

OIL IMPREGNATED BRONZE BEARINGS

SELF-LUBRICATING STANDARD CORED ROUND BARS & SOLID ROUND BARS

METAFRAM HOLLOW CORED ROUND BAR

Dimensions

Ø 1	Ø 2	L ₊₀
38 mm ± 0.8	62 mm ± 1.5	120 mm
45 mm ± 0.8	70 mm ± 1.5	120 mm
45 mm ± 0.8	105 mm ± 1.5	120 mm
80 mm ± 0.8	145 mm ± 2.0	120 mm
80 mm ± 0.8	175 mm ± 2.0	120 mm
85 mm ± 1.5	105 mm ± 2.0	120 mm
85 mm ± 1.5	135 mm ± 2.0	120 mm

METAFRAM SOLID ROUND BAR

Dimensions

Ø1	L ₊₀
15 mm ± 0.8	30 mm
20 mm ± 0.8	40 mm
25 mm ± 0.8	50 mm
30 mm ± 0.8	45 mm
37 mm ± 0.8	74 mm
45 mm ± 0.8	90 mm
50 mm ± 1.5	75 mm
54 mm ± 1.5	110 mm
62 mm ± 1.5	120 mm
70 mm ± 1.5	120 mm
80 mm ± 1.5	75 mm
105 mm ± 1.5	120 mm
135 mm ± 2.0	120 mm
145 mm ± 2.0	120 mm

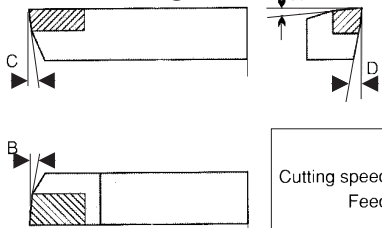
Available standard sizes

METAGLISS WEARPLATES

Available in sheets of 375 x 375 mm — in thicknesses of: 4,6,8,10,12,14,16,18,20 mm & in 3 grades. Please inquire for more details.

Metagloss is a 2 layer composite of: a porous sintered bronze base plus a solid film of MOS₂ (molybdenum disulphide) applied to the base by a special compression technique.

Machining



Angle	Bronze	Iron
A	0 - 3	3 - 7
B	5 - 7	5 - 7
C	5 - 7	4 - 6
D	5 - 7	4 - 6

	Sketching out	Finishing
Cutting speed	180-200 m.mn	140-200 m.mn
Feed	0.1-0.2 mm revolution	0.1 mm max. revolution
Depth of cut	≤ 1 mm	0.1-0.4 mm

Machining of self-lubricating bearings is like machining of light metals (similar to aluminum).

To avoid sealing of the porous surface it is recommended to use sharp tools made of tungsten carbide and to follow the machining instructions described in this flyer.

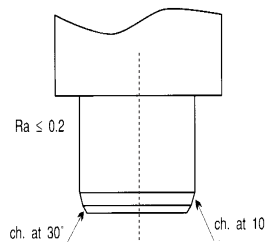
Grinding is not recommended.

Re-impregnation of bearings after machining

After machining immerse the parts in a bath of oil at 80 degrees C for one hour.

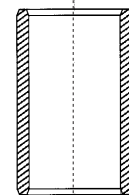
Use oil of the same grade as the initial impregnation (MT 100). Let bearing cool down while immersed in the oil bath.

Fitting instructions



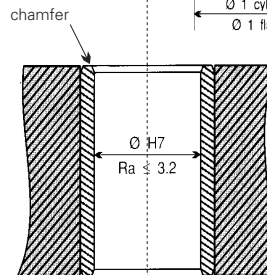
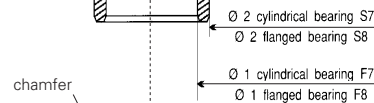
Fitting mandrel

In order to achieve correct fitting, press on bearings using a mandrel of Ø m6 with entry chamfers as shown in the figure.



Bearing before fitting

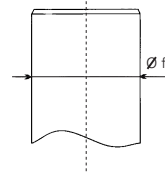
See also ISO 286 and DIN 267 PT 2



Steel housing

The adjustment between bearing and housing and the fitted bearing bore are based on a rigid steel housing.

For other types of housing consult factory.



Shaft

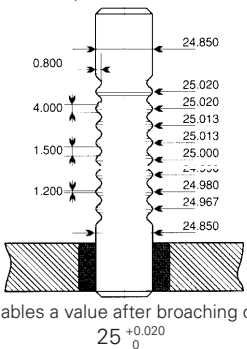
For BP25 bearings
Mini hardness 80 kg/mm²
Ra ≤ 0.6

For FP15 bearings
Mini hardness 120 kg/mm²
Ra ≤ 0.3

abbreviations: mini = minimum; maxi = maximum

Broaching

Example for a bearing with a 25 mm I.D. ground and polished mandrel - HRC 60



Tolerances

Bearings after assembly

Rigid steel housing and assembly with mandrel m6.

Cylindrical bearing : H7 (H8 in case of Ø ≥ 50 mm)

Flanged bearing : H8

Clearance

• Shaft : f7

• Bore : H7 or H8

It is essential to follow the fitting instructions in order to obtain an optimum use of the bearing. (lubrication, friction, wear)

Note: ISO tolerances are in µ (microns). 1 micron = 0.001 mm.

See the latest product information & technical data charts on the Internet at: <http://mdmetric.com> E-mail: sales@mdmetric.com

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