

# Special productions of flange liners

## Welded flange liners

### The ideal plain bearing for your requirements:

Special productions of KS PERMAGLIDE® plain bearing flange liners are created with a thrust washer and a bush through welding. This means that, depending on the requirement, different materials can be used for the bush and the cylindrical part of the flange liner, e.g. by combining a bush made from KS PERMAGLIDE® P200 and a thrust washer made from KS PERMAGLIDE® P14, see examples below. Depending on the axial or radial stress, flange liners with an individual wall thickness are required, which can also be manufactured as special production. Flange liners with individual dimensions can also be created in the liner flange area.

### Advantages of welded flange liners:

- increased contact area without separating joint
  - improved evenness on the sliding surface
  - no bending radius in the inside diameter
  - no interrupted joint on the washer, i.e. full thrust face
  - no cracks in the flange
  - no restriction in the flange diameter, meaning that larger external diameters of the washer are possible than with reshaped flange liners
  - different materials and wall thicknesses for the flange and cylindrical sliding surface can be combined
  - other designs can be produced
  - complex weld geometries can be created
  - taper faces possible on the washer
  - individual laser engraving of the flange liners
- reduced manufacturing costs through material savings
  - reduced manufacturing costs by selecting materials to suit the requirements, e.g. for low stress areas of the component
  - more flexible geometry design, e.g. latching lugs, grooves or larger thrust faces can be achieved easily

- ✓ Production in accordance with the highest quality standards with tolerances to meet DIN ISO 3547
- ✓ Special productions are available in all KS PERMAGLIDE® standard materials (special materials on request)
- ✓ The manufacturer KS Gleitlager has over 15 years of expertise in welding composite materials

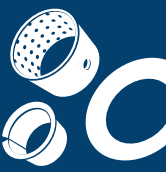


**Individual flange dimensions,**

**different materials,**

**individual wall thicknesses, other designs**

Examples of flange liner special productions made from a KS PERMAGLIDE® standard bush PAP and a thrust washer produced based on a drawing specification and joined in a special welding process



**Manufacturing the individual flange liners**

- The thrust washer is made from composite material through precision cutting with high dimensional accuracy. Flange liners produced in this way therefore have a larger contact surface with better load-bearing properties.
- The thrust washer is connected to the plain bearing bush via laser welding. With this procedure, a discreet heat introduction in the material is created with a high energy density. This means that there is only a minor impact on the structure. A precise weld seam, consistent all around, is created, which minimizes the stress input and the thermal distortion.
- Practically any design is possible with this technology.

**Other KS PERMAGLIDE® special productions:**

[www.permaglide.com/en/products/special-productions/](http://www.permaglide.com/en/products/special-productions/)

