

TENUTE TR/G-S seals

TENUTE TR/G-S, featuring a rigid metal case on OD, is a seal for heavy duty applications, when a considerable clamping force is required. This seal is not subject to OD shrinkage, therefore it can be installed without retaining plate.

Typical applications are hot and cold rolling mills, work rolls and back up rolls.

Maximum pressure capability is 0.5 bar.



Picture 1

Exclusive features of TR/G-S model are:

- Improved resistance to possible shaft misalignments.
- Decrease of the radial force exerted on the shaft.
- Friction decrease, and consequent temperature decrease.
- Increased spring protection, to avoid slipping out from the groove.
- Reduced spring preload.

MATERIALS

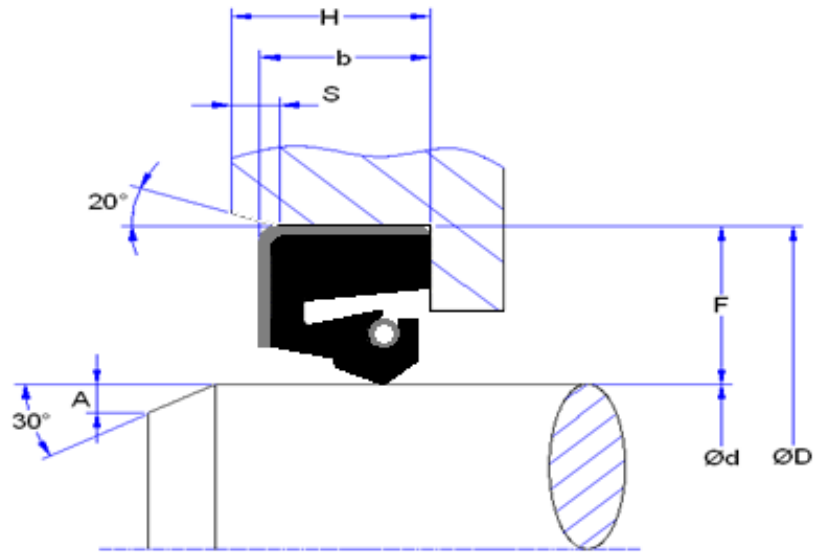
The materials used may vary depending on applications. Standard and special products are made according to Table 1. TENUTE Technical Department is available for any other study of different materials.

Standard production	
Metal case	Carbon Steel
Lip	NBR Rubber
Spring	Carbon Steel
Special production	
Metal case	Stainless steel
Lip	HNBR, FKM, EPDM, VMQ
Spring	AISI 302 - AISI 316

Table 1

Assembly of TR/G-S sealing rings

Picture 2 shows TR/G-S sealing assembly in applications without pressure. Particular applications or requirements different from those detailed must be agreed with TENUTE Technical Department.



Picture 2

Shaft and housing tolerances	
Shaft: h11	Housing: H8

Housing tolerance and chamfers					
Housing Height			Shaft chamfers		Housing chamfers
b	H	Tolerance	Ød (mm)		A minimum
			Over	Up to	(mm)
Up to 10	b +0,3	+ 0,2 / 0	3	50	1,5
Over	b +0,4	+ 0,3 / 0	50	250	3
			250	800	4,5
			800	1500	6
			1500	2500	7,5
					S=0,15 x b

Shaft and housing surface finishing

A roughness of Ra 0.2/0.6 µm is recommended for the shaft in normal applications, while in case of high speeds, a finishing of 0.2/0.4 µm is recommended. Plunge grinding required. For the housing bore a finish turning is sufficient.

Shaft hardness	
Up to 15m/s	Over 15m/s
40HRc	50HRc and above

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.