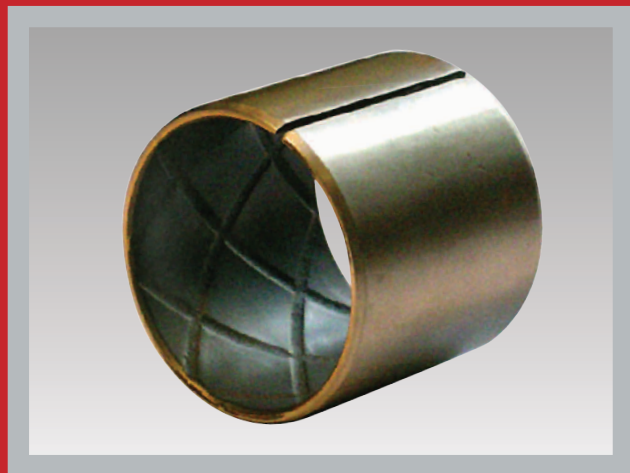


GAP-MET[®]/M



SOLID BRONZE SLIDING BEARING, HIGH-COMPRESSED WITH EVENLY APPLIED LUBRICANT,
MANUFACTURED EMPLOYING SINTERING TECHNIQUE, MAINTENANCE-FREE

GAP-MET[®]/S



WRAPPED SLIDING BEARING, STEEL/GRAPHITE BRONZE,
MAINTENANCE-FREE



GAP-MET®/M

Self-lubricating sliding bearing • High-compressed with evenly applied solid lubricant
Manufactured employing sintering technique • Maintenance-free

| | |
|--|---|
| PROPERTIES | High-load capacity and stability, for all slow movements, unsusceptible to dirt, no moisture absorption, good chemical resistance, good respectively very good temperature resistance, can be reworked mechanically. |
| MATERIALS Base material* Sliding surface ** Running-in layer | Bronze with smoothly dispersed graphite incorporated in the matrix CuSn / CuSnPb Graphite film (optional) |
| MATERIAL PROPERTIES*** Specific load capacity static Specific load capacity dynamic Sliding speed Friction value Temperature strain Max. Pv - value | ≤ 250 [N/mm ²] ≤ 130 [N/mm ²] ≤ 0,5 [m/s] dry 0,10 - 0,20 [μ] -50 - +350 (+650 possible) [°C] 1,5 [N/mm ² x m/s] dry |
| TOLERANCE DETAILS Housing - Ø Bushing-inner - Ø after mounting Shaft tolerance | H7 To customer's specification (D8 / H8 / H9) To be specified by customer (d7 / e7 / f7 / h7) |
| SHAFT MATERIAL | Hardened steel > 180HB, surface roughness ≤ Rz 4 |
| MOUNTING ADVICE Housing Shaft Force fitting mandrel | Mounting bevel, min. 1,5 mm x 15-45° Mounting bevel, 5 mm x 15°, edges rounded The application of an adequate force fitting mandrel is advisable. Grease lubrication of the outer surface may be necessary when mounting. |
| MAINTENANCE | Basically, GAP-MET®/M is a maintenance-free sliding bearing, though oil or grease lubrication is possible. |

We produce all special designs at short notice!

GAZ/M Cylindrical bushing

GAB/M Flanged bushing

GAA/M Thrust washer

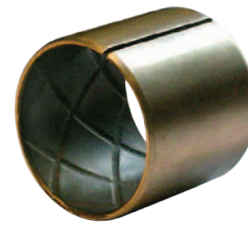
GAS/M Strips

Special designs on customer's request are possible!

* Other alloys are available!

** Also available with cleansing grooves.

*** The above mentioned material properties are valid for optional operating conditions. Through changes of the application conditions e.g. higher sliding speed or strain, these values are subject to changes.



GAP-MET®/S

Wrapped sliding bearing • Steel/ graphite bronze • With integrated solid lubricant • DIN 1494 / ISO 3547 • Maintenance-free

We produce all special designs at short notice!

GAZ/S Cylindrical bushing
GAA/S Thrust washer
GAS/S Strips

| | | | | | | | | | |
|-------------------------------|--|---|---|---|--|--|-------------|------------------|---------------|
| PROPERTIES | High-load capacity and stability, for all slow movements, unsusceptible to dirt, no moisture absorption, good chemical resistance. | | | | | | | | |
| MATERIALS | <table border="0"> <tr> <td>Base material*</td> <td>Steel (also available in bronze and niro)</td> <td rowspan="3" style="font-size: 3em; vertical-align: middle;">}</td> <td rowspan="3"> STANDARD ALLOYS Special alloys on request </td> </tr> <tr> <td>Sliding surface **</td> <td>CuSn alloys</td> </tr> <tr> <td>Running-in layer</td> <td>Graphite film</td> </tr> </table> | Base material* | Steel (also available in bronze and niro) | } | STANDARD ALLOYS Special alloys on request | Sliding surface ** | CuSn alloys | Running-in layer | Graphite film |
| Base material* | | Steel (also available in bronze and niro) | } | | | STANDARD ALLOYS Special alloys on request | | | |
| Sliding surface ** | | CuSn alloys | | | | | | | |
| Running-in layer | Graphite film | | | | | | | | |
| MATERIAL PROPERTIES*** | | | | | | | | | |
| TOLERANCE DETAILS | | | | | | | | | |
| SHAFT MATERIAL | | | | | | | | | |
| MOUNTING ADVICE | | | | | | | | | |
| MAINTENANCE | | | | | | | | | |

PROPERTIES

High-load capacity and stability, for all slow movements, unsusceptible to dirt, no moisture absorption, good chemical resistance.

MATERIALS

Base material*
Sliding surface **
Running-in layer

Steel (also available in bronze and niro)
CuSn alloys
Graphite film

STANDARD ALLOYS
Special alloys on request

MATERIAL PROPERTIES***

Specific load capacity static ≤ 260 [N/mm²]
Specific load capacity dynamic ≤ 80 [N/mm²]
Sliding speed < 0,5 [m/s] dry
Friction value 0,10 to 0,20 [μ]
Temperature strain -150 to +280 [°C]
Max. Pv - value 1,0 [N/mm² x m/s] dry

TOLERANCE DETAILS

Housing - Ø H7
Bushing-inner - Ø after mounting H8 / H9
Shaft tolerance d7 / e7

SHAFT MATERIAL

Hardened steel > 180HB, surface roughness ≤ Rz 4

MOUNTING ADVICE

Housing
Shaft
Force fitting mandrel

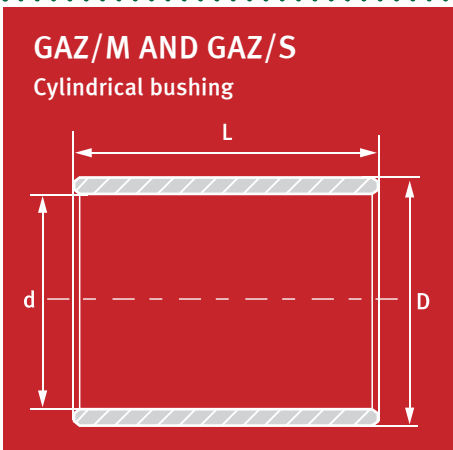
Mounting bevel, min. 1,5 mm x 15-45°
Mounting bevel, 5 mm x 15°, edges rounded
The application of an adequate force fitting mandrel is advisable. Grease lubrication of the outer surface may be necessary when mounting.

MAINTENANCE

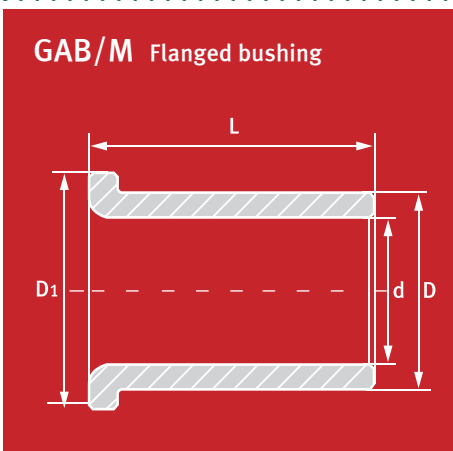
Basically, GAP-MET®/S is a maintenance-free sliding bearing, though oil or grease lubrication is possible.

Grooves and lubrication holes are available in different types!

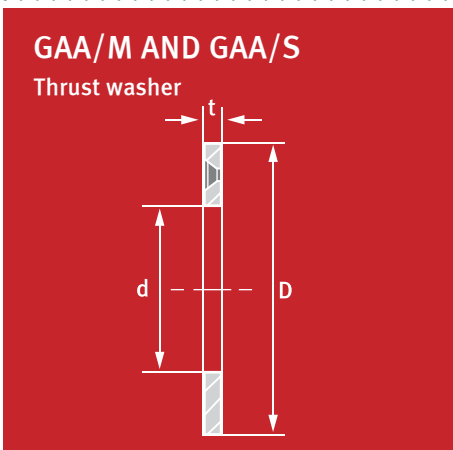
* Other alloys are available!
** Also available with cleansing grooves.
*** The above mentioned material properties are valid for optional operating conditions. Through changes of the application conditions e.g. higher sliding speed or strain, these values are subject to changes.



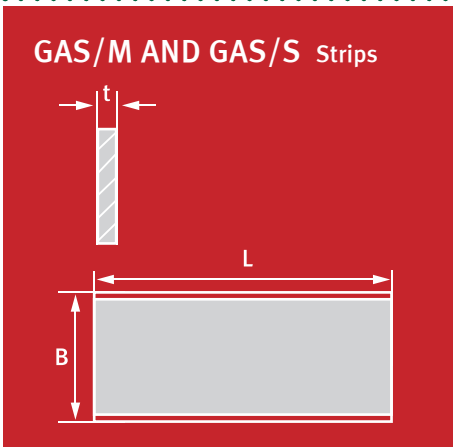
| | | | | |
|--|--------------------------------|--|--|--|
| GA | Z/M | 60 | 70 | 50 |
| GA | Z/S | 60 | 65 | 50 |
| Type (GAP-MET/M®) Type (GAP-MET/S®) | Geometry (Cylindrical bushing) | Inner diameter GAP-MET/M® 60 mm (d) Inner diameter GAP-MET/S® 60 mm (d) | Outer diameter GAP-MET/M® 70 mm (D) Outer diameter GAP-MET/S® 65 mm (D) | Length GAP-MET/M® 50 mm (L) Length GAP-MET/S® 50 mm (L) |



| | | | | |
|-------------------|----------------------------|-------------------------------------|-------------------------------------|-----------------------------|
| GA | B/M | 60 | 70 | 50 |
| Type (GAP-MET/M®) | Geometry (Flanged bushing) | Inner diameter GAP-MET/M® 60 mm (d) | Outer diameter GAP-MET/M® 70 mm (D) | Length GAP-MET/M® 50 mm (L) |



| | | | | |
|--|--------------------------|--|--|---|
| GA | A/M | 30 | 60 | 10 |
| GA | A/S | 30 | 60 | 05 |
| Type (GAP-MET/M®) Type (GAP-MET/S®) | Geometry (Thrust washer) | Inner diameter GAP-MET/M® 30 mm (d) Inner diameter GAP-MET/S® 30 mm (d) | Outer diameter GAP-MET/M® 60 mm (D) Outer diameter GAP-MET/S® 60 mm (D) | Thickness GAP-MET/M® 10 mm (t) Thickness GAP-MET/S® 5 mm (t) |



| | | | | |
|--|------------------|--|--|---|
| GA | S/M | 30 | 70 | 10 |
| GA | S/S | 30 | 70 | 05 |
| Type (GAP-MET/M®) Type (GAP-MET/S®) | Geometry (Strip) | Width GAP-MET/M® 30 mm (B) Width GAP-MET/S® 30 mm (B) | Length GAP-MET/M® 70 mm (L) Length GAP-MET/S® 70 mm (L) | Thickness GAP-MET/M® 10 mm (t) Thickness GAP-MET/S® 5 mm (t) |

All sizes and measurements are produced to customer's specification.