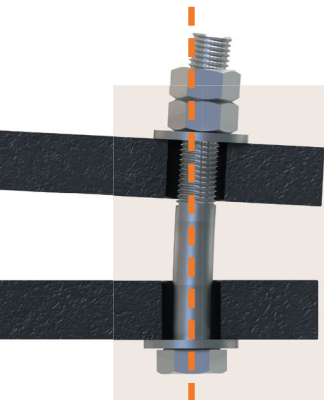




SPHERICAL SPACER

The purpose of chocking is to create a perfect coplanar mounting surface for the machine. RotaChock® fills the gap between the machine foot and its foundation and solves parallel and angular misalignment. But this doesn't mean that a hardware misalignment can't still occur.



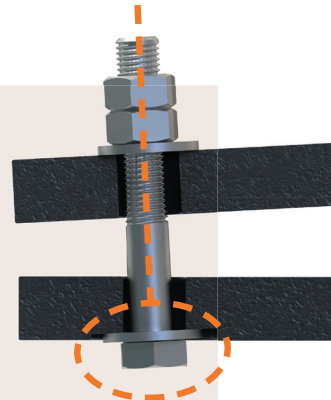
HARDWARE MISALIGNMENT

THE PROBLEM

Whether using RotaChock®, epoxy resins, or steel-fitted blocks, inadequate bolt stretch through hardware misalignment means a loose foundation bolt.

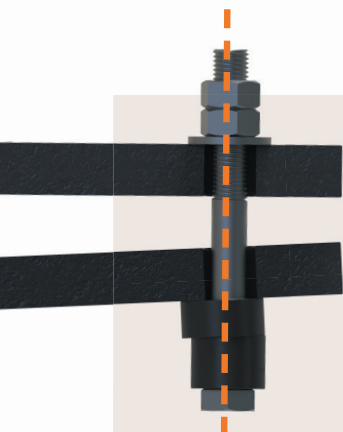
In shipbuilding, classification authorities have required the underside of foundations to be spot faced or counterbored so that the surfaces are parallel.

In other industries, extra-long studs are specified. These long studs mitigate stress build-up but do not benefit the lifecycle.



SPOT-FACING

WHY MACHINE THE FOUNDATION OR MITIGATE THE PROBLEM WHEN YOU COULD SOLVE IT?



THE SOLUTION

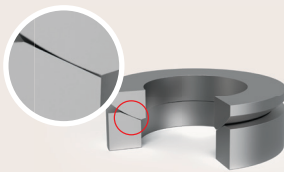
Spherical Spacers solve the above problem by:

- › creating hardware planes
- › elongating the bolt

The Spherical Spacer exist of two parts with a smooth concave and convex curvature, resulting in an angular offset angle of 4°, which creates the hardware plane. The standard heights elongate the bolt and create extra clamping length. Inadequate bolt stretch through hardware misalignment is avoided by using Spherical Spacers.

ROTACHOCK® SPHERICAL SPACERS ARE HAVING THE FOLLOWING ADVANTAGES

- › No classification authority requirement for spotfacing
- › Increased overall lifetimecycle for the bolted connection
- › No chance of bending the bolt
- › Even distribution of the bolt tension at bolt head and the face of the nut
- › Angular offset angle of 4°
- › Increased clamping length results in a higher bolt stretch



DIN 6319 with spherical x conical cross-section



Spherical Spacer with smooth concave and convex curvature

Most market-available spherical washers have a spherical x conical cross-section configuration. Due to the line contact between spherical and conical contours, these washers could prove problematic. I.e.g. when your application is subject to high vibration loading, seismic shock, or marine application loading.

SPHERICAL SPACER SELECTION IS EASY

Spherical Spacers are designed around the bolt. Just check the bolt you are using and match this with the chart below:

| Spherical Spacer | Outside Ø | Inside Ø | Height range | Standard bolt size | Reduced min. height | Weight |
|------------------|-----------|----------|--------------|--------------------|---------------------|--------|
| | mm | mm | mm | M | mm | kg |
| SS16/18 | 37 | 19 | 50 | 16/18 | 20 | 0.2 |
| SS20/22 | 46 | 23 | 50 | 20/22 | 20 | 0.4 |
| SS24/27 | 56 | 28 | 60 | 24/27 | 28 | 0.7 |
| SS30/33 | 67 | 34 | 60 | 30/33 | 28 | 1.0 |
| SS36/39 | 80 | 40 | 70 | 36/39 | 34 | 1.7 |
| SS42/45 | 93 | 46 | 70 | 42/45 | 34 | 2.3 |

The standard Spherical Spacers are manufactured from 42CrMo4 (DIN1.7225) and are Anti-Corrosion Enhanced for cost-effective corrosion protection. Spherical Spacers have been engineered to enable local machining when the height needs to be reduced.



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