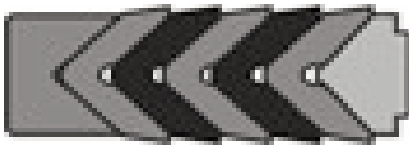
AB Seals
ADVANCED SEALING TECHNOLOGIES

VP/VPF

Design

The AB Seals VP is a vee pack rod seal for medium duty applications offering excellent performance and long life even under difficult operating conditions such as pressure surges , vibration and some misalignment. The seal consists of a male and female adaptor and 5 vee rings. The male adaptor is usually manufactured from polyacetal but some of the larger sizes use rubberized fabric. It has grooves across one face to ensure equal pressure to the sealing edges of the vee ring. All sizes have three vee rings manufactured from rubberized fabric because this has strength and durability and permits an oil film to lubricate the other parts of the seal. Two rubber vee rings are supplied between the rubberized fabric vee rings (up to and including 140mm diameter) to aid low pressure sealing. The female adaptor uses a hard rubberized fabric to support the vee rings and protect them from extrusion damage. At high pressure the lips of the adaptor acts as a secondary seal. The proportions of the range have been determined to give a satisfactory performance when used with the recommended operating conditions.



Features

- Precision moulded vee rings
- Pressure distribution adaptors
- Reliable sealing

Materials

- Fabric rainforced rubber-NBRC/FPMC

Applications

- Mobile hydraulics
- Machine tools
- Injection cylinder
- Hydraulic presses
- Lift platefroms

Technical details	**Metric**	**inch**
Operating Conditic		
Maximum speed	0.5m/sce	1.5 ft/ sce
Temperature Rang	-30	-22
Maximum Pressure	400 bar	6,000 p.s.i

maximum extrutions gap

figures show the maximum premissible gap all on side using minimum rod Ø and maximum clearance Ø.
Refer to housing design section .

Pressure bar	100	160	250	400
maximum gap mm	0.45	0.4	0.3	0.2
pressure p.s.i.	1500	2400	3750	6000

Surface roughness	umRa	umrt	Uin CLA	UIN RMS
Dynamic Sealing Face-rod Ø d1	0.1<> 0.4	4 max	4<>16	5<>18
static sealing face Ø D1	1.6 max	10 max	63 max	70 max
static housing faces L1	3.2 max	16 max	125 max	140 max

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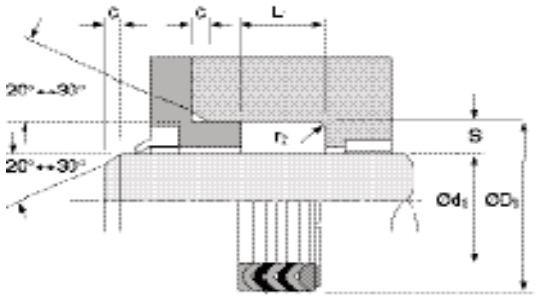
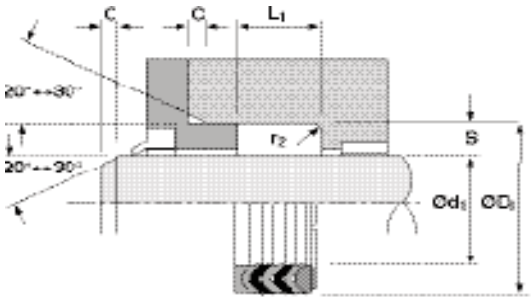
chamafers & Radii

Grove section < s mm	7.5	10	12.5	15
Min chamfer C mm	4	5	6.5	7.5
max Fillet Rad r1 mm	0.4	1.2	1.6	1.6

Tolerance	Ø d1	ØD1	L1 mm
	f9	H 11	0.2





Metric

Ød1	TOL f9	ØD1	TOL H10	L1 0.25	PART NO.	Ød1	TOL f9	ØD1	TOL H10	L1 0.25	PART NO.
20	-0.02 -0.072	30	0.13 0	18.5	VP-20x30x18.5	65	-0.03 -0.104	80	0.19 0	22.5	VP-65x80x22.5
25	-0.02 -0.072	37	0.16 0	22.5	VP-25x37x22.5	70	-0.03 -0.104	85	0.22 0	22.5	VP-70x85x22.5
28	-0.02 -0.072	40	0.16 0	22.5	VP-28x40x22.5	75	-0.03 -0.104	90	0.22 0	22.5	VP-75x90x22.5
30	-0.02 -0.072	42	0.16 0	22.5	VP-30x42x22.5	80	-0.03 -0.104	95	0.22 0	22.5	VP-80x95x22.5
32	-0.025 -0.087	44	0.16 0	22.5	VP-32x44x22.5	85	-0.036 -0.123	100	0.22 0	22.5	VP-85x100x22.5
35	-0.025 -0.087	47	0.16 0	22.5	VP-35x47x22.5	90	-0.036 -0.123	105	0.22 0	22.5	VP-90x105x22.5
36	-0.025 -0.087	48	0.16 0	22.5	VP-36x48x22.5	100	-0.036 -0.123	115	0.22 0	30	VP-100x115x30
40	-0.025 -0.087	52	0.19 0	22.5	VP-40x52x22.5	110	-0.036 -0.123	125	0.25 0	30	VP-110x125x30
42	-0.025 -0.087	54	0.19 0	22.5	VP-42x54x22.5	125	-0.043 -0.143	140	0.25 0	34	VP-125x140x34
45	-0.025 -0.087	60	0.19 0	22.5	VP-45x60x22.5	140	-0.043 -0.143	155	0.25 0	34	VP-140x155x34
50	-0.025 -0.087	65	0.19 0	22.5	VP-50x65x22.5	150	-0.043 -0.143	170	0.25 0	40	VP-150x170x40
55	-0.03 -0.104	70	0.19 0	22.5	VP-55x70x22.5	160	-0.043 -0.143	180	0.25 0	40	VP-160x180x40
56	-0.03 -0.104	71	0.19 0	22.5	VP-56x71x22.5	180	-0.043 -0.143	200	0.29 0	40	VP-180x200x40
60	-0.03 -0.104	75	0.19 0	22.5	VP-60x75x22.5	200	-0.05 -0.165	220	0.29 0	40	VP-200x220x40
63	-0.03 -0.104	78	0.19 0	22.5	VP-63x78x22.5						

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