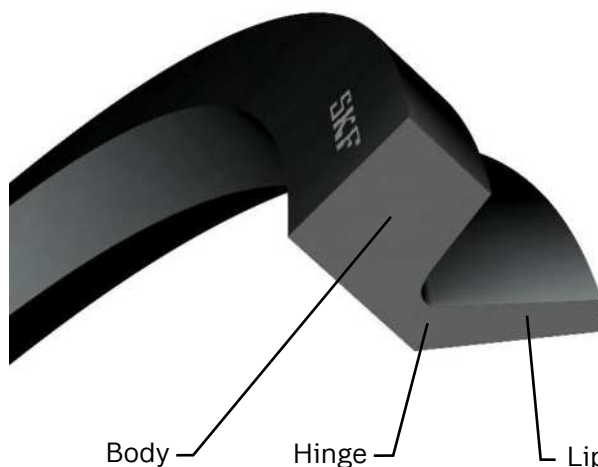


TR/VAX

The TR/VAX seal is a very flexible axial shaft seal developed based on SKF / TENUTE experience over the years to properly operate in applications without pressure. As usual for axial shaft seals or V-rings, the seal rotates with the shaft.

The seal body is completely made of rubber and the cross section consists of three main parts:



The TR/VAX body helps to keep the seal in the right position on the shaft during rotation.

Due to the shape of the sealing lip and the resilience of the polymer used, the TR/VAX seal compensates both for angular deviations as well as axial displacement between the shaft and the sealing surface.

The hinge connects the elastic sealing lip with the solid body. It works as a spring between the seal body and the sealing lip. It enables a constant pressure of the sealing lip onto the mating surface.

Exclusive features of TR/VAX seals are:

- Improved resistance to possible shaft misalignments, angular deviations as well as axial displacements

Possible size range for TR/VAX seals: $\varnothing d_{\min} = 200$ mm; $\varnothing D_{\max} = 2\,020$ mm (please also see the drawing at the next page).

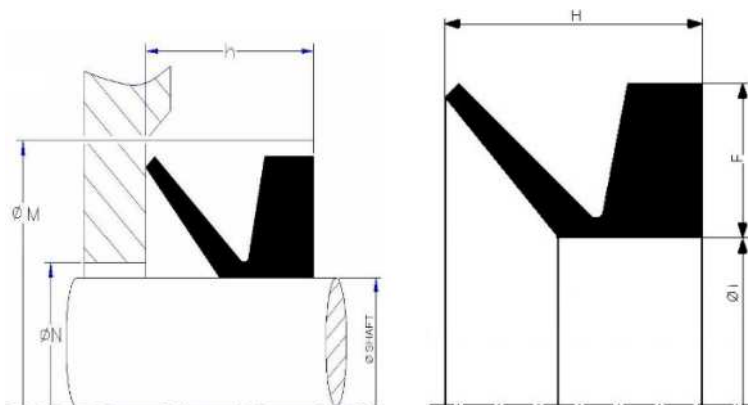
Materials

The standard material for the TR/VAX is a nitril elastomer (NBR) with 60 Shore A filled with PTFE, but for particular applications, the TR/VA can be manufactured in different materials like hydrogenated nitril elastomer (HNBR), silicone elastomer (VMQ) or fluorocarbon elastomer (FKM). The table below shows working temperature ranges (minimum, maximum, peak (*)) applicable to each type of compound.

Material	Temperature	
	min	max
	°C	°C (*)
NBR	-30	+100 (+120)
HNBR	-40	+150 (+175)
VMQ	-50	+200 (+250)
FKM	-20	+200 (+250)

Assembly of TR/VAX seals

The left drawing shows the details of the housing dimensions and the assembly of the TR/VAX seal. In the right-hand drawing you can see the seal cross section and related dimensions.



Particular applications or requirements different from those details shall be agreed with the TENUITE Technical

Department / SKF Seals Application Engineering.

For this axial shaft seal, it is important to check the shaft speed. A circumferential shaft speed exceeding 6 – 8 m/s requires an axial support, whilst over 10 – 12 m/s a radial retention is necessary.

ØSHAFT		ØN	ØM	h	H	F
Over	Up to	max	min			
Mm	mm	mm	mm	mm	mm	mm
200	2 020	ØSHAFT + 12	ØSHAFT + 50	25 ±5,0	31	17,8

Surface finishing

For shuffling surfaces, a roughness of Ra from 0,3 to 1,6 µm is recommended for most of the standard applications, while in case of high speeds, a finishing to Ra from 0,2 to 0,6 µm is recommended. For the shaft no special tolerance or roughness is required, but we recommend keeping Ra values below 3,2 µm.

skf.com | skf.com/seals

© SKF and TENUITE are registered trademarks of the SKF Group

© SKF Group 2024

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication, but no liability can be accepted for any loss or damage whether direct, indirect, or consequential arising out of the use of the information contained herein. All data mentioned in this publication are given as an indication. SKF Seals Application Engineering / TENUITE Technical Department reserves the right to change and improve its products according to application specifications and test results.