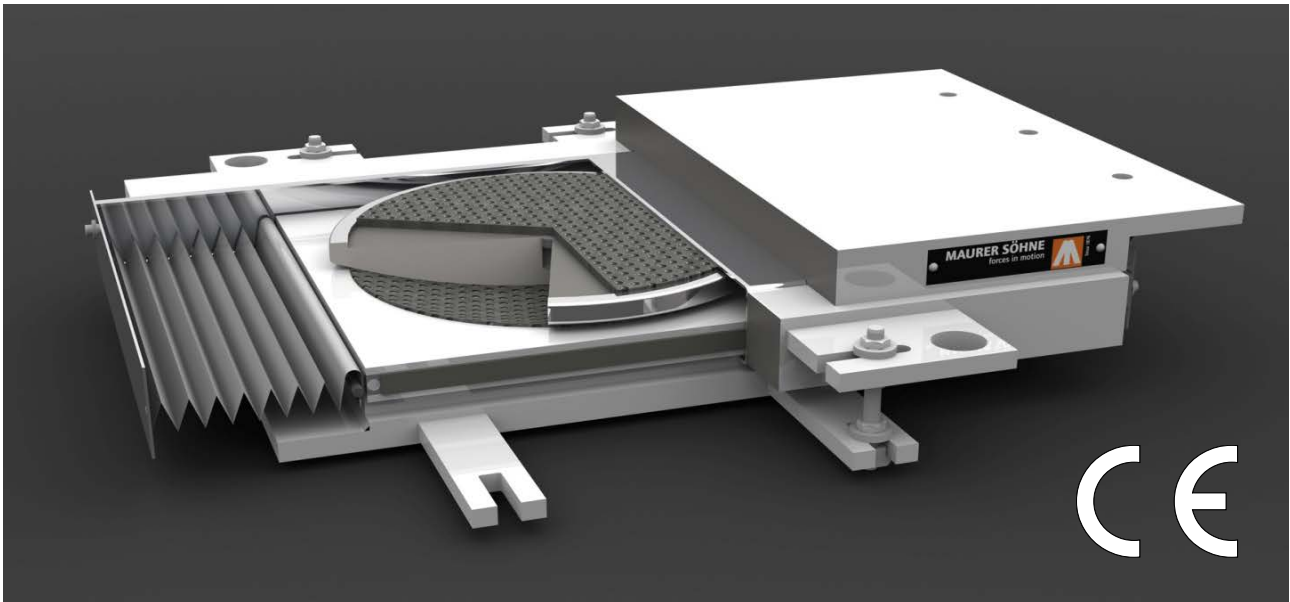


MAURER MSA®- Sliding Alloy

Innovation against corrosion of structural bearings



MAURER MSM®- Spherical bearing with MSA®-Sliding Alloy

MSA® is an abbreviation for MAURER Sliding Alloy. A new solid material developed by MAURER with a special surface treatment. The sliding material can be used for all kinds of spherical and cylindrical bearings. Its corrosion resistance is the main advantage compared to traditional raw materials. With the new developed calotte (rotation part) for spherical structural bearings made out of the new MAURER MSA®-Sliding Alloy a new generation of structural bearing with properties like corrosion free, maintenance free and with a service live more than 50 years was born.

As compared to the hard chromium plated steel calottes, the highly shining MSA®-calottes display a much higher corrosion resistance and are also resistant against aggressive industrial air.

Features of the MAURER MSA® – Calotte

Made out of one solid material element, with special surface treatment, that means,

- Tolerances reduction on the calotte surface as compared to chrome machined calotte surface.
- No different materials on the same calotte as compared to stainless steel covered calotte.
- No chromium-plating , no cracking fissuration.
- No stress differences on the calotte surface.

- **Minimum life time of 50 years**
- **Reduction of surface tolerances**
- **Rustless and maintenance-free**
- **Increased corrosion resistance**
- **Suitable for all climate zones worldwide
certificated from -50°C to +70°C**
- **European approval with CE-marking**

MSM®- Spherical and -Cylindrical Bearing with MSA®

In combination with the sliding material MSM® introduced in 2003, MSA® guarantees a life time of at least 50 years. This means that also under challenging environmental conditions (moisture, flood, industrial air) no premature and cost intensive replacement of these shining calottes is required

Features of MAURER MSA® Sliding Alloy in combination with MAURER MSM® Sliding Material

No corrosion inside the bearing.

- Lower friction between mating surfaces, less than 1 % (at +15°C).
- Spherical and cylindrical bearing are maintenance free, with a working life more than 50 years.



Fig. 1 - MSA®-Calotte which are made out of the new sliding alloy derive their shine from a special surface treatment

Testing of MSA®

The material characteristics of the new sliding alloy were tested in a third party test laboratory. MSA® proved its durability in long term sliding test at the **Material testing institution Stuttgart**:

- accumulated sliding path of 10,000 m
- displacement velocity of 15 mm/s
- contact pressure of 60 N/mm²

No wear could be observed, neither an increase of the friction resistance. The latter even lies below the values which are required for polished stainless steel or for hard chrome.

Also, the corrosion resistance according to DIN EN 1337-9 could be demonstrated.

Composition and surface treatment of MSA® are confidentially registered with **Deutsche Institut für Bautechnik** (German Institute of Civil Engineering) and with material testing institution **MPA Stuttgart**, Germany.

Friction / temperature combination MSA® / MSM®

Since its introduction in 2003, MSM® proves its superior performance even under extreme conditions. Outstanding features of MSM® as compared to PTFE are:

- double permissible contact pressure
- 5-fold accumulated displacement
- 7.5-fold displacement velocity.

The international use of MSM® is regulated in the approval for a temperature range from -50°C to +70°C.

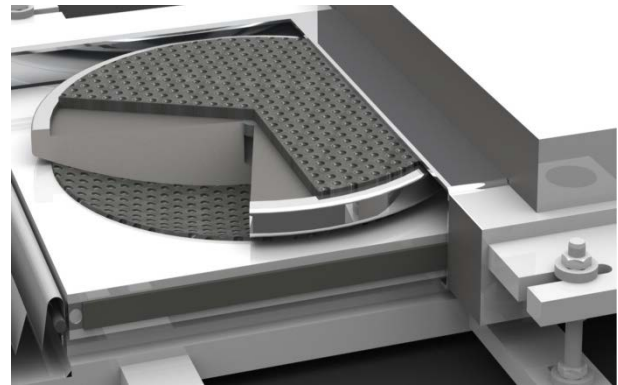


Fig. 2 - MSA®- spherical bearing with sliding material MSM®

Technical Approval MSA® und MSM®

- European Technical Approval ETA-06/0131

In order to document the compliance to the high quality requirements and conformity to the approval, all MAURER MSM®- Spherical and -Cylindrical Bearings will obtain the European **CE** marking certified by the

Materials Testing Institute University of Stuttgart (MPA Stuttgart).



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