



FAM[®] bushings

HIGH RESISTANCE TO ABRASION AND HIGH CONTACT PRESSURE IN SHOCK WORKING CONDITIONS, WITH NO MAINTENANCE.

FAM[®] bushings, manufactured from manganese steel, have an excellent resistance to abrasive wear thanks to a mechanical work hardening of the contact area and require only initial greasing.

Examples of applications

Furnace gates– Blooms conveyor roller on continuous casting outlet – Slabs clamps and coils clamps – transfer ramp of sheet metal – Joints of ingot guide rollers on spraying column – Joints and rollers of metallic deck conveyor – Extractor feeding screw – Tunnel mining machines– Clamshell bucket– Bridge crane spreader– etc...

Surface characteristics

The contact area is superficially mechanical work hardened, to have an initial hard surface layer which is reinforced under mechanical stresses (shocks, abrasion). It can be smooth or cross hatched.

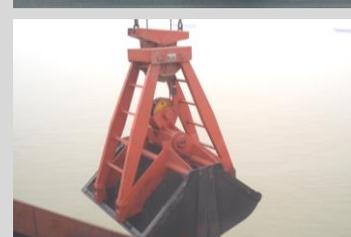
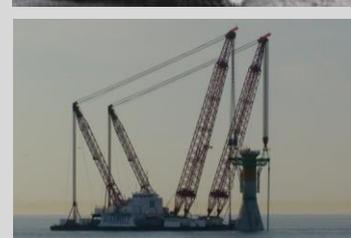
The cross hatching provides an excellent distribution of the grease and enables the removal of abrasive particles from the contact area.

Conditions of use

| | |
|-----------------------------------|------------------------------------|
| Static pressure max (MPa) | 300 |
| Dynamic pressure max (MPa) | 50 |
| Speed (m/s) | 0,05 |
| Max Temp (°C) | 380 |
| Lubrication | Greased or maintenance free |
| Greasing intervals | Initial only |
| Shaft roughness | Ra < 0.8 |
| Shaft hardness | > 56 HRC |

NOTE: This type of bushing can be used without any lubrication in very abrasive conditions.

- 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[®] 400 (for stainless steel), DELSUN[®] (for bronze and copper alloys)



Standard tolerances

a) Interference

We recommend the assembly of our FAM® bushings according to an interference fit of H7/s7. However, under special working conditions (high loads, large diameters) the interference can be increased. For further information, please contact HEF DURFERRIT.

b) Clearance

| Bushing ID | Bushing ID | Shaft tolerance |
|---------------------|------------|-----------------|
| 25 mm < ID < 50 mm | +50 µm | -100 µm |
| | +200 µm | -150 µm |
| 50 mm < ID < 100 mm | +50 µm | -200 µm |
| | +300 µm | -250 µm |
| 100 mm < ID | +100 µm | -250 µm |
| | +400 µm | -300 µm |

Note: these clearances can be increased in case of high abrasive environments

Assembly instructions

FAM® 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 FAM® technology: Cylindrical or flanged bushings, sliding plates, thrust washers, spherical bushings...

Counter shafts

Shafts hardened for 56 to 60 HRC are recommended. For optimal performances, special HEF DURFERRIT shafts are available from HEF: FAM® ST, FAM® HT, FAM® OX...

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 FAM® 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.



HEF DURFERRIT HEADQUARTER
 Rue Benoît Fourneyron - ZI Sud
 42166 Andrézieux Bouthéon
 FRANCE
 Tél. +33 (0)4 77 55 52 22
 bushings@hef.fr

HEF DURFERRIT GERMANY
 Industriestrasse 3
 D - 68169 MANNHEIM
 GERMANY
 Tel: +49 621 32 224 0
 info@hef-gleitlager.de

HEF USA
 2015 Progress Drive
 Springfield
 Ohio 45505
 USA
 Tel: +1 (937) 323 2556
 sales@hefusa.net

HEF DURFERRIT JAPAN
 Sankyo Bldg 6F,
 Shin-Yokohama 3-16-14
 Kohoku-Ku, Yokohama-shi
 Kanagawa-ken 222-0033
 JAPAN
 Tel: +81 45 474 2844
 sales.japan@hef.fr

You have a friction problem? HEF DURFERRIT has the solution!