

## Rolling Mill Bearing

High speed wire rod rolling mill bearing-



|              |                               |
|--------------|-------------------------------|
| Parts number | F5795836 - NU 1034<br>MPA P63 |
| Bearing      | --                            |
| Equivalent   |                               |
| d            | 170                           |
| D            | 260                           |
| B            | 42                            |
| Weight (kg)  | 8.4                           |

## High Speed Wire Rolling Mill Bearings

The wire Rolling Mill Bearings must meet continuous operation requirements under High-Speed and high-impact conditions. Therefore, making bearings that can withstand constant production and the prohibition of bearing damage becomes a critical standard for the manufacturers which produce bearings for high-speed wire rolling mills.

In general, roller bearings have a higher load-carrying capacity than ball bearings. Therefore cylindrical roller bearings, such as tapered roller bearings, or spherical roller bearings become the automatic choice for radial loads. These bearings are made in high-cleanliness bearing steel or double vacuum smelting bearing steel. The specially processed roller under the unique heat and cold treatment will significantly improve the anti-fatigue life of bearing. The antifatigue life of wire mill bearing made of ceramic rollers and highis four times higher than standard bearings.

Along with selecting bearing materials and size, lubricant select When choosing

a proper grease, the oil viscosity and low speed need to be considered. The bearing run at high speed, in general lighter oil. If the bearings run regularly at a low speed, a heavier one is needed.

Rolling bearings in wire rod rolling mills are used for the safe and accurate bearing arrangement of shafts, axles and bevel gearboxes. High speeds and dynamic loads represent a major challenge here. Depending on the shape and temperature of the rolled material, the initial peak loads are more than twice the rolling force or rolling mill torque. The result is a significant raise in the service life of the rolling bearings.

In order to ensure the durable and safe operation of the wire rod rolling equipment, high-precision special bearings are used that can absorb the forces that occur, and guarantee low-friction and low-vibration rotation with the components. MONTON bearings produce with accuracy standards P5–P2 especially for this demanding application. In doing so, long, expensive downtimes are avoided, while a high quality of rolled products is achieved.

High-precision roller bearings are accurately manufactured to one thousandth of a millimeter – far more precise than any other manufacturer. Thanks to this high degree of precision, the bearings do not need to be marked with regard to their eccentricity, so there is no need for the standard marking on the inner or outer race. The advantage of this for our customers is: When installing the bearings, and especially in the case of paired bearings, no errors can be made by not taking the eccentricity sufficiently into account. Moreover, axles and shafts can be mounted with far greater precision, which in turn has a positive effect on the quality and dimensional accuracy of the rolled products.

## High speed wire rod rolling mill bearing type produce by MONTON

### 1. Cylindrical roller bearing

Due to the special shape of the rolling elements, cylindrical roller bearings are suitable for maximum radial loads. In addition to the high load-bearing capacity, high speeds can also be accommodated, which is why these bearings are used primarily in wire rod mills. The cages offer a particularly high degree of strength and stability to withstand the strong acceleration and deceleration forces.

? Variety of designs available

? Higher load ratings than dimensionally equivalent deep groove ball bearings

? Suitable for high speeds

### 2. Deep groove ball bearing

These single-row bearings are suitable for high speeds and capable of absorbing mainly radial loads and, to a lesser degree, axial loads. Deep-groove ball bearings can be utilized for a variety of applications, however they cannot be dismantled for installation purposes. So in spite of their suitability for high speeds and axial and radial loads, they are not the only bearing used; other bearing types are also employed.

- ? Universally applicable

- ? Absorption of radial and axial forces in both directions

- ? High speed suitability

### 3. Angular contact ball bearings

Angular contact ball bearings are not only able to absorb both radial and axial loads, they are also suitable for high speeds. Single-row angular contact ball bearings, however, can absorb axial loads in just one direction only, therefore they are normally paired with a second bearing. The arrangement of the bearings in relation to each other influences the load absorption characteristics.

Guaranteed flexibility with a universal configuration If the load capacity of a single angular contact ball

bearing is not sufficient, several bearings are installed next to each other. To ensure that the load distribution and the play in the bearing set are as uniform as possible, the bearings must be suitably aligned with one another. A distinction is made between the X, O, and tandem arrangement. Depending on the arrangement used, the axial loads are accommodated in different ways.

High-precision roller bearings are manufactured to such high standards of accuracy that any

bearing can be combined with the same MONTON type and installed in the relevant arrangement. Bearings installed in pairs are supplied individually, thus ensuring that the bearings cannot be inadvertently mixed up during assembly. What's more, bearings can be ordered individually, thereby simplifying the procurement of spare parts and inventory control.

- ? Absorption of axial and radial forces

- ? Suitable for very high speeds

- ? Mounting in pairs

#### 4. Four point contact ball bearing

Four point contact ball bearings are a special form of single row angular contact ball bearings. A split

inner or outer ring creates two pressure angles and the four-point contact that gives it its name. This

enables them to absorb radial forces and high axial forces acting on both sides even in confined spaces.

In practice, four point contact ball bearings are often used as pure thrust bearings and combined with

a radial bearing. For this purpose, they should be provided with clear radial clearance to the housing

and installed directly next to the supporting radial bearing. The radial load carrying capacity is often not

used due to the elasticity of the split ring. Four point contact bearings are demountable but not self-retaining. The axial pitch of a bearing ring ensures an efficient assembly

? Absorption of axial forces in both directions

? Low radial loads can be accommodated

? Design with split inner or outer ring possible

| Replaceable third-party bearings                                   |                                                 |
|--------------------------------------------------------------------|-------------------------------------------------|
| 162250-B (MCS140-106, MCS140-106-CD, N-140-VAA)                    | 162250-L (5308-9, 7208PD, 7208PD4/5F)           |
| 162250-C (7226-D2/3/-Spec./6/7/8/9B)                               | 162250-LA (7309PD-5/7F)                         |
| 162250-CA                                                          | 162250-LB (7307PD-3/4/8F)                       |
| 162250-D (MCS-128-107, N-228-VAA)                                  | 162250-M (MRC5310-8/C2, BA2B-475881)            |
| 162250-DA (MCS-128-108)                                            | 162250-MA (MRC5310; MRC5311-5/C2, BA2B-475882)  |
| 162250-E (7224, 7224D-3/5/6/9B)                                    | 162250-MB (7310PD-4/8S)                         |
| 162250-F (U-1024-EMR-304/305, N-1024-VAA, 804235/A)                | 162250-MC                                       |
| 162250-G (MR126KC-1/3/7/10, N-1026-VAA, U1026EMR103, X-4567-ABEC5) | 162250-N (6208-2RS1/W64CVK121)                  |
| 162250-GA (MR126KC4/8/11)                                          | 162250-NA                                       |
| 162250-GC (R126KC-2/4/6)                                           | 162250-P                                        |
| 162250-GD (MR126KC-6/9, R126KC-3/5/7)                              | 162250-Q                                        |
| 162250-GE                                                          | 162250-S (MCS134-104, MCS134-104-CD, N-134-VAA) |
| 162250-H (MR312C-1/2/4), 162250-HA (MR312C-3/5)                    | 162250-U (134-KS, 134-KS-1)                     |
| 162250-HB (R312C-7/11)                                             | 162250-V (MR228 C1, U-1228-EMR-302, N-228 AA)   |

|                                             |                                 |
|---------------------------------------------|---------------------------------|
| 162250-HC                                   | 162250-VA                       |
| 162250-HG                                   | 162250-W (MRC228S, BB1B-447022) |
| 162250-HH                                   | 162250-WA                       |
| 162250-HJ                                   | 162250-X (9128, 9128 KS1/-2)    |
| 162250-HK                                   | 162250-XA                       |
| 162250-J (7310PD-2/3/4/5/7/8B, 7310D-4B)    | 162250-Y (7126KRD-2/4S)         |
| 162250-JA (7311PD-2/3/6/9B)                 | 162250-Z                        |
| 162250-JC                                   | M438106A                        |
| 162250-K (309RD-3/4/5/6/9B)                 | M438106B (N226 E.M1.C3)         |
| 162250-KA (309S-26, 309S-34)                | M438106C                        |
| 162250-KC (CONE-462-CUP-452 DX2S-462EP.008) | M438106D                        |
|                                             | QJ 234 N2 MPA.C3                |

