

2280 Series Driven Conveyor Roller



## 2280 Series Timing Belt Pulley Conveyor Roller

### Products Features

- The polymer timing pulley is installed at the end of the roller, which makes the drive and conveying separate in the zone. The conveying is more stable and has the characteristics of high speed and low noise.
  - The bearing end cap consists of a precision ball bearing, a polymer housing and end cap seal. Combined they provide an attractive, smooth and quite running roller.
  - The design of the end cap protects the bearings by providing excellent resistance to dust and splashed water.
  - It has bigger conveying capacity, which is suitable for medium duty conveying.
  - It has compact structure and simple design without tensioning.
  - It is more efficient without slip synchronous in conveying.
  - The T5 tooth shape design is suitable for the roller conveyor with higher versatile.
  - Its positioning is precise with the use of MDR to meet the application requirements of the load section.
  - It is suitable for clean room and other harsh environment with the use of PU synchronous belt.
  - Compared with traditional belt drive, it is waterproof (no skidding) and has the ability to work in a certain bad environment.
  - It needs no lubrication with easy maintenance.
  - Different timing belt models match the different center distance of the roller. (see the appendix)
  - Suitable for the high speed applications. Maximum speed varies with roller length and diameter. Maximum speed up to 120m/min
  - Temperature: -5°C~+40°C
  - Humidity available  $\geq 30\%$
- Please contact us if humidity out of this scope.

### Specifications

Bearing Unit	
Bearing housing	Polyamide, black
End cap	Polypropylene, Damon green
Precision ball bearing	6002

Drive Element	
Timing pulley	Polyamide, black



## About Duty

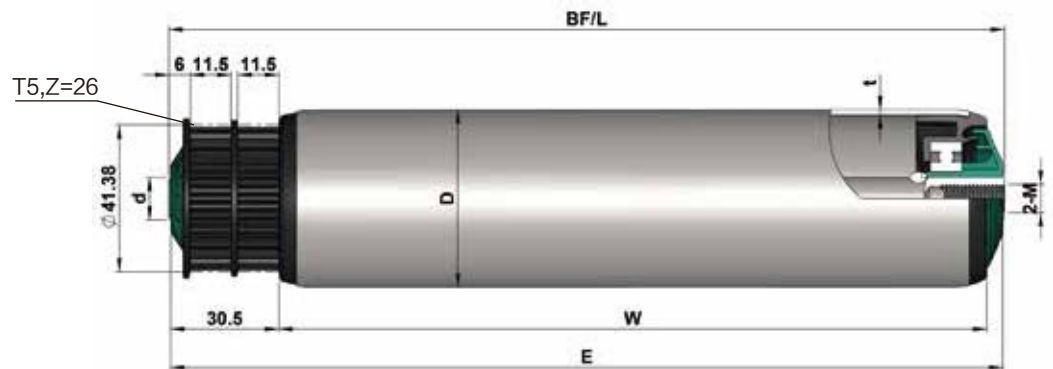
1. Duty is the maximum conveying capacity of driven roller (it is not roller's maximum load capacity) For more information about the load capacity, refer to the load capacity of 1200 series dia 50 roller on Page 27.
2. In driven conveying, duty plays a decisive role.
3. The duty capacity of the roller depends on the conveying arrangement and the mode of the timing belt. In general, the duty capacity of the single zone can achieve 100kg.

## Roller Pitch

The center distance of the timing belt arrangement is strictly limited (recommended tolerance: +0.5/0mm). The common pitch and the timing belt type with it are shown in the following table:

synchronous belt wide: 10mm

Center distance(mm)	Type of timing belt	Teeth number of timing belt
60	10-T5-250	50
75	10-T5-280	56
85	10-T5-300	60
100	10-T5-330	66
105	10-T5-340	68
135	10-T5-400	80
145	10-T5-430	86
160	10-T5-450	90



## 2280 Series Internal Thread

Tube Dia.(D)	Shaft Dia.(d)	BF=W+36	E=W+35	L=W+36
Φ50	Φ12/15			

Tube	D*T	Shaft Dia. (d)	
		Φ12 ( M8x15 )	Φ15 ( M10x20 )
Steel, zinc plated	Φ50x1.5	2.280.SHC.ACC	2.280.SHC.ADC
Steel, zinc plated with PVC sleeve ( 2mm )	Φ50x1.5	2.280.SHD.ACC	2.280.SHD.ADC
Stainless steel	Φ50x1.5	2.280.NHC.BCC	2.280.NHC.BDC
Aluminium	Φ50x1.5	○	○

○—Available configuration

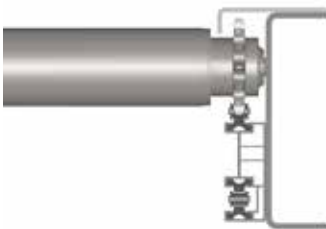
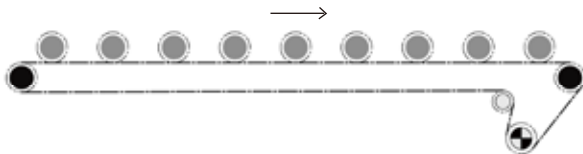
⚙️ Φ50mm rollers can be fitted with PU sleeve (2mm).

## 2214/2224 Series Driven Conveyor Roller

### Single Chain Sprocket Drive

1. The compact construction is suitable for medium/low speed, continuous operation.
2. Typically the conveyor is equipped with a chain tensioner.
3. When considering the maximum duty of the single roller, you should also consider the ultimate tension of the chain under conveyor full drive conditions.
4. Compared with the double chain drive, the choice of roller pitch is more flexible and not determined by the chain pitch.

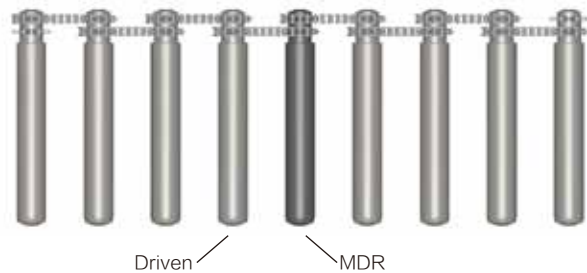
Single chain layout:



### Double Chain Sprocket Drive

1. Suitable for heavy duty loads and frequent start/stop operation.
2. To obtain the best roller drive transmission, the drive should be located in the centre of the conveyor.

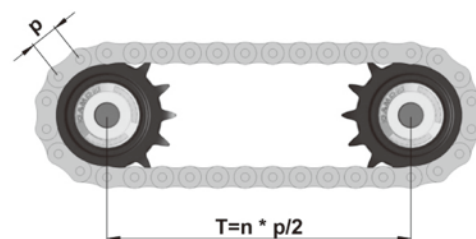
Double chain arrangement:



3. Compared with single sprocket drive, the conveying speed is higher. Maximum speed: 30m/min.
4. The roller pitch is limited, please see below.

$$T = n * p / 2$$

Note: n — Integer, 1、2、3、...  
p — Chain pitch



Avoid half pitch chain. Please use the chart below for the chain pitch.

Unit: mm

Type	Pitch	Center distance(T)					Tolerance
08B11T	12.7	69.8	82.5	95.2	107.9	120.6	0/-0.4
08B14T	12.7	88.9	101.6	114.3	127	139.7	0/-0.4
10B15T	15.875	134.9	150.8	166.6	182.5	198.4	0/-0.7