TENUTE - TR/7 pressure sealing ring

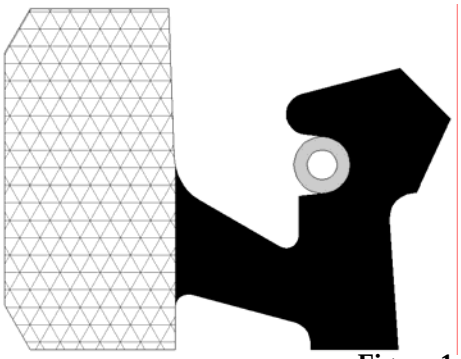

Figure 1

The model TR/7 is employed in presence of pressure, till maximum 6 Bar.
The particular profile of this seal is studied to allow at pressure to produce a couple that permit to lighten the sealing lip and consequently to reduce the friction.
The model TR/7 needs retaining plate.
The exclusive features of this seal can be summared in:

- reduction of radial force practised on shaft from fluid in pressure;
- decrease of friction and consequently the temperature;
- absence of external metallic part and consequently elimination of possibility to damage the housing seal.

The TR/7 can be produced in endless execution up to 2500mm in external diameter.

The standard production is in Nitril elastomer NBR added with Ptfe, but for particular condition of employ, it can be produced in: HNBR hydrogenated nitril elastomer, MQ silicon elastomer, FKM fluoro carbon elastomer.
In the table 1 there are the admissible working temperature (minimum, maximum and maximum point) for this kind of material.

MATERIAL	TEMPERATURE C°
NBR	-30° +100°(120°)
HNBR	-40° +150°(175°)
MQ	-50° +200°(250°)
FKM	-20° +200°(250°)

table 1

Here follow (figure 2) we reproduce a diagram V(P) in reference to elastomer NBR.

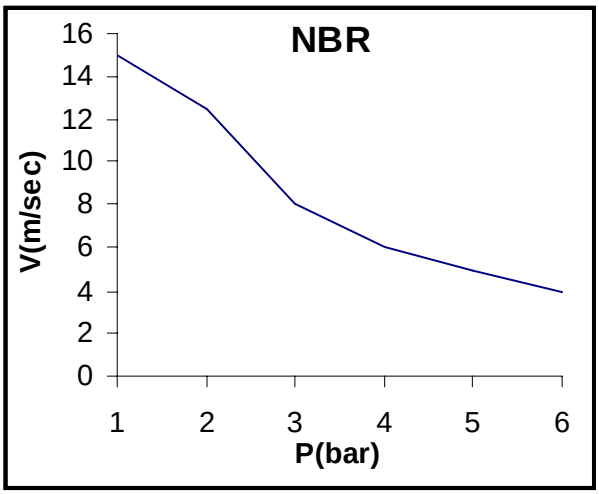

Figure 2

Assembly of TR/7 sealing rings

The drawing shown in figure 3 details the size of housings and the assembly of the above mentioned model. Peculiar applications or requirements different from those detailed are to be agreed with our Technical Departmen..

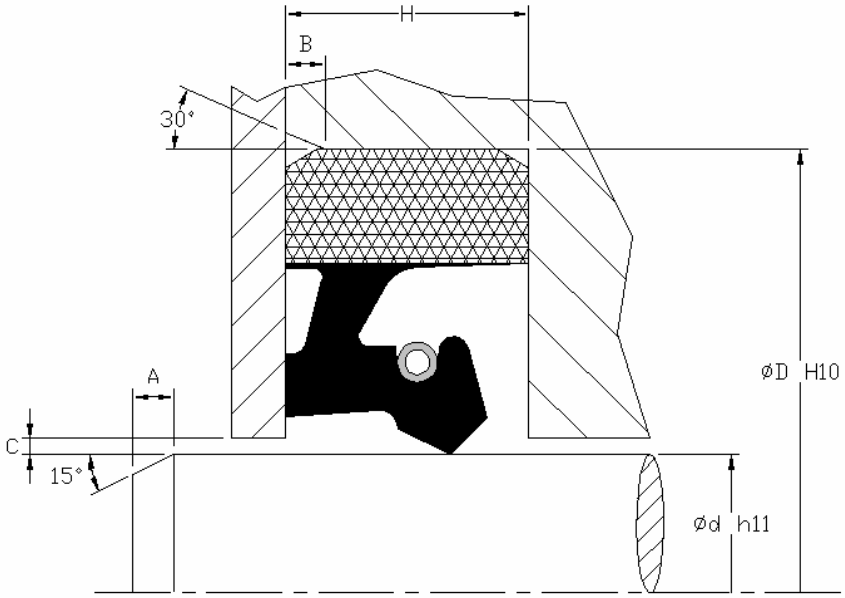

Figure 3

Tolerance and roughness of the metallic parts

Housing Height tolerance			Shaft chamfers			Housing chamfer	
H (mm)	(mm)		Ød(mm)		A minimum	H(mm)	B(mm)
UP TO 15	0 / -0,1		OVER	UP TO	(mm)	10	1
OVER	+ / -0,1		3	50	5	15	1.5
			50	250	10	20	2
			250	800	15	30	3
			800	1500	20	40	4
			1500	2500	25		
C maximum = 1,5mm.							

SURFACES 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.
Furthermore, in case of water, it is advisable to perform chromium plating of the shaft/sealing lip contact surfaces, in order to avoid a rapid wear due to iron oxides that are removed by the sealing lip. A finish turning is enough for housings.

We suggest to ask our Technical Department for more information, for the assembling and the applications.

Tooling List Up-To Date on 04_05_2005

Ø d	Ø D	H	PROFILES
50	70	11,7	*TR/7-AE*
62	82	13	*TR/7-AE*
63	89	12,8	*TR/7-AE*
75	110	15	*TR/7*
76	103	13	*TR/7-AE*
80	110	12	*TR/7*
90	110	13	*TR/7*
90	120	13	*TR/7*
94	127	13	*TR/7*
110	145	15	*TR/7*
110	150	16	*TR/7*
115	140	13	*TR/7*
120	154	15,5	*TR/7-AE*
120	160	18	*TR/7*
130	170	16	*TR/7*
135	170	17	*TR/7-AE*
150	180	15	*TR/7*
156,9	197	19,05	*TR/7*
160	200	16	*TR/7*
170	200	15	*TR/7*
175	210	15	*TR/7*
175	215	16	*TR/7*
175	215	16	TR/7-C

Ø d	Ø D	H	PROFILES
190	220	15	*TR/7*
200	230	15	*TR/7*
200	240	16	*TR/7*
220	260	16	*TR/7*
240	270	15	*TR/7*
255	295	16	*TR/7*
270	314	20	*TR/7*
280	315	16	*TR/7*
290	334	20	*TR/7*
310	350	18	*TR/7*
310	354	20	*TR/7*
310	355,6	20	*TR/7*
320	370	22	*TR/7*
350	394	21,5	*TR/7-AE*
380	424	20	*TR/7*
410	460	22	*TR/7*
600	650	20	*TR/7*
610	670	25	*TR/7*
710	770	25	*TR/7*
760	810	22	*TR/7*
780	830	20	*TR/7*
890	954	25	*TR/7-CS*