

Performances shown below are minimum values for standard conditions of use; the actual performances of our products are superior and depend on the actual conditions of use, consult our technical experts for validation.

> APPLICATIONS

- slightly corrosive chemical products containing acids or concentrated alkalis, reducing agents or diluted oxidising agents, and all sticky or viscous organic compounds (EPR).
- The seals are used in all rotating machines in the relevant industrial sectors.

> OPERATING CONDITIONS

- **Temperature** : - 40° C to + 180° C depending on material choice
- **Pressure** : Up to 10 bar
- **Speed** : Up to 12 m/s
- **Diameter** : Ø 8 to 150 mm
Suitable where axial space is limited.
- **Seats** :
Interchangeable compatible seat : LAR, TAR, LTAR (for internal fitting), LBR and TBR (for external fitting).
Compatible with the retaining sleeve.

> BENEFITS

Positive drive

The bellows is compressed onto the shaft preventing movement, and any premature wear of the bellows.

The EPR has a supplementary positive drive mechanism that is recommended for high start up torque, viscous or sticky media, or frequent stop start operation.

Construction

One-piece construction for rapid installation.

For elevated pressures (> 5 bar), the use of a retaining sleeve will avoid any risk of the bellows moving on the shaft.

Reliability

- Self-aligning by design :
the seal will compensate for bearing play, or slight geometric defects of the system.



Type PRR & EPR

ELASTOMER BELLOWS SEALS

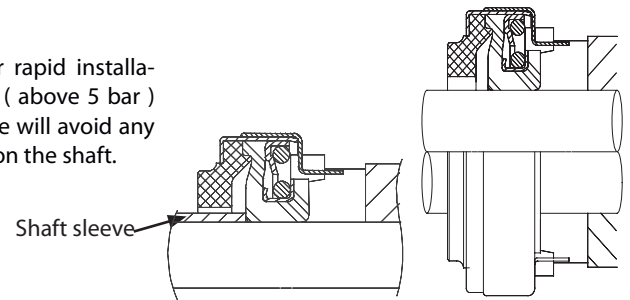


Positive drive :

Compared to the PRR type, the EPR type has a supplementary positive drive mechanism which is recommended for high start up torque, viscous or sticky media, or frequent stop start operation.

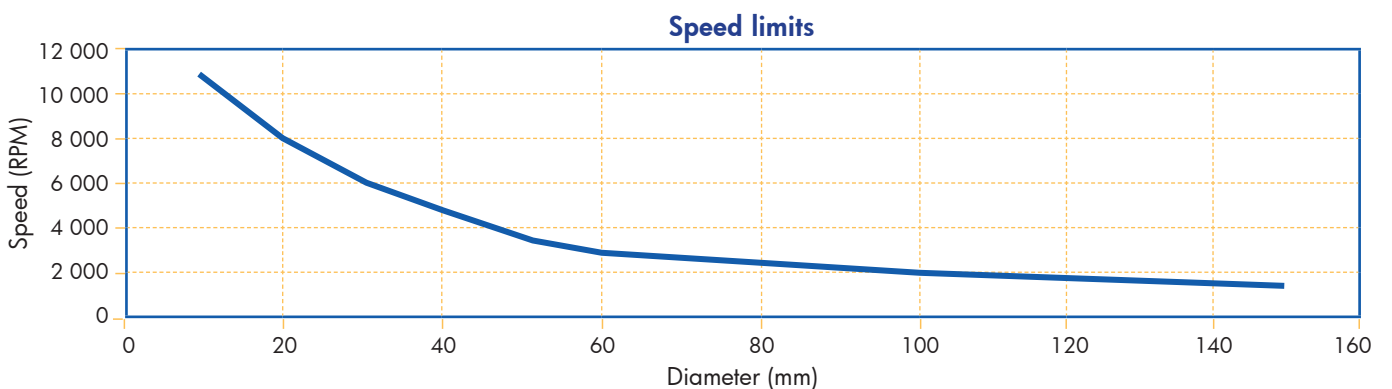
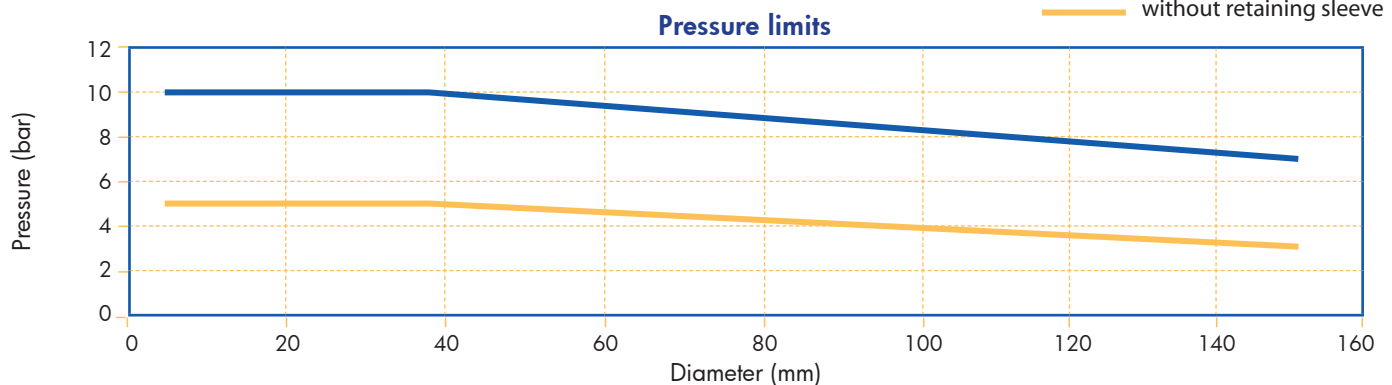
Construction :

One-piece construction for rapid installation. For elevated pressure (above 5 bar) the use of a retaining sleeve will avoid any risk of the bellows moving on the shaft.



> PRESSURE AND SPEED LIMITS

— with retaining sleeve
— without retaining sleeve



> MULTIPLIER FACTORS FOR PRESSURE/SPEED CURVES

	SELECTION CONSIDERATION	MULTIPLIER FACTOR
SEALED FLUID	Petrol, kerosene	× 1
	Water, aqueous solution	× 1
	Lighter hydrocarbons	× 0,75
FACE AND SEAT MATERIALS	Carbon on silicon carbide	× 1
	Carbon on aluminium oxide	× 0,8
	Silicon carbide on silicon carbide	× 0,6
SEALED FLUID TEMPERATURE	T < 80° C	× 1
	80° C < T < 120° C	× 0,8
	120° C < T < 180° C	× 0,4
SPEED	< 3 000 RPM	× 1
	> 3 000 RPM	× 0,85

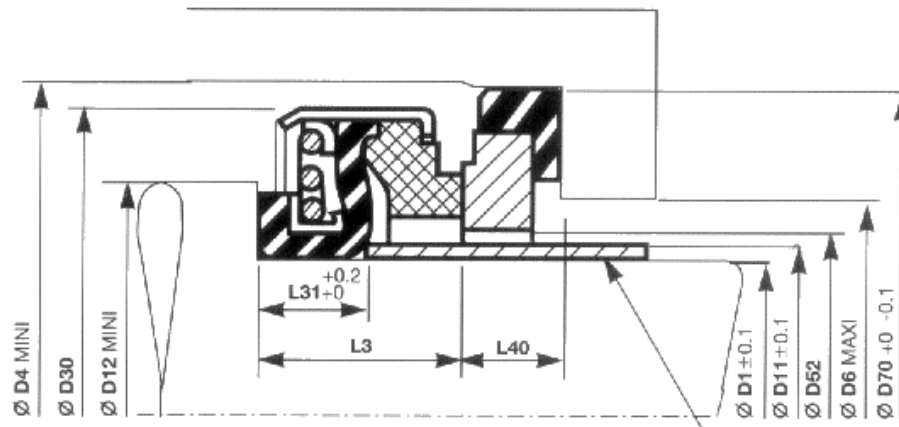
> To know the maximum operating conditions, look at the limit curves in the graphs and multiply by the factor corresponding to the application.

Type PRR & EPR

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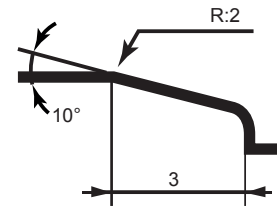


> TYPICAL ARRANGEMENT FOR INTERNAL FITTING

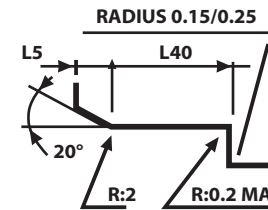


PRR seal with LAR seat

Retaining sleeve for elevated pressure (above 5 bar)



Detail of end of shaft. To facilitate the fitting of the seal to the shaft, the assembly instructions must be observed.



Detail of housing for LAR type seat.

> DIMENSIONS FOR PRR & EPR TYPE SEALS (mm)

D52 shaft	Dimension code	SEAL HEAD AND SHAFT LINKS											SEAT AND HOUSING												
		L3	Tol. L3	D30	D30 A	D4	D12	D13	D11	D52	L31	L32	F1	D70	D74	D6	D6 A	L40	L5	L40 A	L44 A	L45 A	L51	L44	L45
8	0080	11	0 +0,5	24	24	26	15	18	10	11	7,5	3,5	6	26	31	16	15	6	2	8	6	6	1,5	8	8,2
10	0100	11,8	0 +0,7	28	28	31	18	20	12,5	13,5	8,2	4	7,5	31	38	20	18	6	2	8	6	6	1,5	8	8,2
12	0120	12,8	0 +0,5	32	32	35	22	24	14	15	8,2	4	8	35	42	25	21	6	2	8	6	6	1,5	8	8,2
14	0140	12,8	0 +0,5	35	35	38	23	28	16	17	8,2	4	10	38	45	29	23	6	2	8	7	7	1,5	8	8,2
15	0150	12,8	0 +0,5	35	35	38	23	28	16	17	8,2	4	10	38	45	29	23	6	2	8	7	7	1,5	8	8,2
16	0160	12,8	0 +0,5	35	35	38	23	28	18	19	8,2	4	10	38	45	29	23	6	2	8	7	7	1,5	8	8,2
17	0170	12,8	0 +0,5	39	39	42	25	32	20	21	8,2	4	10	42	50	34	27	6	2	8	7	7	1,5	10	10,2
18	0180	12,8	0 +0,5	39	39	42	25	32	20	21	8,2	4	10	42	50	34	27	6	2	8	7	7	1,5	10	10,2
19	0190	12,8	0 +0,5	42	42	45	28	34	23	24	8,2	4	12	45	53	34	30	7	2	10	7	7	1,5	10	10,2
20	0200	12,8	0 +0,5	42	42	45	28	34	23	24	8,2	4	12	45	53	34	30	7	2	10	7	7	1,5	10	10,2
22	0220	12,8	0 +0,5	42	42	45	30	34	25	26	8,2	4	12	45	53	34	30	7	2	10	7	7	1,5	10	10,2
24	0240	13,5	0 +1	47	48	51	37	40	28	29	9,5	6	12	50	57	39	34	7	2	10	7	7	1,5	10	10,2
25	0250	13,5	0 +1	47	48	51	37	40	28	29	9,5	6	12	50	57	39	34	7	2	10	7	7	1,5	10	10,2
28	0280	15	0 +1	54	55	58	40	45	32	33	10,3	6	12	57	68	49	42	7	2,5	10	8	8	1,8	10	10,2
30	0300	15	0 +1	54	55	58	40	45	32	33	10,3	6	12	57	68	49	42	7	2,5	10	8	8	1,8	10	10,2
32	0320	15	0 +1	54	55	58	44	47	34	35	9,9	6	12	57	68	49	42	7	2,5	10	8	8	1,8	10	10,2
35	0350	16	0 +1	60	61	64	47	52	37	38	9,2	7	12	63	73	55	45	8	2,5	10	8	8	1,8	10	10,2
38	0380	18	0 +1	65	67	69	50	53	43	44	11,2	9	14	68	80	60	48	8	2,5	12	8	8	1,8	10	10,2
40	0400	18	0 +1	65	67	69	52	53	43	44	11,2	9	14	68	80	60	48	8	2,5	12	8	8	1,8	10	10,2
45	0410	20	0 +1	70	72	74	58	58	48	49	11,2	9	14	73	85	61	53	8	2,5	12	10	10	1,8	12	12,2
50	0420	24	0 +1	85	87	89	64	68	57	58	12,8	11	16	88	100	76	65	10	2,5	15	10	10	2	15	15,2
55	0430	24	0 +1	85	87	89	69	73	59	60	12,8	11	16	88	100	76	65	10	2,5	15	10	10	2	15	15,2
60	0440	30	0 +1	105	108	111	84	87	71	72	16,3	12	20	110	125	88	85	12	3	15	12	12	2,5	15	15,2
65	0450	30	0 +1	105	108	111	84	87	74	75	16,3	13	20	110	125	88	85	12	3	15	12	12	2,5	15	15,2
70	0460	30	0 +1	105	108	111	89	90	74	75	19,3	13	20	110	125	88	85	12	3	15	12	12	2,5	15	15,2
75	0470	32	0 +1	115	118	121*	94	97	80*	81	17,5	13	22	120	136	104	-	15	3	-	15	15	2,5	-	-
80	0480	32	0 +1	120	123	126*	95	100	84*	85	17,5	13	22	125	141	104	-	15	3	-	15	15	2,5	-	-
90	0500	36	0 +1	135	138	141*	105	112	96*	98	20,5	15	27	140	156	123	-	20	4	-	20	20	2,5	-	-
100	0520	38	0 +1	145	148	151*	115	125	108*	110	21,1	15	27	150	166	131	-	20	4	-	20	20	2,5	-	-
105	0530	40	0 +1	150	153	156*	120	130	112*	114	21,3	17	32	155	172	131	-	20	4	-	20	20	2,5	-	-
110	0540	40	0 +1	160	163	166*	126	137	118*	120	22,3	17	32	165	183	140	-	20	4	-	20	20	3	-	-
120	0560	40	0 +1	170	174	177*	135	147	127*	129	22,3	17	35	175	194	155	-	25	4	-	25	25	3	-	-
150	0620	48	0 +1	210	-	218*	170	-	-	159	-	-	-	228	-	156	-	25	4	-	-	-	-	-	-

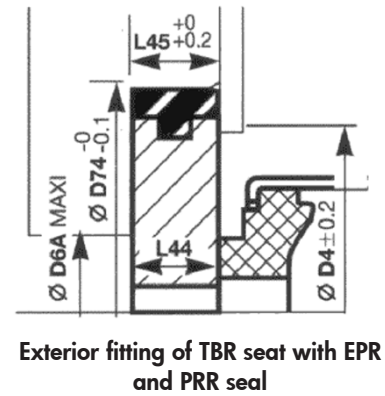
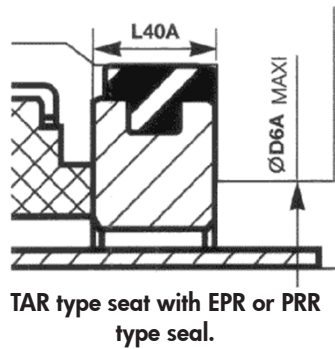
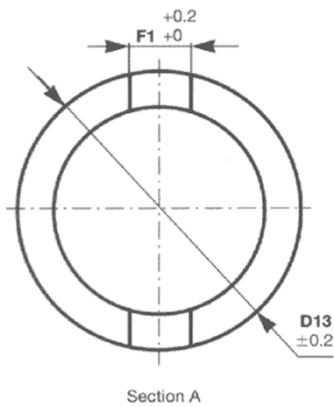
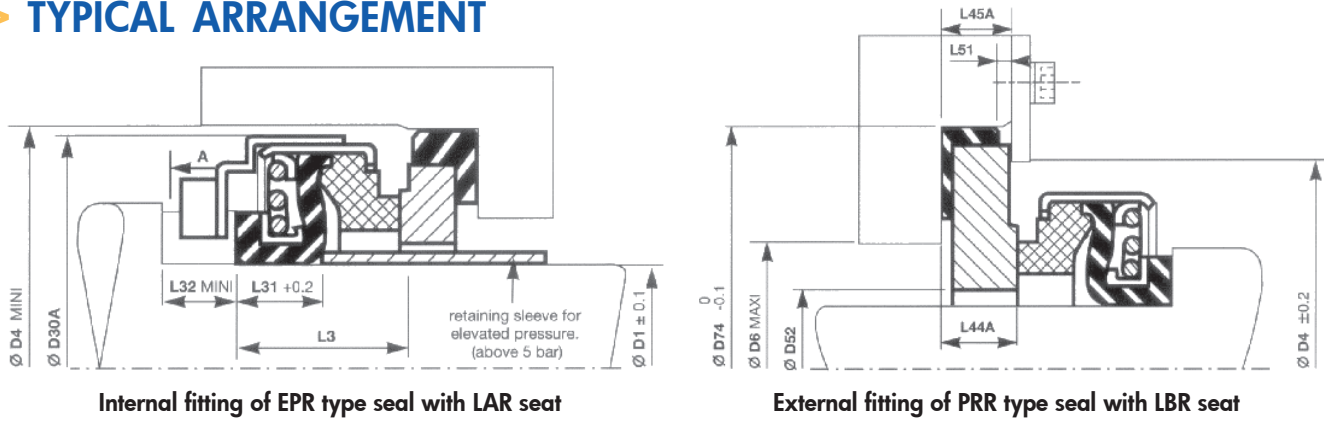
* With LAR et LBR type seats

Type PRR & EPR

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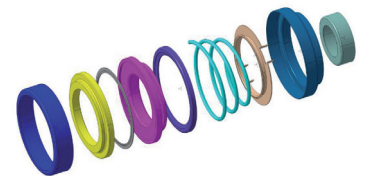


> TYPICAL ARRANGEMENT



> MATERIAL IDENTIFICATION CODES

COMPONENTS	MATERIALS	CYCLAM CODE	DIN CODE
FACE	Resin carbon	26	B5
	Carbographite	52 ou 54	(B)
	Resin impregnated carbon	51*	B
	Silicon carbide	67	Q1
	Tungsten carbide (option)	68	U2
	Metal impregnated carbon (option)	53	A
	Glass filled PTFE (option)	23	Y1
BELLOWS & SEAT RING	Nitrile	01	P
	Ethylene propylene	10	E
	Viton (heat resistant)	14	V
	Viton (acid resistant) (option)	15	V1
METAL COMPONENTS AND SPRING	Molybdenum stainless steel	31	G
COUNTERFACE (SEAT)	Porous silicon carbide	68	U2
	Aluminium oxide (various levels of purity) (option)	64	Q1
	Solid silicon carbide (option)	41 (ou 42)	V
	Aluminium oxide 99% (option)	31	G
	Tungsten carbide (option)	67	Q1



* For machined carbon, this code will become 50.

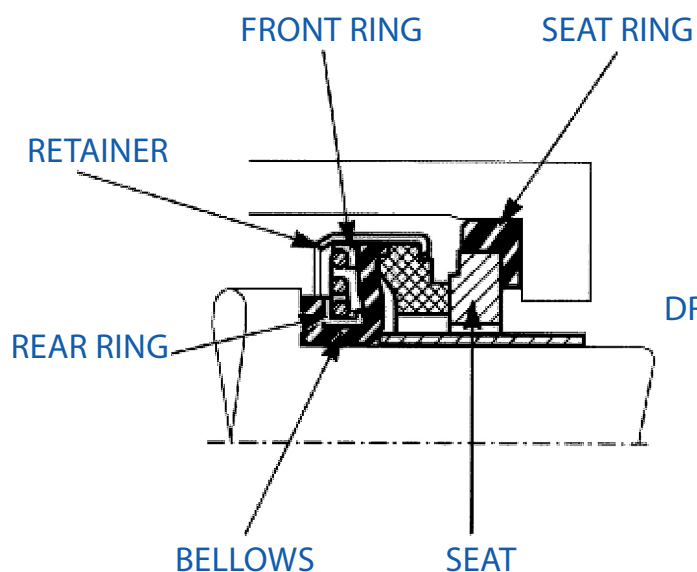
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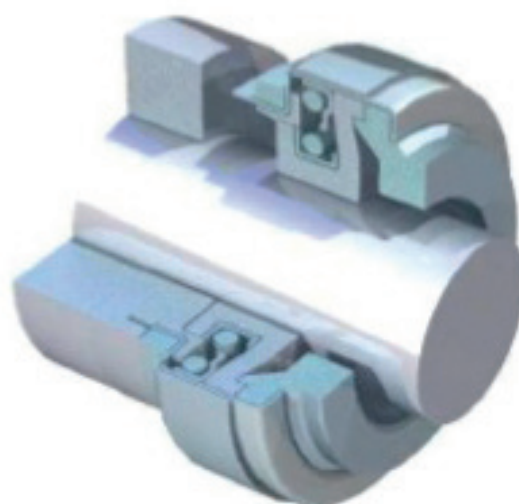
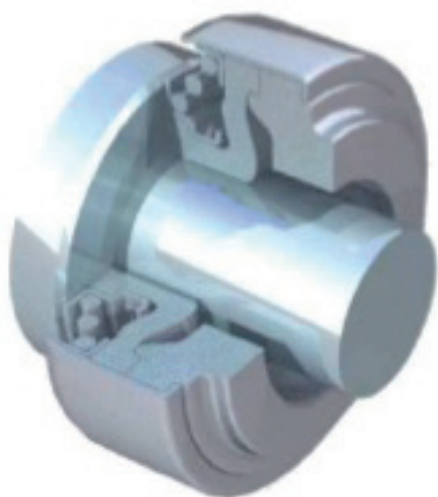
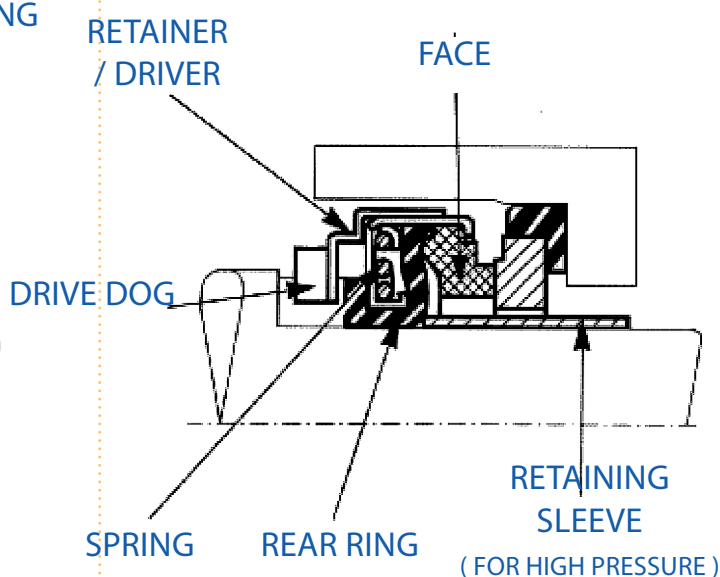


> SECTION SHOWING DIFFERENT COMPONENTS

>> PRR Type



>> Type EPR



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ISO 9001 : 2008



ISO : 14001
ENVIRONNEMENT



ISO/TS : 16949

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