

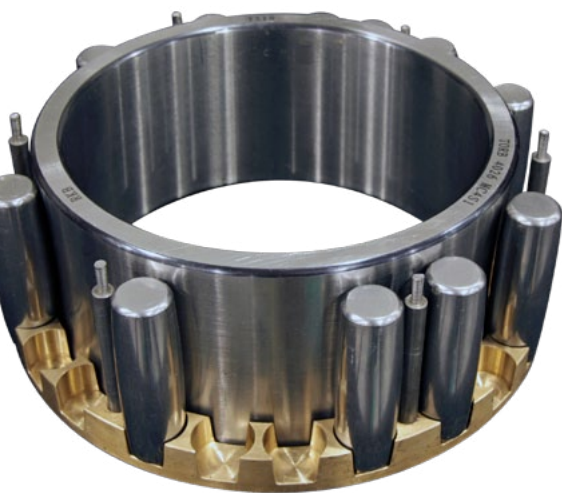
# TORB ROLLER BEARINGS



## BUT: the Swiss Premium-Class Bearing Manufacturer

The BUT Bearing Industries Group is the Swiss manufacturing organization which has been operating in the bearing industry since 1936, with a monthly production capacity exceeding 350 tons of machined steel. The experience gained over the years provides BUT with the know-how and expertise necessary for the development and manufacture of technological industrial bearings up to 1925 mm outer diameter.

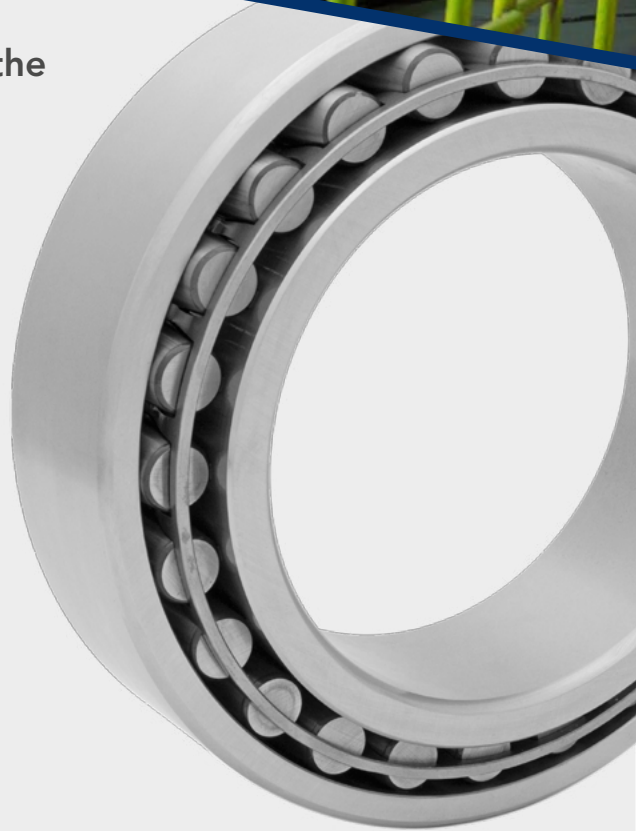
BUT offers reliable cost-effective solutions, with extreme operational flexibility, leading-edge service, huge stock availability, short delivery time and the typical quality of a consistent premium-class bearing source. With a worldwide distribution network and exports to more than 50 countries, BUT is globally recognized as *"The Alternative Power"* in the bearing industry.



## BUT Bearings for the Metals Industry

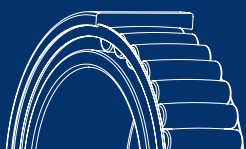
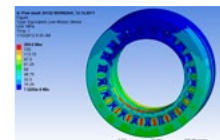
BUT toroidal roller bearings feature:

- Self-aligning capability of spherical roller bearings
- Axial displacement ability of cylindrical roller bearings
- Compact cross section and high load carrying capacity of needle roller bearings



## Engineering and Manufacturing Solutions at Your Service!

- Technical consultancy
- Application analysis and feasibility study
- Engineering and design
- Advanced calculations
- FEM and semi-analytical simulations
- Project co-engineering
- Product customization and optimization
- Advanced and flexible manufacturing technology
- Qualified on-field assistance



# TORB ROLLER BEARINGS



## Types available, dimensional range and price

Full complement or V type

- 75% market shares
- $50 < ID < 200$

Pressed steel cage or J type

- 25% market shares
- $50 < ID < 200$
- The need for a mould implies minimum production lots to amortize production costs

Machined brass cage or M type

- very rare
- $> 200 ID$
- Prices are extremely high

## Main industries and applications

For full complement and V type (small to medium bearings):

- Continuous casting
- Mud pumps (cross-head position)

For M type (large bearings):

- Heavy duty applications
- Cement
- Pulp and paper

## Technical notes and warnings

- BUT toroidal bearings are used in presence of high radial load and when some alignment error must be compensated. BUT toroidal bearings are mounted as non-locating bearing since they can face the thermal expansion along the shaft and both rings must be axially located on both sides
- BUT TORB bearings can be supplied with a CN radial clearance or higher, as C3, C4, C5 due to assembling issues
- It is possible to order the BUT toroidal bearings with cage or full complement (V suffix), and open or sealed type
- BUT TORB bearings can be supplied with a tapered bore 1:12 (K suffix) or 1:30 (K30 suffix) suitable to be mounted on its proper sleeve

## Special designs and variants

