

TENUTE TR/VL-ML-PTV seals

TENUTE TR/VL-ML-PTV has a very narrow cross section, studied to work axially with no pressure. As shown in Picture 1, the seal lip features an exclusive antifriction band, patented by TENUTE under number PCT/EP2006/004962, that can be made in different materials according to the working conditions. Other innovative features offered by TR/VL-ML-PTV are:



Picture 1

Body

In order to avoid the typical “waves” shown by standard TR/VL rings during assembly, a spring has been integrated in the seal back of TR/VL-ML-PTV.

This garter spring helps to keep the seal in the right position on the shaft during rotation, with no need of a radial retaining.

Sealing Lip

Thanks to the PTV strip, the seal ensures a very low friction coefficient and an excellent wear resistance, granting a considerably increased seal life-time. The seal shape compensates both for angular deviations and axial displacements between shaft and sealing surface.

Hinge

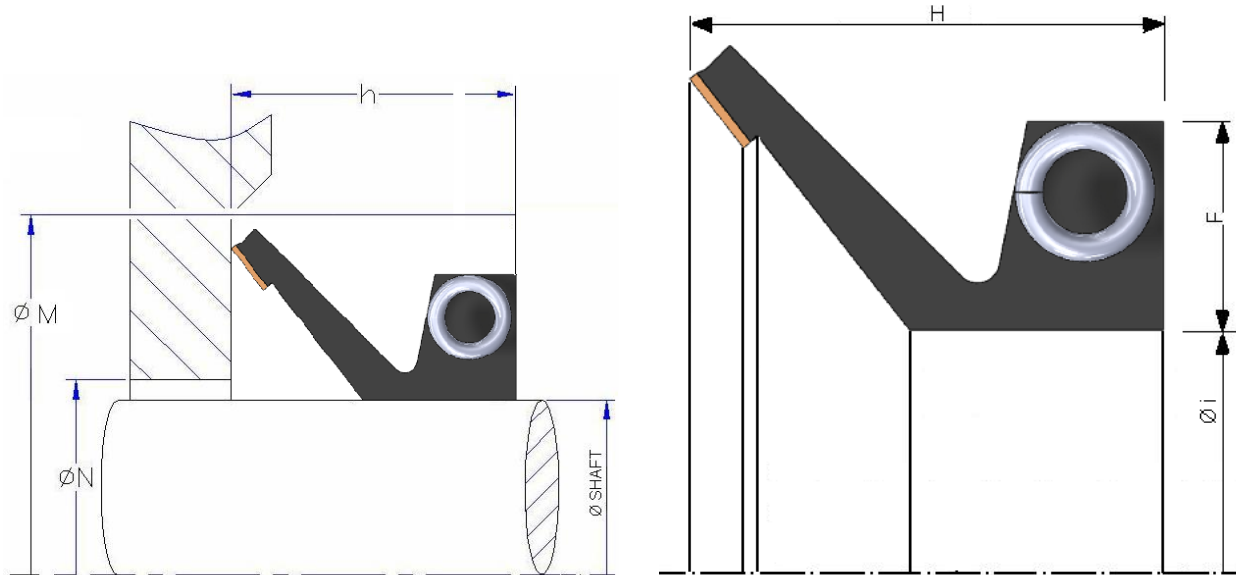
It connects the resilient lip to the solid body. It works as a spring between the seal body and the sealing lip. It ensures a constant pressure of the sealing lip onto the contact surface.

MATERIALS

Standard production is in NBR nitril elastomer. The table below shows general recommendations that have to be taken as generals. Specific applications should be discussed with TENUTE Technical Department.

MATERIAL	TEMPERATURE C°	Friction Coefficient	Recommended Speed
NBR	-30° +100°(120°)	0,18	Up to 20 m/s
HNBR	-40° +150°(175°)		Up to 30 m/s
VMQ	-50° +200°(250°)		Up to 30 m/s
FKM	-20° +200°(250°)		Up to 30 m/s

Assembly and radial section of TR/VL-ML-PTV sealing rings



Picture 2

Picture 2 shows TR/VL-ML-PTV housing sizes and assembly.

The seal spring enables an easier assembly, without need of an external clamping band that is normally necessary to keep the seal in position.

The use range of TR/VL-ML-PTV is not as wide as the one of TR/VL standard model. It depends on the shaft sizes, but it is anyhow within 3mm and 10mm.

Picture 3 shows the seal cross section.

SURFACE FINISHING

For contact surfaces, Ra values ranging from 0,8 and 1,6 μm are suitable to most applications.

In applications requiring high speeds or particular fluids, values must be reduced.

As far as the shaft is concerned, no special value of tolerance or roughness is required. It is anyway recommended to keep Ra values below 1,6/3,2 μm .

All information mentioned in this data-sheet are given as an indication. TENUTE Technical Department reserves the right to change and improve its products according to application specifications and test results.