

# Belt Conveyor Pulley

## Products Overview

[www.damonroller.com](http://www.damonroller.com)

Version:202410V2 (1)

# About Damon Industry



## ONE OF THE GLOBAL LEADING MANUFACTURER OF CONVEYOR ROLLERS

Damon Industry provides millions of rollers all over the world every year for many industries. With professional experience for decades, Damon Industry provides support for global companies to achieve efficient logistics.

Zhejiang Damon Industrial Equipment Co. Ltd, since its establishment in 2004, has always been committed to providing the highest quality conveyor rollers and services for a wide range of industries.

Damon Industry conveyor rollers are used in a variety of industries including food distribution, pharmacy, tobacco, clothing, postal express, logistics and distribution, manufacturing, rubber and airport industries. Damon Industry provides a vast range of reliable and innovative roller solutions. Our dedicated and experienced team of sales people and application engineers work with our clients to ensure the products are suitable for the application and help users improve efficiency and reduce costs.

Globally we have gained the consistent trust of our customers. These customers include influential equipment manufacturing companies and logistics system integrators. We provide customers with over 40 different categories products covering a variety of specifications to suit customers' different requirements.

Damon Industry has manufacturing bases in Asia, Europe, America and Australia, and providing customers a wide range of services such as localized manufacturing, sales and service.

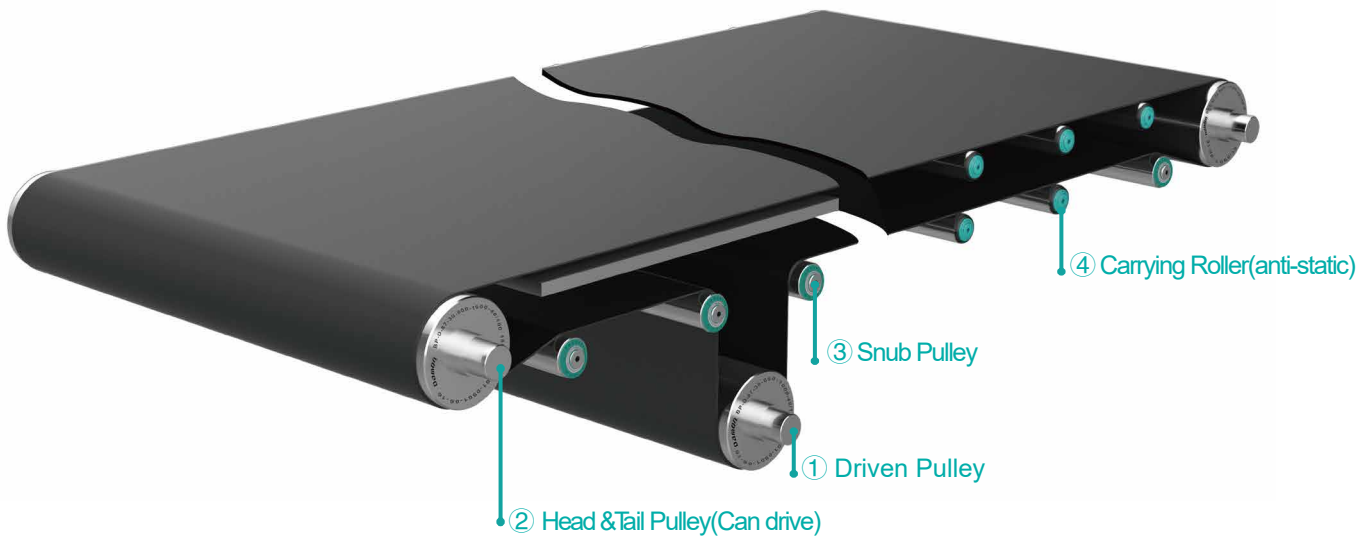
With a strong global presents, Damon Industry will continue to expand and pursue a deeper market share. From introduction of complete information based ERP management system to the independent research and development of the online roller drawing system and then launched 24 h online service, we are viewing our market from a brand new perspective and are willing to share our ideas of quality and innovation with every customer.

Damon Industry was awarded "The Most Innovative Brand" in the industry of Chinese logistics equipment. Damon Industry was also selected for the "Chinese Green Warehousing and Distribution Technology & Equipment" recommended directory. We will always focus on supplying outstanding conveyor roller solutions to local and global customers.

With the starting point of "creating competitiveness for customers' logistics systems", the company is moving towards the vision of "building Damon Industries into the most influential provider and service provider in the field of core components of global logistics equipment".

# Belt Conveyor Pulley One Station Solution

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Through high intensity welding and precise processing craft, Damon Industry devote itself to offer you standardized belt-conveyor roller series with high intensity and quality. We could provide you one-stop solution for belt conveyor rollers, including carrier, head to tail roller, driven roller and tension roller.

## ① Driven Pulley:

Main driving component for centre drive belt conveyors:

Select BP-D series pulley (rotating shaft).

## ② Head & Tail Pulley:

Installed at each end of a belt conveyor according to the different drive type and structure:

a、Centre drive:

Change the belt direction: Select BP-R series pulley (fixed shaft) or DP-D series pulley (rotating shaft)

b、Head or Tail drive:

Drive Pulley: Select BP-D series pulley (rotating shaft)

Idler Pulley: Select BP-R series pulley (fixed shaft) or BP-D series pulley (rotating shaft).

## ③ Snub Pulley:

Used to increase the belt wrap angle for the driven pulley, tension and tracking the belt.

Select BP-R series pulley (fixed shaft) or 1200 series conveyor roller.

Be careful about the belt tensioning and siding force when using as redirection & tensioning.

## ④ Carrying Roller:

Used to support the belt, simplify structure and reduce friction:

Select 1200 series conveyor roller.

# Drum Motor



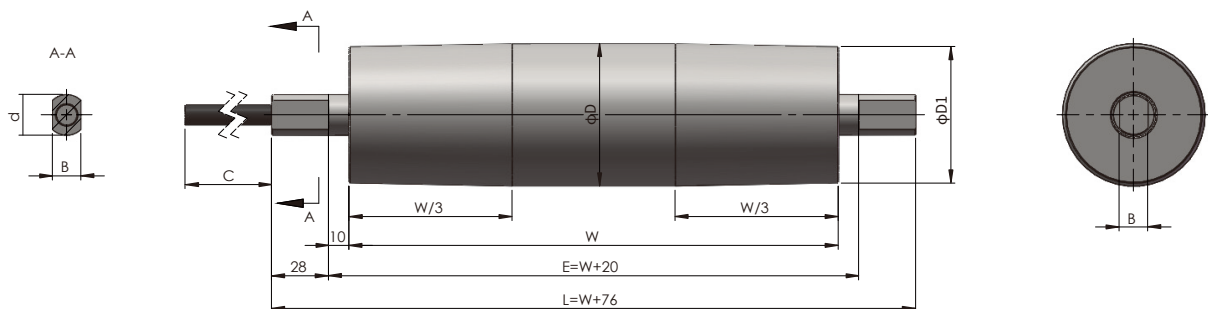
- Space-saving and easy installation
- Frequent starts and stops, up to 2000 cycles per hour
- Up to 95% efficiency, save energy consumption
- Cooling oilless design, no risk of oil leakage
- Direct drive motor technology, high dynamic response, high precision positioning

## Basic Parameters

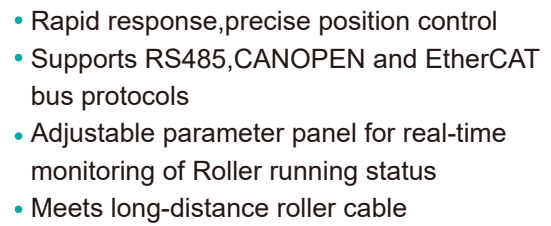
Roller Model	DMR67	DMR100	
Tube Dia.	67mm	100mm	
Rated Power	0.4kW	0.75kW	1.1kW
Rated Torque	4N·m	10N·m	15N·m
Rated Voltage	AC 1X220V (±10%) / 50Hz		
Length Range	300-1000mm	400-1400mm	
Speed Range	30~150m/min		
Working Method	Start-stop frequency ≤2000 cycles per hour,continuous running		

**!** Drum motor roller must be used with a driver and cannot be directly connected to the AC power supply.

## Dimensions



Model	Tube Dia.(D)	Drum Shape(D1)	Shaft Dia.(d)	Milled Flat	Cable Length(C)
DMR 67	70mm	67mm	20mm	width(B)	1000mm
DMR100	103mm	100mm	30mm	14~17mm	800mm



Rated Voltage	AC 1X220V(±10%)
Rated Power	0.4kW / 0.75kW / 1.1kW
Start-stop Frequency	≤ 2000 cycles per hour
Control Mode	I/O & Bus
Bus Communication	RS485 / CANopen / EtherCAT
Maximum Extention Cable	15m

The technical drawings provide the following dimensions:

- Front View (Left):**
  - Top width: 18, 10.7
  - Right side height: 17
  - Bottom width: 19, 73
  - Bottom height: 9.8
  - Internal vertical dimension: 105.5
  - Internal horizontal dimension: 62.1
- Top View (Middle):**
  - Top width: 62.1, 137.7, 58
  - Bottom width: 62.7
  - Bottom height: 3
- Side View (Right):**
  - Top width: 65.5
  - Right side height: 135.5
  - Bottom width: 5.2, 34.5, 5.2
  - Bottom height: 5.2
  - Internal vertical dimension: 105.5



# Drum Motor



- High starting torque and excellent dynamic  
Ensure stable and reliable operation of the equipment
- No cooling oil, no risk of oil leakage
- 95% first-class energy efficiency, no-load current is 10% of the rated current, saves on electricity consumption

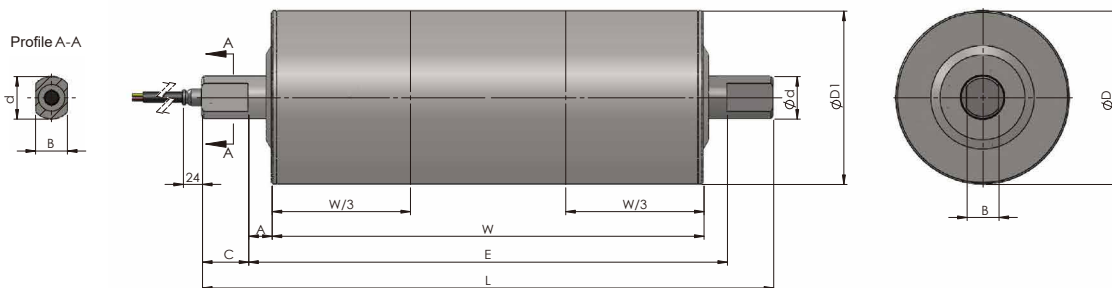
## Basic Parameters

Roller Model	DMR138	DMR165	DMR216
Rated Voltage	AC 3X380V(±10%) / 50Hz		AC 3X380V~418V / 50Hz
Rated Power	1.82kW		2.55kW
Rated Current	3.6A		4.9A
Length Range	500~1100mm		800~1400mm
Working Temperature	-5~40℃		-10~40℃
Ambient Humidity	10~90%RH(Non-condensation)		
IP Rating	IP54		

## Performance Parameters

Product Model	DMR138	DMR165	DMR216
Rated Torque	61N·m	174N·m	278N·m
Belt Pull	884N	2109N	2574N
Current Range	30~90m/min	30~60m/min	
Load Capacity	43kg/m	60kg/m	
Belt Conveyor Length	≤6m	≤9m	≤12m
Maximum Belt Tension	800kg		

## Product Dimensions (Zinc Plated)



Model	Roller Dia.(D)	Drum-Shaped(D1)	Shaft Dia.(d)	Milled Flat Width(B)	Milled Flat Length(C)	Milled Flat Distance(A)	E	L
DMR138	138mm	136mm	30mm	25mm	25mm	8.5mm	W+17	W+67
DMR165	165mm	163mm	40mm	30mm	43.5mm	22mm	W+44	W+44
DMR216	217mm	214.5mm	40mm	30mm	43.5mm	22mm	W+44	W+44



- Easy setting of direction, speed, acceleration, and deceleration
- Standard equipped with an assistant-type intelligent LCD keyboard
- Comprehensive protection functions including short circuit, phase loss, overload, overheat, etc.
- Detachable LCD keyboard for flexible and convenient external use
- Digital IO, bus communication (RS485, CANOPEN) And other control methods

## Drive Technical Data

Rated Voltage	3X380VAC 50-60Hz
Rated Power	2.2kW
Rated Current	5.6A
Noise Level	40dB

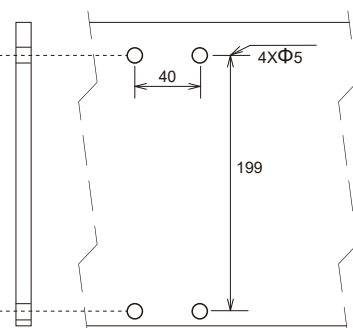
## Drive Application Environment

Operating Temperature	-15~55℃
Relative Humidity	5~95%RH (non-condensation)
Vibration	Maximum 1mm (0.04in.) (5-13.2Hz), Maximum 7m/s <sup>2</sup> (23ft/s <sup>2</sup> ) (13.2-100Hz) sinusoidal
Altitude	0-2000m (for TN, TT, IT grounding systems)
Installation Method	Thread Fixed Installation

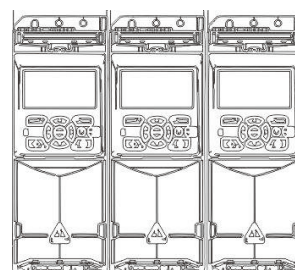
## Dimensions



## Electrical Mounting Board Opening Dimensions



## Drive Installation Example



For optimal heat dissipation, side by side installation is preferred.

# BP-D Series Pulley (Rotating Shaft)

• Customer Part No.

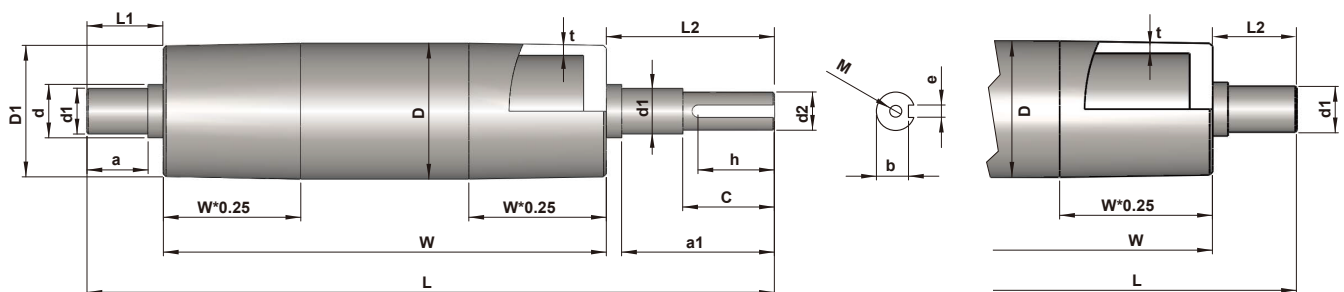


• Customer PO No.



- Thermal refining shaft
- Special welding equipment and technology
- New structure, strong and reliable

## Dimensions(Steel Z/P)



## Specifications

Series	Standard				Optional	Length		
	Tube dia. (D)	Tube (t)	shaft dia. (d1)	Drum (D1)		W	L	L1/L2
06C	Φ59	(4.5)	Φ25	Φ58	Φ20	250~1300	≤1500	≤280
08K	Φ75	(4.5)	Φ30	Φ74	Φ25	250~1300	≤1500	≤280
					Φ35			≤185
08J	Φ87	(4.5)	Φ30	Φ85.6	Φ25	250~1300	≤1500	≤280
					Φ35			≤185
10B	Φ100	(6.0)	Φ30	Φ98	Φ25	250~1400	≤1600	≤280
					Φ35			≤185
11D	Φ112	(6.0)	Φ35	Φ110	Φ30	250~1400	≤1600	≤280
					Φ40			≤185, When ≥Φ40, ≤140
12A	Φ119	(6.0)	Φ35	Φ117	Φ40	250~1400	≤1600	≤185, When ≥Φ40, ≤140
13C	Φ130	(6.5)	Φ35	Φ127	Φ40	70~1800	≤2400	≤300
14K	Φ137	(6.5)	Φ35	Φ135	Φ40	70~1800	≤2400	≤300
15J	Φ156	(6.5)	Φ35	Φ153	Φ40	70~1800	≤2400	≤300
18K	Φ176	(8.0)	Φ40	Φ173	Φ45	70~1800	≤2400	≤300
20C	Φ200	(6.5)	Φ45	Φ196	Φ50/55	70~1800	≤2400	≤300
21J	Φ216	(8.5)	Φ50	Φ212	Φ55	70~1800	≤2400	≤300



Straight tube is available-not tapered ; "( t )" is not accurate data.

If there is dynamic balance requirement for products, please contact us.

Surface treatment: zinc plated or anti-rust oil

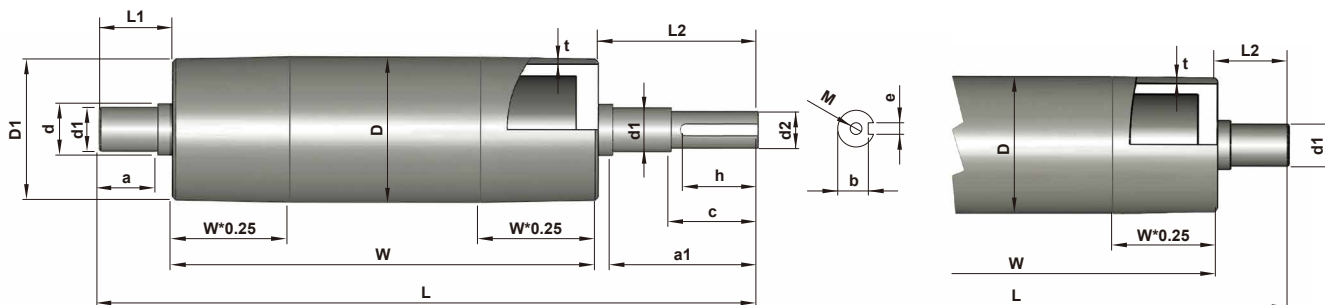
**Precaution of broken shaft:** when installed by shaft through the motor, the torque that the shaft takes is quite big, please pay attention to the actual torque output and installation detail, otherwise, the shaft will break. Please contact us for details.

**Precaution of abrasion of the shaft:** 1, please install the bearing with frame, and make sure the screw is fastened.

2, Machine flat surfaces on both sides of the shaft, so as that the screws can reach the surfaces and thus be fastened.



## Dimensions(Surface Polyurethane-PU)



## Specifications

Standard configuration					Optional	Length		
Series	After PU coating (D)	PU layer thickness (t)	shaft dia. (d1)	Drum (D1)	Optional shaft dia.(d1)	W	L	L1/L2
08J	Φ87	(6.0)	Φ30	Φ85.6	Φ25	250~1400	≤1600	≤280
					Φ35			≤185
10B	Φ100	(6.5)	Φ30	Φ98	Φ25	250~1400	≤1600	≤280
					Φ35			≤185
11D	Φ112	(6.0)	Φ35	Φ110	Φ30	250~1400	≤1600	≤280
					Φ40			≤185, When ≥Φ40, ≤140
12A	Φ122	(5.0)	Φ35	Φ120	Φ40	250~1400	≤1600	≤185, When ≥Φ40, ≤140
13C	Φ130	(5.5)	Φ35	Φ127	Φ40	250~1400	≤1600	≤185, When ≥Φ40, ≤140
15J	Φ156	(6.0)	Φ35	Φ153	Φ40	70~1800	≤2400	≤300
18K	Φ176	(5.0)	Φ40	Φ173	Φ45	70~1800	≤2400	≤300
20C	Φ202	(5.0)	Φ45	Φ199	Φ50/55	70~1800	≤2400	≤300
21J	Φ216	(7.5)	Φ50	Φ212	Φ55	70~1800	≤2400	≤300

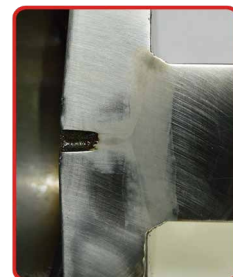
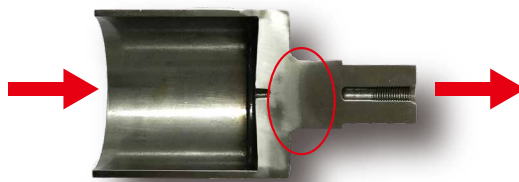
⚙ Straight tube is available-not tapered ; “( t )”is not accurate data.

Polyurethane (PU)color-yellow

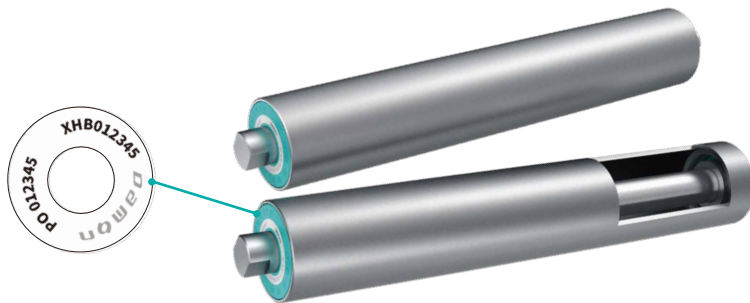
(If the pulley length is out of above, please contact us.)

**Precaution of broken shaft:** when installed by shaft through the motor, the torque that the shaft takes is quite big, please pay attention to the actual torque output and installation detail, otherwise, the shaft will break. Please contact us for details.

**Precaution of abrasion of the shaft:** 1, please install the bearier with frame, and make sure the screw is fastened.  
2, Machine flat surfaces on both sides of the shaft, so as that the screws can reach the surfaces and thus be fastened.

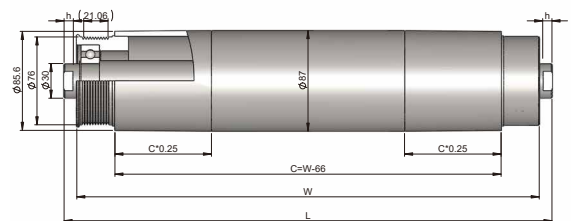
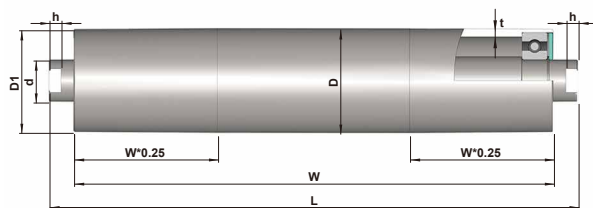


# BP-R Series Pulley (Fixed Shaft)



- Configured with precision bearings
- Precision machining, smooth rotation
- High load capacity, reliable and durable.

## Dimensions(Steel Z/P)



Usually used for climbing belt conveyor

## Specifications

Standard						Length			Remarks
Series	Tube dia. (D)	Tube (t)	shaft dia. (d)	Bearing type	Drum (D1)	W	L	Shaft unilateral outcrop	
05D	Φ51	(3.0)	Φ20	6204	/	450~1300	≤1500	≤100	
06C	Φ59	(4.5)	Φ25	6205	Φ58	70~1300	≤1500	≤100	
07C	Φ69	(6.0)	Φ30	6206	Φ68	70~1300	≤1600	≤150	
08K	Φ75	(4.5)	Φ25	6005	Φ74	120~1300	≤1500	≤100	
08C	Φ79	(4.5)	Φ25	6005	Φ77.6	120~1300	≤1500	≤100	
08J	Φ87	(4.5)	Φ25	6205	Φ85.6	120~1300	≤1500	≤100	
10B	Φ100	(6.0)	Φ30	6306	Φ98	120~1800	≤2100	≤150	
11D	Φ112	(6.0)	Φ30	6306	Φ110	120~1800	≤2100	≤150	
			Φ35	6307					
12A	Φ119	(6.0)	Φ30	6306	Φ117	120~1800	≤2100	≤150	
08J	Φ87	(4.5)	Φ30	6206	Φ85.6	180~1300	≤1600	≤150	Steel Poly-vee

⚙ Straight tube is available-not tapered ; “( t )”is not accurate data.

If there is dynamic balance requirement for products, please contact us.

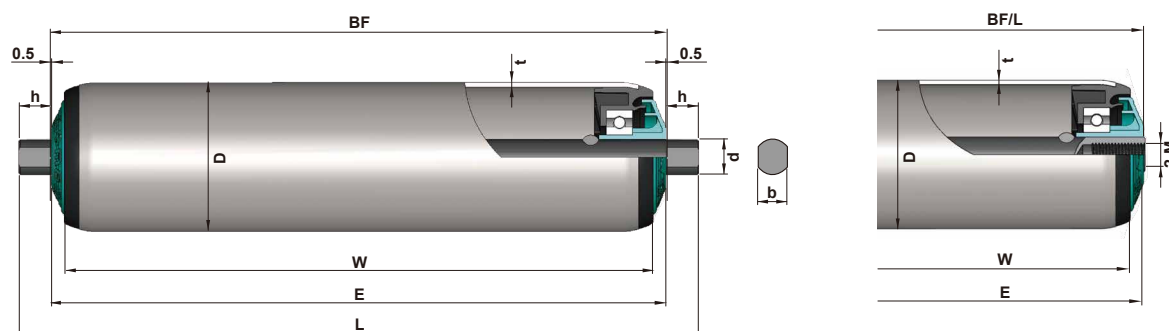
Surface treatment:zinc plated or anti-rust oil

# 1200 Series Conveyor Roller



- Configured with polymer bearing housing and end cap
- Nice appearance, quiet running
- Optional for tubes and installations
- Anti-static is standard

## Dimensions



## Specifications

Tube dia. (D)	Standard Shaft Dia(d)	Dimension relation		Surface treatment	Recommended application location
		BF	L		
Φ50	Φ12/15	BF=W+10	L=W+31	Steel Z/P	4
	Φ17	BF=W+10	L=W+31	SS	3&4
Φ60	Φ12/15	BF=W+10	L=W+31	Steel Z/P	4
	Φ17	BF=W+10	L=W+31	SS	3&4
Φ76	Φ20	BF=W+12	L=W+41	Steel Z/P	3&4
Φ80	Φ20	BF=W+12	L=W+41	Steel Z/P	3&4

 Be careful about the belt tensioning and siding force when using as redirection & tensioning.



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so for the newest product informations, pls refer to the official website.