii of only 357 mm.
- **Robust construction** Robust tapered elements are abrasion-proof, noise-reducing, impact-resistant and excel through a high weather-resistance.
- **Additional components in the scope of delivery** The rollers are delivered with four taper disks and two ball sockets so that an angle compensation can be created during fastening.

TECHNICAL DATA

Platform	1700
Max. load capacity	150 N
Max. conveyor speed	0.8 m/s
Anti-static version	No
Temperature range	–5 to +40 °C with greased ball bearing

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Tapered cones	Polypropylene, RAL9005 (jet black)
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polypropylene, RAL1021 (rape yellow)
End cover	Cover from round belt guides; starting at a reference length of 300 mm, the round belt guides no longer cover the tapered element in its entirety
Drive head	Polyamide RAL9005 (jet black)
Bearing version	Precision steel ball bearing 689 2Z, bearing play C0

LOAD CAPACITIES

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] — installation length [mm]		
mm		mm	200	400	600
ZINC-PLATED STEEL, STAINLESS STEEL, ALUMINUM					
20 × 1.5	Round belt guides on large diameter	8	150	150	150

Maximum static load in newtons over a temperature range of +5 to +40 °C, valid for the female-thread shaft design with a 689 2Z bearing; the drive element is round belt guides on the large diameter and load is specified against installation length.

DESIGN VERSIONS

Shaft	Ø 8 mm with M6 × 15 female thread
Drive element	Round belt guides on large diameter
Conicity	1.8° tapered elements, allowing curve radii of only 357 mm
Reference lengths	150–600 mm in 50 mm increments; other lengths are not available and a tube projection is not possible

ORDERING DIMENSIONS

RL	Reference length / ordering length
EL	Installation length — inside width between side profiles (EL = RL + 10)
U	Usable tube length — length of tapered elements

A sufficient axial play is already taken into account, so only the actual lane width between side profiles is required to order; the recommended profile holes have a dimension of Ø 8.1 mm.

SERIES 3500 KXO

Fixed drive curve roller – Interroll

Series 3500 KXO is a driven curve roller for conveying goods such as cardboards, containers or tires through curve sections, suited to gravity or driven roller curves. Tapered elements with a conicity of 2.2° make tight curve radii possible. Proven millions of times, its elements are secured against shifting for a very high degree of functional dependability.



Cutaway — tapered elements with drive head

- › **High reliability** Proven millions of times; unlike conventional curve rollers, the elements are secured against shifting, giving a very high degree of functional dependability.
- › **Low-noise** The use of polyamide drive heads results in very quiet running.
- › **Good running properties** Tapered elements made of polypropylene have a low net weight, so good startup properties can be achieved.
- › **Robust construction** Tapered elements are abrasion-proof, noise-reducing, impact-resistant and excel through a high weather-resistance.
- › **Variants** Depending on the requirement, the curve rollers can be supplied with drive heads for PolyVee belts, round belts or chains.
- › **Round belt drive head** The drive section is separated from the conveying section so goods cannot be shifted by batching belts; grooves in the metal tube give higher friction and greater conveyance of the round belts, though belt wear is higher if they slip.
- › **PolyVee drive head** Compared with a round belt, a 2-rib belt transfers approximately twice the torque, with conveying and drive technology physically separated; a groove must remain clear between two belts so they cannot touch.

TECHNICAL DATA

Differentiation of tapered elements	Conicity 1.8° gray, conicity 1.8° black, or conicity 2.2° gray
Platform	1700
Max. load capacity	500 N
Max. conveyor speed	2 m/s (chain drive 0.5 m/s)
Anti-static version (< 10 ⁶ Ω)	No (1.8° gray) / Yes (1.8° black) / No (2.2° gray)
Impact-resistant version	Yes
Temperature range	–30 to +40 °C; for rollers used in deep-freeze areas, oiled ball bearings are recommended

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Color of tapered elements	RAL7030 (stone gray) or RAL9005 (jet black)
Tapered cone material	Polypropylene
Bearing housing	Polyamide, RAL9005 (jet black)
Seal	Polypropylene, RAL1021 (rape yellow)
End cover	Polypropylene, RAL1021 (rape yellow); metal disk (not completely closing) for the 2.2° version
Drive head	Polyamide, RAL9005 (jet black); sprocket also in steel
Bearing version	Precision steel ball bearing 6002 2RZ or precision stainless steel ball bearing 6002 2RZ, bearing play each C3

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]				
mm		mm	200	400	600	800	1000
STEEL							
50 × 1.5	PolyVee drive head at the small diameter	12	350	350	350	350	350
50 × 1.5	Round belt drive head at the small diameter	12	350	350	350	350	350
50 × 1.5	Polymer double sprocket head 1/2", T14 at the large diameter	12	500	500	500	500	500
50 × 1.5	Steel double sprocket head 1/2", T14 at the large diameter	12	500	500	500	500	500
50 × 1.5	PolyVee drive head at the small diameter	14	350	350	350	350	350
50 × 1.5	Round belt drive head at the small diameter	14	350	350	350	350	350
50 × 1.5	Polymer sprocket head 1/2", T9*	14	300	300	300	300	300
50 × 1.5	Polymer sprocket head 1/2", T14*	14	500	500	500	500	500
50 × 1.5	Steel sprocket head 1/2", T14*	14	500	500	500	500	500
50 × 1.5	Polymer double sprocket head 3/8", T20 at the large diameter	14	500	500	500	500	500
50 × 1.5	Polymer double sprocket head 1/2", T14 at the large diameter	14	500	500	500	500	500
50 × 1.5	Steel double sprocket head 1/2", T14 at the large diameter	14	500	500	500	500	500

LOAD CAPACITIES LOOSE INSTALLATION

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]				
mm		mm	200	400	600	800	1000
STEEL							
50 × 1.5	PolyVee drive head at the small diameter	8, 11 HEX, 12	350	350	350	350	350
50 × 1.5	Round belt drive head at the small diameter	8, 11 HEX, 12	350	350	350	350	350

Maximum static load in newtons for the printed installation lengths over a temperature range of +5 to +40 °C (the maximum static load at –30 °C to –6 °C is 350 N); the drive-element column lists the head type and its mounting position (small or large diameter), screw-connected ratings are valid for female- or male-thread shafts while loose-installation ratings are valid for spring-loaded, fixed or flatted shafts, all on 6002 2RZ bearings.

DESIGN VERSIONS

Lubrication options for ball bearing	Greased for an ambient temperature from –5 to +40 °C (standard); oiled for an ambient temperature from –30 to +20 °C
Shafts	In addition to the load-table variants: with spring on both sides, with variable length, or different design of both shaft ends
Drives	In addition to the load-table variants: the drive heads for round and PolyVee belt can be designed with an additional internal fixation for temperature-

ORDERING DIMENSIONS

RL	Reference length / ordering length
EL	Installation length — inside diameter between side profiles
AGL	Total length of shaft
U	Usable tube length — length of tapered elements
T	Number of teeth

SERIES 3500 HEAVY

Fixed drive conveyor roller – Interroll

Series 3500 Heavy is a fixed-drive conveyor roller for the driven transport of heavy materials that require a small roller pitch, such as pallets and steel containers. Welded steel sprockets and a 60 x 3 mm steel tube give the roller high mechanical stability, while a continuous Ø 17 mm female-threaded shaft and reinforced type 6003 precision ball bearings support very high loads. After welding, tube, sprockets and flanges are individually zinc-plated for high corrosion protection.



Cutaway — welded steel sprocket drive head

- › **Very robust design** Welded steel sprockets and a steel tube with a dimension of 60 x 3 mm enable a high mechanical stability of the conveyor roller. To achieve a high axial load capacity, the bearing housing opposite the drive side is not only pressed into the tube but also flanged.
- › **High load capacity** A stable, continuous female-threaded shaft with Ø 17 mm ensures a high degree of reinforcement of the conveyor. Reinforced precision ball bearings of type 6003 are used. A correspondingly small roller pitch is possible for the transport of very heavy goods.
- › **High corrosion protection** After the welding process, the components consisting of tube, sprockets and flanges are individually zinc-plated, thereby achieving a high corrosion protection.
- › **Lateral loading** The tube ends opposite the drive side are rounded, thereby allowing materials to be easily moved on from the side. Axial forces are removed through ball bearings and seals.

LOAD CAPACITIES

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]					
mm		mm	200	900	1000	1100	1300	1500
STEEL								
60 × 3	Welded steel sprocket head 1/2", T14	17	3000	3000	3000	3000	2135	1600
60 × 3	Welded steel sprocket head 5/8", T13	17	3000	3000	3000	3000	2135	1600
60 × 3	Welded steel double sprocket head 1/2", T14	17	3000	3000	3000	3000	2135	1600
60 × 3	Welded steel double sprocket head 5/8", T13	17	3000	3000	3000	3000	2135	1600

The load capacity table refers to a temperature range from -5 to +40 °C, is valid for female-thread or male-thread shaft designs (bearing 6003 2RZ), and the maximum static load at -30 to -6 °C is 600 N.

DESIGN VERSIONS

Tube sleeves	PVC sleeve (page 23), PU sleeve (page 25), lagging (page 26)
Anti-static version	(<10 ⁸ Ω) Standard design for rollers with grooves or tube sleeves
Tube	In addition to the variants listed in the load capacity tables: with flanges welded on
Drive head	Welded steel single or double sprocket head; 1/2" pitch with 14 teeth (T14) or 5/8" pitch with 13 teeth (T13)

TECHNICAL DATA

Platform	1700
Max. load capacity	3000 N
Max. conveyor speed	0.5 m/s
Anti-static version	Yes (via sprocket head)
Temperature range	-30 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Drive head	Uncoated steel, zinc-plated steel
Seal	Polyamide on drive side in RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 6003 2RZ, precision stainless steel ball bearing 6003 2RZ, bearing play each C3, greased

ORDERING DIMENSIONS

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
T	Number of teeth

A sufficient axial play is already taken into account, so only the actual lane width between side profiles is required to order; the dimensions of the conveyor roller depend on the shaft version and the drive element.

SERIES 3800 LIGHT

Friction Conveyor Roller / Double Friction Conveyor Roller – Interroll

Series 3800 Light is a friction (torque-limiting) conveyor roller for transporting and accumulating unit handling conveyor systems, such as lightweight cardboards and containers. Conveyance and accumulation pressure both depend on the weight of the materials, making it well suited to buffer sections and packaging applications. A double friction variant links two-sided friction couplings through an internal tube so materials of different widths need not be positioned to the friction side.



Cutaway — sprocket friction drive head

- › **Numerous drive types** Various drive variants are available. The rollers can optionally be driven with flat or round belts as well as chains with a pitch of 3/8". Wrapping or tangential chain drive is possible.
- › **Low-noise** The flat belt drive head made of polyamide ensures very quiet running.
- › **Low roller pitches** Small roller pitches for transporting small materials can also be implemented.
- › **Weight-dependent** Conveyance as well as accumulation pressure depend on the weight of the materials.
- › **Two-sided friction coupling** For the double friction roller variant, the two-sided friction couplings are connected with each other by an internal tube. Positioning materials of different widths to the friction side are not required in this case.

LOAD CAPACITIES

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] — installation length [mm]		
mm		mm	200	400	600
STEEL					
30 × 1.2	Steel sprocket head 3/8", T12	8	150	150	150
30 × 1.2	Steel double sprocket head 3/8", T12	8	150	150	150

Maximum static load [N] for the given installation length, over a temperature range of +5 to +40 °C; valid for female-thread or male-thread shaft designs, with bearing 689 2Z. This static-load table pairs a single friction design with either a single or double sprocket head drive element (T = number of teeth).

DESIGN VERSIONS

Anti-static version	<10 ⁶ Ω
Special tube surface treatment	Carbonitriding
Operating principle	Sprocket head – single friction

TECHNICAL DATA

Platform	1700
Max. load capacity	150 N
Max. conveyor speed	0.5 m/s
Temperature range	–5 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide on drive side, polypropylene on non-drive side, each in RAL9005 (jet black)
Drive head	Sprocket head – zinc-plated steel
Seal	Polypropylene on drive side, polyamide on non-drive side, each in RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 689 2Z, greased

ORDERING DIMENSIONS

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

A sufficient axial play is already taken into account, so that only the actual lane width between side profiles is required; the dimensions of the conveyor roller depend on the shaft version and the drive element.

SERIES 3800

Friction conveyor roller – Interroll – 1 of 2

Series 3800 is a friction (torque-limiting) conveyor roller for transporting and accumulating unit handling such as cardboards or containers, and is also suitable for implementing buffer sections. Its modular construction accepts interchangeable friction heads and a wide range of drive heads, so the roller can be driven with flat, PolyVee or toothed belts as well as chains with a pitch of 1/2" or 3/8". Conveyance and accumulation pressure both depend on the weight of the conveyed materials.



Friction roller with sprocket drive head

- › **Modular construction** The friction heads are interchangeable and can also be exchanged with fixed friction heads. A permanently pressed bearing housing allows inserting a variety of drive heads. The friction heads made of polyamide are secured against dropping out.
- › **Low-noise** The use of polyamide or polyoxymethylene drive heads results in very quiet running.
- › **Numerous drive types** Numerous drive types are available. Depending on the requirement profile, the rollers can be driven with flat, PolyVee or toothed belts as well as chains with a pitch of 1/2" or 3/8".
- › **Weight-dependent** Conveyance as well as accumulation pressure depend on the weight of the materials.

TECHNICAL DATA

Platform	1700
Max. load capacity	500 N
Max. conveyor speed	0.5 m/s
Temperature range	–5 to +40 °C (PVC tube; permanent deformation cannot be ruled out from +30 °C ambient temperature under high continuous static load over hours)

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum; PVC in RAL7030 (stone gray), RAL5015 (sky blue) for Ø 50 mm
Shaft	Uncoated steel, zinc-plated steel or stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Drive head	Polyamide or polyoxymethylene, RAL9005 (jet black); steel (sprocket drive heads only)
Seal	Polypropylene on non-drive side and polyamide on drive side, each in RAL1021 (rape yellow)
Bearing version	Precision steel or stainless steel ball bearing 6002 2RZ, bearing play each C3

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm		mm	200	400	600	800	1000	1200	1400
PVC									
50 × 2.8	Polymer sprocket head 1/2", T14	12	500	185	75	40	–	–	–
50 × 2.8	Polymer double sprocket head 1/2", T14	12	500	215	85	45	–	–	–
50 × 2.8	Polymer flat belt drive head 38 mm	14	500	150	65	35	–	–	–
50 × 2.8	Polymer sprocket head 1/2", T9 and T14	14	300	300	135	70	–	–	–
50 × 2.8	Polymer sprocket head 1/2", T14	14	500	335	135	70	–	–	–
50 × 2.8	Polymer double sprocket head 3/8", T20	14	350	185	75	40	–	–	–
50 × 2.8	Polymer toothed belt drive head 8, T18	14	350	185	75	40	–	–	–
50 × 2.8	Polymer double sprocket head 1/2", T14	14	500	215	80	45	–	–	–
STEEL									
50 × 1.5	Polymer sprocket head 1/2", T14	12	500	500	500	500	500	500	500
50 × 1.5	Steel sprocket head 1/2", T14	12	500	500	500	500	500	500	500
50 × 1.5	Polymer double sprocket head 1/2", T14	12	500	500	500	500	500	500	500
50 × 1.5	Steel double sprocket head 1/2", T14	12	500	500	500	500	500	500	500
50 × 1.5	Polymer flat belt drive head 38 mm	14	500	500	500	500	500	500	500
50 × 1.5	Polymer sprocket head 1/2", T9 and T14	14	300	300	300	300	300	300	300
50 × 1.5	Polymer sprocket head 1/2", T14	14	500	500	500	500	500	500	500
50 × 1.5	Steel sprocket head 1/2", T14	14	500	500	500	500	500	500	500
50 × 1.5	Polymer double sprocket head 3/8", T20	14	350	350	350	350	350	350	350
50 × 1.5	Polymer toothed belt drive head 8, T18	14	350	350	350	350	350	350	350
50 × 1.5	Polymer double sprocket head 1/2", T14	14	500	500	500	500	500	500	500
50 × 1.5	Steel double sprocket head 1/2", T14	14	500	500	500	500	500	500	500
50 × 1.5	PolyVee drive head	14	350	350	350	350	350	350	350
50 × 1.5	Steel sprocket head 1/2", T14	15	500	500	500	500	500	500	500
50 × 1.5	Steel double sprocket head 1/2", T14	15	500	500	500	500	500	500	500
60 × 1.5	Polymer double sprocket head 1/2", T14	12	500	500	500	500	500	500	500
60 × 1.5	Polymer sprocket head 1/2", T9 and T14	14	300	300	300	300	300	300	300
60 × 1.5	Polymer sprocket head 1/2", T14	14	500	500	500	500	500	500	500
60 × 1.5	Steel sprocket head 1/2", T14	14	500	500	500	500	500	500	500
60 × 1.5	Polymer double sprocket head 3/8", T20	14	350	350	350	350	350	350	350
60 × 1.5	Polymer toothed belt drive head 8, T18	14	350	350	350	350	350	350	350
60 × 1.5	Polymer double sprocket head 1/2", T14	14	500	500	500	500	500	500	500
60 × 1.5	Steel double sprocket head 1/2", T14	14	500	500	500	500	500	500	500

SERIES 3800 (CONTINUED)

Friction conveyor roller – Interroll – 2 of 2

LOAD CAPACITIES SCREW-CONNECTED INSTALLATION (CONTINUED)

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]						
mm		mm	200	400	600	800	1000	1200	1400
STEEL									
60 × 1.5	Steel sprocket head 1/2", T14	15	500	500	500	500	500	500	500
60 × 1.5	Steel double sprocket head 1/2", T14	15	500	500	500	500	500	500	500

Maximum static load in newtons for installation lengths of 200 to 1400 mm over a temperature range of +5 to +40 °C, valid for female-thread or male-thread shaft designs (bearing 6002 2RZ); Series 3800 prints only a single static-load table (organized by drive element, spanning two pages) plus a separate dimensions table, so all captured rows are placed in load_rows_screw and load_rows_loose is left empty.

DESIGN VERSIONS

Tube sleeves	PVC sleeve, PU sleeve or lagging
Anti-static version	<10 ⁸ Ω; standard design for rollers with tube sleeves, cannot be used for PVC tube
Special tube surface treatment	Carbonitriding
Shafts	With variable length or different design of both shaft ends, in addition to the variants listed in the load capacity tables
Drive heads	Sprocket and double sprocket (1/2", 3/8"), flat belt (38 mm), toothed belt (8, T18) and PolyVee; polyamide, polyoxymethylene or steel
Adjustable friction	1/2" zinc-plated steel sprocket head with 14 teeth and adjustable friction (EL = AGL = RL + 53)

ORDERING DIMENSIONS

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

A sufficient axial play is already taken into account, so only the actual lane width between side profiles is required; the dimensions of the conveyor roller depend on the shaft version and the drive element (ordering dimensions for tube sleeves, e.g. PVC sleeves, see page 24).

SERIES 3870

Double friction conveyor roller – Interroll

Series 3870 is a double friction conveyor roller for transporting and accumulating unit handling, such as cardboards or containers, and is also suitable for implementing buffer sections. Its two-side friction couplings are connected with each other by an internal tube, so positioning materials of different widths to the friction side is not required. A toothed belt drive head and sprockets with different numbers of teeth allow both wrapping and tangential chain drive to be implemented.



Cutaway — two-sided friction coupling

- › **Application area** Transporting and accumulating unit handling, such as cardboards or containers. Also suitable for implementing buffer sections.
- › **Two-sided friction coupling** It is a double friction roller whose two-side friction couplings are connected with each other by an internal tube. Positioning materials of different widths to the friction side are not required in this case.
- › **Robust construction** The drive heads are pressed together with the internal tube which secures them against dropping out.
- › **Numerous drive variants** A toothed belt drive head and sprockets with different number of teeth are available so that wrapping and tangential chain drive can be implemented.

LOAD CAPACITIES

Tube Ø - wall	Drive element	Shaft Ø	Maximum static load [N] – installation length [mm]			
mm		mm	200	1100	1300	1500
STEEL						
50 × 1.5	Polymer sprocket head 1/2", T9, T11 and T14	14	500	500	440	280
50 × 1.5	Polymer toothed belt drive head 8, T18	14	500	500	440	280
50 × 1.5	Polymer double sprocket head 1/2", T14	14	500	500	440	280
60 × 3	Polymer sprocket head 1/2", T14	14	500	500	440	280
60 × 3	Polymer double sprocket head 1/2", T14	14	500	500	440	280

Maximum static load in newtons for the given installation length, referred to a temperature range of +5 to +40 °C and valid for the female-thread shaft design with a 6002 2RZ bearing.

DESIGN VERSIONS

Tube sleeves	PVC sleeve (page 23), PU sleeve (page 25), Lagging (page 26)
Special tube surface treatment	Carbonitriding

TECHNICAL DATA

Platform	1700
Max. load capacity	500 N
Max. conveyor speed	0.5 m/s
Anti-static version	No
Temperature range	-5 to +40 °C

MATERIALS

Tube	Zinc-plated steel, stainless steel, aluminum
Shaft	Uncoated steel, zinc-plated steel, stainless steel
Bearing housing	Polyamide, RAL9005 (jet black)
Drive head	Polyamide, RAL9005 (jet black)
Seal	Polyamide, RAL1021 (rape yellow)
Bearing version	Precision steel ball bearing 6002 2RZ, bearing play C3

ORDERING DIMENSIONS

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

A sufficient axial play is already taken into account, so that the actual lane width between side profiles is required; the dimensions of the conveyor roller depend on the shaft version and the drive element.

DL 0080

Drum Motor – DL Series – Interroll

The DL 0080 is a lightweight, cost-efficient belt drive for small to medium, dynamic belt conveyor applications. It is ideal for small infeed conveyors, packaging equipment and transfer conveyors, covering everything from classic dry-logistics conveying to food production in dry to humid environments with occasional cleaning. A proven, nearly maintenance-free design keeps it light, quiet and dependable.



DL 0080 drum motor

- › **Lightweight design** A technopolymer planetary gear box keeps the drive light and low-noise while remaining powerful.
- › **Ideal for friction-driven belts** Well suited to lightweight, friction-driven conveyor belts with a moderate belt-expansion factor.
- › **Flexible winding** Available with three-phase or single-phase motor winding to suit the installation.
- › **Frequency-inverter ready** Three-phase speed is adjustable by frequency inverter for precise conveyor control.
- › **Direct single-phase operation** Runs directly on a single-phase network, such as a grounded household outlet, without additional power electronics.

DESIGN VERSIONS

Three-phase winding	Speed adjustable by frequency inverter.
Single-phase winding	Direct operation on a single-phase network without extra electronics.
Lagging (friction drive)	Rubber lagging increases friction between motor and belt to prevent slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid for wet applications; a center V-groove ensures precise belt tracking.
Vulcanization	Cold or hot vulcanization available; hot vulcanization meets particularly strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 80 mm
Motor type	Asynchronous, three-phase or single-phase winding
Speed control	Frequency inverter (three-phase); direct single-phase network operation
Duty	Light-duty, dynamic belt conveying
Application	Small infeed, packaging and transfer conveyors; dry logistics to food production

MATERIALS

Gear	Technopolymer planetary gear box
Shell	Steel or stainless steel

DL 0113

Drum Motor – DL Series – Interroll

The DL 0113 is a lightweight, cost-efficient belt drive for small to medium, dynamic belt conveyor applications. It is ideal for small infeed conveyors, packaging equipment and transfer conveyors, covering everything from classic dry-logistics conveying to food production in dry to humid environments with occasional cleaning. A proven, nearly maintenance-free design keeps it light, quiet and dependable.



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DESIGN VERSIONS

Three-phase winding	Speed adjustable by frequency inverter.
Single-phase winding	Direct operation on a single-phase network without extra electronics.
Lagging (friction drive)	Rubber lagging increases friction between motor and belt to prevent slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid for wet applications; a center V-groove ensures precise belt tracking.
Vulcanization	Cold or hot vulcanization available; hot vulcanization meets particularly strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 113 mm
Motor type	Asynchronous, three-phase or single-phase winding
Speed control	Frequency inverter (three-phase); direct single-phase network operation
Duty	Light-duty, dynamic belt conveying
Application	Small infeed, packaging and transfer conveyors; dry logistics to food production

MATERIALS

Gear	Technopolymer planetary gear box
Shell	Steel or stainless steel

DM 0080

Drum Motor – DM Series – Interroll

Practice-oriented, scalable and thought out in detail, the DM 0080 makes it easy to build a completely individual conveyor system while meeting the higher permissible belt-tension requirements now demanded by industry and belt manufacturers. Its broad speed spectrum and clever plug-and-play connection simplify installation, and every motor is approved, tested and modularized for fast delivery worldwide.



DM 0080 drum motor

- › **Modular platform** Free combination of shaft, end housing, shell, steel or technopolymer gear and asynchronous or synchronous winding to match any application.
- › **Broad speed spectrum** A wide speed range covers virtually all conveyor applications.
- › **Plug-and-play** Clever plug-and-play connection significantly simplifies installation.
- › **Oil-free synchronous variant** The synchronous version is offered oil-free for highly dynamic applications, food-processing conveyors, SmartBelt and servo-driven belt conveyors.
- › **Wide accessory range** Encoder, brake, backstop and rubber laggings, plus various accessories, are available.

DESIGN VERSIONS

Winding options	Asynchronous or synchronous motor winding.
Oil-free synchronous	Synchronous variant offered oil-free for highly dynamic and hygienic applications.
Options	Encoder, brake and backstop available.
Lagging (friction drive)	Rubber lagging increases friction and prevents slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid; a center V-groove ensures precise belt tracking; cold or hot vulcanization, hot meeting strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 80 mm
Motor type	Asynchronous or synchronous winding
Speed control	Broad speed range via frequency inverter; servo driver for the synchronous variant
Duty	Individual conveyor systems with higher permissible belt tension
Application	Internal logistics in food processing, industry, distribution and airports

MATERIALS

Gear	Steel or technopolymer
Shell	Steel or stainless steel

DM 0113

Drum Motor – DM Series – Interroll

Practice-oriented, scalable and thought out in detail, the DM 0113 makes it easy to build a completely individual conveyor system while meeting the higher permissible belt-tension requirements now demanded by industry and belt manufacturers. Its broad speed spectrum and clever plug-and-play connection simplify installation, and every motor is approved, tested and modularized for fast delivery worldwide.



DM 0113 drum motor

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- › **Plug-and-play** Clever plug-and-play connection significantly simplifies installation.
- › **Wide accessory range** Encoder, brake, backstop and rubber laggings, plus various accessories, are available.
- › **Global platform concept** Covers internal logistics across food processing, industry, distribution and airports.

DESIGN VERSIONS

Winding options	Asynchronous or synchronous motor winding.
Options	Encoder, brake and backstop available.
Lagging (friction drive)	Rubber lagging increases friction and prevents slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid; a center V-groove ensures precise belt tracking; cold or hot vulcanization, hot meeting strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 113 mm
Motor type	Asynchronous or synchronous winding
Speed control	Broad speed range via frequency inverter
Duty	Individual conveyor systems with higher permissible belt tension
Application	Internal logistics in food processing, industry, distribution and airports

MATERIALS

Gear	Steel
Shell	Steel or stainless steel

DM 0138

Drum Motor – DM Series – Interroll

Practice-oriented, scalable and thought out in detail, the DM 0138 makes it easy to build a completely individual conveyor system while meeting the higher permissible belt-tension requirements now demanded by industry and belt manufacturers. Its broad speed spectrum and clever plug-and-play connection simplify installation, and every motor is approved, tested and modularized for fast delivery worldwide.



DM 0138 drum motor

- › **Modular platform** Free combination of shaft, end housing, shell and steel gear to match any application.
- › **Broad speed spectrum** A wide speed range covers virtually all conveyor applications.
- › **Plug-and-play** Clever plug-and-play connection significantly simplifies installation.
- › **Wide accessory range** Encoder, brake, backstop and rubber laggings, plus various accessories, are available.
- › **Global platform concept** Covers internal logistics across food processing, industry, distribution and airports.

DESIGN VERSIONS

Options	Encoder, brake and backstop available.
Lagging (friction drive)	Rubber lagging increases friction and prevents slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid; a center V-groove ensures precise belt tracking; cold or hot vulcanization, hot meeting strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 138 mm
Motor type	Asynchronous three-phase
Speed control	Broad speed range via frequency inverter
Duty	Individual conveyor systems with higher permissible belt tension
Application	Internal logistics in food processing, industry, distribution and airports

MATERIALS

Gear	Steel
Shell	Steel or stainless steel

DM 0165

Drum Motor – DM Series – Interroll

Practice-oriented, scalable and thought out in detail, the DM 0165 makes it easy to build a completely individual conveyor system while meeting the higher permissible belt-tension requirements now demanded by industry and belt manufacturers. Its broad speed spectrum and clever plug-and-play connection simplify installation, and every motor is approved, tested and modularized for fast delivery worldwide.



DM 0165 drum motor

- › **Modular platform** Free combination of shaft, end housing, shell and steel gear to match any application.
- › **Broad speed spectrum** A wide speed range covers virtually all conveyor applications.
- › **Plug-and-play** Clever plug-and-play connection significantly simplifies installation.
- › **Wide accessory range** Encoder, brake, backstop and rubber laggings, plus various accessories, are available.
- › **Global platform concept** Covers internal logistics across food processing, industry, distribution and airports.

DESIGN VERSIONS

Options	Encoder, brake and backstop available.
Lagging (friction drive)	Rubber lagging increases friction and prevents slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid; a center V-groove ensures precise belt tracking; cold or hot vulcanization, hot meeting strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 165 mm
Motor type	Asynchronous three-phase
Speed control	Broad speed range via frequency inverter
Duty	Individual conveyor systems with higher permissible belt tension
Application	Internal logistics in food processing, industry, distribution and airports

MATERIALS

Gear	Steel
Shell	Steel or stainless steel

DM 0217

Drum Motor – DM Series – Interroll

Practice-oriented, scalable and thought out in detail, the DM 0217 makes it easy to build a completely individual conveyor system while meeting the higher permissible belt-tension requirements now demanded by industry and belt manufacturers. Its broad speed spectrum and clever plug-and-play connection simplify installation, and every motor is approved, tested and modularized for fast delivery worldwide.



DM 0217 drum motor

- › **Modular platform** Free combination of shaft, end housing, shell and steel gear to match any application.
- › **Broad speed spectrum** A wide speed range covers virtually all conveyor applications.
- › **Plug-and-play** Clever plug-and-play connection significantly simplifies installation.
- › **Wide accessory range** Encoder, brake, backstop and rubber laggings, plus various accessories, are available.
- › **Global platform concept** Covers internal logistics across food processing, industry, distribution and airports.

DESIGN VERSIONS

Options	Encoder, brake and backstop available.
Lagging (friction drive)	Rubber lagging increases friction and prevents slippage; resistant to oil, fuels and cleaning chemicals.
Lagging profiles	Longitudinal grooved lagging redirects liquid; a center V-groove ensures precise belt tracking; cold or hot vulcanization, hot meeting strict hygiene requirements.

TECHNICAL DATA

Shell diameter	Ø 217 mm
Motor type	Asynchronous three-phase
Speed control	Broad speed range via frequency inverter
Duty	Individual conveyor systems with higher permissible belt tension
Application	Internal logistics in food processing, industry, distribution and airports

MATERIALS

Gear	Steel
Shell	Steel or stainless steel

DP 0080 / 0089

Drum Motor – DP Pallet Drive – Interroll

The space-saving Interroll Pallet Drive makes the design and installation of driven pallet conveyors very easy, providing the ideal single-zone drive for efficient use of space. A high-performance asynchronous drum motor with a robust multi-stage planetary gear is integrated into the Interroll Roller based on Series 3950, handling loads of up to 1,250 kg per zone. Pallet rollers are driven roller-to-roller, so no complex motor stations are required.



DP 0080 / 0089 pallet drive

- › **Space-saving single-zone drive** Compact pallet drive simplifies design and installation while making efficient use of space.
- › **High-performance drum motor** Asynchronous motor with a robust multi-stage planetary gear built into the roller.
- › **Heavy-duty capacity** Applicable for loads of up to 1,250 kg per zone.
- › **Roller-to-roller drive** Pallet rollers are driven roller-to-roller, eliminating complex motor stations and minimizing engineering.
- › **Maintenance-free, floor-mount** The compact, maintenance-free solution can be mounted directly on the floor.

DESIGN VERSIONS

Series 3950 base	Drum motor integrated into the Interroll Roller based on Series 3950.
Zone load	Rated for loads of up to 1,250 kg per zone.
Roller-to-roller	Pallet rollers driven roller-to-roller with no separate motor stations.
Floor mounting	Compact, maintenance-free assembly mounts directly on the floor.

TECHNICAL DATA

Shell diameter	Ø 80 / 89 mm
Motor type	High-performance asynchronous drum motor with multi-stage planetary gear
Base roller	Interroll Roller based on Series 3950
Load capacity	Up to 1,250 kg per zone
Drive concept	Single-zone, roller-to-roller
Application	Driven pallet conveyors

MATERIALS

Gear	Multi-stage planetary gear
Shell	Steel