TENUTE TR/P sealing rings

TENUTE TR/P sealing ring is provided with a supplementary lip, called dust seal, sufficiently tough to prevent foreign bodies from penetrating in the sealing system thus early deteriorating the main lip.

It is suitable for non-critical solutions, for which other types of seals cannot be used due to reduced available space.

TR/P geometry and technical features are substantially the same as TR/1 – TR/2 – TR/3 models.

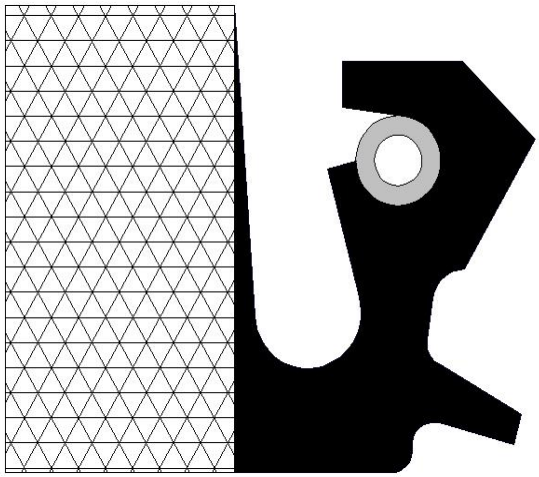

Figure 1

During its assembly, it is advisable to fill some grease between the two sealing lips, in order to provide for lubrication of the secondary lip over time.

An important version of the TR/P model is the TR/P Split –endless form- to facilitate its assembly.

Obviously, this production offers to installers the opportunity to work in limit situations, where it would be difficult or even impossible to use normal endless rings. Both solutions, TR/P endless, TR/P split, require a retaining plate for a correct operation.

TR/P can be manufactured – as endless form – up to a 2500 mm diameter.

We enclose figure two showing a typical installation of the TR/3-P sealing ring. In the following table you can find the most important data to be considered in case of this sealing system design.

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

Assembly of TR/P sealing rings

The drawing shown in figure 2 details the size of housings and the assembly of the above mentioned models.
The size and housings tolerances are the same for all the three types.
Peculiar applications or requirements different from those detailed are to be agreed with our Technical Department.

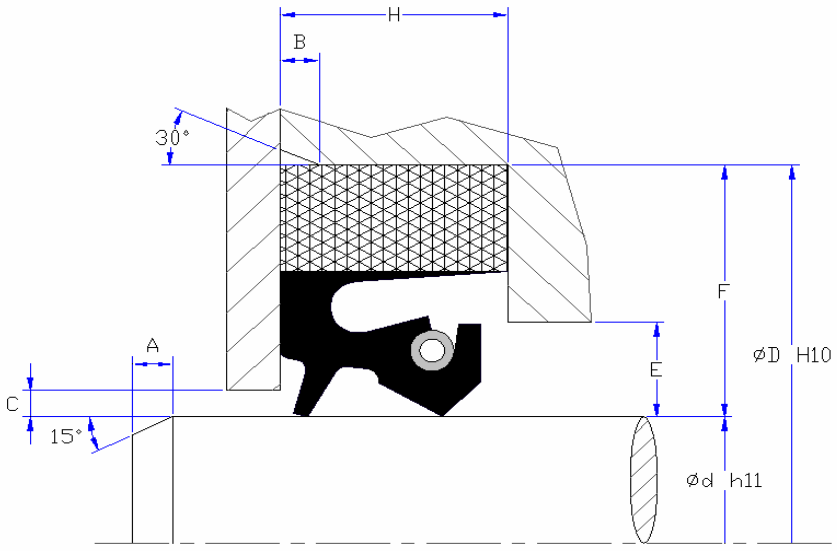

Figure 2

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 = 0,2F					E **maximum =0,5F**		

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	PROFILE
19,05	33,33	7,93	TR/1-P
50	75	10	TR/3-P
53,975	82,55	12,7	TR/3-P
60	85	11	TR/3-P
69,85	95,2	14,25	TR/1-P
69,85	107,95	14,3	TR/3-P
70	90	10	TR/1-P
70	90	12	TR/3-P
70	102	12,5	TR/3-P
75	95	12	TR/3-P
75	100	11	TR/3-P
75	107	12,5	TR/1-p
80	100	13	TR/1-P
80	105	12	TR/1-P
80	112	12,5	TR/1-P
90	120	15	TR/1-P
95	120	13	TR/1-P
100	120	12	TR/3-P
105	130	12	TR/3-P
110	130	12	TR/3-P
110	140	12	TR/1-P
110	150	16	TR/1-P
115	150	15	TR/3-P
130	160	15	TR/3-P
130	160	18	TR/1-P
130	170	16	TR/1-P
150	180	15	TR/3-P
150	190	16	TR/1-P
165	205	16	TR/3-P
175	200	15	TR/1-P
180	210	15	TR/1-P
180	220	16	TR/1-P
190,5	215,9	15,88	TR/1-P
200	240	16	TR/3-P
210	240	15	TR/3-P
215,9	254	19,05	TR/1-P
220	260	16	TR/1-P

Ø d	Ø D	H	PROFILE
240	270	15	TR/1-P
240	280	16	TR/1-P
240	280	18	TR/1-P
250	280	15	TR/3-P
250	290	16	TR/3-P
260	300	18	TR/1-P
260	310	16	TR/1-P
279	323	20	TR/1-P
279,39	323,03	19,84	TR/1-P
279,4	311,15	15,875	TR/3-P
280	310	14	TR/3-P
280	320	16	TR/1-P
280	320	18	TR/1-P
280	324	20	TR/1-P
300	340	22	TR/1-P
304,79	342,89	19,05	TR/1-P
320	360	20	TR/1-P
330	360	14	TR/3-P
330	370	20	TR/1-P
330	370	20	TR/3-P
330	374	20	TR/3-P
330,2	368,3	19,05	TR/1-P
335	390	20,6	TR/3-P
340	384	20	TR/1-P
370	410	20	TR/3-P
380	424	20	TR/1-P
390	430	16	TR/1-P
400	460	28	TR/3-P
420	460	20	TR/1-P
460	510	22	TR/1-P
514,34	554,02	19,84	TR/1-P
515	555	20	TR/1-P
560	610	20	TR/1-P
580	630	22	TR/1-P
590	640	22	TR/3-P
2000	2050	20	TR/3-P