



2280 Series

Timing Belt Pulley Conveyor Roller

Product 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 quiet running roller.
- The design of the end cap protects the bearings by providing excellent resistance to dust and splashed water.
- larger transmission capability, compact structure, tensioning-free mechanism and simple design.
- It is more efficient without slip in conveying.
- The T5 tooth shape design is suitable for the roller conveyor with higher versatility.
- 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 2~3m/s.
- Standard configuration with anti-static design surface impedance $\leq 10^6 \Omega$.
- Temperature range: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$.
- Humidity range: 30%~ 90% RH (non-condensation).
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 |

2280 Series Driven Conveyor Roller

About Conveying Duty

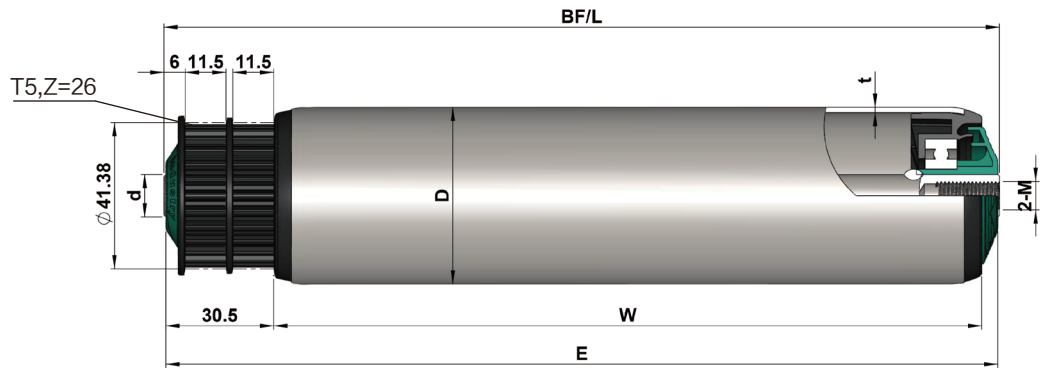
1. Duty is the maximum conveying capacity of driven roller (it's not roller's maximum load capacity) For more information about the load capacity, refer to the load capacity of 1200 series dia 50 roller on Page 27.
2. In driven conveying, duty plays a decisive role.
3. The duty capacity of the roller 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 Center 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-T5-420 | 84 |
| 160 | 10-T5-450 | 90 |



2280 Series Internal Thread

| Tube Dia.(D) | Shaft Dia.(d) | | | |
|--------------|---------------|---------|--------|--------|
| Φ50 | Φ14/15 | BF=W+36 | E=W+35 | L=W+36 |

| Tube | D*T | Shaft Dia. (d) | |
|--|---------|----------------|----------------|
| | | Φ14 (M8) | Φ15 (M10x20) |
| Steel, zinc plated | Φ50x1.5 | 2.280.SH.C.BLC | 2.280.SH.C.ADC |
| Steel, zinc plated with PVC sleeve (2mm) | Φ50x1.5 | 2.280.SH.D.BLC | 2.280.SH.D.ADC |
| Stainless steel(304) | Φ50x1.5 | 2.280.NH.C.BLC | 2.280.NH.C.BDC |
| Aluminium | Φ50x1.5 | ○ | ○ |

○ — Available configuration

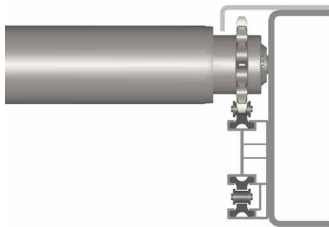
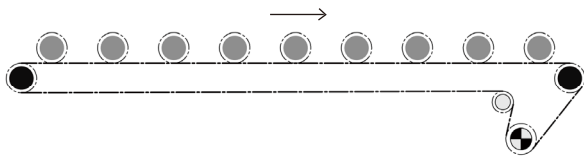
⚙️ Φ50 rollers can be fitted with PU(2mm).



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.

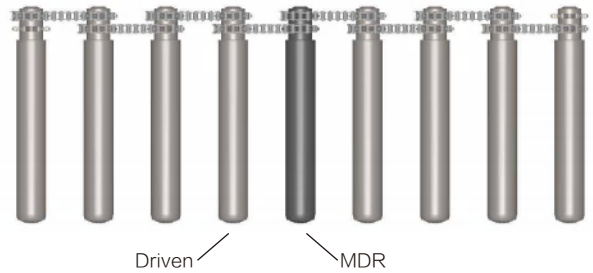
Single chain layout:



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.

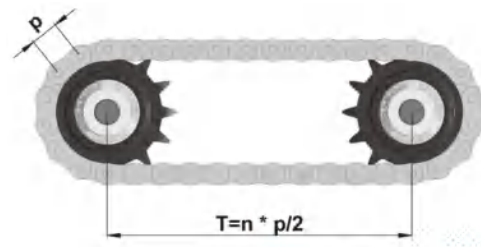
Double chain arrangement:



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 |
| 10A13T | 15.875 | 119 | 134.9 | 150.8 | 166.6 | 182.5 | 0/-0.7 |
| 10B15T | 15.875 | 134.9 | 150.8 | 166.6 | 182.5 | 198.4 | 0/-0.7 |