



.....conveying non-stop movements since 1988



Driven Convey Solution



## DRIVEN CONVEY SOLUTION:

Drive convey could make the goods conveyed in accurate speed, steadily and reliably. According to the driving method, it could be classified as “belt convey” and “chain convey”.

**Belt Drive:** Steady running, low noise, low in environmental pollution, high speed allowed, but could not work in oiled place.

O-belt drive – most traditional and popular in belt convey, widely applied in carton convey, with the features of high speed and low noise. According to different driving structure, it is classified as single groove and double grooves (multiple grooves designed on the base of double grooves) Disadvantage is load capacity is lower and lifetime is shorter than chain convey.

**Double Groove Drive:**

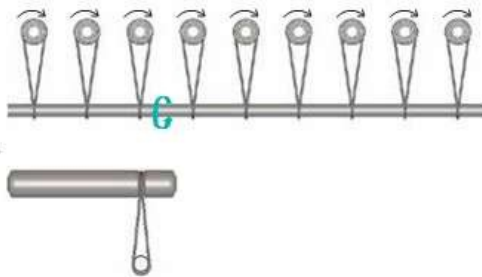
O-belt driven, one roller pulling another roller to convey.

1. Easy arrangement, simple installation and maintenance.
2. The torque decay more quickly, normal single roller could pull 7-8 passive rollers. The weight of conveyed unit should not exceed 30 kg.
3. The length of O-belt could be decided as requirement no much requirement for the roller centre distance.
4. Preloading value is needed for the length of O-belt loop, it could be different according to the different O-belt manufacturer. Normally make preloading value of 6 % - 8 %, that is reduced by 6 % - 8 % from the theoretical length of loop.

## Single Groove Drive:

Conveyor driven by the drive shaft (popularly named line shaft) under the rollers, line shaft installed with driving wheels. O-belt turn around 90 degree and fixed in roller groove and driving wheel. Roller driven by the running of line shaft.

1. Every roller's driving force is transmitted by the line shaft separately, compared with double grooves drive, it has more load capacity, mainly applied in the long distance convey. The max. convey distance could reach more than 10 meters.
2. Line shaft could be connected by universal joint coupling.
3. The maintenance is relatively difficult. Need to disassemble the whole line shaft.



| Single Groove Drive | Double Groove Drive |
|---------------------|---------------------|
|---------------------|---------------------|

## MS - VEE Drive:

Applied in more and more roller conveyor line, it has high load capacity, more than 3 times of traditional O-Belt convey. The pitch is 2.34 mm.

1. Only the poly-VEE belt of elastic fibre core could be applied in rollers because fibre core could cover the tapping tolerance of frame, and could also apply in the curve convey.
2. You could choose poly-vee belt of 2 grooves or 03 grooves according to the weight of conveying load.
3. Roller centre distance is strictly limited, the recommended poly-vee belt type for different centre distance is referred chart below:

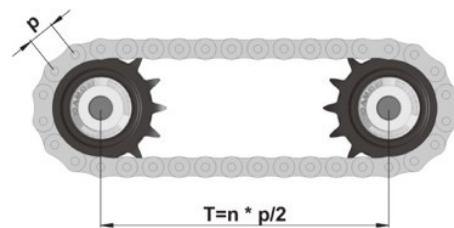
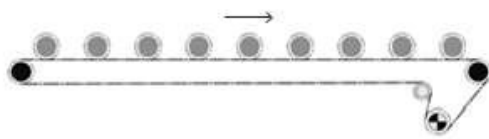
| Roller Pitch |        | 2 grooves | 3 grooves |
|--------------|--------|-----------|-----------|
| (mm)         | (inch) |           |           |
| 50mm         | 2.36"  |           |           |
| 60mm         | 2.36"  |           |           |
| 73mm         | 2.87"  |           |           |
| 75mm         | 3.00"  |           |           |
| 94mm         | 3.70"  |           |           |
| 100 mm       | 4.00"  |           |           |
| 105 mm       | 4.13"  |           |           |
| 120 mm       | 4.72 " |           |           |
| 133 mm       | 5.23"  |           |           |
| 160 mm       | 6.30"  |           |           |

### Chain Drive:

Large load capacity, easy arrangement, strong environmental adaption, could work in the place with oil and water frequently touching, and with high temperature, but the chain is easy to be abraded in the dusty environment, loud noise in high speed.

#### Single chain sprocket drive:

Compact structure, suitable for the condition of middle and light load, low speed, continuing operation. A chain drives all the single sprocket rollers on the conveyor. By the guide bars (popularly named chain support), the chain is fixed between the sprocket and chain support.



#### Double chain Sprocket drive:

Suitable for condition of heavy-duty load, high speed, frequently on – off. Chain meshes on the sprocket of roller by the hook-up's method. The convey is realized by one roller pulling another roller.



You could find the products in the catalogue according to their different features:

| Product features                                                          | Series           | Diameter            |
|---------------------------------------------------------------------------|------------------|---------------------|
| O-belt drive, light duty conveys, groove position customized              | NGA -2230 / 2240 | Ø50 / 60            |
| O-belt wheel, light duty conveys                                          | NGA -2260        | Ø50                 |
| MS & SS -VEE Wheel, middle duty conveys, high speed, low noise            | NGA -2250        | Ø50                 |
| MS & SS, middle duty conveys, nice, low noise                             | NGA -2214/ 2224  | Ø50 / 60            |
| MS & SS sprocket and bearing housing, heavy duty conveys, strong, durable | NGA -2311 / 2321 | Ø50 /60/ 76/ 80/ 89 |
| MS & SS sprocketbearing housing, nice, low noise                          | NGA -2211 / 2221 | Ø50 / 60 / 80       |
| MS & SS, light duty conveys, exclusive use for aluminium alloy tube       | NGA -2312 / 2322 | Ø50 / 60            |

## NGA -2230 / 2240 (Series)

### O-Belt conveyor roller

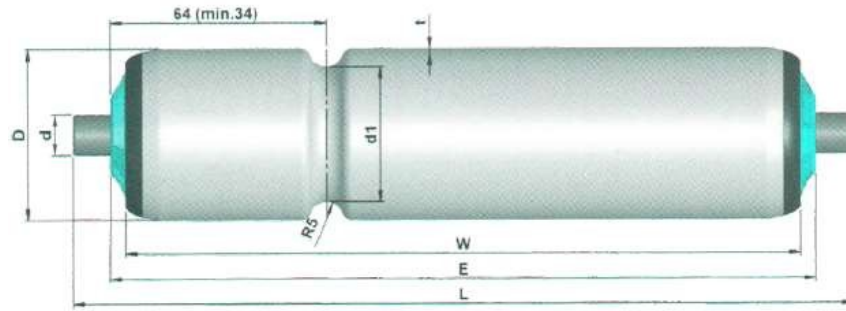
#### Product features

1. Compared with chain drive, belt drive has the advantage of high speed and low noise, "O-belt" is the most popular way of belt drive
2. Roller is driven by the friction of the "O-belt" in the groove of roller. To avoid the damage of the static to the goods (e.g., CMOS chip in electronic industry), anti-static design has already been the standard configuration of this product.
3. Except standard type, the position and number of grooves could be customized (4 or more grooves on one roller is not recommended)
4. The load capacity of roller depends on the driving power of "O-belt" and the transmission structure (line shaft drive is higher than hook-ups), reference data is normally less than 300N.
5. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
6. The end cap of roller resists dust and water splash well in operation environment.
7. Suitable in high-speed application. Speed could vary according to diameter and length of roller, Max. speed up to 120m/min.
8. Temperature range: 0 to +40°C.

| Bearing Unit           |               |
|------------------------|---------------|
| Bearing Housing        | MSHousing     |
| End Cap                | Polypropylene |
| Precision Ball bearing | ZZ            |



(Spring Loaded)



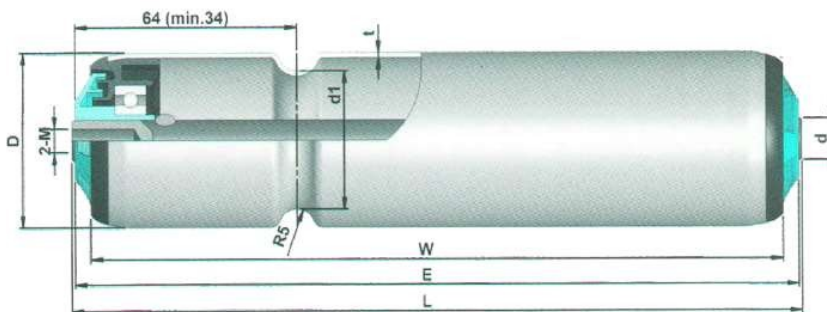
| Tube Dia. (D) | Shaft Dia. (d) |       |        | d 1   |
|---------------|----------------|-------|--------|-------|
| Ø25           | Ø10            |       |        |       |
| Ø37           | Ø10            | E=W+9 | L=W+31 |       |
| Ø38           | Ø12            | E=W+9 | L=W+31 |       |
| Ø40           | Ø12            | E=W+9 | L=W+31 |       |
| Ø50           | Ø12/11hex      | E=W+9 | L=W+31 | Ø38.5 |
| Ø60           | Ø12/11hex      | E=W+9 | L=W+31 | Ø48   |

d=11hex

| Tube                                   | D X t      | Bearing | Shaft Dia (Round) | Shaft Dia (hex) |
|----------------------------------------|------------|---------|-------------------|-----------------|
| MS, Zinc-plated                        | Ø 50 x 1.6 | ZZ      | Ø15               | 11 hex          |
|                                        | Ø 60 x 1.6 | ZZ      | Ø17               | 17 hex          |
| Stainless Steel                        | Ø 50 x 1.5 | ZZ      | Ø15               | 11 hex          |
|                                        | Ø 60 x 1.5 | ZZ      | Ø17               | 17 hex          |
| MS, Zinc-plated, with PVC sleeve (2mm) | Ø 50 x 1.5 | ZZ      | Ø15               | 11 hex          |

NGA -2230 Series

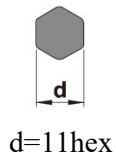
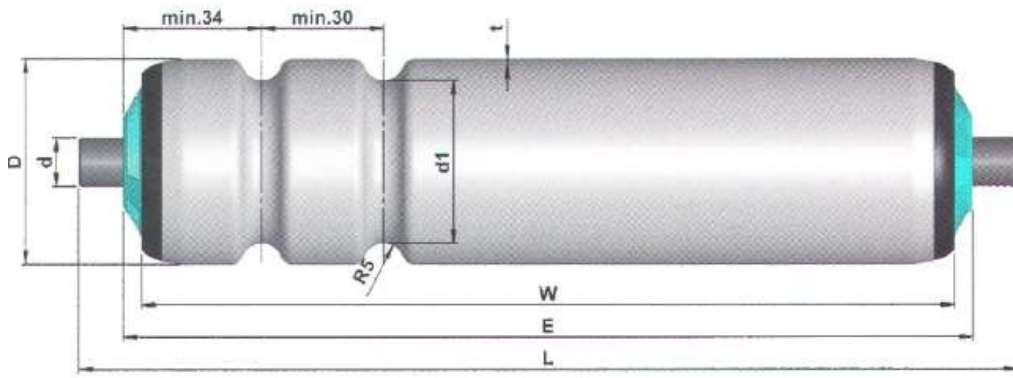
(Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) | Shaft Dia Hex |       |        | d 1   |
|---------------|----------------|---------------|-------|--------|-------|
| Ø50           | Ø12/15         | 11            | E=W+9 | L=W+11 | Ø38.5 |
| Ø60           | Ø12/15/17      | 17            | E=W+9 | L=W+11 | Ø48   |

| Tube                                   | D X t           | Bearing | Shaft Dia (d)<br>(Round) |
|----------------------------------------|-----------------|---------|--------------------------|
| MS, Zinc-plated                        | Ø 50 X 1.5 /1.6 | ZZ      | Ø12/15 (M 8X 15)         |
|                                        | Ø 60 X 1.5/1.6  | ZZ      | Ø15/17 (M 10X 20)        |
| Stainless Steel                        | Ø 50 X 1.5      | ZZ      | Ø12/15 (M 8X 15)         |
|                                        | Ø 60 X 2        | ZZ      | Ø15/17 (M 10X 20)        |
| MS, Zinc-plated, with PVC sleeve (2mm) | Ø 50 X 1.5      | ZZ      | Ø12/15 (M 8X 15)         |
|                                        |                 |         |                          |

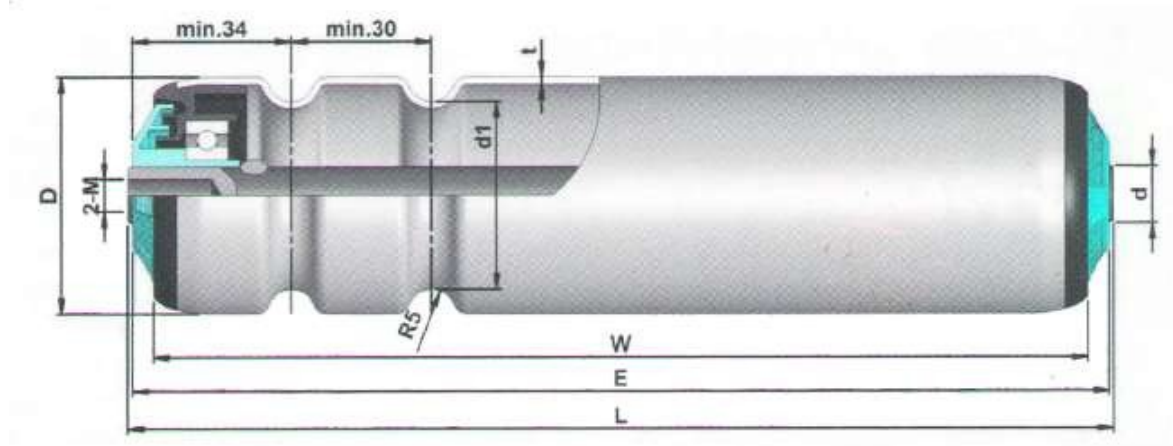
## NGA-2240 Series (Spring Loaded)



| Tube Dia. (D) | Shaft Dia. (d) |       |        | d 1   |
|---------------|----------------|-------|--------|-------|
| Ø50           | Ø12/15/11hex   | E=W+9 | L=W+31 | Ø38.5 |
| Ø60           | Ø12/15/11hex   | E=W+9 | L=W+31 | Ø48   |
|               |                |       |        |       |

| Tube                                   | D X t           | Bearing | Shaft Dia (d)<br>Ø12 | 11hex |
|----------------------------------------|-----------------|---------|----------------------|-------|
| MS, Zinc-plated                        | Ø 50 X 1.5 /1.6 | ZZ      | 12/15                | 11    |
|                                        | Ø 60 X 1.5/1.6  | ZZ      | 17                   | 17    |
| Stainless Steel                        | Ø 50 X 1.5      | ZZ      | 12/15                | 11    |
|                                        | Ø 60 X 2        | ZZ      | 17                   | 17    |
| MS, Zinc-plated, with PVC sleeve (2mm) | Ø 50 X 1.5      | ZZ      | 12/15                | 11    |
|                                        |                 |         |                      |       |

## NGA -2240 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |       |        | d 1   |
|---------------|----------------|-------|--------|-------|
| Ø50           | Ø12/15         | E=W+9 | L=W+11 | Ø38.5 |
| Ø60           | Ø12/15         | E=W+9 | L=W+11 | Ø48   |

| Tube                                      | D X t          | Bearing | Shaft Dia (d)<br>Ø12 (M 8X 15) |
|-------------------------------------------|----------------|---------|--------------------------------|
| MS, Zinc-plated                           | Ø 50 X 1.5/1.6 | ZZ      | Ø12/15 (M 8X 15)               |
|                                           | Ø 60 X 1.6     | ZZ      | Ø15/17 (M 10X 20)              |
| Stainless Steel                           | Ø 50 X 1.5     | ZZ      | Ø12/15(M 8X 15)                |
|                                           | Ø 60 X 2       | ZZ      | Ø15/17(M 10X 20)               |
| MS, Zinc-plated, with<br>PVC sleeve (2mm) | Ø 50 X 1.5     | ZZ      | Ø12/15 (M 10X 20)              |
|                                           |                |         |                                |



## NGA -2260 (Series)

### MS O-Belt wheel roller

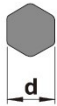
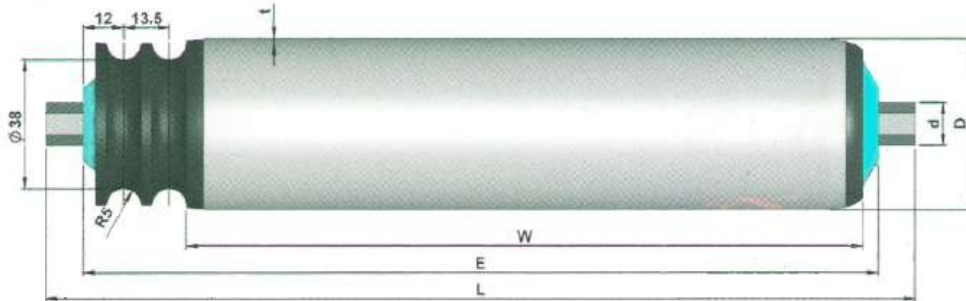
#### Product Features

1. Actually, NGA- 2260 is improved from NGA- 2230/2240 series. It does not make grooves on the tube, but moving the "O-belt" wheel to the end of the roller, make it separate between drive space and convoy space, so as to avoid the interference between "O-belt" and conveying goods, also avoid the oil from the surface of goods polluting the "O-belt".
2. Because it is not grooving on the tube, the tube will not have any distortion, and the roller will run more smoothly.
3. The groove position is fixed. The collocation seems not so flexible, but it could be solved by cooperation with NGA-2230/2240 series.
4. The load capacity of roller depends on the driving power of "O-belt" and the transmission structure (line shaft drive is higher than hook-ups). Reference data is normally less than 300N.
5. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
6. The end cap of roller resists dust and water splash well in operation environment.
7. Suitable in high-speed application. Speed could vary according to diameter and length of roller, Max. Speed up to 120m/min.
8. Temperature range: 0 to +40°C
- 9.

| Bearing Unit           |               |
|------------------------|---------------|
| Bearing Housing        | MSHousing     |
| End cap                | Polypropylene |
| Precision Ball Bearing | ZZ            |

| Driving Element |    |
|-----------------|----|
| O-Belt wheel    | MS |

## NGA - 2260 Series (Spring Loaded)

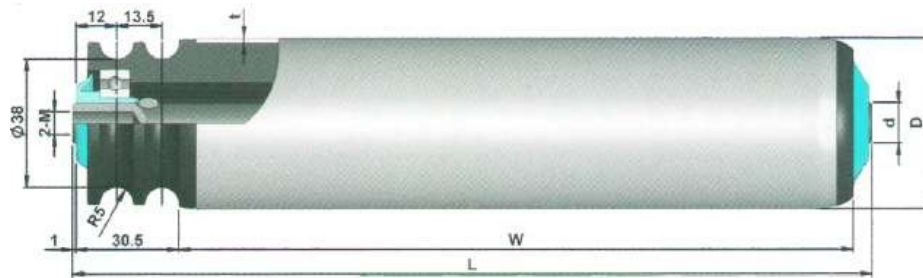


d=11hex

| TubeDia.(D) | ShaftDia.(d) |        |        |
|-------------|--------------|--------|--------|
| Ø50         | Ø15/11hex    | E=W+35 | L=W+57 |
|             |              |        |        |

| Tube                                      | D X t      | Bearing | Shaft Dia (d)<br>( Round) | hex |
|-------------------------------------------|------------|---------|---------------------------|-----|
| MS, Zinc-plated                           | Ø 50 X 1.5 | ZZ      | Ø12/15                    | 11  |
| Stainless Steel                           | Ø 50 X 1.5 | ZZ      | Ø12/15                    | 11  |
| Aluminium, oxidation                      | Ø 50 X 1.5 | ZZ      | Ø12/15                    | 11  |
| MS, Zinc-plated, with<br>PVC sleeve (2mm) | Ø 50 X 1.5 | ZZ      | Ø12/15                    | 11  |
|                                           |            |         |                           |     |

## NGA -2260 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |        |
|---------------|----------------|--------|
| Ø50           | Ø12/15         | E=W+37 |

| Tube            | D X t      | Bearing | Shaft Dia (d)<br>(Round) |
|-----------------|------------|---------|--------------------------|
| MS, Zinc-plated | Ø 50 X 1.6 | ZZ      | Ø12/15 (M 10 X 20)       |
| Stainless Steel | Ø 50 X 1.5 | ZZ      | Ø12/15 (M 10 X 20)       |



|                                           |            |    |                    |
|-------------------------------------------|------------|----|--------------------|
| Aluminium, oxidation                      | Ø 50 X 1.5 | ZZ | Ø12/15 (M 10 X 20) |
| MS, Zinc-plated, with<br>PVC sleeve (2mm) | Ø 50 X 1.5 | ZZ | Ø12/15 (M 10 X 20) |
|                                           |            |    |                    |

## NGA -2250 (Series)

### MS-vee Roller

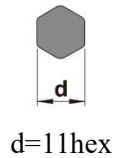
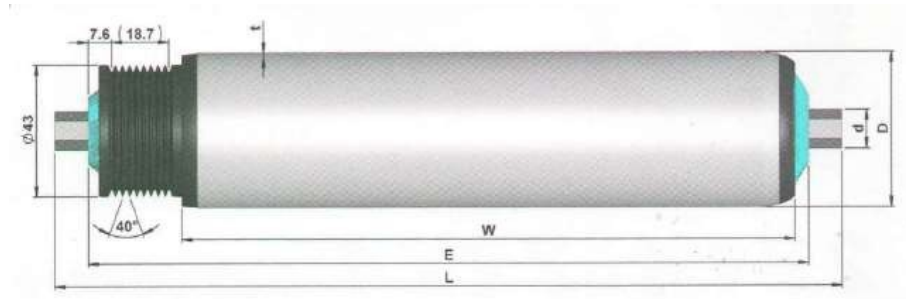
#### Product Features

1. "O-belt" roller could not solve the problem of weak loading capacity, but this problem could be well solved by 2250 series of MS-vee roller, and this type of roller has also the features of "O-belt" roller like high speed and low noise.
2. Poly-vee belt, pitch 2.34mm.
3. According to the load to convey, you could choose the Poly- vee belt of 2 grooves or 3 grooves. Even for the Poly-vee belt of 2 grooves, the unit convey capacity could reach 50kg.
4. The assembly of MS-vee wheel and tube make it separate between drive space and convoy space, avoid the effect of oil from the surface of conveying goods to the Poly-vee belt.
5. The different roller pitch (centre distance between rollers) requires different type of poly-vee belt.
6. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
7. The end cap of roller resists dust and water splash well in operation environment.
8. Suitable in high-speed application. Speed could vary according to diameter and length of roller, Max. speed up to 120m/min.
9. Temperature range: 0 to +40°C

| Bearing Housing        |               |
|------------------------|---------------|
| Bearing Housing        | MS Housing    |
| End Cap                | Polypropylene |
| Precision Ball Bearing | ZZ            |

| Driving Element                                       |                   |
|-------------------------------------------------------|-------------------|
| Poly-vee Belt                                         | Polyamide , Black |
| <input type="checkbox"/> Poly Vee belt also available |                   |

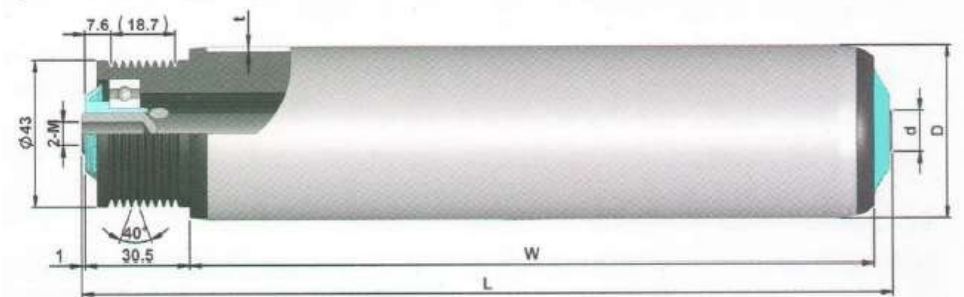
## NGA -2250 Series (Spring Loaded)



| TubeDia.(D) | ShaftDia.(d) |        |        |
|-------------|--------------|--------|--------|
| Ø50         | Ø12/11hex    | E=W+35 | L=W+57 |
|             |              |        |        |
|             |              |        |        |

| Tube                                      | D X t      | Bearing | Shaft Dia (d)<br>(Round) | 11hex |
|-------------------------------------------|------------|---------|--------------------------|-------|
| MS, Zinc-plated                           | Ø 50 X 1.6 | ZZ      | Ø12/15                   | 11    |
| Stainless Steel                           | Ø 50 X 1.5 | ZZ      | Ø12/15                   | 11    |
| Aluminium, oxidation                      | Ø 50 X 1.5 | ZZ      | Ø12/15                   | 11    |
| MS, Zinc-plated, with<br>PVC sleeve (2mm) | Ø 50 X 1.5 | ZZ      | Ø12/15                   | 11    |
|                                           |            |         |                          |       |

### NGA -2250 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |        |
|---------------|----------------|--------|
| Ø50           | Ø12/15         | E=W+37 |

| Tube                                      | D X t        | Bearing | Shaft Dia (d)<br>(Round) |
|-------------------------------------------|--------------|---------|--------------------------|
| MS, Zinc-plated                           | Ø 50.6 X 1.5 | ZZ      | Ø12/15 (M 10 X 20)       |
| Stainless Steel                           | Ø 50.6 X 1.5 | ZZ      | Ø12/15 (M 10 X 20)       |
| Aluminium, oxidation                      | Ø 50.6 X 1.5 | ZZ      | Ø12/15 (M 10 X 20)       |
| MS, Zinc-plated, with<br>PVC sleeve (2mm) | Ø 50.6 X 1.5 | ZZ      | Ø12/15 (M 10 X 20)       |
|                                           |              |         |                          |

## NGA -2214 / 2224 Series

## MS Sprocket Roller

## Product features

1. The disadvantage of the MS sprocket drive is more noise. But 2214/2224 series adopt sprocket made MS Sprocket as the driving element, the running noise has been greatly slowed down.
2. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
3. The end cap of roller resists dust and water splash well in operation environment.
4. The design of bearing housing makes it is able to operate in some special environment.
5. Temperature range: 0 to +40°C

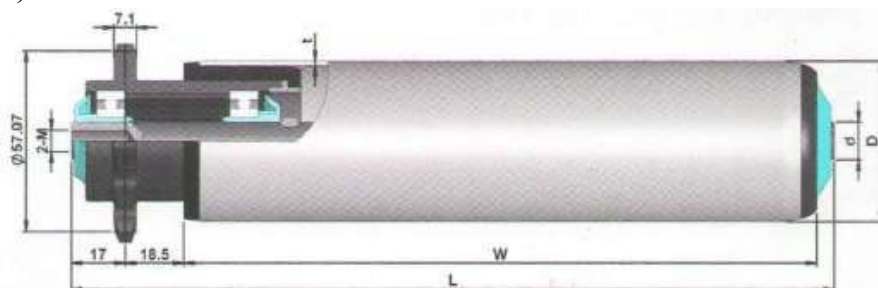
## Parameters

| Bearing Unit           |               |
|------------------------|---------------|
| Bearing Housing        | MS Housing    |
| End cap                | Polypropylene |
| Precision Ball Bearing | ZZ            |

| Driving Element |            |
|-----------------|------------|
| Sprocket        | MS Housing |

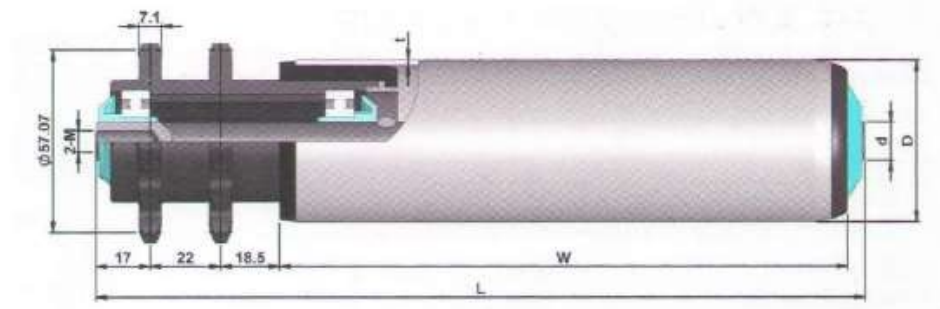
## NGA -2214/ 2224 Series

(Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |        | Sprocket Type | Material |
|---------------|----------------|--------|---------------|----------|
| Ø50           | Ø15            | L=W+41 | 08B14T        | MS       |
| Ø60           | Ø15/17         | L=W+41 | 08B14T        | MS       |

| Tube                 | D X t      | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|----------------------|------------|---------|---------------------------------|
| MS, Zinc-plated      | Ø 40 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |
| Stainless Steel      | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |
| Aluminium, oxidation | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |



| Tube Dia. (D) | Shaft Dia. (d) |        | Sprocket Type | Material |
|---------------|----------------|--------|---------------|----------|
| Ø50           | Ø15            | L=W+63 | 08B14T        | MS       |
| Ø60           | Ø15/17         | L=W+63 | 08B14T        | MS       |

| Tube                 | D X t      | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|----------------------|------------|---------|---------------------------------|
| MS, Zinc-plated      | Ø 40 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |
| Stainless Steel      | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |
| Aluminium, oxidation | Ø 50 X 1.5 | ZZ      | Ø15 (M 10 X 20)                 |
|                      | Ø 60 X 2.0 | ZZ      | Ø17 (M 12 X 20)                 |

## NGA -2311 /2321 (Series)

### Steel Sprocket Roller

#### Product Features

1. MS sprocket welded with MS tube, make it capable to transmit higher torque, and meet with the request of transportation of heavy duty.
2. The bearing in the end of the sprocket is dismountable, not only increase load capacity, but also helpful for maintenance and replacement.
3. The covering on the outside of the sprocket, well dust proof in operation environment.
4. The precision ball bearing is fixed by impact in the MS bearing housing, tight and durable.
5. Tight MS bearing housing could bear more heavier duty bearing unit.
6. Compared with roller bearing unit, its noise is a little bit louder.
7. Temperature range: -10 to +80°C

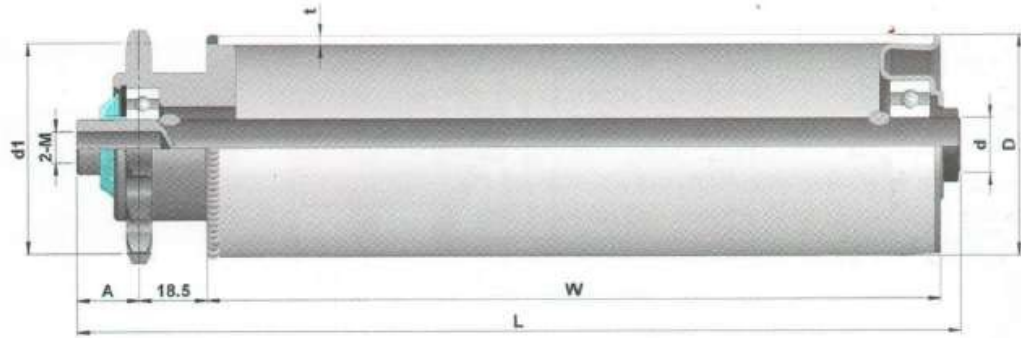
#### Parameters

| Bearing Unit           |                               |
|------------------------|-------------------------------|
| Bearing Housing        | MS Housing                    |
| Precision ball bearing | ZZ                            |
| Ground sleeve          | Polyamide (partial configure) |

#### Driving Element

|          |                 |
|----------|-----------------|
| Sprocket | MS, zinc plated |
|----------|-----------------|

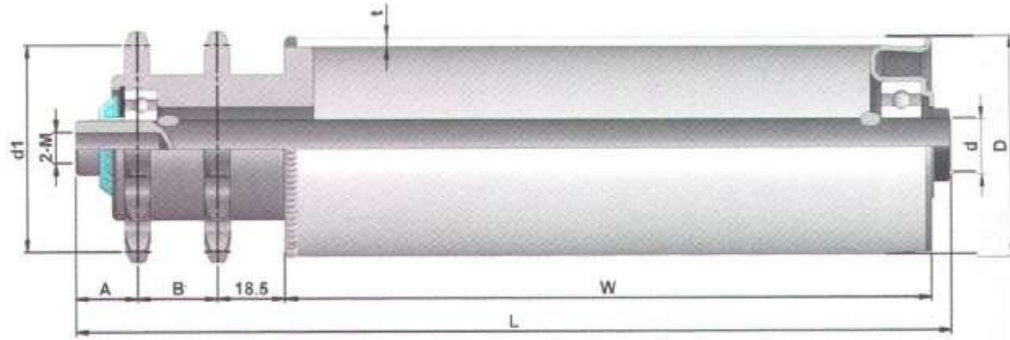
### NGA -2311 Series (Female Thread)



| Tube Dia.<br>(D) | Shaft Dia. (d) | A  |          | Sprocket Type | d 1    |
|------------------|----------------|----|----------|---------------|--------|
| Ø40              | Ø15            | 17 | $L=W+40$ | 3.8B11T       | Ø39.04 |
| Ø50              | Ø15            | 17 | $L=W+40$ | 08B14T        | Ø45.08 |
| Ø60              | Ø15/17         | 17 | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø76/ 80 / 89     | Ø20            | 20 | $L=W+44$ | 10A13T        | Ø66.33 |

| Tube            | D X t        | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-----------------|--------------|---------|---------------------------------|
| MS, Zinc plated | Ø 40 X 2/3   | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 50 X 2/3   | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 60 X 2/3/4 | ZZ      | Ø17 (M 12 X 20)                 |
|                 | Ø 76 X ¾/5   | ZZ      | Ø20 (M 12 X 25)                 |
|                 | Ø 80 X ¾/5   | ZZ      | Ø20 (M 12 X 25)                 |
|                 | Ø 89 X ¾/5   | ZZ      | Ø20 (M 12 X 25)                 |

### NGA -2321 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) | Shaft Dia Hex | A  |          | Sprocket Type | d 1    |
|---------------|----------------|---------------|----|----------|---------------|--------|
| Ø40           | Ø15            | 11            | 17 | $L=W+62$ | 3/8'B11T      | Ø39.4  |
| Ø50           | Ø15            | 11            | 17 | $L=W+62$ | 08B14T        | Ø45.08 |
| Ø60           | Ø17/20         | 17            | 17 | $L=W+63$ | 08B14T        | Ø57.07 |
|               |                |               |    |          |               |        |
| Ø76/ 80 / 89  | Ø20            | 17            | 20 | $L=W+69$ | 10A13T        | Ø66.33 |

| Tube            | D X t          | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-----------------|----------------|---------|---------------------------------|
| MS, Zinc-plated | Ø 40 X 1.5/2/3 | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 50 X 1.5/2/3 | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 60 X 2/3/4   | ZZ      | Ø17 (M 12 X 20)                 |
|                 | Ø 76 X ¾       | ZZ      | Ø20 (M 12 X 25)                 |
|                 | Ø 80 X ¾       | ZZ      | Ø20 (M 12 X 25)                 |
|                 | Ø 89 X ¾       | ZZ      | Ø20 (M 12 X 25)                 |

## NGA -2211 / 2221 Series

### Steel Sprocket Roller

#### Product Features

1. Steel sprocket welded with tube, make it capable to transmit higher torque, and meet the request of transportation of heavy-duty load.
2. The bearing in the end of the sprocket is dismountable, not only increase load capacity, but also helpful for maintenance and replacement.
3. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
4. The end cap of roller resists dust and water splash well in operation environment.
5. Temperature range: 0 to +40°C

#### Parameters

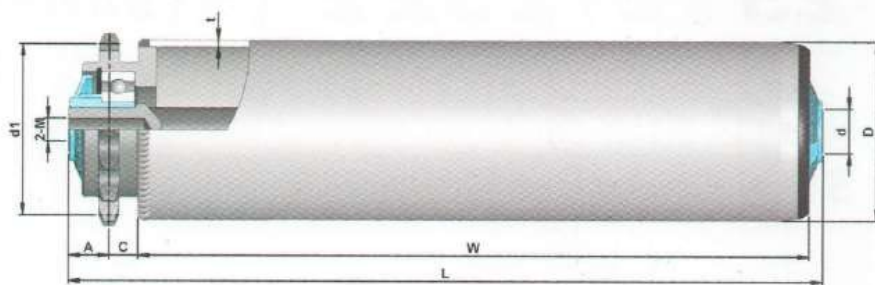


| Bearing Unit           |               |
|------------------------|---------------|
| Bearing housing        | MS            |
| End Cap                | Polypropylene |
| Precision ball bearing | ZZ            |

| Driving Element |                 |
|-----------------|-----------------|
| Sprocket        | MS, zinc plated |

## NGA -2211 / 2221 Series

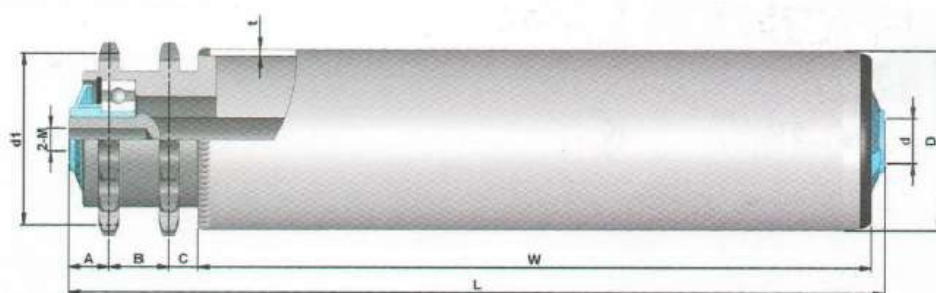
(Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) | A  | C    |          | Sprocket Type | d 1    |
|---------------|----------------|----|------|----------|---------------|--------|
| Ø40           | Ø12/15         | 17 | 18.5 | $L=W+41$ | 3/8B11T       | Ø39.4  |
| Ø50           | Ø12/15         | 17 | 18.5 | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø60           | Ø15/17         | 17 | 18.5 | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø80           | Ø20            | 18 | 13   | $L=W+37$ | 10B15T        | Ø76.35 |
|               |                |    |      |          |               |        |

| Tube | D X t | Bearing | Shaft Dia (d) |
|------|-------|---------|---------------|
|------|-------|---------|---------------|

|                 |                |    |                 |
|-----------------|----------------|----|-----------------|
| MS, Zinc-plated | Ø 40 X 1.5/2/3 | ZZ | Ø15 (M 10 X 20) |
|                 | Ø 50 X 1.5/2/3 | ZZ | Ø15 (M 10 X 20) |
|                 | Ø 60 X 2/3/4   | ZZ | Ø17 (M 12 X 25) |
|                 | Ø 80 X 3/4     | ZZ | Ø20 (M 12 X 25) |



| Tube Dia. (D) | Shaft Dia. (d) | A  | B  | C    |        | Sprocket Type | d 1    |
|---------------|----------------|----|----|------|--------|---------------|--------|
| Ø40           | Ø12/15         | 17 | 22 | 18.5 | L=W+63 | 3/8'B11T      | Ø39.4  |
| Ø50           | Ø12/15         | 17 | 22 | 18.5 | L=W+63 | 08B14T        | Ø57.07 |
| Ø60           | Ø15/17         | 17 | 22 | 18.5 | L=W+63 | 08B14T        | Ø57.07 |
| Ø80           | Ø20            | 18 | 26 | 13   | L=W+63 | 10B15T        | Ø76.35 |

| Tube            | D X t          | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-----------------|----------------|---------|---------------------------------|
| MS, Zinc-plated | Ø 40X 1.5/2/3  | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 50 X 1.5/2/3 | ZZ      | Ø15 (M 10 X 20)                 |
|                 | Ø 60 X 2/3/4   | ZZ      | Ø17 (M 12 X 25)                 |
|                 | Ø 80 X 3/4     | ZZ      | Ø20 (M 12 X 25)                 |

## NGA - 2312 / 2322 (Series)

### (Steel sprocket Roller)

#### Product Features

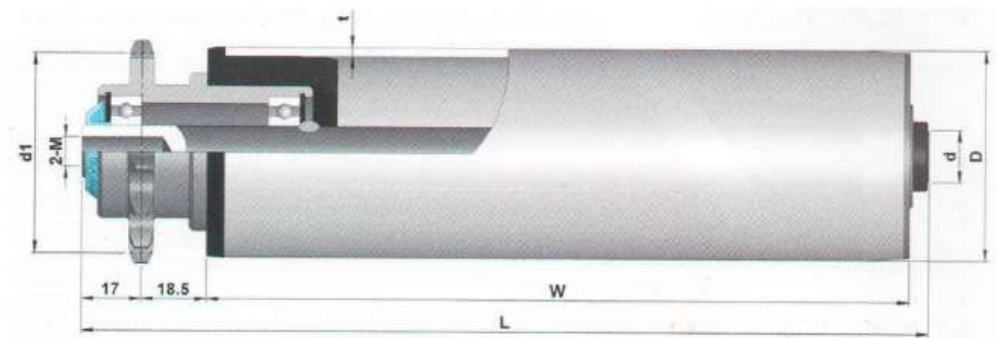
1. Designed for the sprocket roller with tube of aluminium alloy, transmission set is adopted between MS sprocket and tube to realize driving.
2. Aluminium alloy tube is light and easy to clean, widely applied in some special industries (e.g. rubber industry).
3. The bearing in the end of the sprocket is dismountable, helpful for maintenance and replacement.
4. The precision ball bearing is fixed by impact in the MS housing, tight and durable.
5. Temperature range: 0 to +40°C

#### Parameters

| Bearing Unit           |                               |
|------------------------|-------------------------------|
| Bearing Housing        | MS Housing, zinc - plated     |
| Precision Ball Bearing | ZZ                            |
| Ground Sleeve          | Polyamide (partial configure) |

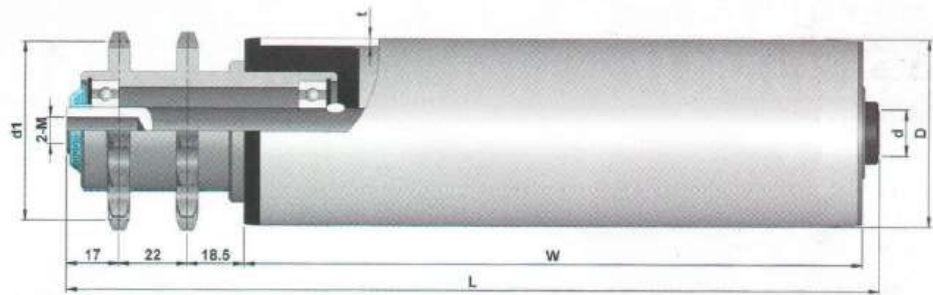
| Driving Element |            |
|-----------------|------------|
| Sprocket        | MS Housing |

## NGA -2312 / 2322 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |          | Sprocket Type | d 1    |
|---------------|----------------|----------|---------------|--------|
| Ø40           | Ø15            | $L=W+41$ | 3/8"B11T      | Ø39.4  |
| Ø50           | Ø15            | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø60           | Ø15/17         | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø76           | Ø20            | $L=W+41$ | 10B19T        | Ø77.16 |
| Ø80           | Ø20            | $L=W+41$ | 10B19T        | Ø77.16 |

| Tube                    | D X t          | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-------------------------|----------------|---------|---------------------------------|
| Aluminium,<br>Oxidation | Ø 40 X 1.5/2/3 | ZZ      | Ø15 (M 10 X 20)                 |
|                         | Ø 50 X 1.5/2/3 | ZZ      | Ø15 (M 10 X 20)                 |
|                         | Ø 60 X 2/3/4   | ZZ      | Ø17 (M 12 X 25)                 |
|                         | Ø 76 X 3/4     | ZZ      | Ø20 (M 12 X 25)                 |
|                         | Ø 80 X 4       | ZZ      | Ø20 (M 12 X 25)                 |



| Tube Dia. (D) | Shaft Dia. (d) |          | Sprocket Type | d 1    |
|---------------|----------------|----------|---------------|--------|
| Ø40           | Ø12            | $L=W+41$ | 3/8B11T       | Ø39.4  |
| Ø50           | Ø12            | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø60           | Ø12/15         | $L=W+41$ | 08B14T        | Ø57.07 |
| Ø76           | Ø20            | $L=W+41$ | 10B19T        | Ø77.16 |
| Ø80           | Ø20            | $L=W+41$ | 10B19T        | Ø77.16 |

| Tube                 | D X t          | Bearing | Shaft Dia (d)   |
|----------------------|----------------|---------|-----------------|
| Aluminium, Oxidation | Ø 40 X 1.5/2/3 | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 50 X 1.5/2/3 | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2       | ZZ      | Ø15 (M 10 X 20) |
|                      | Ø 76 X 3       | ZZ      | Ø20 (M 12 X 25) |
|                      | Ø 80 X 4       | ZZ      | Ø20 (M 12 X 25) |
|                      |                | ZZ      | Ø20 (M 12 X 25) |

## ACCUMULATING CONVEY SOLUTION

Accumulation convey is also called piled convey. It has not only the function of common drive convey, but also the feature that goods stop and pile up on the conveyor line in the condition of driving element still operating. While the operating resistance is not obviously increased.

In normal conveying, the accumulation device transmits the moment of force. But when goods stopped and piled up, the operating moment of resistance exceeds the roller's definitive working moment of force. The accumulation sleeve or friction slice slips, roller and the driving element are in the condition of flexible connection. It appears that rollers under the goods stop running, only the driving element is still running.

The accumulation force on the conveyor line will increase according to the length of goods piled up. If we adopt non-accumulation convey. It will happen very likely as below:

1. Goods will push each other goods will be damaged or squeezed out by the more and more accumulation force.
2. Violent friction between roller and goods, bottom of the goods is damaged.
3. Load of conveyor line is increased gradually, driving motor is overload.

Accumulation force is limited by many factors, and these factors has general influence on the roller's operation and lifetime.

1. Goods weight
2. The smooth of goods bottom.
3. Temperature and moisture
4. Accumulation time

## 5. Load position

According to different structure, it is classified as telescope-feed accumulation and adjustable accumulation:

1. Telescope-Feed accumulation: mainly for light duty carton convey (<35 kg/ carton). Its accumulation force is limited and not so stable in some case. It even needs some driving rollers to cooperate for expected accumulation result.
2. Adjustable accumulation: mainly for heavy duty pallet convey the accumulation force is adjustable. Suitable for different load convey.



You could find the products in catalogue according to their different features:

| Product Features                                                        | Series          | Diameter        |
|-------------------------------------------------------------------------|-----------------|-----------------|
| MS sprocket, light duty accumulation, could switch to driving structure | NGA-3214/ 3224  | Ø 50/ 60        |
| MS sprocket, light duty accumulation, strong and durable                | NGA-3212 / 3222 | Ø 50/ 60        |
| MS sprocket, heavy duty accumulation, accumulation force is adjustable  | NGA -3816/ 3826 | Ø 50/ 60/76/ 89 |

[NGA -3214 / 3224 \(Series\)](#)



## (MS Sprocket Accumulating Roller)

### Product Features

1. Typical telescope-feed accumulation, the accumulation power is depended on by the load and automatically adjustable in some scale.
2. Accumulation cover is made of MS, which is abrasion resisting.
3. The size is the same as NGA - 2214/2224 series, both series could be of combination, and functions could be easily switched (by the exchange of driving rings).
4. Adopting sprocket made of MS Sprocket as the driving element, the running noise is greatly slowed down compared with MS sprocket.
5. The covering on the outside of the sprocket, well dust proof in operation environment.
6. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
7. The end cap of roller resists dust and water splash well in operation environment.
8. The design of bearing housing makes it is able to operate in some special environment.
9. Temperature range: 0 to +40°C

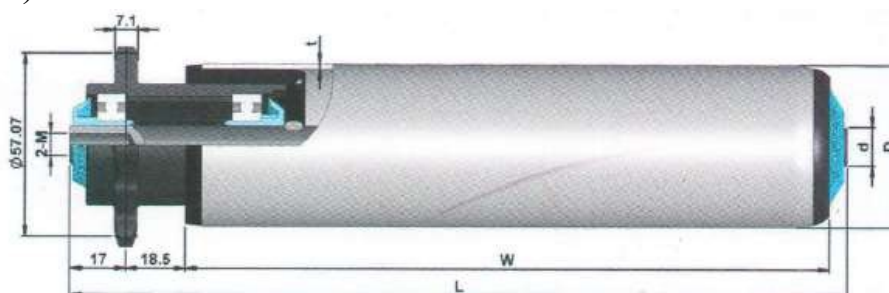
### Parameters

| Bearing Unit           |               |
|------------------------|---------------|
| Bearing Housing        | MS Housing    |
| End cap                | Polypropylene |
| Precision ball bearing | ZZ            |

| Driving Element |    |
|-----------------|----|
| Sprocket        | MS |

### NGA - 3214 / 3224 Series

#### (Female Thread)

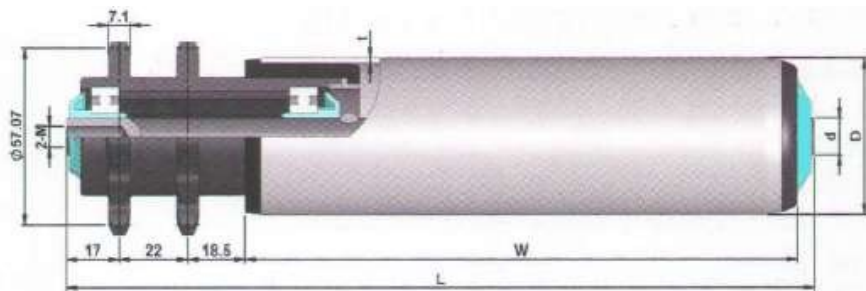


| Tube Dia. (D) | Shaft Dia. (d) |        | Sprocket Type | Material |
|---------------|----------------|--------|---------------|----------|
| Ø50           | Ø12/ 15        | L=W+41 | UBB14T        | PA66     |
| Ø60           | Ø12/15         | L=W+41 | UBB14T        | PA66     |

| Tube            | D X t      | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-----------------|------------|---------|---------------------------------|
| MS, Zinc-plated | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                  |



|                      |            |    |                 |
|----------------------|------------|----|-----------------|
|                      | Ø 60 X 2   | ZZ | Ø15 (M 10 X 20) |
| Stainless steel      | Ø 50 X 1.5 | ZZ | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2   | ZZ | Ø15 (M 10 X 20) |
| Aluminium, oxidation | Ø 50 X 1.5 | ZZ | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2   | ZZ | Ø15 (M 10 X 20) |



| Tube Dia. (D) | Shaft Dia. (d) |        | Sprocket Type | Material |
|---------------|----------------|--------|---------------|----------|
| Ø50           | Ø12/ 15        | L=W+63 | 08B14T        | PA66     |
| Ø60           | Ø12/15         | L=W+63 | 08B14T        | PA66     |

| Tube                 | D X t        | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) | Ø15 (M 10 X 20) |
|----------------------|--------------|---------|---------------------------------|-----------------|
| Steel, Zinc-plated   | Ø 50.6 X 1.5 | ZZ      | 3.224.JHA.ACC                   | 3.224.JHA.ADC   |
|                      | Ø 60 X 2     | ZZ      | 3.224.JOA.ACC                   | 3.224.JOA.ADC   |
| Stainless steel      | Ø 50.6 X 1.5 | ZZ      | 3.224.NHC.BCC                   | 3.224.NHC.BDC   |
|                      | Ø 60 X 2     | ZZ      | 3.224.NOC.BCC                   | 3.224.NOC.BDC   |
| Aluminium, oxidation | Ø 50.6 X 1.5 | ZZ      | 3.224.AHC.ACC                   | 3.224.AHC.ADC   |
|                      | Ø 60 X 2     | ZZ      | 3.224.AOC.ACC                   | 3.224.AOC.ADC   |

## NGA -3212 / 3222 (Series)

### MS Sprocket Accumulating Roller

#### Product Features

1. Typical telescope-feed accumulation, the accumulation power is determined by the load and automatically adjustable in some scale.
2. Accumulation cover is made of polyamide, which is self- lubricating and abrasion resisting.
3. Precision ball bearing MS bearing housing, end cap forms the bearing unit which is very important. It is not only for good looking but also further more for the smooth and quiet running.
4. The end cap of roller resists dust and water splash well in operation environment.
5. Temperature range: 0 to +40°C

#### Parameters

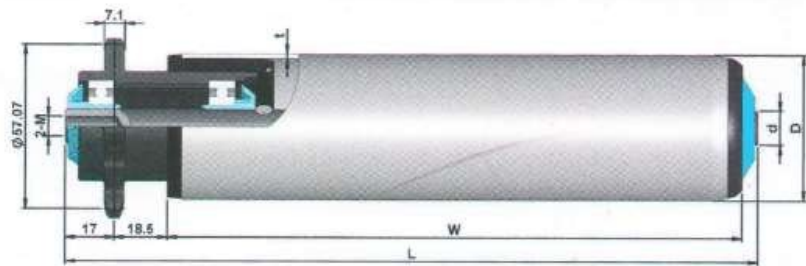
| Bearing Unit    |            |
|-----------------|------------|
| Bearing Housing | MS Housing |

|                        |                          |
|------------------------|--------------------------|
| End Cap                | Polypropylene, Aqua blue |
| Precision Ball Bearing | ZZ                       |

#### Driving Element

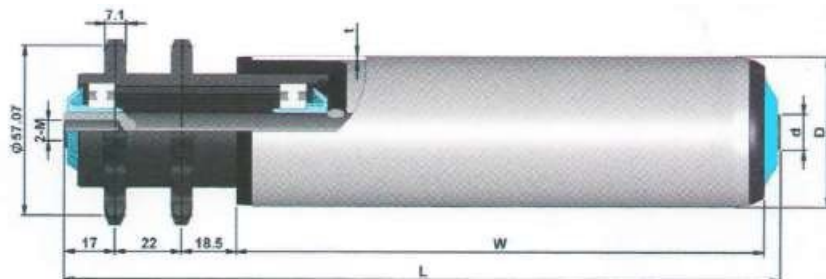
|          |    |
|----------|----|
| Sprocket | MS |
|----------|----|

### NGA -3212 / 3222 Series (Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) |          | Sprocket Type |
|---------------|----------------|----------|---------------|
| Ø50           | Ø12/ 15        | $L=W+41$ | UBB14T        |
| Ø60           | Ø12/15         | $L=W+41$ | UBB14T        |

| Tube                 | D X t      | Bearing | Shaft Dia (d)   |
|----------------------|------------|---------|-----------------|
| MS, Zinc-plated      | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20) |
| Stainless steel      | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20) |
| Aluminium, oxidation | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20) |



| Tube Dia. (D) | Shaft Dia. (d) |          | Sprocket Type |
|---------------|----------------|----------|---------------|
| Ø50           | Ø12            | $L=W+63$ | 08B14T        |



|     |     |        |        |
|-----|-----|--------|--------|
| Ø60 | Ø12 | L=W+63 | 08B14T |
|-----|-----|--------|--------|

| Tube                 | D X t      | Bearing | Ø15 (M 10 X 20) Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|----------------------|------------|---------|-------------------------------------------------|
| MS, Zinc-plated      | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                                  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20)                                 |
| Stainless steel      | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                                  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20)                                 |
| Aluminium, oxidation | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                                  |
|                      | Ø 60 X 2   | ZZ      | Ø15 (M 10 X 20)                                 |

## NGA -3816/ 3826 (Series)

### Adjustable Accumulating Roller

#### Product features

1. The accumulation power of telescope-feed accumulation is limited, could not support heavy duty accumulation, but NGA-3816/3826 series could satisfy this requirement.
2. Friction slice made of special material greatly improve its abrasion resistance, and its life time is greatly improved.
3. The accumulation power is adjusted by the nut of the end, make the accumulation power accurate and steady.
4. Using the self-locking nut of the end, make it not easy to lose or lower down the accumulation power.
5. The precision ball bearing is fixed by impact in the MS bearing housing, tight and durable.
6. Tight steel bearing unit could bear heavier duty than polymer bearing unit.
7. Temperature range: -10 to +80°C

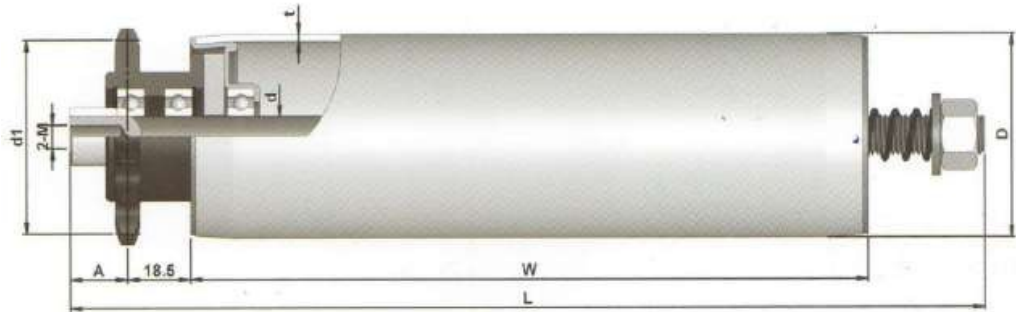
#### Parameters

| Bearing Unit           |                         |
|------------------------|-------------------------|
| Bearing Housing        | MS Housing, Zinc plated |
| Precision Ball Bearing | ZZ                      |

| Driving Element |    |
|-----------------|----|
| Sprocket        | MS |

## NGA-3816 Series

(Female Thread)

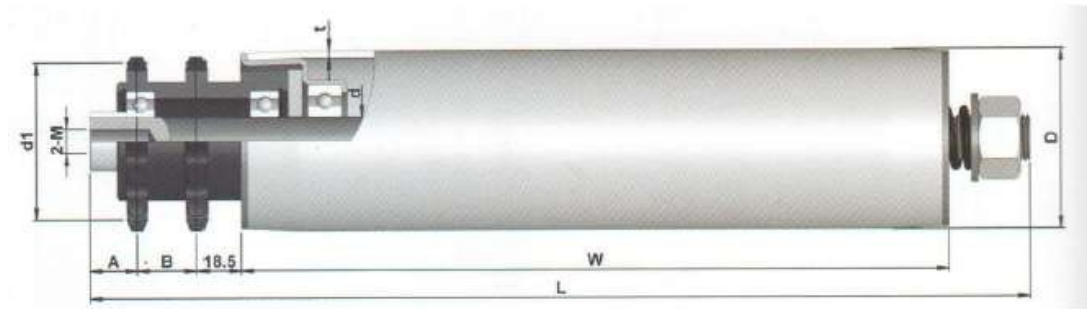


| Tube Dia. (D) | Shaft Dia. (d) | A  |          | Sprocket Type | d 1    |
|---------------|----------------|----|----------|---------------|--------|
| Ø50           | Ø12            | 17 | $L=W+70$ | 08B11T        | Ø45.08 |
| Ø60           | Ø12/15         | 17 | $L=W+70$ | 08B14T        | Ø57.07 |
| Ø76 / 89      | Ø20            | 20 | $L=W+78$ | 10A13T        | Ø66.33 |

| Tube                    | D X t      | Bearing | Shaft Dia (d)<br>Ø12 (M 8 X 15) |
|-------------------------|------------|---------|---------------------------------|
| MS, Zinc-plated         | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                  |
|                         | Ø 60 X 2   | ZZ      | Ø15/17 (M 8 X 15)               |
|                         | Ø 76 X 3   | ZZ      | Ø15/17 (M 8 X 15)               |
|                         | Ø 76 X 4   | ZZ      | Ø20 (M 12 X 25)                 |
|                         | Ø 89 X 3   | ZZ      | Ø20 (M 12 X 25)                 |
| Stainless steel         | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                  |
|                         | Ø 60 X 2   | ZZ      | Ø15/17 (M 8 X 15)               |
|                         | Ø 76 X 3   | ZZ      | Ø20 (M 12 X 25)                 |
| Aluminium,<br>oxidation | Ø 50 X 1.5 | ZZ      | Ø12 (M 8 X 15)                  |
|                         | Ø 60 X 2   | ZZ      | Ø15/17 (M 8 X 15)               |
|                         | Ø 76 X 3   | ZZ      | Ø20 (M 12 X 25)                 |

## NGA - 3826 Series

(Female Thread)



| Tube Dia. (D) | Shaft Dia. (d) | A  |           | Sprocket Type | d 1    |
|---------------|----------------|----|-----------|---------------|--------|
| Ø50           | Ø12/15         | 17 | $L=W+92$  | 08B11T        | Ø45.08 |
| Ø60           | Ø15            | 17 | $L=W+92$  | 08B14T        | Ø57.07 |
| Ø76 / 89      | Ø20            | 20 | $L=W+103$ | 10A13T        | Ø66.33 |

| Tube                 | D X t         | Bearing | Shaft Dia (d)   |
|----------------------|---------------|---------|-----------------|
| MS, Zinc-plated      | Ø 50 X 1.5    | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2 /2.9 | ZZ      | Ø17 (M 8 X 15)  |
|                      | Ø 76 X 3      | ZZ      | Ø20 (M 12 X 25) |
|                      | Ø 76 X 4      | ZZ      | Ø20 (M 12X 25)  |
|                      | Ø 89 X 3      | ZZ      | Ø20 (M 12 X 25) |
| Stainless steel      | Ø 50 X 1.5    | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2      | ZZ      | Ø17 (M 8 X 15)  |
|                      | Ø 76 X 3      | ZZ      | Ø20 (M 12X 25)  |
| Aluminium, oxidation | Ø 50 X 1.5    | ZZ      | Ø12 (M 8 X 15)  |
|                      | Ø 60 X 2      | ZZ      | Ø17 (M 8 X 15)  |
|                      | Ø 76 X 3      | ZZ      | Ø20 (M12X 25)   |