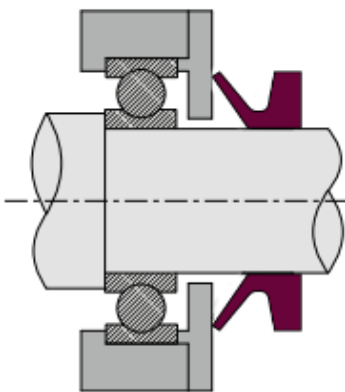


V-rings are often combined with other types of seals such as radial shaft seals. In some cases, V-rings are used as the primary seal part. As they offer optimal axial sealing, they are used to protect the metal part against dirt, grease, oil and dust.

V-RINGS COMPRISES OF 3 PARTS:

1. **The body:** The thickest part of the seal. Clamped in place on the rotating axle and permits rotation.
2. **The hinge:** The part connecting the sealing lip to the body of the seal, which provides a certain amount of flexibility which prevents position stresses.
3. **The sealing lip:** The lip compensates for radial runout (angle deviations in the rotating axial) as well as significant tolerance gaps other than those recommended by its flexibility. This ensures sealing on the opposing metal surface.



Stretched on the shaft, the V-Ring must be positioned at a precise distance in relation to the opposing metal friction surface (or back) to guarantee optimal sealing under axial pre-stressing of the sealing lip. The V-ring turns with the rotating shaft and depending on the circumferential speed, the centrifugal force acting on the the sealing lip repels it on the outside, which reduces compression. Beyond, a certain speed, the sealing lip must not come into constant contact with the opposing metal wall, as sealing is not guaranteed.

Surface roughness

The quality of the back side influences the lifespan of the V-Ring in contact. The surface roughness on the back side is determined according to the fluid that is to be sealed and the circumferential speed of the shaft.

Roughness Ra	Circumferential speed	Media
0.40 µm - 0.8 µm	> 10.0m/sec	Oil, water
0.80 µm - 1.60 µm	5.0m/sec - 10.0 m/sec	Oil/water splashes, grease
1.60 µm - 2.00 µm	1.0 m/sec - 5.0m/sec	Grease, dirt, water splashes
2.00 µm - 2.50 µm	> 1.0m/sec	Grease, dirt