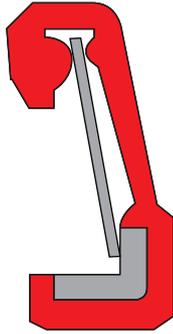


SEAL SPEC R97



description

axial shaft seals are used primarily as a protective seal for roller bearings. their sizes are matched to those of roller bearings. if fluids are to be prevented from escaping, a design with an internal seal lip, is to be preferred. the design with external sealing lip is suitable for sealing grease and for protection against dirt entering from the outside.

the elastomer seal lip is axially spring-loaded against the opposite mating face by a spider spring. the linear compressive force is lower than with an oil seal (about one third), but constant in operation. there is no reduction in contact force due to thermal expansion as with oil seals, and the larger diameter of the sliding seal edge has an unessential influence on the friction effect.

- + low friction, minimum heat generation
- + no shaft wear, simple installation
- + minimum installation space requirement
- + high sliding speed
- + high heat resistance
- + simple installation
- + suitable for a wide range of roller bearing series
- + long service life

category of profile

molded/standard/trade product only

axial shaft rotary seal

the R97 seal is designed for use as a rotary seal

area of application; hydraulics & pneumatics

axial shaft seals are used for sealing shafts, axles and bearings. their function is to prevent the ingress of dust, dirt, splash water, etc., and to prevent the escape of fluid or lubricant from the sealed chamber.

the fields of application of the individual types differ widely and are predominantly dependent on the type of lubricant and the operating conditions.

function

axial shaft seals are ready-to-install seal elements for sealing shafts, axles and bearings. the axial shaft seal consists of an elastomer-elastic membrane with a vulcanised metallic reinforcement ring. the membrane has an axial sealing lip. the sealing lip is designed in a conical form to obtain a minimum contact area, thus considerably reducing friction, heat and wear.

axial shaft seals have axial spring load against the mating surface. the seal requires very little mounting space and can be effectively used where space is limited.



operating parameter & material

sealing element ¹	material metal parts ²	temperature	max surface speed	max pressure ³
NBR (75 shore A)	reinforcement ring: steel 1.0338/st 14.03	-30 °C ... +120 °C	30 m/s	-
FKM (75 shore A)	star-type spring: spring steel 1.0605/C75	-25 °C ... +250 °C	30 m/s	-

¹ special grades and other materials (ACM, EACM, EPDM, HNBR, VMQ) on request

the stated operation conditions represent general indications. it is recommended not to use all maximum values simultaneously. surface speed limits apply only to the presence of adequate lubrication film.

² metal insert, and spring as well, can be supplied in different materials on request.

surface quality

surface roughness	Rtmax (µm)	Ra (µm)
oil lubrication	≤2,5	≤1,0
grease lubrication	≤6,3	≤2,5

fitting & installation

before installation of the seal, the sealing surface should be cleaned and greased lightly to minimize wear during the run-in phase. installation is, in most cases, performed "blind", i.e. uniform contact between the sealing lip and the mating face cannot be checked visually. during installation the sealing lip must not be damaged or deformed, and the seal must be installed parallel to the mating face. this is best ensured if the seal is installed against a seat in the housing with an assembly tool.

optimal seal performance is obtained when the seal or mating face is positioned in line with the front end of the seal.

seal & housing recommendations

please note that we are able to produce those profiles to your specific need or any non standard housing. for detail measurements, please see seal-mart catalog...

