ROLLERS AND DRIVE ROLLERS

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

CONVEYOR ROLLERS

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CONVEYOR ROLLERS

Standard Assemblies for Rollers

Warranty Information

Goods furnished are warranted to be free from all latent defects in material and workmanship under normal use and service for the time indicated below. For full Terms and Conditions please call 800-830-9680 or visit our website: www.interroll.us

The permissible loads for each roller are shown in the tables for the appropriate series of roller. Roller load capacity is largely influenced by roller length, load distribution and spindle attachment.

Rollers

- Two years from date of invoice.

Standard Assemblies for Rollers

Standard Types of Tube

Steel Tube
As tube material, steel has the greatest rigidity and resistance to deflection. Zinc plated, galvanized steel or stainless steel tubes provide protection against corrosion. Sprockets, gears or flanges can be welded onto the tube. Special designs are available including: grooved tubes for round belts; PVC sleeved tubes; and polyurethane sleeved tubes.

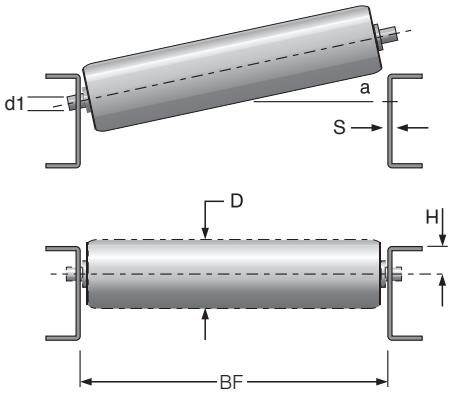
Aluminum tubes
Compared with the steel tube, an aluminum tube has reduced rigidity, approximately one-third of the flexural resistance of steel. An aluminum tube, however, weighs only 36% of a comparable steel tube. Aluminum tubes are corrosion resistant.

Plastic (Copolymer) tube
Assuming a comparable diameter, the load capacity of a steel tube is much higher than that of a PVC-copolymer tube. However, PVC tubes offer substantial advantages:

- sound insulation
- high impact resistance
- lightweight
- corrosion resistance
- easy to clean

Standard Shaft Designs

Spring loaded shafts
Spring loaded shafts are the simplest design, and are very quick and easy to install and remove. Spring loaded shafts are usually installed in gravity rollers for light and medium weight goods. The assembly holes in the frame should be at least .02" larger than the diameter of the shaft; the two frame members have to be rigidly connected with tie-bars to ensure parallelism. The shafts are not secured against rotation (except for hexagon shafts). Be sure that the between frame (BF) width is at least .12" wider than the overall roller length (RL). The installation space has to be enough to install the rollers in the side frames.



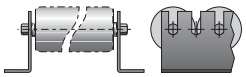
CONVEYOR ROLLERS

Standard Assemblies for Rollers

d1 - required hole diameter
S - frame wall thickness
H - distance between top of frame to center line of mounting hole
D - roller diameter
BF - distance between frame
d - roller shaft diameter

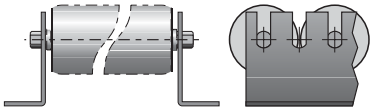
The circumstances and the formula shown in the illustration must be considered. An overall dimension of d1 to shaft diameter of approximately .02" is enough in most cases.

$$d1 \geq \frac{S \times (H + D/2)}{(BF - 1)} + d$$



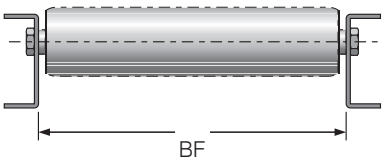
Taperhex shafts
The award winning TAPERHEX® Gold shaft is a patented spring-load design with self-adjusting hexagonal tapered shuttles. Tension from the spring causes the shuttle to lock in the conveyor frame's mounting holes. Roller rattling—the leading cause of roller shaft and side frame wear—is eliminated.

Shafts with milled flats
In this case we are talking about a floating or drop-in shaft, where the shaft is secured against rotation. The rollers can be easily assembled and disassembled utilizing an appropriate frame with open slots. The two frame members have to be rigidly spaced with tie bars, and the frame width has to be at least .12" wider than the overall roller length (RL).

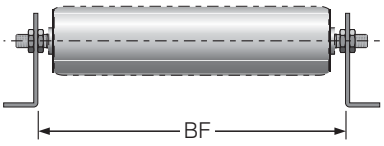


Female tapped shaft
Assembly with screws or bolts guarantees a very stable frame design, ideal for medium and heavy loads. Problems of shaft movement, with accompanying vibration and noise are completely eliminated. Roller shafts and frames work together, so that a higher load on the roller is possible compared with drop-in shafts.

In addition, the need and cost of tie bars is eliminated. Rollers are easily installed in an existing frame, if replacement is required. In addition, the need and cost of tie bars is eliminated. Rollers are easily installed in an existing frame, if replacement is required.



Male threaded shafts
This shaft design is installed in the frame with nuts. The characteristics are comparable to the female tapped design. However, the subsequent assembly and disassembly of the roller often cause problems.



CONVEYOR ROLLERS

Types of Drive

Types of Drive

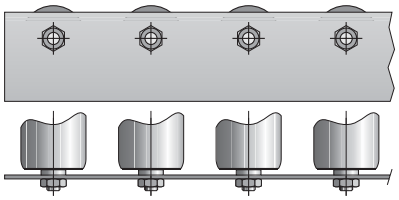
Gravity conveyor rollers
In many cases products need not be conveyed on driven rollers; they can be transported on gravity conveyors. It is very important that conveyor rollers function with the lowest possible friction and least starting resistance.

Driven rollers
Driven rollers are used in many applications and are available in many different designs. The drive can be chain or toothed belts, or with frictional drive using round or flat belts. Positive drive rollers allow no slip between the roller and drive and are subject to sudden "start and stop." The use of chain frequently creates noise, which can be considerably reduced when using a polyamid drive material instead of steel. Sprockets made of steel or plastic are both very strong. The weakest component of the drive arrangement is the chain. The chain's breaking load determines the maximum possible driving length of the conveyor.

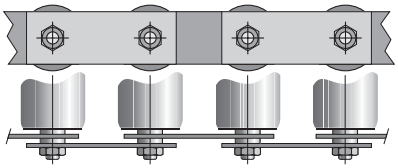
The use of frictionally engaged "slip" drives adds additional load on the rollers due to the pressure necessary to produce torque. For that reason friction drives are normally used only for the handling of light and medium weight goods.

Positive drives
Interroll uses three types of positive drives:
- tangential drive roller by chain
- roller to roller drive by chain

Tangential drive

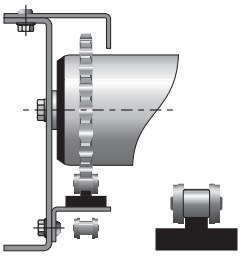


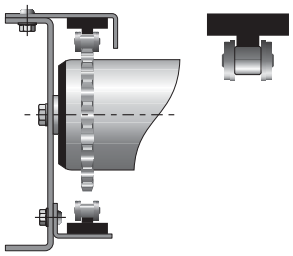
Roller to roller drive

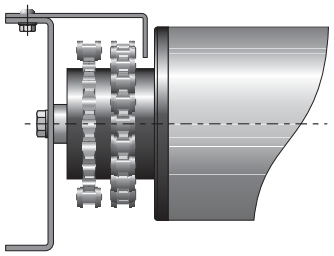


CONVEYOR ROLLERS

Types of Drive







Tangential drive

The tangential chain drive is efficient and easy to build. The length of chain is shorter than for roller to roller drive. This single chain powers all the rollers of one section. The chain engages the corresponding sprocket wheels, and is supported by a chain guiding profile made of low friction plastic, transferring the necessary driving force to a single roller sprocket tooth. The driving chain can be positioned to drive over or under the roller sprockets. The drive station must be installed to maintain the tension in the chain as tight as possible and is often equipped with a device for automatic adjustment of chain tension. Tension rollers at the drive station need to withstand normal conveyor loads plus extra vector forces. These forces should be considered carefully during roller selection. The length of conveyor, powered by a single drive unit, is determined by the breaking load of the chain, and by the weight of the load to be conveyed. In comparison to roller to roller conveyor, the tangential drive is easy to assemble.

Roller to roller drive

Assembly is relatively easy, but a certain number of restrictions must be considered when using this drive design. Chain guidance is not necessary, but roller spacing (distance from roller to roller) must be held to strict tolerances.

The maximum length of a conveyor powered with a single drive unit is calculated by the breaking load of the chain. The chain has to withstand the highest load at the drive. The drive unit should always be located in the middle of the conveyor, in order to optimize the tensile strength of the chain. Verify the load capacity of the rollers installed near the drive unit since those rollers function as pressure rollers.

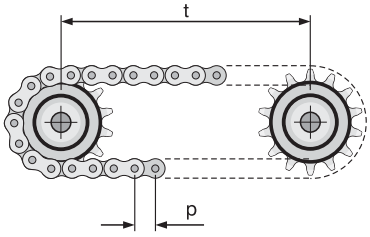
Roller pitch

The possible roller pitch “t” for roller to roller drive is a multiple of the half chain pitch “p” of the corresponding chain, thus:

t = K p/2 [inch]
K = whole number
t min. = Max Sprocket Dia.

The total number of the chain links is given by the sum of the number of teeth “Z” of the sprocket and “K”; it should be an even number, otherwise an offset connecting link must be used. Interroll recommends the following tolerances for roller pitch “t”:

Chain pitch (#)	P (inch)	Tolerance for “t” (inch)	Breaking load (lbs)
35	.375	+0 /-.015	2,100
40	.500	+0 /-.025	3,700
50	.625	+0 /-.030	6,100
60	.750	+0 /-.032	8,500
80	1.00	+0 /-.039	14,500

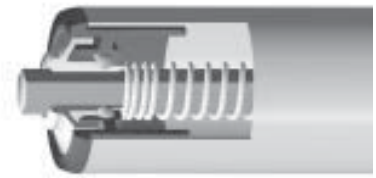


CONVEYOR ROLLERS

Light Duty Conveyor Rollers - Series 1100

Light Duty Conveyor Rollers Series 1100

(plastic bearings with stainless steel balls)



Bearing

Balls: Stainless steel

The bearings used are molded of either polypropylene or acetal plastic, according to size. They are provided with double labyrinth seals to prevent entry of dust, dirt and other contaminants. Balls are corrosion resistant type 302 stainless steel. Bearings may be washed or steam cleaned without damage and are suitable for operation in temperatures up to 150°F.

Due to the limited heat dissipation capacity of plastic ball bearings, Series 1100 rollers should not be used for high speed powered applications.

Tube

Diameters (inch).62, .75 (.78), 1.12 (1.18), 1.90.

A wide selection of tube material is available for this series. Selection is dependent upon application but where loads are light, PVC is recommended for maximum economy.

Shaft

Diameter: .192 .250 .312
Hexagonal: .312 .375 .437

Shaft materials include carbon steel, aluminum and stainless steel in a variety of sizes and mounting types.

Application

These rollers are lightweight and free-rolling with a clean and attractive finish. The unique plastic design is virtually corrosion proof.
These rollers have wide application in light duty gravity conveyors, flow racks and machinery of all types.

Applications include fisheries, canneries, meat packing plants and commercial food equipment including dishwashing machinery and food-handling conveyors.

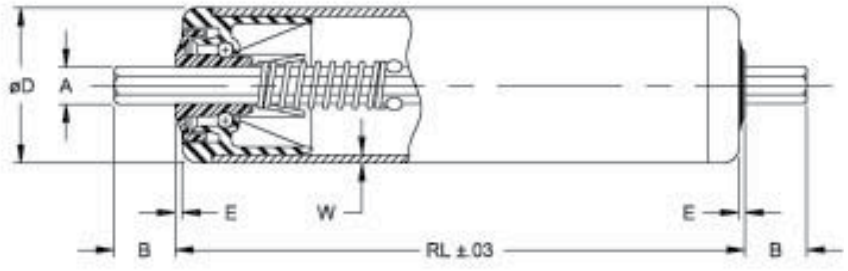
Ideal for interfacing with all types of packaging machinery.

CONVEYOR ROLLERS

Light Duty Conveyor Rollers - Series 1100

INTERROLL

Light Duty
Conveyor Rollers
Series 1100



(Typical RL=BF–.12)

Note: For Hex shafts, "A" dimension indicates flat-to-flat measurement.

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Bearing	1.113.___.___-	0.62	.035	0.08	.192 dia		Acetal	White	Balls Stainless
	1.101.___.___-	0.75	.035 & .060	0.08	.250 dia		Acetal	White	Balls Stainless
	1.105.___.___-	1.12	.050 & .070	0.08	.192 dia		Acetal	White	Balls Stainless
	1.107.___.___-	1.12	.050 & .070	0.08	.250 dia		Acetal	White	Balls Stainless
	1.109.___.___-	1.12	.050 & .070	0.08	.312 dia		Acetal	White	Balls Stainless
	1.111.___.___-	1.12	.050 & .070	0.08	.312 hex		Acetal	White	Balls Stainless
	1.131.___.___-	1.90	.065	0.19	.437 hex		Polypro.	Gray	Balls Stainless
	1.133.___.___-	1.90	.110	0.19	.437 hex		Polypro.	Gray	Balls Stainless
	1.151.___.___-	1.90	.065	0.19	***		Polypro.	Gray	Balls Stainless
	1.153.___. -	1.90	.110	0.19	***		Polypro.	Gray	Balls Stainless

*** Use these bearings for the following shaft sizes: .312 dia, .312 hex and .375 hex.

Tube	_.___.S16.___-	0.62	.035			Stainless	Polished	
	_.___.S19.___-	0.75	.035			Stainless	Polished	
	_.___.V20.___-	0.78	.060			PVC	Gray	Max. length 15", use
								with .75" dia. bearings
	_.___.A21.___-	0.75	.035			Aluminum	Anodized	
	_.___.A29.___-	1.12	.050			Aluminum	Anodized	
	_.___.V30.___-	1.18	.070			PVC	Gray	Max. length 22", use
								with 1.12" dia. bearings
	_.___.A49.___-	1.90	.065			Aluminum	None	
	_.___.G49.___-	1.90	.065			Steel	Galvanized	
	_.___.R69.___-	1.90	.065			Steel	Galvanized	Soft PVC Sleeve
	_.___.R09.___-	1.90	.065			Steel	Galvanized	Polyurethane Sleeve
	_.___.S49.___-	1.90	.065			Stainless	Polished	
	_.___.V50.___-	1.90	.110			PVC	Gray	

CONVEYOR ROLLERS

Light Duty Conveyor Rollers - Series 1100

Light Duty
Conveyor Rollers
Series 1100

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Shaft	_._____.___.C00-				.192 dia	.56	Steel	None	Spring Loaded
	_._____.___.S00-				.192 dia	.56	Stainless	None	Spring Loaded
	_._____.___.C07-				.192 dia	.75	Steel	None	Threaded 10-32
	_._____.___.S07-				.192 dia	.75	Stainless	None	Threaded 10-32
	_._____.___.C02-				.250 dia	.75	Steel	None	Threaded 1/4-20
	_._____.___.S02-				.250 dia	.75	Stainless	None	Threaded 1/4-20
	_._____.___.A03-				.250 dia	.56	Aluminum	None	Spring Loaded
	_._____.___.C03-				.250 dia	.56	Steel	None	Spring Loaded
	_._____.___.S03-				.250 dia	.56	Stainless	None	Spring Loaded
	_._____.___.A04-				.250 dia	.56	Aluminum	None	Spring Loaded
	_._____.___.C04-				.250 dia	.56	Steel	None	Spring Loaded
	_._____.___.S04-				.250 dia	.56	Stainless	None	Spring Loaded
	_._____.___.C12-				.312 dia	.75	Steel	None	Threaded 5/16-18
	_._____.___.S12-				.312 dia	.75	Stainless	None	Threaded 5/16-18
	_._____.___.C13-				.312 dia	.56	Steel	None	Spring Loaded
	_._____.___.S13-				.312 dia	.56	Stainless	None	Spring Loaded
	_._____.___.C20-				.312 hex	.56	Steel	None	Spring Loaded
	_._____.___.S20-				.312 hex	.56	Stainless	None	Spring Loaded
	_._____.___.C21-				.312 hex	.56	Steel	None	Spring Loaded, use with 1.9" dia. bearings
	_._____.___.S21				.312 hex	.56	Stainless	None	Spring Loaded, use with 1.9" dia. bearings
	_._____.___.C35				.375 hex	.56	Steel	None	Spring Loaded
	_._____.___.C37				.437 hex	.56	Steel	None	Tapped 1/4-20 x 5/8 D
	_._____.___.S37				.437 hex	.06	Stainless	None	Tapped 1/4-20 x 5/8 D
	_._____.___.C40				.437 hex	.56	Steel	None	Spring Loaded
	_._____.___.S40				.437 hex	.56	Stainless	None	Spring Loaded

CONVEYOR ROLLERS

Light Duty Conveyor Rollers - Series 1100

Light Duty Conveyor Rollers Series 1100

Series 1100 load capacity in lbs.

Tube Dia. In. Material Shaft Dia. RL Inches	0.62 SS All	0.75 Alu All	0.75 SS All	0.78 PVC All	1.12 Alu All	1.18 PVC All	1.9 Alu .312 Dia.	1.9 SS All	1.9 Steel All	1.9 PVC All
4	15	20	25	20	27	27	79	79	79	40
8	15	20	25	11	27	27	79	79	79	40
12	15	20	25	5	27	16	79	79	79	40
16	15	20	25		27	5	79	79	79	40
20	10	18	22		27	2	79	79	79	36
24		11	15		27		77	79	79	20
28		7	10		27		65	79	79	
32					27		56	79	79	
36					27		52	79	79	
40							45	79	79	
44							43	79	79	
48							38	79	79	

Series 1100 Metal roller

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Diameter	Spring Loaded	Fixed	Loose Shaft / No Shaft
0.62	3.25	3.00	3.00
0.75	3.25	3.00	3.00
1.12	*3.75	3.00	3.00
1.90	4.25	3.25	3.25

*3.25" For all shafts other than .312" (5/16") hex.

Sleeve Materials (all dimensions in inches)

Material	Description
Soft PVC	Hardness, 63 shore A, thickness .08, Gray
Polyurethane	Hardness, 80 shore A, thickness .12, Orange

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Commercial	15 fpm - gravity only

To order, use the following reference to form your ten-digit part number:

1.131.G49.C40-14.88"

Bearing Part No.
Tube Part No.
Shaft Part No.
15" between frame

CONVEYOR ROLLERS

Metal Conveyor Rollers - Series 1200

Metal Conveyor Rollers Series 1200
(commercial bearings)

Bearing
Balls: Steel

All rollers in this series are fitted with commercial grade steel ball bearings which are zinc-plated for mild corrosion resistance. Bearing races are burnished or coined, and then hardened, to provide smooth, low-torque operation.

Balls are made from bearing quality steel and are fully hardened and ground. Close fit between mating parts provides limited protection against entry of dust and dirt.

Tube
Diameters (inch) .75, 1.00, 1.38, 1.90, 2.50, 3.15.

Series 1200 rollers are supplied with metal tubes only. Steel tubing is low-carbon steel, AISI 1010-1015, electrically welded. Many of these rollers can also be supplied with stainless steel or aluminum tubes on special order.
Check with factory for availability.

Shaft
Diameter: .250
Hexagonal: .312, .437 and .687

Standard shaft metal is unplated, low-carbon steel.

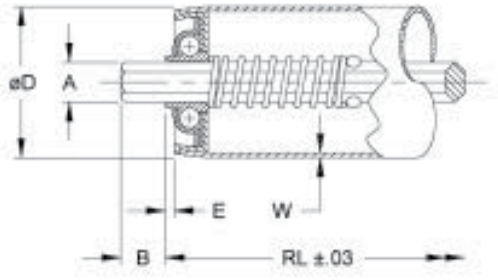
Application
Series 1200 rollers are widely used in gravity and powered conveyors, packaging machinery, storage systems and cargo handling equipment.

These rollers have been designed to provide maximum value in terms of load capacity versus cost.

CONVEYOR ROLLERS

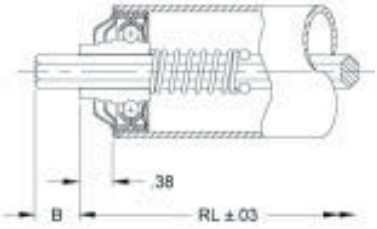
Metal Conveyor Rollers - Series 1200

Metal Conveyor Rollers
Series 1200



Note: For Hex shafts, "A" dimension indicates flat-to-flat measurement.

* Heavy Wall Tube - See Tubes C66 and G66



(Typical RL=BF–.12)

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Bearing	1.206.___.___-	.75	.035	.11	.250 dia		Steel	Zinc Plated	No grease or oil
	1.210.___.___-	1.00	.049	.06	.250 dia		Steel	Zinc Plated	No grease or oil
	1.211.___.___-	1.00	.049	.06	.312 hex		Steel	Zinc Plated	Lightly oiled
	1.212.___.___-	1.38	.049	.17	.250 dia		Steel	Zinc Plated	Lightly greased
	1.213.___.___-	1.38	.049	.17	.312 hex		Steel	Zinc Plated	Greased
	1.220.___.___-	1.90	.065	.11	.437 hex		Steel	Zinc Plated	Greased
	1.223.___.___-	1.90	0.65	.11	.437 hex		Steel	Zinc Plated	Lightly oiled
	1.226.___.___-	2.50	.120	.38	.687 hex		Steel	Zinc Plated	See Dwg. above, Greased
Tube	_.___.A18.___-	.75	.035				Aluminum	Anodized	
	_.___.A25.___-	1.00	.049				Aluminum	Anodized	
	_.___.G25.___-	1.00	.049				Steel	Galvanized	
	_.___.G36.___-	1.38	.049				Steel	Galvanized	
	_.___.S36.___-	1.38	.049				Stainless	Polished	
	_.___.R08.___-	1.38	.049				Steel	Galvanized	1 variable groove
	_.___.R49.___-	1.38	.049				Steel	Galvanized	2 variable grooves
	_.___.A48.___-	1.90	.065				Aluminum	None	
	_.___.R32.___-	1.90	.065				Aluminum	None	Soft PVC sleeve
	_.___.C48.___-	1.90	.065				Steel	None	
	_.___.G48.___-	1.90	.065				Steel	Galvanized	
	_.___.Z16.___-	1.90	.065				Steel	Galvanized	1 variable groove
	_.___.Z12.___-	1.90	.065				Steel	Galvanized	2 variable grooves
	_.___.J92.___-	1.90	.065				Steel	Mill	Soft PVC sleeve
	_.___.J73.___-	1.90	.065				Steel	Mill	Soft PVC sleeve w/1 variable groove
	_.___.P53.___-	1.90	.065				Steel	Galvanized	Soft PVC sleeve w/2 variable grooves
	_.___.P21___-	1.90	.065				Steel	Galvanized	Polyurethane sleeve
	_.___.P50.___-	1.90	.065				Steel	Galvanized	Polyurethane sleeve w/1 variable groove
	_.___.S48.___-	1.90	.065				Stainless	Polished	
	_.___.C66.___-	2.50	.120				Steel	None	See Dwg. above

Refer to Grooved Roller diagram on page 90 for indicating groove locations

CONVEYOR ROLLERS

Metal Conveyor Rollers - Series 1200

Metal Conveyor Rollers Series 1200

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Tube	_._____.P05._____-	2.50	.120				Steel	None	2 variable grooves
	_._____.G66._____-	2.50	.120				Steel	Galvanized	See Dwg above
	_._____.L06._____-	2.50	.120				Steel	Galvanized	2 variable grooves
	Refer to Grooved Roller diagram on page 90 for indicated grooved location(s)								
Shaft	_._____.C02-			.250 dia	.75	Steel	None	Threaded 1/4-20	
	_._____.C05-			.250 dia	.56	Steel	None	Spring-loaded	
	_._____.C22-			.312 hex	.56	Steel	None	Spring-loaded	
	_._____.C38-			.437 hex	.06	Steel	None	Tapped 5/16-18x5/8D	
								(removable)	
	_._____.C41-			.437 hex	.56	Steel	None	Spring-loaded	
	_._____.C66-			.687 hex	.75	Steel	None	Spring-loaded	

Series 1200 roller load capacity in lbs.	Tube Dia. In. Material Gauge Shaft Dia. RL Inches	0.75 Alu 20 0.25	1 Steel 18 .25/.312	1 Alu 18 .25/.312	1.38 Steel 18 0.312	1.9 Alu 16 0.437	1.9 Steel/SS 16 0.437	2.5 Steel 11 .687
	4	15	25	20	65	100	225	600
	8	15	25	20	65	100	225	600
	12	15	25	20	65	100	225	600
	16	15	25	20	65	100	225	600
	20	10	25	20	65	90	225	600
	24	10	25	20	65	90	225	600
	28	8	20	15	65	75	225	500
	32	5	15	10	60	75	225	500
	36	2	10	5	60	60	194	400
	40		5	3	40	60	110	350
	44		5	3	30	40	70	300
	48		5	3	10	30	56	300

To order, use the following reference to form your ten-digit part number:

1.206.A18.C02-14.88"RL

- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

CONVEYOR ROLLERS

Metal Conveyor Rollers - Series 1200

Metal Conveyor Rollers Series 1200

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Diameter	Spring Loaded	Fixed	Loose Shaft/No Shaft
0.75	2.50	2.00	2.00
1.00	3.00	2.00	2.00
1.38	3.50	2.00	2.00
1.90	3.88	2.00	2.00
2.50	5.25	3.25	2.75

Minimum Groove Dimensions (all dimensions in inches)

Diameter	Minimum X & U Dimension	Minimum Y & V Dimension
1.38	.83	1.25
1.90	1.03	1.25
2.50	1.60	1.25
Material		Maximum X & Y or U & V
Stainless		Must not exceed 4.50

Sleeve Materials (all dimensions in inches)

Material	Description
Soft PVC	Hardness 63 shore A, thickness .08, Gray
Polyurethane	Hardness 80 shore A, thickness .12, Orange

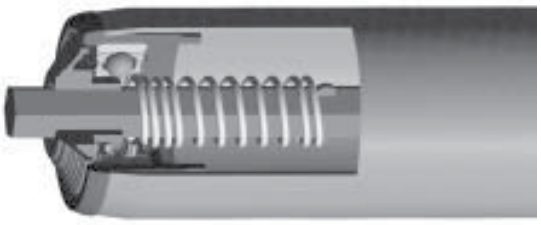
Speed Ratings

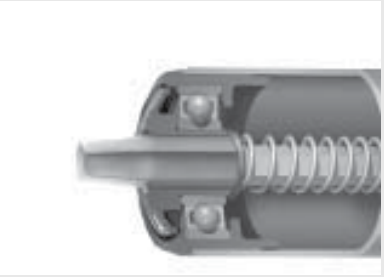
Bearing Type	Maximum Recommended Conveyor Speed
Commercial	150 fpm

CONVEYOR ROLLERS

Heavy Duty Conveyor Roller - Series 1450

Heavy Duty Conveyor Roller Series 1450





Bearings

Balls: Precision ground chrome alloy steel. 6205ZZ precision bearings.

Conforming to ABEC-1 industry standards, they provide virtually infinite life in almost every conveyor application.

The bearing housings are made of either black polyamide 6 (Nylon) with a yellow polyamide shield, or conductive molded polypropylene with a polyamide shield. The sealing arrangement protects the ball bearings against coarse dust. Additionally, the use of technopolymer parts insures low noise operation.

Tube

Diameters (inch) 2.50" & 3.50"

The housing is swaged and locked in place in the roller tube. Smooth, radiused roller ends facilitate easy transfer of conveyed good, eliminating any possibility of snagging or scraping sensitive surfaces. The steel tubes have a wall thickness of .120" (11 gauge) and are supplied in either galvanized or mill finish.

Shaft

Diameter: .787" (20mm)
Hexagonal: .687" straight hex & .687" patented Taperhex

Shafts can be supplied with the sizes listed above and can be spring loaded or end drilled and tapped.

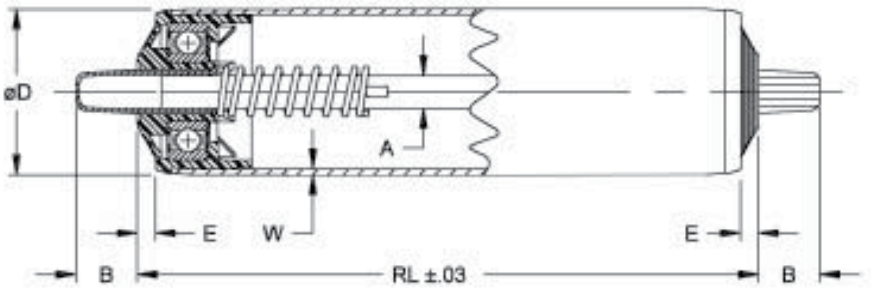
Application

This roller is suitable for conveying heavy items, particularly pallets and containers. The load capacity can be up to 1,124 lbs. (depending on conveyor width and speed).

CONVEYOR ROLLERS

Heavy Duty Conveyor Roller - Series 1450

Heavy Duty
Conveyor Roller
Series 1450



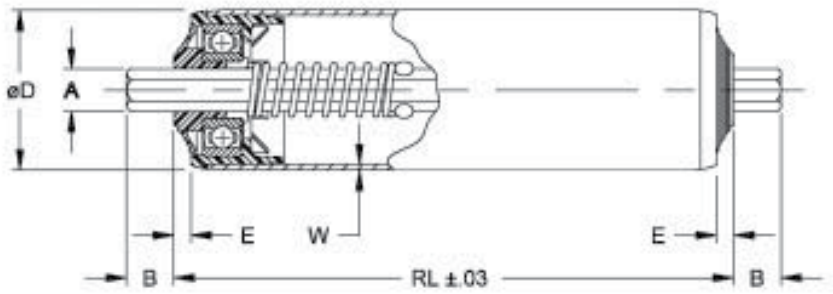
Note: For Hex shafts, "A" dimension indicates flat-to-flat measurement.

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Bearing	1.462.___.___-	2.50	0.120	0.19	.687 hex		Polypropylene	Black	6205ZZ
	1.465.___.___-	2.50	0.120	0.19	.687 taperhex		Polypropylene	Black	6205ZZ
	1.45Z.___.___-	3.50	0.120	0.19	.687 hex		Nylon	Black	6205ZZ
	1.455.___.___-	3.50	0.120	0.19	.787 dia		Nylon	Black	6205ZZ
Tube	_.___.P08.___-	2.50	0.120				Steel	Mill	
	_.___.P09.___-	2.50	0.120				Steel	Galvanized	
	_.___.J8B.___-	3.50	0.120				Steel	Mill	
Shaft	_.___.___.W54-				.687 hex	0.75	Steel	None	Spring loaded.
									Use with bearing 1.462
	_.___.___.G30-				.687 hex	0.75	Steel	None	Spring loaded.
									Use with bearing 1.45Z
	_.___.___.D45-				.687 Taperhex	1.00	Steel	None	Use for lengths of
									6.09" to 11.99"
	_.___.___.Y69-				.687 Taperhex	1.00	Steel	None	Use for lengths of
									12.00" to 88.87"
	_.___.___.P20-				.787 dia	0.06	Steel	None	Tapped 1/2-13 x .75 deep, fixed

CONVEYOR ROLLERS

Heavy Duty Conveyor Roller - Series 1450

Heavy Duty Conveyor Roller Series 1450



Load Capacity in lbs., based on a conveyor speed of 400 fpm

Tube Dia Shaft Dia. RL Inches	2.50 .687 hex	2.50 .687 Taperhex	3.50 .687 hex	3.50 .787 dia
8	800	900	1124	1124
12	800	900	1124	1124
16	800	900	1124	1124
24	800	900	1124	1124
32	800	900	1124	1124
40	675	900	913	1124
48	575	900	771	1122
55	512	836	682	1000

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Shaft

Part Number	Minimum Roller Length
W54	4.88
D45	6.09
Y69	12.00
P20	3.00
000	3.00

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Precision	500 fpm

To order, use the following reference to form your ten-digit part number:

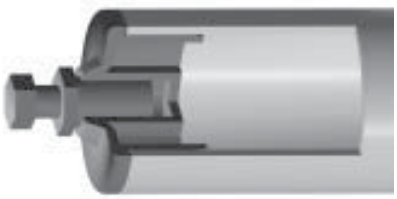
1.462.P09.W54-14.88"RL

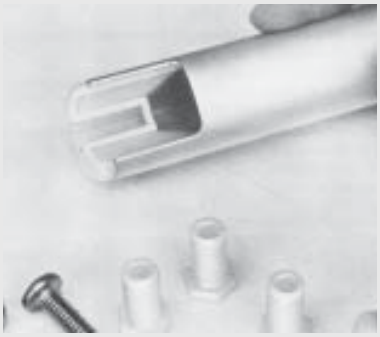
Bearing Part No.
Tube Part No.
Shaft Part No.
15" between frame

CONVEYOR ROLLERS

Journal Bearing Conveyor Rollers - Series 1500

Journal Bearing
Conveyor Rollers
Series 1500





Bearings

Journal

Series 1500 rollers have been designed to operate without lubrication. However it is true with all journal bearing materials operating without lubrication, some wear will be experienced over long periods of time.

To insure the highest level of performance and maximum life, initial lubrication is recommended. A few drops of oil applied at installation assists seating and allows a good wear resistant bearing-to-shaft match to form. Initial lubrication can increase the life of the bearings up to ten times their unlubricated lifetime.

Tube

Diameters (inch) 1.12 (1.18), 1.90, 2.50, ***3.50***

A wide selection of tube material is available for this series. Selection is dependent upon application but where loads are light, PVC is recommended for maximum economy.

Shaft

Stub shaft

The design is based on the use of molded nylon stub shafts which are bolted to the conveyor frame and which act as cantilevered shafts. The end bearings of the roller engage the stub shafts and loads are transmitted through the roller to the stub shafts and frame. Molded of acetal plastic, the end bearings are unusually quiet in operation. Acetal bearings running on nylon stub shafts have a very low coefficient of friction, with excellent operating life.

Application

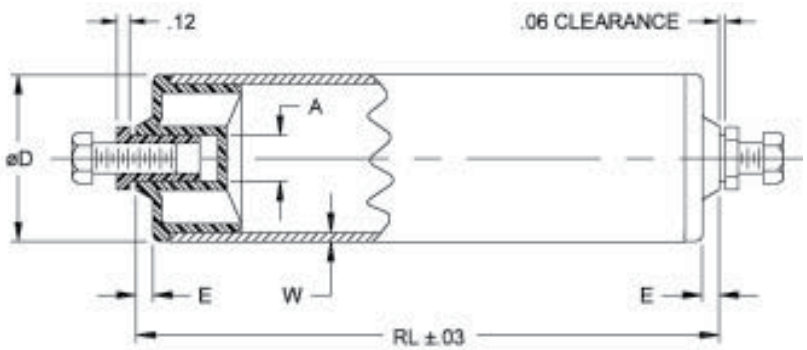
Typical applications include gravity conveyors in meat and dairy processing plants, and rollers for dish and tray conveyors in commercial kitchens.

Non-Standard

CONVEYOR ROLLERS

Journal Bearing Conveyor Rollers - Series 1500

Journal Bearing
Series 1500



(Typical RL=BF–.37)

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Bearing	1.505.___.___-	1.12	.050	.08	.380 dia		Acetal	White	Use A31, V31
	1.519.___.___-	1.90	.065	.19	.510 dia		Nylon Housing	Black	
	1.521.___.___-	1.90	.110	.19	.510 dia		Nylon Housing	White	Acetal Bearing
	1.525.___.___-	2.50	.065	.19	.510 dia		Nylon Housing	Black	Acetal Bearing
	1.527.___.___-	2.50	.125	.19	.510 dia		Nylon Housing	Black	Acetal Bearing
	1.536.___.___-	3.50	.280	.19	.510 dia		Nylon Housing	Black	Acetal Bearing
Tube	_.___.A31.___-	1.12	.050				Aluminum	Anodized	
	_.___.V31.___-	1.18	.070				P.V.C.	Gray	
	_.___.A49.___-	1.90	.065				Aluminum	None	
	_.___.G49.___-	1.90	.065				Steel	Galvanized	
	_.___.S49.___-	1.90	.065				Stainless	Polished	
	_.___.V50.___-	1.90	.110				P.V.C.	Gray	
	_.___.R13.___-	1.90	.110				P.V.C.	Gray	Soft PVC Sleeve
	_.___.G64.___-	2.50	.065				Steel	Galvanized	
	_.___.V64.___-	2.50	.125				P.V.C.	Gray	
	_.___.***V75.***___-	3.50	.280				P.V.C.	Gray	
Shaft	_.___.___.N89-				.370 dia	.12	Nylon	None	1/4-20 x 3/4 SS
									screw supplied
	_.___.___.N90-				.500 dia	.12	Nylon	None	5/16-18 x 7/8
									SS screw supplied

Note: Series 1500 rollers mount by use of stub shaft and screw. When ordering, roller length should be specified as .37" less than the distance between the mounting rails to insure sufficient clearance.

*When ordering spare parts: N89-P102, N064; N90-P087, N219.

Non-Standard

CONVEYOR ROLLERS

Journal Bearing Conveyor Rollers - Series 1500

Journal Bearing
Series 1500

	Tube Dia. In. Material Gauge Shaft Dia. RL Inches	1.12 Alu 18 ALL	1.18 PVC 16 ALL	1.9 Alu 16 ALL	1.9 Steel 16 ALL	1.9 SS 16 ALL	1.9 PVC ALL	2.5 PVC 11 ALL	2.5 Steel 16 ALL	3.5 PVC ALL
Series 1500 roller load capacity in lbs.	8	75	60	75	100	100	75	100	100	100
	12	60	40	60	80	80	60	80	80	80
	16	30	25	30	75	75	30	75	75	75
	20	20	10	20	60	60	20	60	60	60
	24	10	5	10	50	50	10	50	50	50
	28				30	30		30	30	30
	32				15	15		15	15	15

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

		Stub Shaft Only
Series 1500 rollers	All Diameters	2.75"

Sleeve Materials (all dimensions in inches)

	Material	Description
Series 1500 rollers	Soft PVC	Hardness 63 shore A, thickness .08, Gray

Speed Ratings

	Bearing Type	Maximum Recommended Conveyor Speed
Series 1500 rollers	Journal	15 fpm – gravity only

To order, use the following reference to form your ten-digit part number:

1.505.A31.N89-14.63"RL

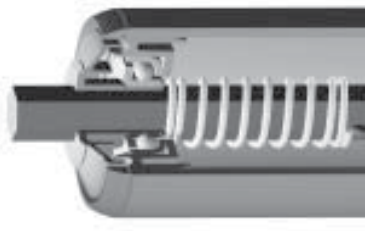
Bearing Part No.
Tube Part No.
Shaft Part No.
15" between frame

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Conveyor Rollers Series 1700

(commercial, stainless steel and precision bearings available)



Bearing

Balls: Commercial, Precision (6002) or Stainless Steel

All three styles of bearings are protected against the entry of dust and dirt by a special labyrinth seal design; the molded seal being configured to eject water in areas where moisture is a consideration.

Where speeds are low and cost considerations are paramount, use of commercial grade bearings is recommended. For higher speed applications where both noise and longevity are important parameters, precision bearings are the right choice. Although load carrying capacities are reduced when compared to other types, stainless steel bearings provide an extra measure of protection against corrosion and are frequently specified in food handling and washdown applications.

Tube

Diameters (inch). 1.38, 1.90, ***50mm***, 2.50, ***3.15***, ***3.50***

This series makes use of a resilient shock absorbing plastic housing which is swaged and locked in place in the roller tube. Smooth, radiused roller ends facilitate easy transfer of conveyed goods, eliminating any possibility of snagging or scraping sensitive surfaces.

Some sizes are also available with stainless steel, PVC, polyethylene and aluminum tubes. Please check factory for availability.

Shaft

Diameter: .500", ***12mm, 17mm***

Hexagonal: .437"

Shaft materials include carbon steel and stainless steel in a variety of sizes and mounting types.

Application

This is the universal roller for virtually every conveying application. Several alternate bearing designs are available providing users with a wide choice of load and speed capabilities. This versatile arrangement assures maximum cost effectiveness while providing unlimited design flexibility. Typical applications include gravity and powered conveyors.

Non-standard

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

	Part Number	D	W	E	A	B	Material	Finish	Remarks
Commercial Bearings	1.701.___.___-	1.90	0.065	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.702.___.___-	1.90	0.065	0.19	.500 dia		Nylon	Black	Commercial bearings
	1.704.___.___-	1.90	0.110	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.705.___.___-	1.90	0.110	0.19	.500 dia		Nylon	Black	Commercial bearings
	1.7AA.___.___-	50mm	1.5mm	0.19	8mm dia		Nylon	Black	Commercial bearings
	1.7AE.___.___-	50mm	1.5mm	0.19	11 hex		Nylon	Black	Commercial bearings
	1.7AC.___.___-	50mm	1.5mm	0.19	12mm dia		Nylon	Black	Commercial bearings
	1.707.___.___-	2.50	0.083	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.708.___.___-	2.50	0.083	0.19	.500 dia		Nylon	Black	Commercial bearings
	1.710.___.___-	2.50	0.125	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.711.___.___-	2.50	0.125	0.19	.500 dia		Nylon	Black	Commercial bearings
	1.713.___.___-	3.15	0.083	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.714.___.___-	3.15	0.083	0.19	.500 dia		Nylon	Black	Commercial bearings
	1.716.___.___-	3.50	0.280	0.19	.437 hex		Nylon	Black	Commercial bearings
	1.717.___.___-	3.50	0.280	0.19	.500 dia		Nylon	Black	Commercial bearings
Stainless Bearings	1.750.___.___-	1.90	0.065	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.742.___.___-	1.90	0.065	0.19	.437 hex		Nylon	Black	Stainless bearings w/food grade grease
	1.751.___.___-	1.90	0.065	0.19	.500 dia		Nylon	Black	Stainless bearings
	1.743.___.___-	1.90	0.065	0.19	.500 dia		Nylon	Black	Stainless bearings w/food grade grease
	1.753.___.___-	1.90	0.110	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.744.___.___-	1.90	0.110	0.19	.437 hex		Nylon	Black	Stainless bearings w/food grade grease
	1.754.___.___-	1.90	0.110	0.19	.500 dia		Nylon	Black	Stainless bearings
	1.745.___.___-	1.90	0.110	0.19	.500 dia		Nylon	Black	Stainless bearings w/food grade grease
	1.7FX.___.___-	50mm	1.5mm	0.19	11 hex		Nylon	Black	Stainless bearings
	1.7FV.___.___-	50mm	1.5mm	0.19	12mm dia		Nylon	Black	Stainless bearings
	1.756.___.___-	2.50	0.083	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.746.___.___-	2.50	0.083	0.19	.437 hex		Nylon	Black	Stainless bearings w/food grade grease
	1.757.___.___-	2.50	0.083	0.19	.500 dia		Nylon	Black	Stainless bearings
	1.747.___.___-	2.50	0.083	0.19	.500 dia		Nylon	Black	Stainless bearings w/food grade grease
	1.759.___.___-	2.50	0.125	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.748.___.___-	2.50	0.125	0.19	.437 hex		Nylon	Black	Stainless bearings w/food grade grease
	1.760.___.___-	2.50	0.125	0.19	.500 dia		Nylon	Black	Stainless bearings
	1.749.___.___-	2.50	0.125	0.19	.500 dia		Nylon	Black	Stainless bearings w/food grade grease
	1.762.___.___-	3.15	0.083	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.763.___.___-	3.15	0.083	0.19	.500 dia		Nylon	Black	Stainless bearings
	1.765.___.___-	3.50	0.280	0.19	.437 hex		Nylon	Black	Stainless bearings
	1.766.___.___-	3.50	0.280	0.19	.500 dia		Nylon	Black	Stainless bearings

Non-standard

INTERROLL

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

Precision Bearings

Part Number	D	W	E	A	B	Material	Finish	Remarks
1.457.___.___-	1.38	0.049	0.19	.312 hex		Nylon	Black	6001ZZ
1.478.___.___-	1.38	0.049	0.19	.471 dia		Nylon	Black	6001ZZ
1.770.___.___-	1.90	0.065	0.19	.437 Taperhex	Nylon	Black	6002ZZ	
1.771.___.___-	1.90	0.110	0.19	.437 Taperhex	Nylon	Black	6002ZZ	
1.772.___.___-	1.90	0.065	0.19	.437 hex		Nylon	Black	6002-2RS
1.775.___.___-	1.90	0.065	0.19	.437 hex		Nylon	Black	6002ZZ
1.776.___.___-	1.90	0.065	0.19	.500 dia		Nylon	Black	6002ZZ
1.778.___.___-	1.90	0.110	0.19	.437 hex		Nylon	Black	6002ZZ
1.779.___.___-	1.90	0.110	0.19	.500 dia		Nylon	Black	6002ZZ
*1.7L9.*___.___-	50mm	1.5mm	0.19	11 hex		Nylon	Black	6002ZZ
*1.7L7.*___.___-	50mm	1.5mm	0.19	12mm dia		Nylon	Black	6002ZZ
*1.75A.*___.___-	50mm	1.5mm	0.19	17mm dia		Nylon	Black	6003ZZ
1.781.___.___-	2.50	0.083	0.19	.437 hex		Nylon	Black	6002ZZ
1.774.___.___-	2.50	0.083	0.19	.437 hex		Nylon	Black	6002-2RS
1.768.___.___-	2.50	0.083	0.19	.437 Taperhex	Nylon	Black	6002ZZ	
1.782.___.___-	2.50	0.083	0.19	.500 dia		Nylon	Black	6002ZZ
1.784.___.___-	2.50	0.125	0.19	.437 hex		Nylon	Black	6002ZZ
1.769.___.___-	2.50	0.125	0.19	.437 Taperhex	Nylon	Black	6002ZZ	
1.785.___.___-	2.50	0.125	0.19	.500 dia		Nylon	Black	6002ZZ
*1.787.*___.___-	3.15	0.083	0.19	.437 hex		Nylon	Black	6002ZZ
*1.788.*___.___-	3.15	0.083	0.19	.500 dia		Nylon	Black	6002ZZ
*1.790.*___.___-	3.50	0.280	0.19	.437 hex		Nylon	Black	6002ZZ
*1.791.*___.___-	3.50	0.280	0.19	.500 dia		Nylon	Black	6002ZZ

Tube

_.___.G38.___-	1.38	0.049		Steel	Galvanized	use with 1.457 bearing only
_.___.K32.___-	1.38	0.049		Steel	Galvanized	use with 1.478 bearing only - no shield
_.___.S38.___-	1.38	0.049		Stainless	Polished	use with 1.457 bearing only
_.___.F31.___-	1.90	0.065		Steel	Galvanized	Anti static option
_.___.R81.___-	1.90	0.065		Steel	Galvanized	
_.___.G10.___-	1.90	0.065		Steel	Galvanized	w/Foam insert
_.___.R82.___-	1.90	0.065		Stainless	Polished	
_.___.H74.___-	1.90	0.065		Stainless	Polished	Anti-static option
_.___.P60.___-	1.90	0.065		Stainless	Polished	1 variable groove & anti-static option
_.___.P61.___-	1.90	0.065		Stainless	Polished	2 variable grooves & anti-static option
_.___.K35.___-	1.90	0.065		Steel	Galvanized	1 variable groove & anti static option

Non-standard

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

Tube

Part Number	D	W	E	A	B	Material	Finish	Remarks
_._____M07._____-	1.90	0.065				Steel	Galvanized	2 variable grooves & anti static option
_._____K97._____-	1.90	0.065				Steel	None	2 variable grooves & anti static option
_._____K38._____-	1.90	0.065				Steel	Galvanized	PVC sleeve
_._____J74._____-	1.90	0.065				Steel	Galvanized	PVC sleeve w/1 variable groove
_._____R56._____-	1.90	0.065				Steel	Galvanized	PVC sleeve w/2 variable grooves
_._____J76._____-	1.90	0.065				Steel	Galvanized	Polyurethane sleeve
_._____J77._____-	1.90	0.065				Steel	Galvanized	Polyurethane sleeve w/1 variable groove
_._____J78._____-	1.90	0.065				Steel	Galvanized	Polyurethane sleeve w/2 variable grooves
_._____H56._____-	1.90	0.065				Steel	Galvanized	2 standard grooves & anti static option
_._____H57._____-	1.90	0.065				Steel	Galvanized	Polyurethane sleeve w/2 standard grooves & anti static option
_._____H58._____-	1.90	0.065				Steel	Galvanized	PVC sleeve w/2 standard grooves
_._____H59._____-	1.90	0.065				Stainless	Polished	2 standard grooves & anti static option
_._____H60._____-	1.90	0.065				Stainless	Polished	PVC sleeve w/2 standard grooves & anti static option
_._____H61._____-	1.90	0.065				Stainless	Polished	Polyurethane sleeve w/2 standard grooves & anti static option
_._____R79._____-	1.90	0.065				Aluminum	None	Anti static option
_._____J44._____-	1.90	0.110				Polyethylene	Yellow	Resists litho ink build up, max length is 26" RL
_._____R83._____-	1.90	0.110				PVC	Gray	
_._____M10._____-	1.90	0.110				PVC	Gray	2 variable grooves
_._____P59._____-	1.90	0.110				PVC	Gray	1 variable groove
_._____*G50.*_____-	50mm	1.5mm				Steel	Galvanized	Anti static option
_._____*H53.*_____-	50mm	1.5mm				Steel	Galvanized	1 variable groove & anti static option
_._____*H5.*_____-	50mm	1.5mm				Steel	Galvanized	2 variable grooves & anti static option
_._____*H5.*_____-	50mm	1.5mm				Steel	Galvanized	2 standard grooves & anti static option
_._____W71._____-	2.50	0.083				Steel	Galvanized	Anti static option
_._____B20._____-	2.50	0.083				Steel	Galvanized	1 variable groove & anti static option
_._____K10._____-	2.50	0.083				Steel	Galvanized	2 variable grooves & anti static option
_._____R84._____-	2.50	0.125				PVC	Gray	
_._____*W73.*_____-	3.15	0.083				Steel	None	
_._____*W72.*_____-	3.15	0.083				Steel	Galvanized	
_._____*R78.*_____-	3.50	.280				PVC	Gray	

Non-standard

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

Shaft

Part Number	D	W	E	A	B	Material	Finish	Remarks
_._____.___.Z62-				.312 hex	0.56	Steel	None	Spring-loaded
_._____.___.EAB-				.312 dia (8mm)	0.56	Steel	None	Spring-loaded
_._____.___.M70-				.437 hex	0.56	Steel	None	Spring-loaded
_._____.___.M71-				.437 hex	0.56	Steel	None	Fixed ends
_._____.___.X62-				.437 hex	0.56	Stainless	None	Spring-loaded
_._____.___.C38-				.437 hex	0.56	Steel	None	Tapped 5/16-18 x 5/8 Deep, removable
_._____.___.S38-				.437 hex	0.56	Stainless	None	Tapped 5/16-18 x 5/8 Deep, removable
_._____.___.U05-				.437 Taperhex	0.71	Steel	Brass flash plate	7.00" - 48.00"RL
_._____.___.U64-				.437 Taperhex	0.71	Steel	Brass flash plate	3.88" - 7.00" RL
_._____.___.U79-				.437 Taperhex	0.71	Steel	Brass flash plate	>48.00"RL
_._____.___.***Y39-***				.471 dia (12mm)	0.06	Steel	None	Tapped 5/16-18 x 5/8
								Deep, fixed
_._____.___.***LAE-***				.471 dia (12mm)	0.06	Steel	None	Tapped M8 x 15mm Deep, fixed
_._____.___.M72-				.500 dia	1.00	Steel	None	1/2-13 threaded, removable
_._____.___.M73-				.500 dia	0.06	Steel	None	Tapped 5/16-18 x 5/8 Deep, fixed
_._____.___.M74-				.500 dia	1.00	Steel	None	1/2-13 threaded, fixed
_._____.___.M75-				.500 dia	0.56	Steel	None	Spring-loaded
_._____.___.L37-				.500 dia	0.06	Stainless	None	Tapped 5/16-18 x 5/8 Deep, fixed
_._____.___.L57-				.500 dia	0.56	Stainless	None	Spring-loaded
_._____.___.***G31-***				.668 dia (17mm)	0.06	Steel	None	Tapped 3/8 x 16 x 3/4 Deep, fixed

Non-standard

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

Series 1700 commercial bearing load capacity in lbs.

Tube Dia. In. Material Gauge Shaft Dia. RL Inches	1.9 + 50mm Steel/SS 16 .437	1.9 + 50mm Steel/SS 16 .500	1.9 PVC .437	2.5 Steel 14 .437	2.5 Steel 14 .500	2.5 PVC .437	2.5 PVC .500	3.15 Steel 14 437	3.15 Steel 14 0.500	3.5 PVC .437	3.5 PVC .500
8	360	360	200	360	360	360	360	360	360	360	360
12	360	360	140	360	360	270	270	360	360	270	270
16	360	360	75	360	360	164	164	360	360	165	165
24	347	360	25	333	360	79	79	324	360	80	80
32	263	311	20	250	293	45	45	241	279	45	45
40	200	200		203	236	27	27	191	223	25	25
48	115	115		104	200	18	18	160	187	20	20
56	70	70		124	124			137	160		
62	47	47		83	83			119	140		

Minimum Roller Length for Non-Grooved Rollers (all dimensions in inches)

Diameter	Spring Loaded	Fixed	Loose Shaft/No Shaft
All except 1.38	4.25	2.50	2.25
1.38	3.50	2.25	2.25

Minimum Groove Dimensions (all dimensions in inches)

Diameter	Minimum X & U Dimension	Minimum Y & V Dimension
1.38	1.27	1.25
1.90	1.42	1.25
2.50	1.42	1.25

Material	Maximum Y & V or U & V Dimension
Stainless	Must not exceed 4.50
PVC	Must not exceed 4.50

Standard groove location = x = 2.15", y = 1.25"

Sleeve Materials (all dimensions in inches)

Material	Description
Soft PVC	Hardness 63 shore A, Thickness .08, Gray
Polyurethane	Hardness 80 shore A, Thickness .12, Orange

Speed Ratings

Series 1700 rollers

Bearing type	Maximum Permissible Conveyor Speed
Commercial	225 fpm
Stainless Steel	225 fpm
Precision	400 fpm

To order, use the following reference to form your ten-digit part number:

1.701.R81.M70-14.88" RL

- 1.701 — Bearing Part No.
- R81 — Tube Part No.
- M70 — Shaft Part No.
- 14.88" RL — 15" between frame

CONVEYOR ROLLERS

Universal Conveyor Rollers - Series 1700

Universal Rollers
Series 1700

	Tube Dia. In. Material Gauge Shaft Dia. RL Inches	1.9 + 50mm Steel/SS 16 .437	1.9 + 50mm Steel/SS 16 .500	1.9 PVC .437	2.5 Steel 14 .437	2.5 Steel 14 .500	2.5 PVC .437	2.5 PVC .500	3.15 Steel 14 .437	3.15 Steel 14 .500	3.5 PVC .437	3.5 PVC .500
Series 1700 stainless steel bearing load capacity in lbs.	8	180	180	200	180	180	180	180	180	180	180	180
	12	180	180	140	180	180	135	135	180	180	135	135
	16	180	180	75	180	180	82	82	180	180	83	83
	24	173	180	25	167	180	39	39	162	180	40	40
	32	132	155	20	125	146	23	23	162	180	40	40
	40	100	100		101	118	14	14	96	111	13	13
	48	57	57		52	100	9	9	80	93	10	10
	56	35	35		62	62			69	80		
	62	24	24		42	42			60	70		

	Tube Dia. In. Material Gauge Shaft Dia. RL Inches	1.38 Steel 18 .312/.471	1.9 + 50mm Steel/SS 16 .437	1.9 + 50mm Steel/SS 16 .500	1.9 PVC .437	2.5 Steel 14 .437	2.5 Steel 14 .500	2.5 PVC .437	2.5 PVC .500	3.15 Steel .437	3.15 Steel .500	3.5 PVC .437	3.5 PVC .500
Series 1700 precision bearing load capacity in lbs.	8	100	450	450	200	450	450	360	360	450	450	360	360
	12	100	450	450	140	450	450	270	270	450	450	270	270
	16	75	344	403	75	338	392	164	164	331	385	165	165
	24	75	230	270	25	223	259	79	79	216	250	80	80
	32	65	176	207	20	167	196	45	45	160	187	45	45
	40	60	144	169		135	158	27	27	128	149	25	25
	48	50	115	115		113	133	18	18	106	124	20	20
	56		70	70		99	115			90	106		
	62		47	47		83	83			79	92		

CONVEYOR ROLLERS

Precision Rollers - Series 1800

Precision Rollers
Series 1800
(precision bearings)

Bearing

Balls: Precision ground chrome alloy steel

Accuracy begins with the shielded deep-groove, chrome alloy, precision-ground ball bearings (ABEC-1). Cleanliness is insured by an external “dirtguard” with polyester felt contact seals which protects against contaminants. Axial play is eliminated by the use of bowed retaining rings on both ends of the shaft. Bearings are housed in a sintered iron housing produced to extremely “tight” tolerances for concentricity and fit.

Tube

Diameters (inch) ***2.00***, 2.50, ***3.00***, 3.50

Tubes are precision end-bored to assure proper housing fit and minimal runout.

Shaft

Diameter: ***.669***, .787, .984

Hexagonal: .437, .687

Two shafts are available; hex shafts are spring-loaded for typical mounting and for more precise applications, round shafts may be preferred. Round shafts are cold drawn steel with bearing seats precision-ground for accurate fit. Shaft ends can be milled, cross-drilled, tapped or threaded.

Application

Precise in every detail, these rollers are designed for heavy-duty applications requiring high load capacity and long life. These are well suited for high-speed powered installations where low noise levels are required. Typical applications include parts handling equipment, guided vehicles (AGV’s), transfer machines, high speed packaging lines and belt conveyors.

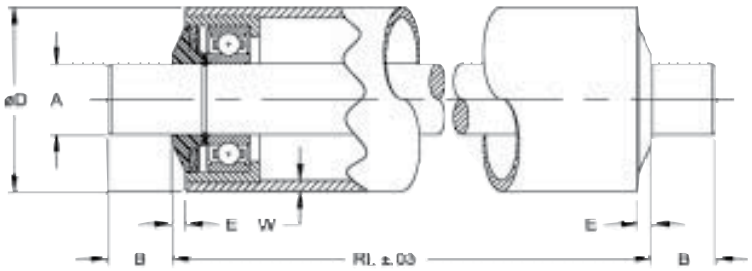
Non-standard

INTERROLL

CONVEYOR ROLLERS

Precision Rollers - Series 1800

Precision Rollers Series1800



(Typical RL = BF - .12)

	Part Number	D	W	E	A	B	Material	Bearing/Finish	Remarks
Bearing	***1.815*** .___.___-	***2.00***	.120	.19	.437 hex		Sintered	6203ZZ	Precision Bearings
	1.816 .___.___-	***2.00***	.120	.19	.669 dia		Sintered	6203ZZ	Precision Bearings
	1.817 .___.___-	***2.00***	.120	.19	.787 dia		Sintered	6204ZZ	Precision Bearings
									Use R94 tube
	1.825 .___.___-	2.50	.120	.19	.687 hex		Sintered	6205ZZ	Precision Bearings
	1.826. .___.___-	2.50	.120	.19	.787 dia		Sintered	6204ZZ	Precision Bearings
	1.827. .___.___-	2.50	.120	.19	.984 dia		Sintered	6205ZZ	Precision Bearings
	1.832 .___.___-	***3.00***	.180	.19	.687 hex		Sintered	6205ZZ	Precision Bearings
	1.835 .___.___-	***3.00***	.180	.19	.787 dia		Sintered	6204ZZ	Precision Bearings
	1.836.___.___-	***3.00***	.180	.19	.984 dia		Sintered	6205ZZ	Precision Bearings
	1.843 .___.___-	3.50	.180	.19	.687 hex		Sintered	6205ZZ	Precision Bearing
Tube	_.___.***R94.***___-	***2.00***	.120				Steel	None	Welded tubing use 1.817 bearing
	_.___.***R95.***___-	***2.00***	.120				Steel	Zinc-Plated	Welded tubing use 1.817 bearing
	_.___.***Z32.***___-	***2.00***	.120				Steel	None	Welded Tubing
	_.___.***Z33.***___-	***2.00***	.120				Steel	Zinc-Plated	Welded Tubing
	_.___.Z35.___-	2.50	.120				Steel	None	Welded Tubing
	_.___.Z36.___-	2.50	.120				Steel	Galvanized	Welded Tubing
	_.___.***Z39.***___-	***3.00***	.180				Steel	None	DOM
	_.___.Z64.___-	3.50	.180				Steel	None	Welded Tubing
Shaft	_.___.___.R60-				.437 hex	.56	Steel	None	Spring loaded
	_.___.___.C38-				.437 hex	.06	Steel	None	Tapped 5/16-18 x 5/8 deep, loose
	_.___.___.***D68-***				.669 dia	.06	Steel	None	Tapped 3/8-16 x 3/4 deep, fixed
	_.___.___.R62-				.687 hex	.75	Steel	None	Spring loaded
	_.___.___.C64-				.687 hex	.06	Steel	None	Tapped 3/8-16 x 3/4 deep, fixed
	_.___.___.B55-				.787 dia	.06	Steel	None	Tapped 3/8-16 x 3/4 deep, fixed
	_.___.___.R71-				.984 dia	.06	Steel	None	Tapped 5/16-18 x 3/4 deep, fixed

Note: For Hex shafts, “A” dimension indicates flat-to-flat measurement.
Non-standard

CONVEYOR ROLLERS

Precision Rollers - Series 1800

Precision Rollers Series 1800

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Series 1800 metal roller

Diameter	Spring Loaded	Fixed
2.00	4.75	2.88
2.50	5.25	2.88
3.00	5.25	2.88
3.50	5.25	2.88

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Precision	500 fpm

Series 1800 precision bearing load capacity in lbs.

Tube Dia. In. Material Gauge Shaft Dia. RL Inches	2 Steel 11 .437	2 Steel 11 .669	2 Steel 11 .787	2.5 Steel 11 .687	2.5 Steel 11 .787	2.5 Steel 11 .984	3 Steel 7 0.787	3.5 Steel 7 0.687	3.5 Steel 7 0.984
8	500	1013	1013	1013	1013	1013	1013	1013	1013
12	500	1013	1013	1013	1013	1013	1013	1013	1013
16	500	1013	1013	1013	1013	1013	1013	1013	1013
24	450	938	1013	1013	1013	1013	1013	1013	1013
32	350	738	774	774	1013	1013	774	1013	1013
36	250	527	533	533	1013	1013	533	1013	1013
40	175	378	383	383	797	797	383	797	797
44	140	281	284	284	590	590	284	590	590
48	100	214	216	216	450	450	216	450	450
52	80	167	169	169	351	351	169	351	351
60	50	108	108	108	225	225	108	225	225

To order, use the following reference to form your ten-digit part number:

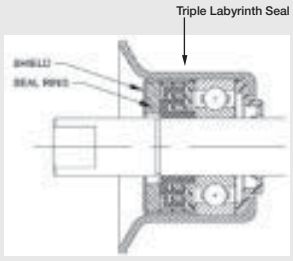
1.815.Z32.R60-14.88"RL

- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

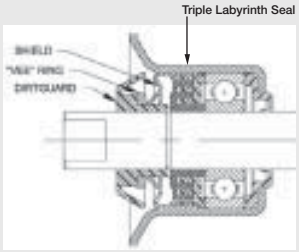
CONVEYOR ROLLERS

Heavy Duty Welded Conveyor Rollers - Series 1940, 1960

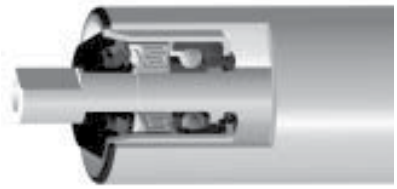
Heavy Duty Welded Conveyor Rollers Series 1940 Series 1960
(precision bearings)



Series 1.940 seal design



Series 1.960 seal design



Bearing
Balls: Precision ground chrome alloy steel
Series 1940 bearings are protected from contaminants by a series of elements as shown on left.

Series 1960 bearings utilize an additional dirtguard shield and seal. The shield, made of diecast zinc alloy, deflects large dirt particles from the bearing area. Smaller particles and liquids which work their way between the stationary dirtguard and the rotating steel shield are automatically ejected as the roller turns. The rubber “vee” ring maintains 360˚ contact with the steel shield, preventing loss of grease at the same time excluding dirt and water. A triple labyrinth seal and a seal provide an extra measure of protection for the bearings.

Tube
Diameters (inch) 2.50, 3.50, 4.00, ***5.00***
Designed for heavy-duty conveying applications, Series 1940 and 1960 rollers feature UNIBLOC welded end construction. Heavy gauge steel ends are permanently welded in place with weld seams continuous over a full 360°. Rollers are fitted with high quality precision ground ball bearings which are factory lubricated with SHELL ALVANIA EP2 grease.

Shaft
Diameter: .787
Available with milled flats, end drill and tap or threaded.

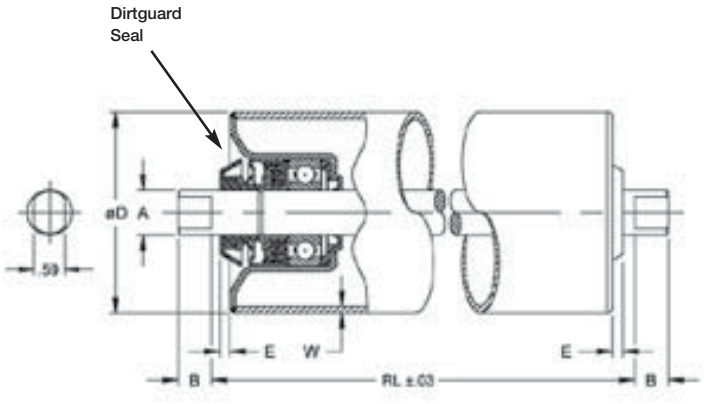
Application
Suitable for heavy duty palletizer applications as well as exposure to environmental elements such as bulk handling conveyors and foundry operations.

Non-standard

CONVEYOR ROLLERS

Heavy Duty Welded Conveyor Rollers - Series 1940, 1960

Heavy Duty
Welded Rollers
Series 1940
Series 1960

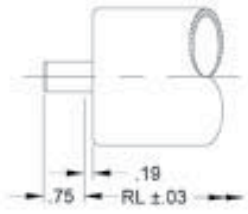


(Typical RL = BF)

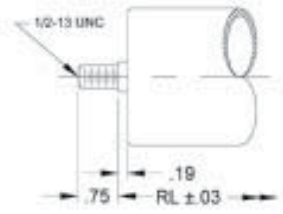
	Part Number	D	W	E	A	B	Material	Bearing/Finish	Remarks
Bearing	1.940._____-___-	**			.787 dia		Steel	6204ZZ	Without Dirtguard seal
	1.960._____-___-	**			.787 dia		Steel	6204ZZ	Dirtguard shown above
	1.941._____-___-	**			.787 dia		Steel	6204ZZ	Cantilever mounting
Tube	_._____.H19._____-	2.50	.120				Steel	Mill	
	_._____.H20._____-	3.50	.120				Steel	Mill	
	_._____.H21._____-	4.00	.134				Steel	Mill	
	_._____.***H22.***_____-	5.00	.134				Steel	Mill	
Shaft	_._____-_____.C70-			.19	.787 dia	.39	Steel		See drawing above
	_._____-_____.C71-			.19	.787 dia	.90	Steel		See drawing below
	_._____-_____.C72-			.19	.787 dia	.90	Steel		See drawing below
	_._____-_____.C73-			.19	.787 dia		Steel		See drawing below

Non-standard

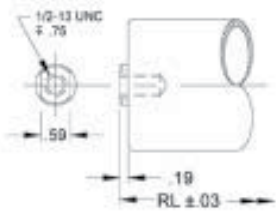
** Bearings may be used with any of the tubes listed above.



C71 Shaft (one end only)
For cantilever mounted rollers.



C72 Shaft (one end only)
Threaded end provides a quick mounting arrangement. **For cantilever mounted rollers.



C73 Shaft (both ends)
Tapped ends serve as conveyor rollermounts, and as a rigid spacer for frame assembly.

CONVEYOR ROLLERS

Heavy Duty Welded Conveyor Rollers - Series 1940, 1960

Heavy Duty
Welded Rollers
Series 1940
Series 1960

Series 1940/1960 precision bearing load capacity in lbs.

Tube Dia. In. Material Gauge Shaft Dia. RL Inches	2.5 Steel 11 .787	3.5 Steel 11 .787	4 Steel 10 .787	5 Steel 10 .787
8	1346	1346	1346	1346
16	1346	1346	1346	1346
24	1006	956	947	956
32	754	700	691	700
40	612	556	547	556
48	493	461	452	461
56	302	396	387	396
62	198	349	338	349
70	137	311	302	311
78	99	281	272	281

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Diameter	Fixed
2.50	4.88
3.50	4.88
4.00	4.88
5.00	5.50

Speed Ratings Rollers for Non-Grooved Rollers (all dimensions in inches)

Bearing Type	Maximum Recommended Conveyor Speed
Precision	500 fpm

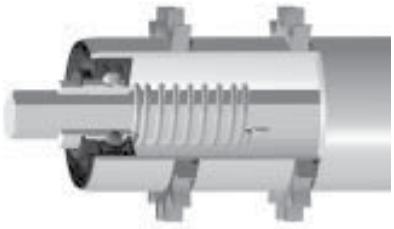
To order, use the following reference to form your ten-digit part number:

1.940.H20.C70-15.00"RL
- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

CONVEYOR ROLLERS

Sprocket Driven Rollers with Welded Construction - Series 3400, 3500

Sprocket Driven Rollers with Welded Construction
Series 3400
(precision bearings)
Series 3500
(commercial bearings)



Bearing

Series 3500 Commercial

Commercial grade steel ball bearings which are zinc plated for mild corrosion resistance.

Series 3400 Precision

Precision ground chrome alloy steel ball bearings 6203ZZ and 6205ZZ.

Tube

Diameters (inch).1.90, 2.50

Steel roller tube for 1.90" diameter is 16 gauge (.065) supplied in mill finish. Steel roller tube for 2.50" diameter is 11 gauge (.120) supplied in mill finish.

Shaft

Hexagonal: .437, .687

Standard shaft material is unplated low-carbon steel. For mounting convenience both .437 and .687 hex shafts can be supplied either spring-loaded for snap-in assembly, or with tapped ends for bolted construction.

Sprockets

1.90" diameter:

15 teeth - #50 chain
18 teeth - #40 Chain

2.50" diameter:

15 teeth - #60 chain
18 teeth - #50 chain

Application

Series 3400 and 3500 drive rollers provide a simple and economical means for building powered roller conveyors.

These drive rollers are available with either single or double sprockets. Sprockets are MIG welded with 360˚ continuous weld.

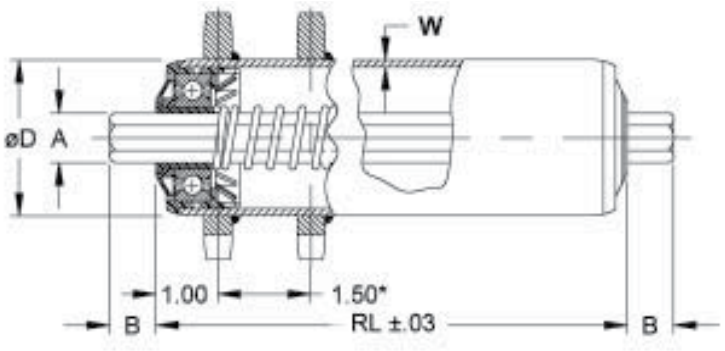
The double sprocket design is particularly well suited for heavy duty applications where short lengths of chain connect each roller to the next.

Single sprocket rollers, driven by a continuous chain that engages the sprocket teeth tangentially, are better suited for light duty applications.

CONVEYOR ROLLERS

Sprocket Driven Rollers with Welded Construction - Series 3400

Sprocket Driven Rollers Series 3400



(Typical RL = BF - .12)

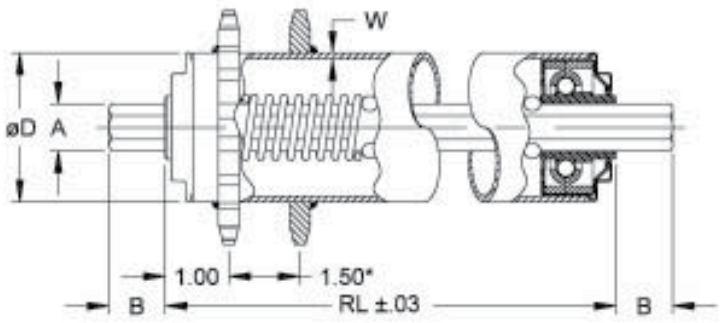
	Part Number	D	W	A	B	Material	Bearing/Finish	Remarks
Bearing	3.450.___.___-	1.90	.065	.437 hex		Sintered Iron	6203ZZ	Precision Bearing
	3.462.___.___-	2.50	.120	.687 hex		Sintered Iron	6205ZZ	Precision Bearing
Tube	_.___.J30.___-	1.90	.065			Steel	None	2 - #40 - 18 Sprockets
	_.___.P65.___-	1.90	.065			Steel	None	1 - #50 - 15 Sprocket
	_.___.H47.___-	1.90	.065			Steel	None	2 - #50 - 15 Sprockets
	_.___.M93.___-	2.50	.120			Steel	None	2 - #50 - 18 Sprockets
	_.___.P98.___-	2.50	.120			Steel	None	2 - #60 - 15 Sprockets
Shaft	_.___.___.C38-			.437 hex	.06	Steel	None	Tapped 5/16-18 x 5/8D
	_.___.___.V15-			.437 hex	.56	Steel	None	Spring-loaded
	_.___.___.W54-			.687 hex	.75	Steel	None	Spring-loaded
	_.___.___.C64-			.687 hex	.06	Steel	None	Tapped 3/8-16 x 3/4D

Note: For Hex shafts, “A” dimension indicates flat-to-flat measurement.

CONVEYOR ROLLERS

Sprocket Driven Rollers with Welded Construction - Series 3500

Sprocket Driven Rollers Series 3500



(Typical RL = BF - .12)

	Part Number	D	W	A	B	Material	Finish	Remarks
Bearing	3.520.___.___-	1.90	.065	.437 hex		Steel	Zinc-Plated	Commercial bearings
	3.525.___.___-	2.50	.120	.687 hex		Steel	Zinc-Plated	Commercial bearings
Tube	_.___.D42.___-	1.90	.065			Steel	None	1 - #40 - 18 Sprocket
	_.___.D43.___-	1.90	.065			Steel	None	2 - #40 - 18 Sprocket
	_.___.D44.___-	1.90	.065			Steel	None	1 - #50 - 15 Sprocket
	_.___.D46.___-	1.90	.065			Steel	None	2 - #50 - 15 Sprocket
	_.___.D61.___-	2.50	.120			Steel	None	1 - #50 - 18 Sprocket
	_.___.D67.___-	2.50	.120			Steel	None	2 - #50 - 18 Sprocket
	_.___.D68.___-	2.50	.120			Steel	None	1 - #60 - 15 Sprocket
	_.___.D69.___-	2.50	.120			Steel	None	2 - #60 - 15 Sprocket
Shaft	_.___.___.C38-			.437 hex	.06	Steel	None	Tapped 5/16-18 x 5/8D
	_.___.___.C41-			.437 hex	.56	Steel	None	Spring-loaded
	_.___.___.C64-			.687 hex	.06	Steel	None	Tapped 3/8-16 x 3/4D
	_.___.___.C66-			.687 hex	.75	Steel	None	Spring-loaded

Note: For Hex shafts, “A” dimension indicates flat-to-flat measurement.

To order, use the following reference to form your ten-digit part number:

3.525.D69.C66-14.88"RL

- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

CONVEYOR ROLLERS

Sprocket Driven Rollers with Welded Construction - Series 3400, 3500

Sprocket Driven Rollers Series 3400, 3500

	Tube Dia. In. Material Gauge Shaft Dia. Sprocket RL Inches	1.9 Steel 16 .437 #50 - 15	2.5 Steel 11 .687 #60 - 15	2.5 Steel 11 .687 #50 - 18
Series 3400 precision bearing roller load capacity in lbs.	8	675	800	800
	12	675	800	800
	16	675	800	800
	24	675	800	800
	32	403	600	600
	40	200	350	350
	48	115	190	190
	54	70	150	150
	62	47	120	120
	70	32	100	100

	Tube Dia. In. Material Gauge Shaft Dia. Sprocket RL Inches	1.9 Steel 16 .437 #40 - 18	1.9 Steel 16 .437 #50 - 15	2.5 Steel 11 .687 #60 - 15	2.5 Steel 11 .687 #50 - 18
Series 3500 commercial bearing roller load capacity in lbs.	8	225	225	600	600
	12	225	225	600	600
	16	225	225	600	600
	24	225	225	600	600
	32	225	225	300	500
	40	110	110	300	350
	48	56	56	300	300

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

	Diameter	Spring Loaded	Fixed	Loose Shaft/No Shaft
Series 3400 metal roller	1.90	4.25	3.75	3.75
	2.50	4.50	3.75	3.75

Minimum Roller Lengths for Non-Grooved Rollers

	Diameter	Spring Loaded	Fixed	Loose Shaft/No Shaft
Series 3500 metal roller	1.90	3.75	3.75	3.75
	2.50	5.25	3.75	3.75

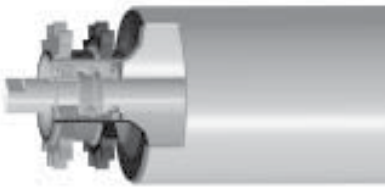
Speed Ratings

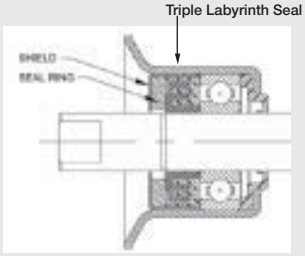
Bearing Type	Maximum Recommended Conveyor Speed
Precision – Series 3400	100 fpm
Commercial – Series 3500	60 fpm

CONVEYOR ROLLERS

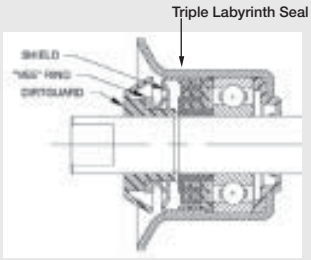
Heavy Duty Welded Drive Rollers - Series 3900

Heavy Duty
Welded
Drive Rollers
Series 3900





Series 3940 seal design



Series 3960 seal design

Bearing
Balls: Precision ground
Bearings are protected from contaminants by a series of elements. A zinc-plated steel shield deflects large dirt particles away from the bearing area. Behind this shield is an oil impregnated cellular plastic ring which acts as a wiping seal. A triple labyrinth seal provides further protection and a molded plastic back-seal effectively prevents grease loss.

Rollers are fitted with high quality precision ground ball bearings which are factory lubricated with SHELL ALVANIA EP2 grease.

Tube
Diameters (inch) 2.50, 3.50, 4.00, ***5.00***
The welded assembly is supplied in mill finish.

Shaft
Diameter: .787

Sprocket
All tube diameters:
15 teeth - #50 chain
18 teeth - #40 chain
The steel bearing housing includes two steel sprockets. The bearing housing is welded (360° continuous bead) to the steel tube.

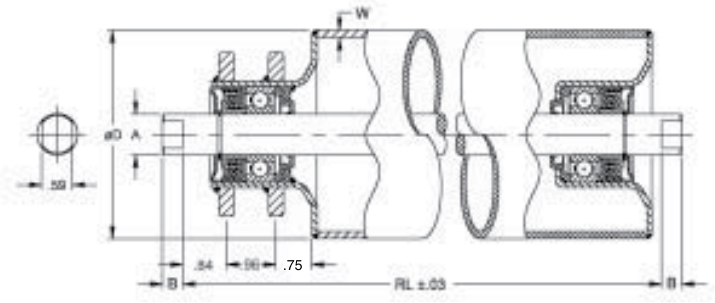
Application
Series 3900 RollerDrives are used for pallet handling and other heavy duty applications.

Non-standard

CONVEYOR ROLLERS

Heavy Duty Welded Drive Rollers - Series 3900

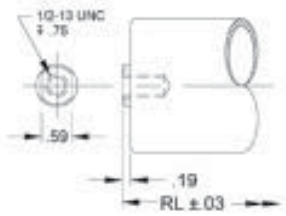
Heavy Duty
Welded
Drive Rollers
Series 3900



Typical RL=BF

	Part Number	D	W	E	A	B	Material	Bearing/Finish	Remarks
Bearing	3.940.___.___-	All			.787 dia		Steel	6204ZZ	Milled Shaft Design
	3.960.___.___-	All			.787 dia		Steel	6204ZZ	Dirtguard seal
Tube	_.___.H23.___-	2.50	.120				Steel	Mill	2-#50-15 Sprockets
	_.___.H24.___-	2.50	.120				Steel	Mill	2-#40-18 Sprockets
	_.___.H25.___-	3.50	.120				Steel	Mill	2-#50-15 Sprockets
	_.___.H26.___-	3.50	.120				Steel	Mill	2-#40-18 Sprockets
	_.___.H27.___-	4.00	.134				Steel	Mill	2-#50-15 Sprockets
	_.___.H28.___-	4.00	.134				Steel	Mill	2-#40-18 Sprockets
	_.___.***H29.***___-	5.00	.134				Steel	Mill	2-#50-15 Sprockets
	_.___.***H30.***___-	5.00	.134				Steel	Mill	2-#40-18 Sprockets
Shaft	_.___.___.C73			.19	.787 dia		Steel		See drawing below
	_.___.___.C76			.19	.787 dia	.39	Steel		See drawing above

Non-standard



C73 Shaft (both ends)
Tapped ends serve as conveyor roller mounts, and as a rigid spacer for frame assembly.

CONVEYOR ROLLERS

Heavy Duty Welded Drive Rollers - Series 3900

Heavy Duty
Welded
Drive Rollers
Series 3900

Series 3900 Heavy duty welded roller load capacity in lbs.

Tube Dia. In. Material Gauge Shaft Dia. Welded RL Inches	2.5 Steel 11 .787 2–#50–15	2.5 Steel 11 .787 2–#40–18	3.5 Steel 11 .787 2–#50–15	3.5 Steel 11 .787 2–#40–18	4 Steel 10 .787 2–#50–15	4 Steel 10 .787 2-#40–18	5 Steel 10 .787 2–#50–15	5 Steel 10 .787 2–#40–18
8	950	950	1046	1046	1046	1046	1346	1346
16	950	950	1046	1046	1046	1046	1346	1346
24	950	950	1046	1046	1046	1046	1346	1346
32	950	950	1046	1046	1046	1046	1346	1346
40	950	950	1046	1046	1046	1046	1346	1346
48	950	950	1046	1046	1046	1046	1346	1346
54	950	950	1046	1046	1046	1046	1346	1346
62	700	700	776	776	776	776	1346	1346
70	500	500	536	536	536	536	1346	1346
78	350	350	385	385	385	385	1341	1341

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Diameter	All shaft configrations
2.50	8.00
3.50	8.00
4.00	8.00
5.00	8.00
5.00	8.00

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Precision	The permissible conveyor speed is 160 fpm. However, when conveying pallets, 60 fpm should not be exceeded.

CONVEYOR ROLLERS

Drive Rollers with Slip Drive or Direct Drive - Series 3800

Drive Rollers with Slip Drive or Direct Drive Series 3800

Bearing
Balls: Commercial grade

Tube
Diameters (inch) 1.90, 2.50.
Aluminum, stainless steel and galvanized steel tubes are available in the 1.90" diameter drive rollers, only galvanized steel is available in the 2.50" diameter.

Shaft
Diameter: .500

Application
The Series 3800 has been designed to provide a simple and economical means of building powered conveyor systems with accumulation capability. Loads can be stopped and released at any point without stopping the chain drive. The slip drive relies on friction between two coaxial members. The inner member rotates continuously as it is chain driven. The outer member, the conveyor roller, is in sliding contact with the inner member through a bushing. Transmitted torque between the inner and outer member is proportional to both load and speed.

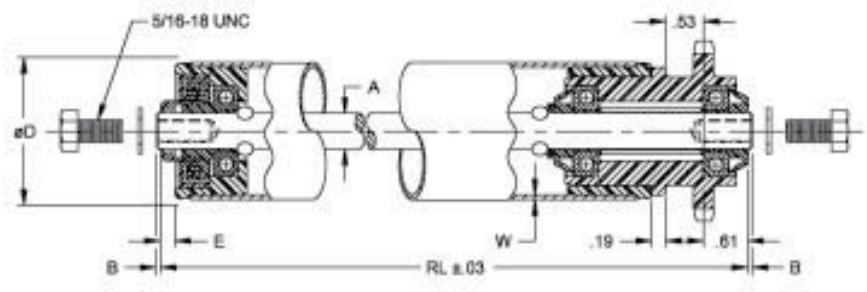
This series is recommended for speeds up to 60 fpm where continuous slippage is a requirement. For intermittent slippage applications speeds up to 90 fpm are possible.

For applications where accumulation is not required Series 3800 rollers may also be supplied for direct drive. This is accomplished using mating keys and keyways in the contact area of the inner roller and outer members. For both direct and slip drive, these rollers are available with single and double sprockets. Single sprockets are used with tangential chain drive, double sprockets are used where chains connect one roller to the next.

CONVEYOR ROLLERS

Drive Rollers with Slip Drive or Direct Drive - Series 3800

Drive Rollers with Slip or Direct Drive Series 3800



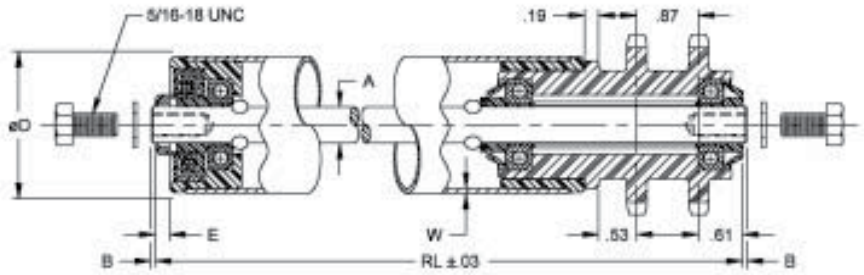
	Part Number	D	W	A	B	Material	Finish	Type	Remarks
Bearing	3.801.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Slip Drive	1 - #40-9 Nylon Spkt
	3.802.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Slip Drive	1 - #40-14 Nylon Spkt
	3.803.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Slip Drive	2 - #40-14 Nylon Spkts
	3.804.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Slip Drive	1 - #40-9 Nylon Spkt
	3.805.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Slip Drive	1 - #40-14 Nylon Spkt
	3.806.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Slip Drive	2 - #40-14 Nylon Spkts
	3.811.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Direct Drive	1 - #40-9 Nylon Spkt
	3.812.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Direct Drive	1 - #40-14 Nylon Spkt
	3.813.___.___-	1.90	.065	.500 dia		Nylon Housing	Black	Direct Drive	2 - #40-14 Nylon Spkts
	3.814.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Direct Drive	1 - #40-9 Nylon Spkt
	3.815.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Direct Drive	1 - #40-14 Nylon Spkt
	3.816.___.___-	2.50	.065	.500 dia		Nylon Housing	Black	Direct Drive	2 - #40-14 Nylon Spkts
Tube	_.___.A01.___-	1.90	.065			Aluminum	None	For 1 Sprocket	
	_.___.A02.___-	1.90	.065			Aluminum	None	For 2 Sprockets	
	_.___.G01.___-	1.90	.065			Steel	Galvanized	For 1 Sprocket	
	_.___.G02.___-	1.90	.065			Steel	Galvanized	For 2 Sprockets	
	_.___.J63.___-	1.90	.065			Steel	None	For 2 Sprockets	Soft PVC sleeve
	_.___.S01.___-	1.90	.065			Stainless	320 Grit	For 1 Sprocket	
	_.___.S02.___-	1.90	.065			Stainless	320 Grit	For 2 Sprockets	
	_.___.G03.___-	2.50	.065			Steel	Galvanized	For 1 Sprocket	
	_.___.G04.___-	2.50	.065			Steel	Galvanized	For 2 Sprockets	
Shaft	_.___.___.T20-			.500 dia.	.06	Steel	None	Double	Tapped 5/16-18
									x 5/8 deep
	_.___.___.M92-			.500 dia.	.06	Steel	None	Single	Tapped 5/16-18
									x 5/8 deep

Note: Plastic Journal Bearing Used With 9 Tooth Sprocket.
Commercial Ball Bearing Used With 14 Tooth Sprocket.

CONVEYOR ROLLERS

Drive Rollers with Slip Drive or Direct Drive - Series 3800

Drive Rollers with Slip or Direct Drive Series 3800



(Typical RL = BF - .12)

	Tube Dia. In.	1.9	1.9	1.9	2.5	2.5	2.5
	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Gauge	16	16	16	16	16	16
	Shaft Dia.	0.5	0.5	0.5	0.5	0.5	0.5
	Sprocket	1–#40–9	1–#40–14	2–#40–14	1–#40–9	1–#40–14	2–#40–14
	RL Inches						
Series 3800 slip drive sprocket driven roller load capacity in lbs.	8	45	110	110	45	110	110
	16	45	110	110	45	110	110
	24	45	110	110	45	110	110
	28	45	110	110	45	110	110
	32	45	110	110	45	110	110
	36	45	110	110	45	110	110
	40	45	110	110	45	110	110
	44	45	110	110	45	110	110
	52	45	100	100	45	100	100
	62	45	65	65	45	65	65

To order, use the following reference to form your ten-digit part number:

3.801.A01.T20-14.88"RL

- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

CONVEYOR ROLLERS

Drive Rollers with Slip Drive or Direct Drive - Series 3800

Drive Rollers with Slip or Direct Drive Series 3800

	Tube Dia. In. Material Gauge Shaft Dia. Sprocket RL Inches	1.9 Steel 16 0.5 1–#40–9	1.9 Steel 16 0.5 1–#40–14	1.9 Steel 16 0.5 2–#40–14	2.5 Steel 16 0.5 1–#40–9	2.5 Steel 16 0.5 1–#40–14	2.5 Steel 16 0.5 2–#40–14
Series 3800 direct drive sprocket driven roller load capacity in lbs.	8	67.5	126	126	67.5	126	126
	16	68	126	126	68	126	126
	20	68	126	126	68	126	126
	24	68	126	126	68	126	126
	28	68	126	126	68	126	126
	32	68	126	126	68	126	126
	36	68	126	126	68	126	126
	40	68	126	126	68	126	126
	44	68	126	126	68	126	126
	52	65	104	104	68	126	126
	60	56	65	65	68	126	

Minimum Roller Lengths for Non-Grooved Rollers

	Diameter	Fixed
Series 3800 slip drive/ direct drive rollers	1.90" Single Sprocket	4.63"
	1.90" Double Sprocket	5.50"
	2.50" Single Sprocket	4.63"
	2.50" Double Sprocket	5.50"

Sleeve Materials (all dimensions in inches)

Material	Description
Soft PVC	Hardness 63 shore A, thickness .08, Gray

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Commercial	60 fpm for continuous slippage
Commercial	90 fpm for intermittent slippage

CONVEYOR ROLLERS

Tapered Conveyor Rollers - Series 1300, 1350, 1400

Tapered
Conveyor Rollers
Series 1300
(commercial bearings)
Series 1350
(stainless steel bearings)
Series 1400
(precision bearings)

Contact factory for special
Grooved tapered part numbers

Bearing
Balls: Commercial, Precision or Stainless Steel

This innovative series of tapered rollers offers the designer a choice of three distinct bearing systems for building roller curves. Tapered rollers with commercial grade ball bearings, stainless steel ball bearings or chrome alloy steel precision bearings are all available. Bearings are fitted into nylon housings. Double labyrinth seals, snapped into place, complete and assembled providing a pre-lubricated bearing cartridge which is fully protected from dust and dirt and requires no maintenance.

Tube
Diameters (inch) 2.07 (small end)

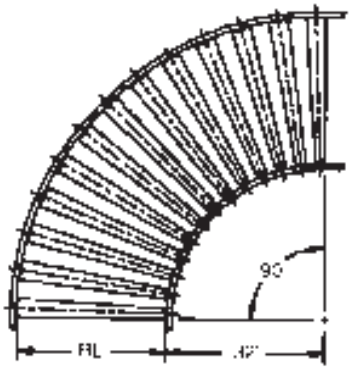
Steel roller tubes (or optional aluminum or stainless tubes) are overlaid with several high impact molded polypropylene conical segments to form a continuous tapered roller assembly to desired length. The completed assembly offers excellent wear properties, noise dampening and shock resistance. For powered applications, the smaller end of the tube can be friction driven by polyurethane “O” rings.

Shaft
Diameter: .500,
Hexagonal: .437

Shafts may be spring-loaded, tapped or threaded.

Application

45˚, 90˚ and 180˚ conveyor curves with a 32" inside radius.

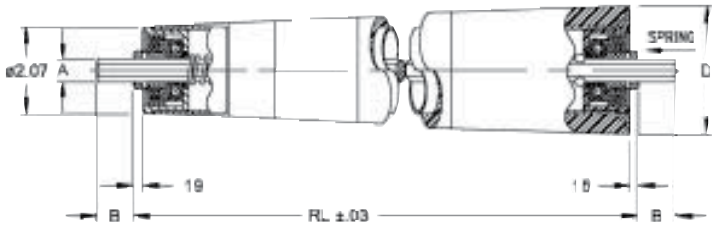


CONVEYOR ROLLERS

Tapered Conveyor Rollers - Series 1300, 1350, 1400

Spring loaded shafts move in direction of arrow

Tapered Conveyor Rollers Series 1300, 1350, 1400



(Typical RL=BF–.12)

	Part Number	D	A	B	Material	Finish	Remarks
Bearing	1.318.___.___-		.437 hex		Nylon	Black	Commercial bearings
	1.319.___.___-		.500 dia		Nylon	Black	Commercial bearings
	1.368.___.___-		.437 hex		Nylon	Black	Stainless bearings
	1.369.___.___-		.500 dia		Nylon	Black	Stainless bearings
	1.418.___.___-		.437 hex		Nylon	Black	Precision bearings
	1.419.___.___-		.500 round		Nylon	Black	Precision bearings
Tube	_.___.T12.___-	2.80			polypropylene/steel	Black	RL Range 9.52”-12.27”
	_.___.T14.___-	3.06			polypropylene/steel	Black	RL Range 13.47”-16.22”
	_.___.T18.___-	3.31			polypropylene/steel	Black	RL Range 17.42”-20.17”
	_.___.T22.___-	3.56			polypropylene/steel	Black	RL Range 21.37”-24.13”
	_.___.T26.___-	3.81			polypropylene/steel	Black	RL Range 25.32”-28.07”
	_.___.T32.___-	4.06			polypropylene/steel	Black	RL Range 29.27”-32.02”
	_.___.T36.___-	4.31			polypropylene/steel	Black	RL Range 33.22”-35.97”
Shaft	_.___.___.C42-		.437 hex	.56	steel	None	Spring-loaded
	_.___.___.S42-		.437 hex	.56	stainless	None	Spring-loaded
	_.___.___.C50-		.500 dia	1.00	steel	None	1/2-13" threaded removable
	_.___.___.S50-		.500 dia	1.00	stainless	None	1/2-13" threaded removable
	_.___.___.C51-		.500 dia	.06	steel	None	Tapped 5/16-18" x 5/8D
	_.___.___.S51-		.500 dia	.06	stainless	None	Tapped 5/16-18 x 5/8D
	_.___.___.C52-		.500 dia	1.00	steel	None	1/2-13" threaded-fixed
	_.___.___.S52-		.500 dia	1.00	stainless	None	1/2-13" threaded-fixed

Note: For grooved tube part numbers, please contact the factory for further information. For Hex shafts, “A” dimension indicates flat-to-flat measurement.

To order, use the following reference to form your ten-digit part number:

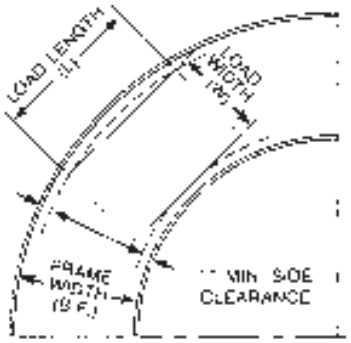
1.318.T14.C42-14.88"RL

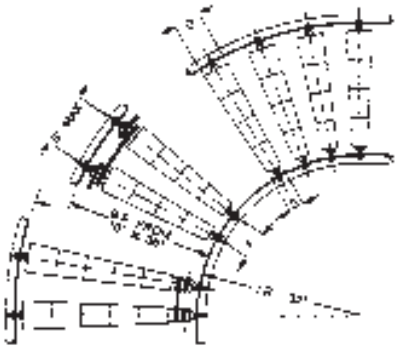
- Bearing Part No.
- Tube Part No.
- Shaft Part No.
- 15" between frame

CONVEYOR ROLLERS

Tapered Conveyor Rollers - Series 1300, 1350, 1400

Tapered Conveyor Rollers Series 1300, 1350, 1400





Curved design
Interroll plastic tapered rollers increase in diameter by 0.062" each inch of many lengths. Rollers may be ordered in many roller lengths from 9.88" to 35.88" for a range of 10" to 36" between conveyor frames.

The small (S) and large (D) diameters of the rollers are dependent upon the roller length. The small diameter is typically 2.07". The large diameter is wholly dependent upon the small diameter (S), the roller length (RL) and the roller taper.

The required number of rollers per 90° curve is dependent upon the inside frame pitch (P) of the rollers. It should be close enough for a minimum of three rollers to be supporting the load at any point in its travel.

For loads outside the range of the chart, the following formula may be used:

$$BF = \sqrt{[(32" + 1" + 18")2 + (24"/2)2]} + 1" - 32"$$

Example:

Load width (W) = 18"
Load length (L) = 24"
Chart shows (BF) = 22"
Inside Radius of curve (R)=32"

For the same sample, the formula would give ...

$$BF = \sqrt{[(32" + 1" + 18")2 + (24"/2)2]} + 1" - 32"$$

Answer 21.39" or 22"

On conveyor curves using Interroll tapered rollers, the between frame (B.F.) width for various size loads may be calculated as follows:
(a) Determine the length (L) and the width (W) of the largest load.
(b) Select the B.F. width from the B.F. selection chart given below.
(c) If the load is outside of the chart's range, or the inside radius (I.R.) of the curve is other than 32", use the formula given to the side of the chart.

CONVEYOR ROLLERS

Tapered Conveyor Rollers - Series 1300, 1350, 1400

Tapered Conveyor Rollers Series 1300, 1350, 1400

Series 1300, 1350, 1400 tapered roller load capacity in lbs.

Tube Dia. In. Material Bearing Shaft Dia.RL Inches	2.07" Diameter Plastic over Steel Commercial and Precision Bearings* All	2.07" Diameter Plastic over Steel Stainless Bearings All
10	113	56
12	113	56
14	113	56
16	113	56
18	113	56
20	113	56
22	113	56
24	113	56
26	113	56
28	113	56
30	113	56
32	113	56
34	106	53
36	90	45

Minimum Roller Lengths for Non-Grooved Rollers (all dimensions in inches)

Diameter	Spring Loaded	Fixed	Loose Shaft/No Shaft
1300-1400	9.88	9.88	9.88

Speed Ratings

Bearing Type	Maximum Recommended Conveyor Speed
Commercial	125 fpm
Stainless	125 fpm
Precision	236 fpm

INSPIRED BY EFFICIENCY

ROLLERDRIVE

Symbols

⊕	Suitable for deep freeze area
24V	Voltage 24 V
48V	Voltage 48 V
20W	Power 20 W
35W	Power 35 W
50W	Power 50 W
AI	Analog interface
BI	Bus interface (CANopen)

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

ROLLERDRIVE
SERIES EC5000

ø 1.9", cylindrical, IP54, for 32 to 104 °F

24V

48V

20W

35W

50W

AI

BI

Application area
Drive for unit handling conveyor systems, such as transporting cardboard cartons, containers, platens or tires at normal ambient temperature. Suitable for straight conveyors, small belt conveyors and especially zero-pressure accumulation conveyors. Also usable in shuttle systems, aligning conveyor segments or transfers to other "conveyor system branches".

Compact design
The motor integrated in the tube allows a very compact design of the conveyor system.

Very energy-efficient
The brushless drive features energy recovery when braking. The conveyor system can operate without pneumatics or conventional drives, which must be operated continually.

Flexible possible applications
RollerDrive is available in many variations, allowing it to be used in all types of different conveyor systems. For the user, this translates into a single interface instead of many. Depending on the application area, PolyVee, round or toothed belts can be used for the transmission of force. Nine gear ratios allow selecting the perfect pairing between speed and torque. The electronic holding brake (Zero-Motion-Hold) holds conveying goods in position, even on gravity conveyors.

Low-noise
The use of decoupling elements achieves particularly low-noise running.

Maintenance-free and installation-friendly
The drive with internal commutation electronics does not require any maintenance. It features an overload protection that prevents damages due to overtemperature or blockage. It is connected securely without complex screw connection by using a motor cable with 5-pin snap-in plug.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

Technical data

Rated voltage	24 V	24 V	24 V	48 V	48 V	48 V
Power	20 W	35 W	50 W	20 W	35 W	50 W
Rated current	1.4 A	2.4 A	3.4 A	0.7 A	1.2 A	1.7 A
Starting current	3.0 A	5.5 A	7.5 A	1.5 A	2.8 A	3.8 A
Max. noise emission (installed)	55 dB(A), application-dependent					
Length of motor cable	19.6"					
Max. reference length	59"					
Ambient temperature in operation	32 to 104 °F					
Motor shaft	Stainless steel, 7/16" HEX, thread M12 x 1					
Anti-static version	Yes (< 10^6 Ω)					
Tube wall thickness	ø 1.9": 0.065"					
Tube material	Zinc-plated steel, stainless steel					
Tube sleeving	PVC sleeve 0.08" PU sleeve 0.063", 0.125"					

Maximum static load capacity
The maximum load capacity of the RollerDrive EC5000 depends on the drive head and the length of the RollerDrive.

Length of RollerDrive	≤ 39"	43"	47"	51"	55"	59"
Maximum load capacity per RollerDrive without drive head	242 lbs	203 lbs	165 lbs	143 lbs	121 lbs	104 lbs
Maximum load capacity per RollerDrive with drive head (PolyVee, round or toothed belt)	76 lbs					

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

24V

48V

20W

35W

50W

AI

BI

Design versions

20 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	2.2	5.5	5.5
13:1	264	12	3.18	8.0	8.0
18:1	190	8	4.4	11.1	11.1
21:1	163	8	5.2	13.0	13.0
30:1	114	6	7.5	18.8	18.8
42:1	82	4	10.4	26.1	26.1
49:1	70	4	12.1	30.4	30.4
78:1	42	2	17.8	48.0	48.0
108:1	32	2	24.9	67.0	67.0

35 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	3.89	9.8	9.8
13:1	264	12	5.6	14.1	14.1
18:1	190	8	7.8	19.6	19.6
21:1	163	8	9.2	22.9	22.9
30:1	114	6	13.1	33.1	33.1
42:1	82	4	18.3	45.8	45.8
49:1	70	4	21.4	53.4	53.4
78:1	42	2	31.4	84.4	84.4
108:1	32	2	43.8	115.0	115.0

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

50 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	5.5	13.98	13.98
13:1	264	12	8.0	20.2	20.2
18:1	190	8	11.2	28.0	28.0
21:1	163	8	13.0	32.7	32.7
30:1	114	6	18.8	47.2	47.2
42:1	82	4	26.1	65.4	65.4
49:1	70	4	30.5	76.3	76.3
78:1	42	2	44.8	115.0	115.0
108:1	32	2	62.5	115.0	115.0

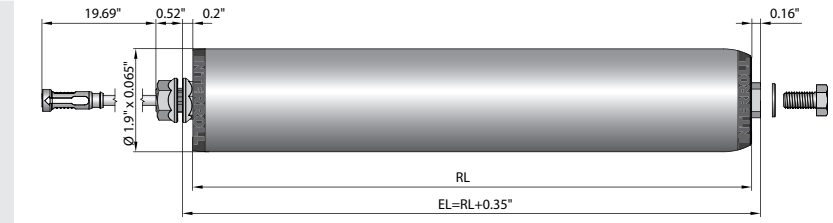
Before the run-in, the values may differ up to ±20 %. After a run-in phase, the values vary only in the range of ±10 % for 95 % of all RollerDrive used.

Dimensions

The minimum reference length depends on the gear box variant, the grooves in the tube and the drive or the bearing assembly. A sufficient axial play is already taken into account, so that the actual clear width between side profiles is required.
When using the tapered hexagon spring shaft, it must be ensured that the design of the axial play is not too high. If the RollerDrive selected is too short, the shaft may have play in the hexagon hole. A hexagon hole with a size of at least 0.44" is recommended. If the RollerDrive is installed obliquely, the fastening hole must be designed larger accordingly.

RL = Reference length/ordering length
EL = Installation length

5/16"-18 or M8 female thread, without grooves



ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

24V

48V

20W

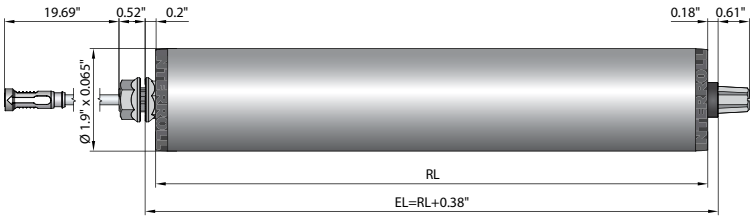
35W

50W

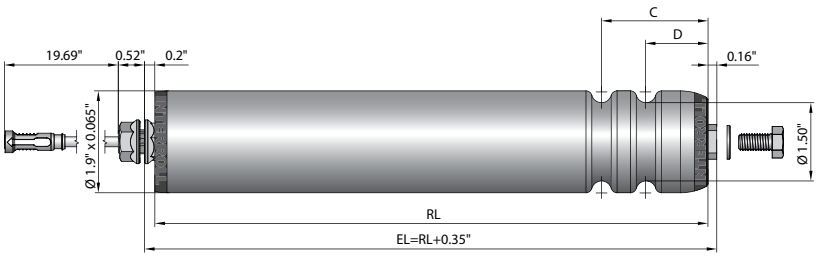
AI

BI

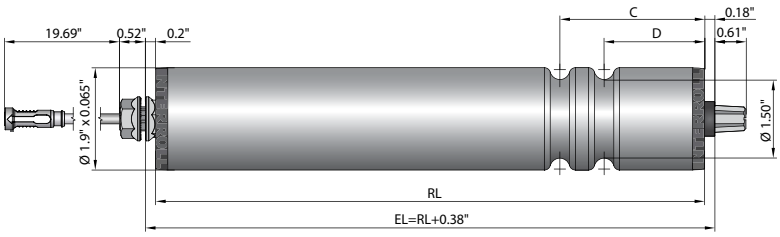
Hexagon spring shaft, without grooves



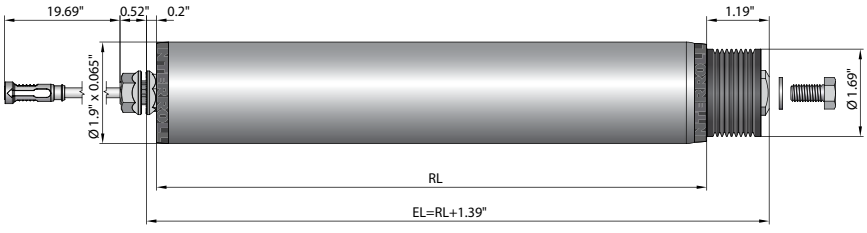
5/16"-18 or M8 female thread, with grooves



Hexagon spring shaft, with grooves



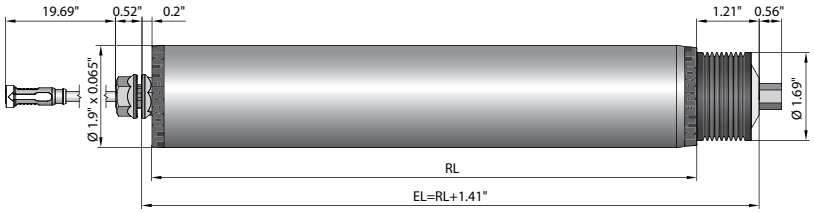
PolyVee drive head with M8 female thread



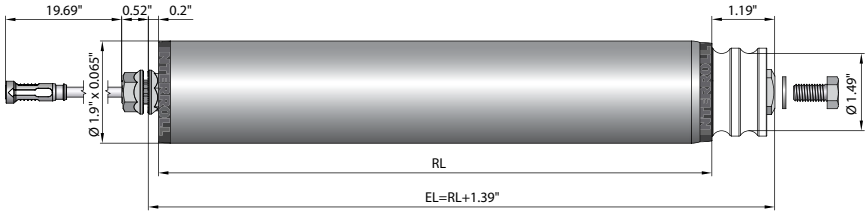
ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for 32 to 104 °F

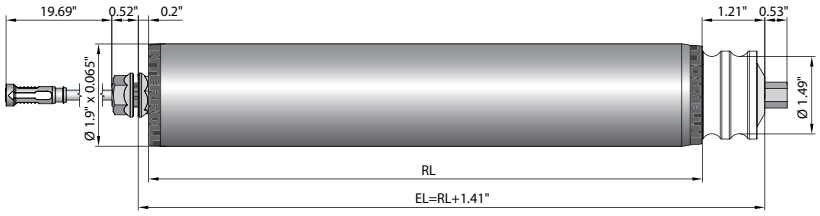
PolyVee drive head with 7/16" hexagon spring shaft



Round belt drive head with M8 female thread



Round belt drive head with 7/16" hexagon spring shaft



ROLLER DRIVES

Rollerdrive Series EC5000 Based on ø 1.9”, tapered, IP54, for 32 to 104 °F

ROLLERDRIVE SERIES EC5000

Based on ø 1.9", tapered, IP54, for 32 to 104 °F

24V
48V
20W
35W
50W
AI
BI

Application area
Drive for unit handling conveyor systems, such as transporting cardboard cartons, containers, platens or tires at normal ambient temperature. Suitable for roller/ belt curves as well as constantly driven or zero pressure accumulation conveyor technology.

Compact design
The drive integrated in the tube allows a very compact design of the curve.

Very energy-efficient
The brushless drive features energy recovery when braking. The conveyor system can operate without pneumatics or conventional drives, which must be operated continually.

Robust design
In contrast to conventional designs, the tapered elements (gray and black) are secured against axial shifting. This safeguard prevents the tapered elements from shifting on the tube, similar to the matching conveyor rollers.

Flexible possible applications
RollerDrive is available in many variations, allowing it to be used in all types of different conveyor systems. For the user, this translates into a single interface instead of many. Depending on the application area, PolyVee or round belts can be used for the transmission of force. Nine gear ratios allow selecting the perfect pairing between speed and torque.

Low-noise
The use of decoupling elements achieves particularly low-noise running.

Maintenance-free and installation-friendly
The drive with internal commutation electronics does not require any maintenance. It features an overload protection that prevents damages due to overtemperature or blockage. It is connected securely without complex screw connection by using a motor cable with 5-pin snap-in plug.

ROLLER DRIVES

Rollerdrive Series EC5000 Based on ø 1.9”, tapered, IP54, for 32 to 104 °F

Technical data

Rated voltage	24 V	24 V	24 V	48 V	48 V	48 V
Power	20 W	35 W	50 W	20 W	35 W	50 W
Rated current	1.4 A	2.4 A	3.4 A	0.7 A	1.2 A	1.7 A
Starting current	3.0 A	5.5 A	7.5 A	1.5 A	2.8 A	3.8 A
Max. noise emission (installed)	55 dB(A), application-dependent					
Length of motor cable	19.6"					
Max. reference length	40"					
Ambient temperature in operation	32 to 104 °F					
Maximum load capacity per RollerDrive without drive head	104 lbs					
Max. load capacity per RollerDrive with drive head (PolyVee or round belt)	76 lbs					
Motor shaft	Stainless steel, 7/16" HEX, thread M12 x 1					
Anti-static version	No					
Tube wall thickness	0.065"					
Tube material	Zinc-plated steel, stainless steel					
Tapered cones	1.8° in black (not antistatic)					

Design versions

20 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	2.2	5.5	5.5
13:1	264	12	3.18	8.0	8.0
18:1	190	8	4.4	11.1	11.1
21:1	163	8	5.2	13.0	13.0
30:1	114	6	7.5	18.8	18.8
42:1	82	4	10.4	26.1	26.1
49:1	70	4	12.1	30.4	30.4
78:1	42	2	17.8	48.0	48.0
108:1	32	2	24.9	67.0	67.0

ROLLER DRIVES

Rollerdrive Series EC5000 Based on ø 1.9”, tapered, IP54, for 32 to 104 °F

24V

48V

20W

35W

50W

AI

BI

35 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	3.89	9.8	9.8
13:1	264	12	5.6	14.1	14.1
18:1	190	8	7.8	19.6	19.6
21:1	163	8	9.2	22.9	22.9
30:1	114	6	13.1	33.1	33.1
42:1	82	4	18.3	45.8	45.8
49:1	70	4	21.4	53.4	53.4
78:1	42	2	31.4	84.4	84.4
108:1	32	2	43.8	115.0	115.0

50 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	382	18	5.5	13.98	13.98
13:1	264	12	8.0	20.2	20.2
18:1	190	8	11.2	28.0	28.0
21:1	163	8	13.0	32.7	32.7
30:1	114	6	18.8	47.2	47.2
42:1	82	4	26.1	65.4	65.4
49:1	70	4	30.5	76.3	76.3
78:1	42	2	44.8	115.0	115.0
108:1	32	2	62.5	115.0	115.0

Before the run-in, the values may differ up to ±20 %. After a run-in phase, the values vary only in the range of ±10 % for 95 % of all RollerDrive used.

ROLLER DRIVES

Rollerdrive Series EC5000 Based on ø 1.9”, tapered, IP54, for 32 to 104 °F

Dimensions

The minimum reference length depends on the gear box variant, the grooves in the tube and the drive or the bearing assembly. A sufficient axial play is already taken into account, so that the actual clear width between side profiles is required.
When using the tapered hexagon spring shaft, it must be ensured that the design of the axial play is not too high. If the RollerDrive selected is too short, the shaft may have play in the hexagon hole. A hexagon hole with a size of at least 0.44" is recommended. If the RollerDrive is installed obliquely, the fastening hole must be designed larger accordingly.

RL = Reference length
EL = Installation length
U = Usable tube length: Length of tapered elements

Reference lengths with tapered elements

Conicity: 1.8°, color: black (not antistatic)		
Tapered rated length [inch]	**Min. Ø [inch]**	**Max. Ø [inch]**
11.85	2.30	3.05
13.62	2.19	3.05
15.61	2.07	3.05
15.80	2.30	3.30
17.57	2.19	3.30
19.56	2.07	3.30
19.75	2.30	3.56
21.53	2.19	3.56
23.51	2.07	3.56
23.70	2.30	3.81
25.48	2.19	3.81
27.46	2.07	3.81
27.66	2.30	4.06
29.43	2.19	4.06
31.41	2.07	4.06
31.61	2.30	4.32
33.38	2.19	4.32
35.36	2.07	4.32

ROLLER DRIVES

Rollerdrive Series EC5000 Based on ø 1.9”, tapered, IP54, for 32 to 104 °F

24V

48V

20W

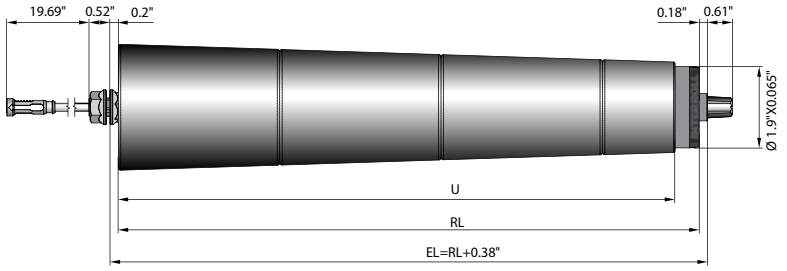
35W

50W

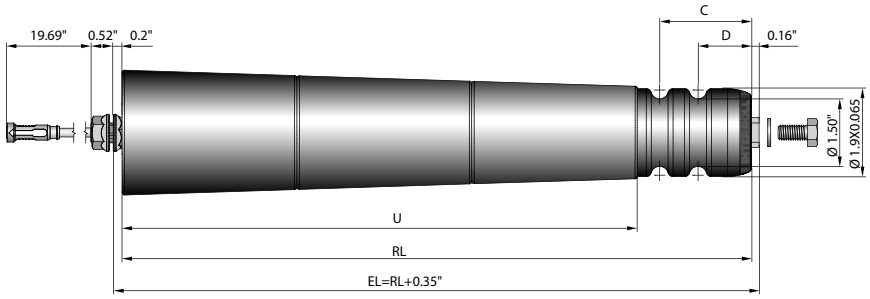
AI

BI

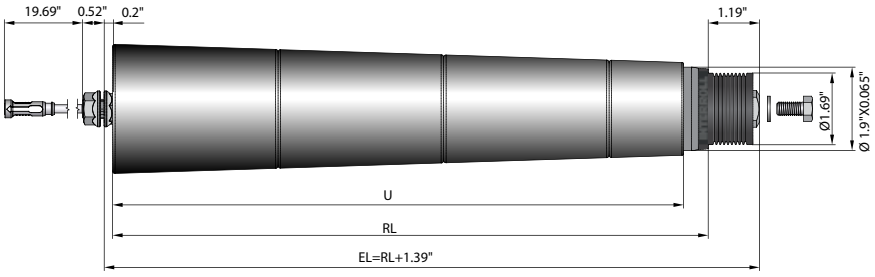
Hexagon spring shaft, without grooves



5/16"-18 or M8 female thread, with grooves



PolyVee drive head with M8 female thread



ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for -22 to 32 °F

ROLLERDRIVE SERIES EC5000

ø 1.9", cylindrical, IP54, for –22 to 32 °F

24V
48V
20W
35W
50W
AI
BI

Application area
Drive for unit handling conveyor systems, such as transporting cardboard cartons, containers or platens in deep freeze conditions. Suitable for straight conveyors and especially zero-pressure accumulation conveyors. Also usable in shuttle systems, aligning conveyor segments or transfers to other "conveyor system branches".

Compact design
The motor integrated in the tube allows a very compact design of the conveyor system.

Very energy-efficient
The brushless drive features energy recovery when braking. The conveyor system can operate without pneumatics or conventional drives, which must be operated continually.

Flexible possible applications
RollerDrive is available in many variations, allowing it to be used in all types of different conveyor systems. For the user, this translates into a single interface instead of many. Depending on the application area, PolyVee, round or toothed belts can be used for the transmission of force. Nine gear ratios allow selecting the perfect pairing between speed and torque. The electronic holding brake (Zero-Motion-Hold) holds conveying goods in position, even on gravity conveyors.

Low-noise
The use of decoupling elements achieves particularly low-noise running.

Maintenance-free and installation-friendly
The drive with internal commutation electronics does not require any maintenance. It features an overload protection that prevents damages due to overtemperature or blockage. It is connected securely without complex screw connection by using a motor cable with 5-pin snap-in plug.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for -22 to 32 °F

Technical data

Rated voltage	24 V	24 V	48 V	48 V
Power	35 W	50 W	35 W	50 W
Rated current	2.2 A	3.4 A	1.1 A	1.7 A
Starting current	5.5 A	7.5 A	2.8 A	3.8 A
Max. noise emission (installed)	55 dB(A), application-dependent			
Length of motor cable	19.6"			
Max. reference length	59"			
Ambient temperature in operation	–22 to 32 °F			
Motor shaft	Stainless steel, 7/16" HEX, thread M12 x 1			
Anti-static version	Yes (< 10^6 Ω)			
Tube wall thickness	ø 1.9": 0.065"			
Tube material	Zinc-plated steel, stainless steel			
Tube sleeving	PVC sleeve 0.08" PU sleeve 0.063", 0.125"			

Maximum static load capacity
The maximum load capacity of the RollerDrive EC5000 depends on the drive head and the length of the RollerDrive.

Length of RollerDrive	≤ 39"	43"	47"	51"	55"	59"
Maximum load capacity per RollerDrive without drive head	242 lbs	203 lbs	165 lbs	143 lbs	121 lbs	104 lbs
Maximum load capacity per RollerDrive with drive head (PolyVee, round or toothed belt)	76 lbs					

Design versions

35 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
30:1	114	6	13.1	33.1	33.1
42:1	82	4	18.3	45.8	45.8
49:1	70	4	21.4	53.4	53.4

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for -22 to 32 °F

24V

48V

20W

35W

50W

AI

BI

50 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
13:1	264	12	8.0	20.2	20.2
18:1	190	8	11.2	28.0	28.0
21:1	163	8	13.0	32.7	32.7
30:1	114	6	18.8	47.2	47.2
42:1	82	4	26.1	65.4	65.4
49:1	70	4	30.5	76.3	76.3
78:1	42	2	44.8	115.0	115.0
108:1	32	2	62.5	115.0	115.0

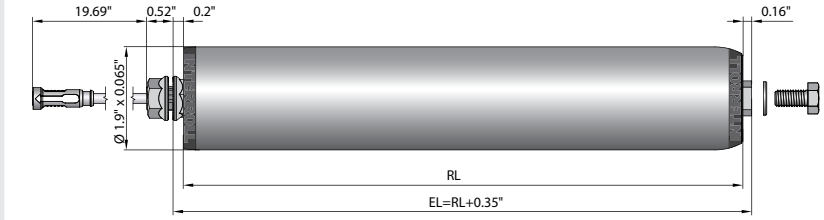
Before the run-in, the values may differ up to ±20 %. After a run-in phase, the values vary only in the range of ±10 % for 95 % of all RollerDrive used.

Dimensions

The minimum reference length depends on the gear box variant, the grooves in the tube and the drive or the bearing assembly. A sufficient axial play is already taken into account, so that the actual clear width between side profiles is required. A hexagon hole with a size of at least 0.44" is recommended. If the RollerDrive is installed obliquely, the fastening hole must be designed larger accordingly.

RL = Reference length/ordering length
EL = Installation length

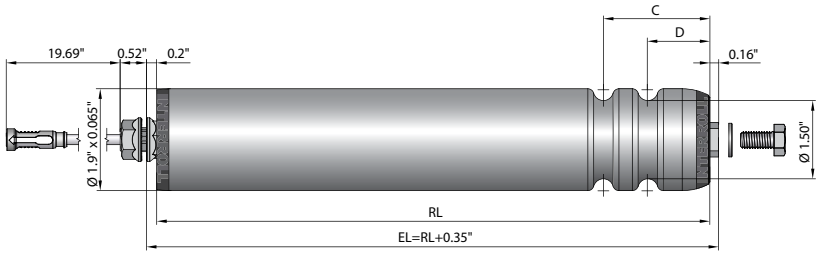
M8 female thread, without grooves



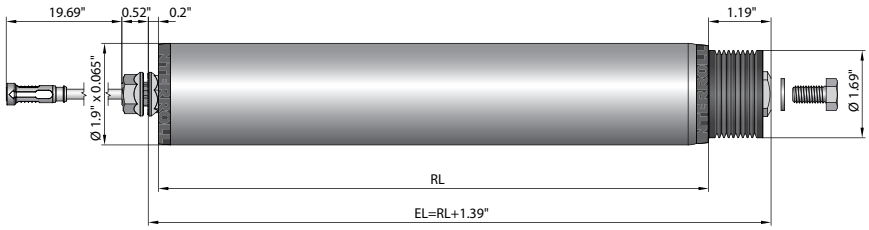
ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.9”, cylindrical, IP54, for -22 to 32 °F

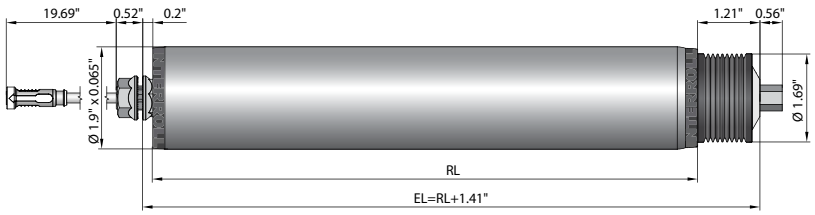
M8 female thread, with grooves



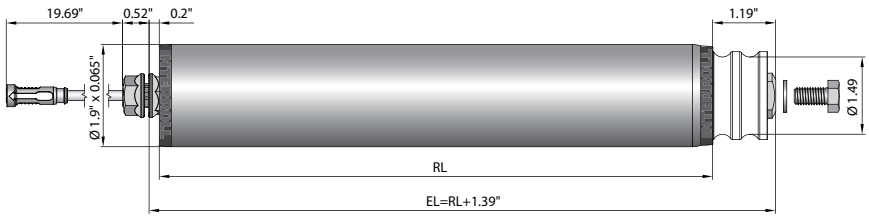
PolyVee drive head with M8 female thread



PolyVee drive head with 7/16" hexagon spring shaft



Round belt drive head with M8 female thread



ROLLER DRIVES

Rollerdrive Series EC5000 ø 2.36”, cylindrical, IP54, for 32 to 104 °F

ROLLERDRIVE
SERIES EC5000
ø 2.36", cylindrical, IP54, for 32 to 104 °F

24V
48V
20W
35W
50W
AI
BI

Application area
Drive for unit handling conveyor systems, such as transporting cardboard cartons, containers, platens, (truck) tires or lightweight pallets at normal ambient temperature. Suitable for straight conveyors, small belt conveyors and especially zero-pressure accumulation conveyors. Also usable in aligning conveyor segments or transfers or other "conveyor system branches".

Compact design
The motor integrated in the tube allows a very compact design of the conveyor system.

Very energy-efficient
The brushless drive features energy recovery when braking. The conveyor system can operate without pneumatics or conventional drives, which must be operated continually.

Flexible possible applications
RollerDrive is available in many variations, allowing it to be used in all types of different conveyor systems. For the user, this translates into a single interface instead of many. Nine gear ratios allow selecting the perfect pairing between speed and torque. The electronic holding brake (Zero-Motion-Hold) holds conveying goods in position, even on gravity conveyors.

Low-noise
The use of decoupling elements achieves particularly low-noise running.

Maintenance-free and installation-friendly
The drive with internal commutation electronics does not require any maintenance. It features an overload protection that prevents damages due to overtemperature or blockage. It is connected securely without complex screw connection by using a motor cable with 5-pin snap-in plug.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 2.36”, cylindrical, IP54, for 32 to 104 °F

Technical data

Rated voltage	24 V	48 V
Power	50 W	50 W
Rated current	3.4 A	1.7 A
Starting current	7.5 A	3.8 A
Max. noise emission (installed)	55 dB(A), application-dependent	
Length of motor cable	19.69"	
Max. reference length	59"	
Ambient temperature in operation	32 to 104 °F	
Max. load capacity per RollerDrive with PolyVee drive head	123 lbs	
Motor shaft	Stainless steel, 7/16" HEX, thread M12 x 1	
Anti-static version	Yes (< 10^6 Ω)	
Tube wall thickness	0.079"	
Tube material	Zinc-plated steel, stainless steel	
Tube sleeving	PVC sleeve 0.079" Lagging 0.079"	

Design versions

50 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
9:1	474	23	5.5	13.9	13.9
13:1	328	18	8.0	20.2	20.2
18:1	236	12	11.2	28.0	28.0
21:1	202	10	13.0	32.7	32.7
30:1	141	6	18.8	47.2	47.2
42:1	102	6	26.1	65.4	65.4
49:1	86	6	30.5	76.3	76.3
78:1	55	2	44.8	115.0	115.0
108:1	39	2	62.5	115.0	115.0

Before the run-in, the values may differ up to ±20 %. After a run-in phase, the values vary only in the range of ±10 % for 95 % of all RollerDrive used.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 2.36”, cylindrical, IP54, for 32 to 104 °F

24V

48V

20W

35W

50W

AI

BI

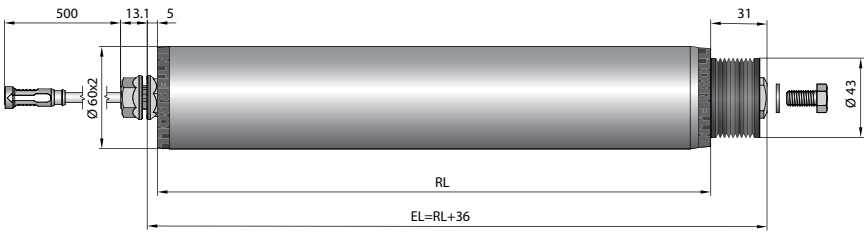
Dimensions

RL = Reference length/ordering length
EL = Installation length, clear width between side profiles

The minimum reference length depends on the gear box variant and the drive or the bearing assembly. A sufficient axial play is already taken into account, so that the actual clear width between side profiles is required. A hexagon hole with a size of at least 0.44" is recommended. If the RollerDrive is installed obliquely, the fastening hole must be designed larger accordingly.

Note: This model is available in metric sizes only (millimeters) as shown below.

PolyVee drive head with female thread



ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.97”, cylindrical, IP66, for 32 to 104 °F

ROLLERDRIVE SERIES EC5000

ø 1.97", cylindrical, IP66, for 32 to 104 °F

24V
48V
20W
35W
50W
AI
BI

Application area
Drive for unit handling conveyor systems, such as transporting cardboard cartons, containers or platens at normal ambient temperature. Suitable for straight conveyors and especially zero-pressure accumulation conveyors. Often used at locations for cleaning with water jets due to the high protection rating.

Compact design
The motor integrated in the tube allows a very compact design of the conveyor system.

Very energy-efficient
The brushless drive features energy recovery when braking. The conveyor system can operate without pneumatics or conventional drives, which must be operated continually.

Flexible possible applications
RollerDrive is available in many variations, allowing it to be used in all types of different conveyor systems. For the user, this translates into a single interface instead of many. Depending on the application area, PolyVee or round belts can be used for the transmission of force. The many gear ratios allow selecting the perfect pairing between speed and torque.

Low-noise
The use of decoupling elements achieves particularly low-noise running.

Maintenance-free and installation-friendly
The drive with internal commutation electronics does not require any maintenance. It features an overload protection that prevents damages due to overtemperature or blockage. It is connected securely without complex screw connection by using a motor cable with 5-pin snap-in plug.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.97”, cylindrical, IP66, for 32 to 104 °F

Technical data

Rated voltage	24 V	24 V	48 V	48 V
Power	35 W	50 W	35 W	50 W
Rated current	2.4 A	3.4 A	1.2 A	1.7 A
Starting current	5.5 A	7.5 A	2.8 A	3.8 A
Max. noise emission (installed)	55 dB(A), application-dependent			
Length of motor cable	19.69"			
Max. reference length	59"			
Ambient temperature in operation	32 to 104 °F			
Motor shaft	Stainless steel, 7/16" HEX, thread M12 x 1			
Anti-static version	Yes (< 10^6 Ω)			
Tube wall thickness	ø 1.97": 0.059"			
Tube material	Stainless steel			
Tube sleeving	PVC sleeve 0.08", 0.19" PU sleeve 0.08" Lagging 0.08" to 0.19"			

Maximum static load capacity
The maximum load capacity of the RollerDrive EC5000 depends on the drive head and the length of the RollerDrive.

Length of RollerDrive	≤ 39"	43"	47"	51"	55"	59"
Maximum load capacity per RollerDrive without drive head	242 lbs	203 lbs	165 lbs	143 lbs	121 lbs	104 lbs
Maximum load capacity per RollerDrive with drive head (PolyVee, round or toothed belt)	76 lbs					

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.97”, cylindrical, IP66, for 32 to 104 °F

ROLLERDRIVE SERIES EC5000

ø 1.97", cylindrical, IP66, for 32 to 104 °F

24V
48V
20W
35W
50W
AI
BI

Design versions

35 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
18:1	196	8	7.8	19.6	19.6
21:1	169	8	9.2	22.9	22.9
30:1	118	6	13.1	33.1	33.1
42:1	84	4	18.3	45.8	45.8
49:1	72	4	21.4	53.4	53.4
78:1	45	2	31.4	84.4	84.4
108:1	33	2	43.8	115.0	115.0

50 W

Gear ratio	Max. conveying speed [fpm]	Min. conveying speed [fpm]	Rated torque [in-lbs]	Acceleration torque [in-lbs]	Continuous blocking torque [in-lbs]
18:1	196	8	11.2	28.0	28.0
21:1	169	8	13.0	32.7	32.7
30:1	118	6	18.8	47.2	47.2
42:1	84	4	26.1	65.4	65.4
49:1	72	4	30.5	76.3	76.3
78:1	45	2	44.8	115.0	115.0
108:1	33	2	62.5	115.0	115.0

Before the run-in, the values may differ up to ±20 %. After a run-in phase, the values vary only in the range of ±10 % for 95 % of all RollerDrive used.

ROLLER DRIVES

Rollerdrive Series EC5000 ø 1.97”, cylindrical, IP66, for 32 to 104 °F

Dimensions

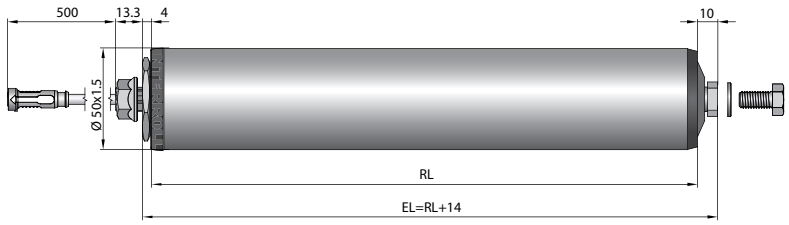
The minimum reference length depends on the gear box variant, the grooves in the tube and the drive or the bearing assembly. A sufficient axial play is already taken into account, so that the actual clear width between side profiles is required. A hexagon hole with a size of at least 0.44" is recommended. If the RollerDrive is installed obliquely, the fastening hole must be designed larger accordingly.

RL = Reference length/ordering length
EL = Installation length, clear width between side profiles

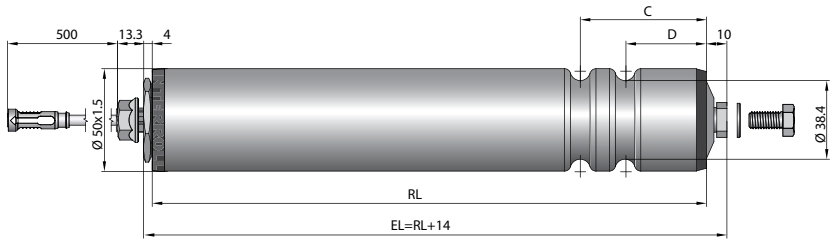
The female thread solution for the IP66 designs consists of a shaft bolt using a floating bearing. Ball bearings are not used.

Note: This model is available in metric sizes only (millimeters) as shown below.

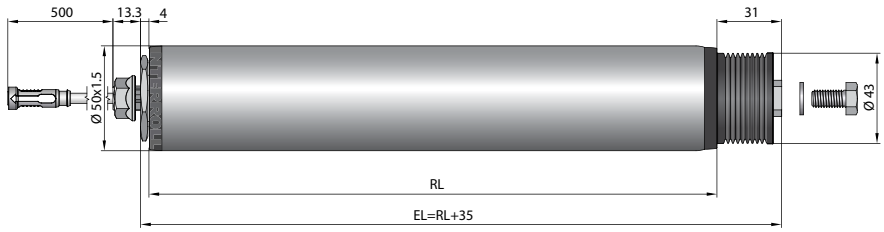
Female thread, without grooves



Female thread, with grooves



PolyVee drive head with female thread



DRUM MOTORS

Symbols

- Drum motor
- Idler pulley
- Options
- Accessories

DRUM MOTORS

DL Series - DL 0080

DRUM MOTOR
DL SERIES
DL 0080

A lightweight motor for light-duty applications. The DL 0080 is a cost-efficient belt drive for small to medium, dynamic belt conveyor applications and is ideal for small infeed conveyors, packaging equipment, and transfer conveyors. Its application range stretches from classic conveying applications in the dry logistics area up to applications in food production in dry to humid environments with occasional cleaning.

The proven and nearly maintenance-free design, as well as a planetary gear box made of technopolymer result in a lightweight, low-noise and at the same time powerful drum motor for applications for which the weight of the belt drive plays a role. Lightweight, friction-driven conveyor belts with a moderate belt expansion factor are particularly well suited for use with a DL 0080 drum motor.

The speed of the DL 0080 with three-phase motor winding can be adjusted by means of a frequency inverter. In addition to the three-phase motor variant, the DL 0080 is also available with a single-phase motor winding. This also allows operating the drum motor directly on a single-phase network, such as a grounded household power outlet, without additional power electronics.

DRUM MOTORS

DL Series - DL 0113

DRUM MOTOR
DL SERIES
DL 0113

A lightweight motor for light-duty applications. The DL 0113 is a cost-efficient belt drive for small to medium, dynamic belt conveyor applications and is ideal for small infeed conveyors, packaging equipment, and transfer conveyors. Its application range stretches from classic conveying applications in the dry logistics area up to applications in food production in dry to humid environments with occasional cleaning.

The proven and nearly maintenance-free design, as well as a planetary gear box made of technopolymer result in a lightweight, low-noise and at the same time powerful drum motor for applications for which the weight of the belt drive plays a role. Lightweight, friction-driven conveyor belts with a moderate belt expansion factor are particularly well suited for use with a DL 0113 drum motor.

The speed of the DL 0113 with three-phase motor winding can be adjusted by means of a frequency inverter. In addition to the three-phase motor variant, the DL 0113 is also available with a single-phase motor winding. This also allows operating the drum motor directly on a single-phase network, such as a grounded household power outlet, without additional power electronics.

DRUM MOTORS

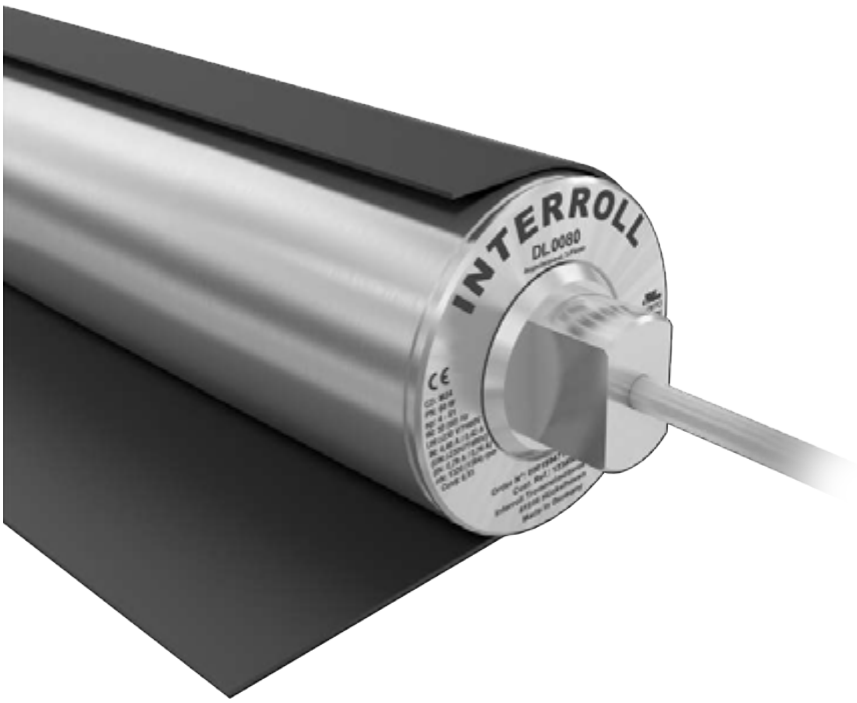
DL Series - Lagging and Coating

DL SERIES
LAGGING AND COATING
LAGGING

For friction drive belt applications

Hygienic and loadable
A lagging provides an advantage for drum motors, particularly for wet applications and in food processing, with its typical hygienic requirements. A lagging increases the friction between drum motor and conveyor belt, thereby preventing slippage. On top of that, it is resistant to external influences such as oil, fuels, and other chemicals that may be used for cleaning. Depending on the application, different profiles are available: For high volumes of liquid, a longitudinal grooved lagging redirects moisture between belt and motor, a center V-groove ensures precise belt tracking. Laggings are available in cold and hot vulcanization, whereby the latter meets particularly strict hygiene requirements.

Note: It is important to incorporate a calculation of belt pull and speed that is adjusted to the greater outer diameter of the drum motor.



DRUM MOTORS

DM Series - DM 0080

DRUM MOTOR
DM SERIES
DM 0080

Practice-oriented, scalable and thought out in detail: The new drum motor DM 0080 makes it easy to build a completely individual conveyor system and is dimensioned for the higher requirements of permissible belt tension now demanded from industry and belt manufacturers alike.

With a broader speed spectrum, the DM 0080 covers all possible applications. The clever plug-and-play connection significantly simplifies the installation. Each motor is approved, tested, and modularized so that it can be produced and delivered around the world in the shortest amount of time.

The modular design of the DM 0080 allows a free combination of individual module groups, such as shaft, end housing, shell, steel or technopolymer gear, asynchronous or synchronous motor winding, to perfectly meet the requirements of an application. In addition, various options, such as encoder, brake, backstop, rubber laggings, etc., as well as different accessories are available.

With the platform concept of the DM 0080, it is possible to cover all internal logistics applications in the food processing sector, as well as in industry, distribution and airports.

The DM 0080 synchronous drum motor is also offered as oil-free variant. It is ideal for highly dynamic applications, conveyor systems in food processing, SmartBelt conveyors and many belt conveyors with servo driver.

DRUM MOTORS

DM Series - DM 0113

DRUM MOTOR
DM SERIES
DM 0113

Practice-oriented, scalable and thought out in detail: The new drum motor DM 0113 makes it easy to build a completely individual conveyor system and is dimensioned for the higher requirements of permissible belt tension now demanded from industry and belt manufacturers alike.

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With the platform concept of the DM 0113, it is possible to cover all internal logistics applications in the food processing sector, as well as in industry, distribution and airports.

DRUM MOTORS

DM Series - DM 0138

DRUM MOTOR
DM SERIES
DM 0138

Practice-oriented, scalable and thought out in detail: The new drum motor DM 0138 makes it easy to build a completely individual conveyor system and is dimensioned for the higher requirements of permissible belt tension now demanded from industry and belt manufacturers alike.

With a broader speed spectrum, the DM 0138 covers all possible applications. The clever plug-and-play connection significantly simplifies the installation. Each motor is approved, tested, and modularized so that it can be produced and delivered around the world in the shortest amount of time.

The modular design of the DM 0138 allows a free combination of individual module groups, such as shaft, end housing, shell or steel gear, to perfectly meet the requirements of an application. In addition, various options, such as encoder, brake, backstop, rubber laggings, etc., as well as different accessories are available.

With the platform concept of the DM 0138, it is possible to cover all internal logistics applications in the food processing sector, as well as in industry, distribution and airports.

DRUM MOTORS

DM Series - DM 0165

DRUM MOTOR
DM SERIES
DM 0165

Practice-oriented, scalable and thought out in detail: The new drum motor DM 0165 makes it easy to build a completely individual conveyor system and is dimensioned for the higher requirements of permissible belt tension now demanded from industry and belt manufacturers alike.

With a broader speed spectrum, the DM 0165 covers all possible applications. The clever plug-and-play connection significantly simplifies the installation. Each motor is approved, tested, and modularized so that it can be produced and delivered around the world in the shortest amount of time.

The modular design of the DM 0165 allows a free combination of individual module groups, such as shaft, end housing, shell or steel gear, to perfectly meet the requirements of an application. In addition, various options, such as encoder, brake, backstop, rubber laggings, etc., as well as different accessories are available.

With the platform concept of the DM 0165, it is possible to cover all internal logistics applications in the food processing sector, as well as in industry, distribution and airports.

DRUM MOTORS

DM Series - DM 0217

DRUM MOTOR
DM SERIES
DM 0217

Practice-oriented, scalable and thought out in detail: The new drum motor DM 0217 makes it easy to build a completely individual conveyor system and is dimensioned for the higher requirements of permissible belt tension now demanded from industry and belt manufacturers alike.

With a broader speed spectrum, the DM 0217 covers all possible applications. The clever plug-and-play connection significantly simplifies the installation. Each motor is approved, tested, and modularized so that it can be produced and delivered around the world in the shortest amount of time.

The modular design of the DM 0217 allows a free combination of individual module groups, such as shaft, end housing, shell or steel gear, to perfectly meet the requirements of an application. In addition, various options, such as encoder, brake, backstop, rubber laggings, etc., as well as different accessories are available.

With the platform concept of the DM 0217, it is possible to cover all internal logistics applications in the food processing sector, as well as in industry, distribution and airports.

DRUM MOTORS

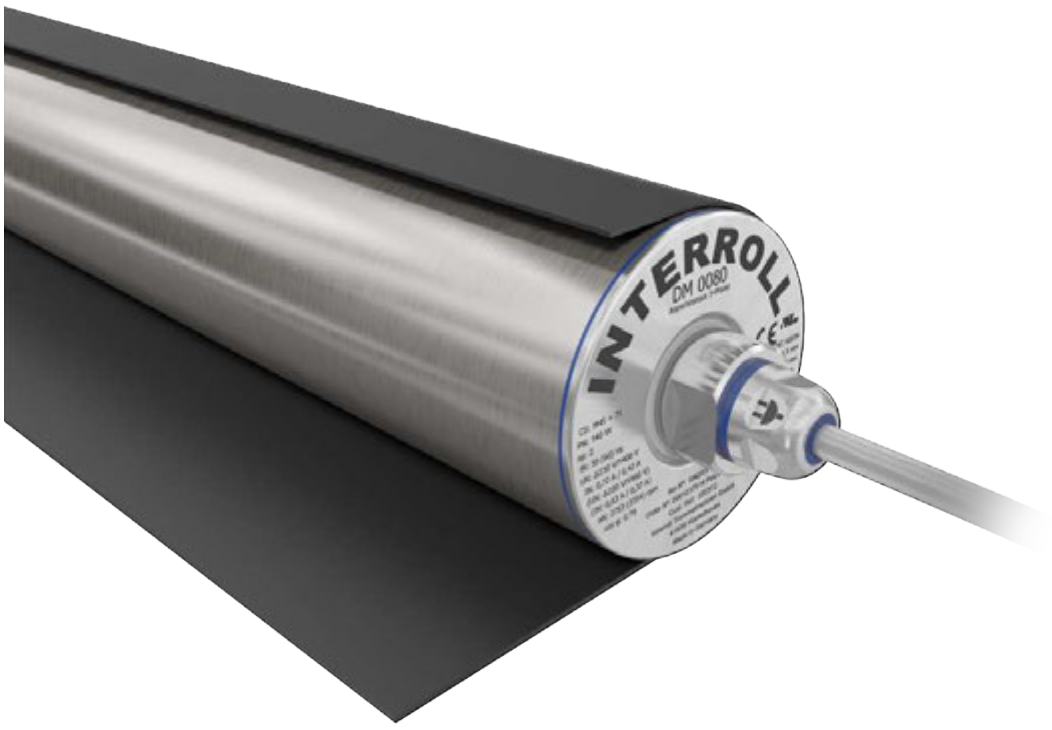
DM Series - Lagging and Coating

DM SERIES
LAGGING AND COATING
LAGGING

For friction drive belt applications

Hygienic and loadable
A lagging provides an advantage for drum motors, particularly for wet applications and in food processing, with its typical hygienic requirements. A lagging increases the friction between drum motor and conveyor belt, thereby preventing slippage. On top of that, it is resistant to external influences such as oil, fuels, and other chemicals that may be used for cleaning. Depending on the application, different profiles are available: For high volumes of liquid, a longitudinal grooved lagging redirects moisture between belt and motor, a center V-groove ensures precise belt tracking. Laggings are available in cold and hot vulcanization, whereby the latter meets particularly strict hygiene requirements.

Note: It is important to incorporate a calculation of belt pull and speed that is adjusted to the greater outer diameter of the drum motor.



DRUM MOTORS

DP Series - Pallet Drive 0080 / 0089

DRUM MOTOR
DP SERIES
PALLET DRIVE 0080 / 0089

With the new space saving Interroll Pallet Drive, design and installation of the driven pallet conveyors is very easy. It is the perfect single-zone drive solution for efficient space utilization.

The high-performance asynchronous drum motor with robust multi-stage planetary gear is integrated into the Interroll Roller based on Series 3950 and is applicable for loads of up to 1,250 kg per zone.

Construction of pallet conveyors requires minimal engineering: There is no need for complex motor stations; the pallet rollers are driven roller-to-roller. This compact and maintenance-free solution can be mounted directly on the floor.