

Roll Neck Bearing Mounting of a Single-Way Four-High Cold Rolling Mill for Aluminium

FAG

Examples of Applications Engineering

WL 17 505 EA



Builder: Sack GmbH; Düsseldorf; Operating at: Novelis Switzerland SA

Operating Data

Back-up Rolls

Roll diameter 1 525 mm
Roll body length 2 500 mm

Work Rolls

Roll diameter 600 mm
Roll body length 2 500 mm
Rolling load max. 26 000 kN
Rolling speed max. 1 260 m/min

Bearing Arrangement of the Back-up Rolls

Radial bearing arrangement

On each roll end a four-row cylindrical roller bearing
FAG **Z-527048.ZL**

Dimensions (d×D×B):

900×1 220×840 mm
Cage: pin type cage
Radial Clearance: C4
Bearing seat tolerances:
Inner rings +0,350 / +0,440 mm
Outer rings H7

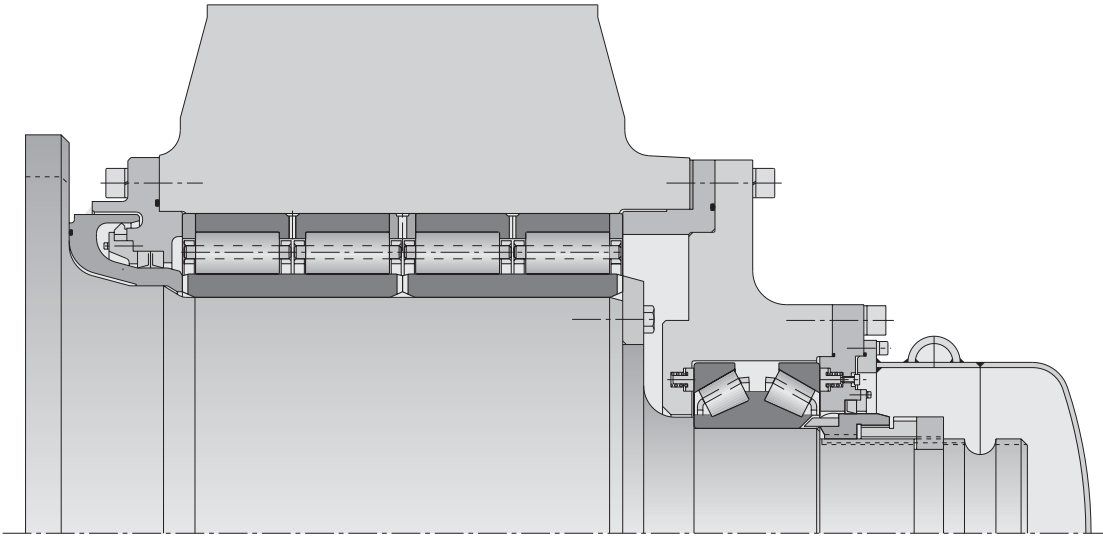
Axial bearing arrangement

Double-row tapered roller bearing
FAG **Z-531295.01.TR2**
Dimensions (d×D×B):
400×650×240 mm
The tapered roller bearing cups are axially preloaded by means of coil springs.
Tolerances of the bearing seats:
Cone f6, cups not radially supported.

Bearing Arrangement of the Work Rolls

Radial bearing arrangement

On each roll end two cylindrical roller bearings
FAG **Z-532381.ZL-N12BA**
Dimensions (d×D×B):
350×500×190 mm
The tolerances of the cylindrical roller bearings are so close that the load is evenly distributed through all roller rows.
Cage: prong-type cage made of brass
Radial Clearance: C3
Bearing seat tolerances:
Inner rings p6
Outer rings H6



Bearing arrangement of the back-up rolls

Axial bearing arrangement

Two angular contact ball bearings
FAG **7064-MP-UA** on the operator's end.

Dimensions (d×D×B):

320×480×74 mm.

On the drive end a deep groove ball
bearing FAG **61972-M-C3**

Dimensions (d×D×B):

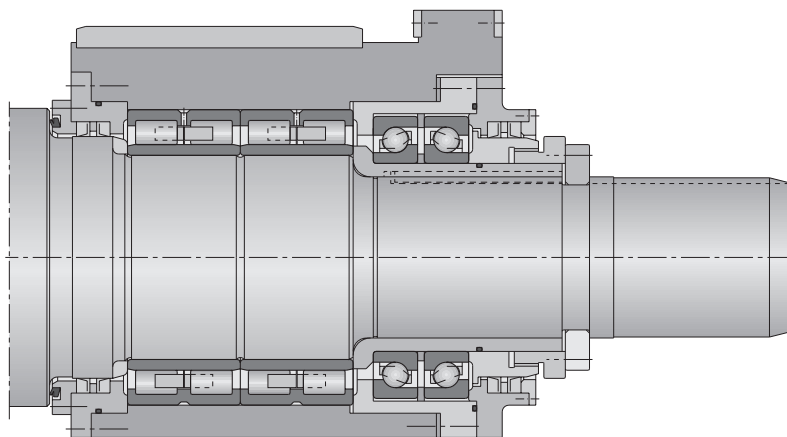
360×480×56 mm.

The angular contact ball bearings
accomodate the thrust loads /chock is
axially located in the roll stand); the
deep groove ball bearing only locates
the chock on the roll (chock is not
axially secured in the roll stand).

Bearing seat tolerances:

Inner rings k6

Outer rings not radially supported.

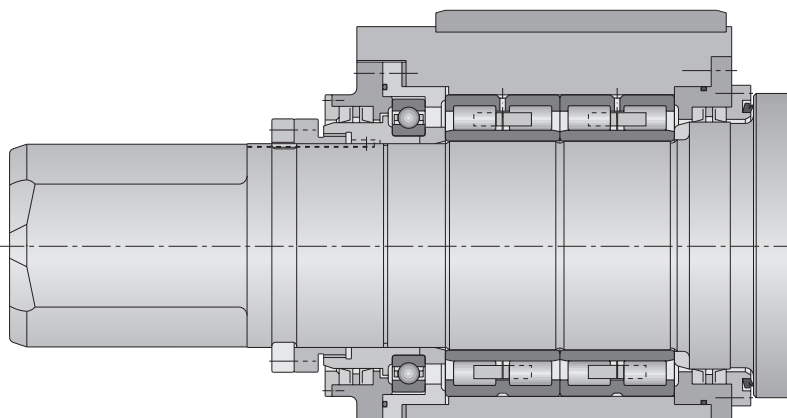


Bearing arrangement of the work rolls, operator's end

Lubrication

All bearing arrangements of back-up
rolls and work rolls are lubricated with
oil mist.

They use a high-viskosity oil with
extreme pressure additives since the
cylindrical roller bearings are exposed
to high load – particularly at the back-up
rolls – and as there may occur operating
temperatures up to 70 °C.



Bearing arrangement of the work rolls, drive end

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