

VR RADIAL SHAFT SEAL-Single Lip OOB

PRODUCT APPLICATION

For sealing shafts. Rotary shaft seal (RWDR) in dimensions in accordance with DIN 3760

PRODUCT ADVANTAGES

- Low coefficient of friction
- Low power loss and high service life values
- Low pumping effect due to tangential and radial preload
- High pressure stability
- No post-treatment of the shaft material, such as hardening, nitriding, hard chrome plating or additional liners required*



MATERIAL

Sleeve / Membrane	NBR
	HNBR
	FKM
	EPDM
	FFKM *
Support Ring/Body	Aluminium
	Stainless steel (1.4301) *

* Other materials on enquiry.

OPERATING CONDITIONS

Temperature	-50 °C to 220 °C**
Circumferential speed	40* m/s for 0 MPa
Pressure (Pmin to Pmax)	0.06* MPa to 1.5* MPa

* Value depends on other application parameters and the elastomer used.

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TOLERANCE

Surface Element	Surface Tolerance	Roundness
Shaft	HT1	IT8
Housing	ISO tolerance H8	

*Depending on increase in rotational speed, the radial shaft deflection may need to be more tightly adjusted. Please enquire.

SURFACE QUALITY

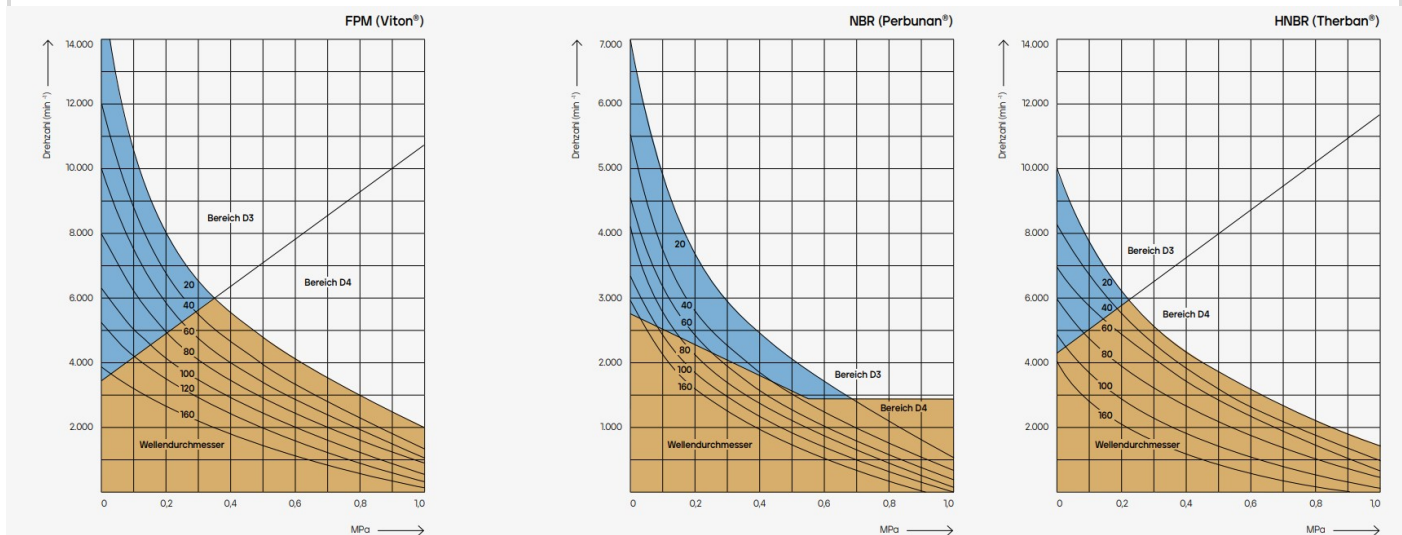
Surface Element	Rz	Ra / Rt
Shaft	1 - 5 µm	0.1 - 0.8 µm
Housing	4.0 µm ≤ Rz ≤ 8.0 µm	Ra ≤ 3 µm Rt ≤ 16 µm

*Please observe our general design notes in catalogue.

Shaft Surface Hardness:

- Simple applications: 25 - 30 HRC
- Normal applications: Min. 40 HRC
- External dirt ingress or contaminated media: Min. 55 HRC

P - V DIAGRAM





OOB Single Lip Seal

support body / diameter

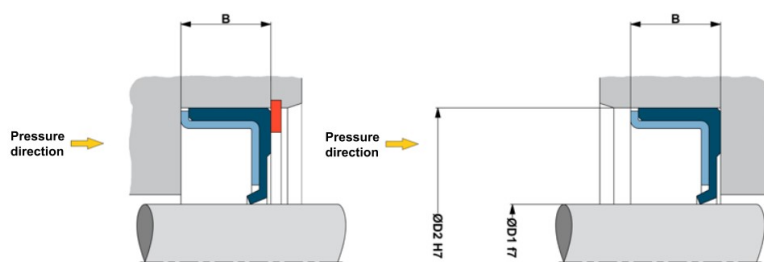
D3 = D1 + 1.0mm to D1 = 145mm

D4 = D1 + 0.5mm

D3 = D1 + 1.5 mm from D1 = 150mm

D4 = D1 + 1.0 mm

Housing – diameter D5 min.
D5 = (D1 + D2) / 2



D1	D2	B	D1	D2	B	D1	D2	B	D1	D2	B
			20	30	7	42	55	10	85	110	10
				32			62			120	12
				35			72		90	110	10
				40		45	60	10		120	12
				47			62		95	120	12
6	16	7	22	32	7		65			125	
	22			35			72		100	120	12
7	10	7		40		48	62	10		125	
	16			47			72			130	
	22		24	35	7	50	65	10	105	130	12
8	16	7		37			68			140	
	22			40			72		110	130	12
	24			47			80			140	
9	22	7	25	35	7	52	68	10	115	140	12
	24			40			72			150	
	26			42		55	70	10	120	150	12
10	22	7		47			72			160	
	24			52	9		80		130	160	12
	26		26	37	7		85			170	
11	22	7		42		56	70	10	135	170	12
	26			47			72		140	170	12
			28	40	7		80		145	175	15
12	22	7		47			85		150	180	15
	24			52	9	58	72	10	160	190	15
	28		30	40	7		80		170	200	15
	30			42		60	75	10	180	210	15
				45			80		190	220	15
14	24	7		47			85		200	230	15
	28			52	9		90		210	240	15
	30			62	10	62	85	10	220	250	15
	35						90		230	260	15
15	26	7	32	45	7	63	85	10	240	270	15
	30			47			90		250	280	15
	32			52	9	65	85	10	260	300	20
	35		35	47	7		90		280	320	20
16	28	7		50			100		300	340	20
	30			52	9	68	90	10	320	360	20
	32			62	10		100		340	380	20
	35		36	47	7	70	90	10	360	400	20
17	28	7		50			100		380	420	20
	30			52	9	72	95	10	400	440	20
	32			62	10		100				
	35		38	52	9	75	95	10			
	40			55	10		100				
18	30	7		62		78	100	10			
	32		40	52	9	80	100	10			
	35			55	10		110				
	40			62							
				72							