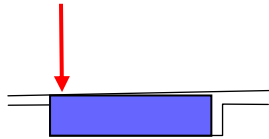
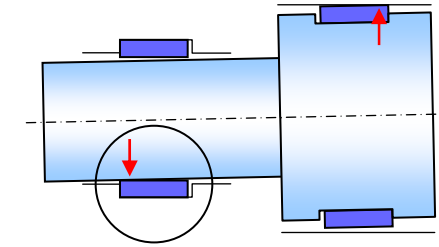


# Guivex Guide Rings

Guivex: U.S. Patent 6,012,847

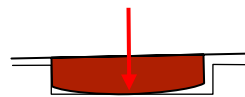
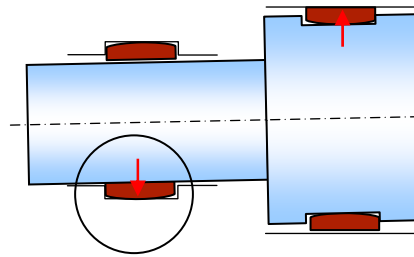
Guivex Guide Rings for rod (SBK) and piston guides (KBK) in hydraulic cylinders are setting new standards. Thanks to the unique design they provide an optimum balance between stability under compressive load and durability. Often the number of guide rings in a system can be reduced because of the increased load carrying capability the Guivex design offers. Guivex Guide Rings therefore offer you technical as well as economic benefits.

Conventional Guide Rings Under Side Load



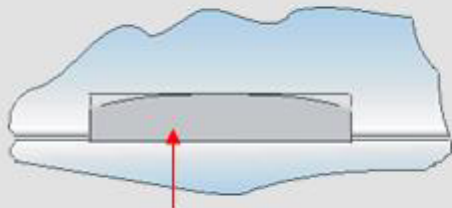
- Tension peaks
- High wear
- Creation of noise
- Poor lubrication
- Edge breaking

Guivex Guide Rings Under Side Load



- Guivex Shape:**
- No tension peaks
  - Noise reduction
  - Improved lubrication
  - Less wear

The special convex shape results in an equal distribution of stresses.

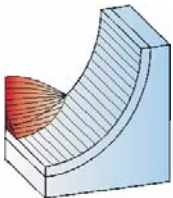


Guivex SBK

- The shearing forces are equally distributed on the length of the guide ring resulting in a remarkable capacity to take high radial loads.
- No peak stresses on the corner – no edge breaking
- Optimal utilization of the guide length results in less housing space and a much better overloading limit.
- The stress distribution in the contact area serves as an advantage by pulling in hydraulic oil between guide ring and counter surface – total friction and wear will be considerably reduced.

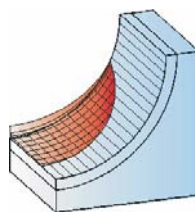
## Comparison of Peak Stresses

Metal Guide Bushing



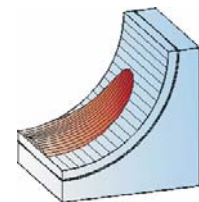
Extremely high peaks of stress on the edges

Phenolic Resin Guide Bushing



Reduced peaks of stress on the edges

New Guivex Phenolic Resin Guide Bushing



No peaks of stress - no edge loading