



# COD 11<sup>®</sup> bushings

**HIGH RESISTANCE TO WEAR AND SEIZURE UNDER HARD WORKING CONDITIONS SUCH AS HIGH PRESSURE, CORROSION, ABRASION, SHOCKS AND LOW MAINTENANCE**

The COD 11 bushing is a machined bearing with excellent resistance to wear and seizure. With these bearings, the intervals of lubrication are considerably increased.

## Examples of applications

Harbors installations – Propeller shaft bearing – Offshore lifting platform – Screw and swivel for automatic adjustment of ingot mould sides – Joints of continuous casting chain – Gasholder roller bushings – Bushing blocks for overhead cranes – Guide bushings for piston pumps (offshore) – etc...

## Surface characteristics

The surface topography of the COD 11 bushings provides large grease reservoirs. Different forms are available: holes, cavities, cross hatching, while maintaining an optimum load distribution.

The diffusion surface treatment provides high surface hardness and an excellent resistance to seizure and wear.

## Conditions of use

<b>Static pressure max (MPa)</b>	<b>200</b>
<b>Dynamic pressure max (MPa)</b>	<b>60</b>
<b>Speed (m/s)</b>	<b>0.2</b>
<b>Max Temp (°C)</b>	<b>250 with periodic greasing 350 with initial greasing with greased</b>
<b>Lubrication</b>	<b>Depending on topography</b>
<b>Greasing intervals</b>	

- Nitrocarburising specialist, owner of QPQ®, TENIFER®, ARCOR®, SURSULF®, TUFFTRIDE®...
- Low friction, anti-corrosion coatings: lamellar zinc, PTFE & MoS2 coatings...
- PVD & CVD coatings expert: DLC (aC:H, TaC), hard coatings (CrN, TiN,...): CERTESS®
- Anti-seizure treatment: STANAL<sup>®</sup> 400 (for stainless steel), DELSUN<sup>®</sup> (for bronze and copper alloys)

## Standard tolerances

<b>Bushing inner diameter</b>	<b>H9</b>
<b>Bushing outer diameter</b>	<b>p6</b>
<b>Housing</b>	<b>H7</b>
<b>Shaft tolerances</b>	<b>f7</b>
<b>Shaft roughness</b>	<b>Ra &lt; 0.8</b>
<b>Shaft hardness</b>	<b>&gt; 56 HRC</b>

## Assembly instructions

COD 11<sup>®</sup> bushings are best assembled by press fitting or by nitrogen mounting (Other assembly techniques can also be used. If necessary, please contact HEF DURFERRIT prior to use.)

## Available basic forms

Different forms are available with COD 11<sup>®</sup> technology: Cylindrical or flanged bushings, sliding plates, thrust washers...

## Customizable bushings and products

COD 11<sup>®</sup> bushings may be customized to answer your specific needs. Surface topography may be adapted depending on your conditions: BH holes, cross hatching...

## Counter shaft

For optimal performances, special HEF DURFERRIT shafts are available from HEF: COD<sup>®</sup> ST, COD<sup>®</sup> STC...

Shafts for marine applications: in sea water environment, we recommend COD<sup>®</sup> EM shafts.

## Large testing capabilities and strong R&D

- 60 tribologists and R&D engineers
- More than 30 test benches, customizable tribometers
- Studies in special environment: Cryogenic, high temperature, water, oil, grease, dust ...
- More than 2 500 studies in various industries
- More than 600 patents



The COD 11<sup>®</sup> bushing is based on our experience in the field of tribology. Therefore, it should be tested and validated in your real working conditions before being adopted for permanent use.

