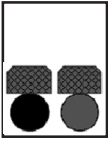


PISTON COMPOSITE SEAL



Features : Piston seal profile consists of two piece seal set for sealing pistons with one seal ring and one energizer O-ring.

Composition : These seals have two different type of combination for different application temperature range.

Material :

Seal Ring: PTFE+ Bronze +MoS₂ PTFE+ Bronze +MoS₂,

O-Ring: Nitrile Butadiene rubber (NBR) Fluoro Carbon Rubber (FPM)

Working Temperature Range - Medium Hydraulic Fluid:

-20 ° C. To + 100 ° C.

- 4 ° F To + 212 ° F.

-20 ° C. To + 100 ° C.

- 4 ° F To + 212 ° F.

Properties : Low friction , Free of stick slip, High abrasion resistance, Wide temperature Range, Good thermal conductivity, Low wear and high extrusion resistance, Wide fluid application range, Resistance against cold flow, Minimum installation space required.

Application : Mobile Hydraulics, Injection moulding machines, Machine tools, Material Handling Equipments, Control and regulating apparatus.

General Technical Data :

Working Pressure : Up to 400 bar

Surface Speed : 4 m/s.

Surface finish :

Roughness depth: R(max) Ra,

Sliding surface: $\leq 2.5 \mu\text{m}$ 0.05-0.3 μm ,

Bottom of groove: $\leq 6.3 \mu\text{m}$ $\leq 1.6 \mu\text{m}$,

Side of groove: $\leq 15 \mu\text{m}$ $\leq 3 \mu\text{m}$.

Extrusion Gap dimension :

The gap dimension on the non-pressurised side of the seal is decisive for sealing function. Figures show the maximum permissible gap all on one side using the minimum clearance \emptyset and max bore \emptyset .

Profile dimension Maximum permissible gap (S)

L 160 bar 260 bar 320 bar 400 bar

2,2 0,35 0,3 - -

3,2 0,4 0,35 - -

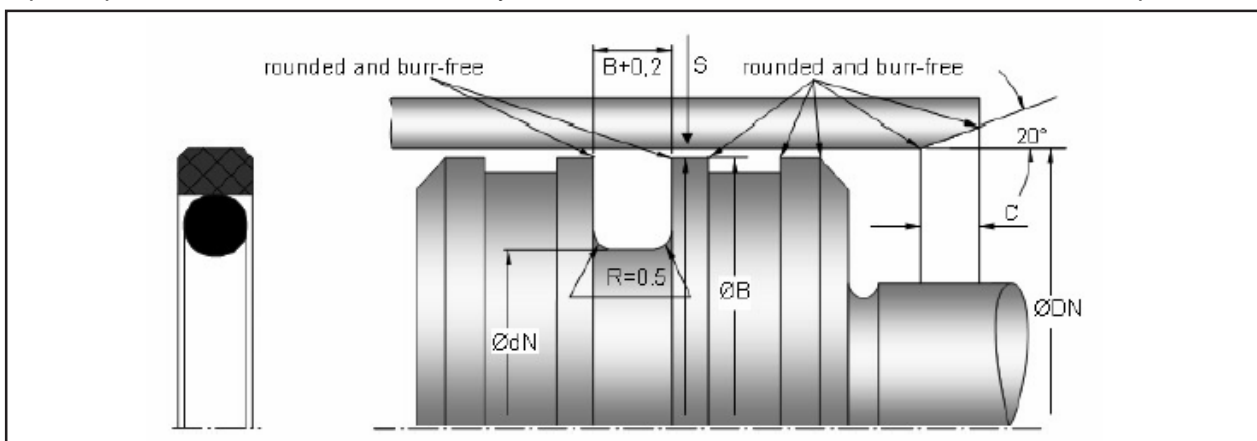
4,2 0,5 0,4 0,3 -

6,3 0,6 0,5 0,45 0,45

8,1 0,7 0,6 0,55 0,5

Installation :

Piston seals can be fitted on single-piece pistons. First insert the rubber 'O' Ring into the housing carefully to avoid twisting of O Ring Chord. The PTFE ring is then carefully pushed over the piston into place above the O Ring. An assembly tool eases installation of small, PTFE rings. The PTFE seal normally returns to its original size after installation. In some cases where the lead-in chamfer on the piston is inadequate, it is advisable to calibrate the PTFE ring by mounting it on a steel tube (duly machined and polished), having outer diameter equal to piston outer diameter. Immediately after calibration, the seal should be installed over the piston.



Gurudev Says : Life is combination of form and formless. Feelings have no form – their expressions have form.
The Self has no form, but its abode has a form.

Sri Sri Ravishankar

PISTON COMPOSITE SEAL

SIZES IN MM

dn x DN x B(+0.2)	O-RING SIZE	PRICE PER NO.	dn x DN x B(+0.2)	O-RING SIZE	PRICE PER NO.	dn x DN x B(+0.2)	O-RING SIZE	PRICE PER NO.
5.1 x 10 x 2.2	4.8 x 1.78	135.00	64.5 x 80 x 6.3	62.87 x 5.33	594.00	209 x 230 x 8.1	202.57 x 6.99	2,673.00
7.1 x 12 x 2.2	6.74 x 1.78	135.00	69.5 x 85 x 6.3	69.22 x 5.33	675.00	214 x 235 x 8.1		3,012.00
7.8 x 12.7 x 2.2	7.65 x 1.78	135.00	73.4 x 88.9 x 6.3	72.39 x 5.33	702.00	219 x 240 x 8.1	215.27 x 6.99	2,781.00
9.1 x 14 x 2.2	8.74 x 1.78	135.00	79 x 90 x 4.2	78.97 x 3.53	702.00	224 x 245 x 8.1		3,126.00
7.5 x 15 x 3.2	7.59 x 2.62	135.00	74.5 x 90 x 6.3	72.39 x 5.33	702.00	229 x 250 x 8.1	227.97 x 6.99	3,564.00
8.5 x 16 x 3.2	7.59 x 2.62	135.00	69 x 90 x 8.1	68.0 x 7.0	702.00	234 x 255 x 8.1		3,288.00
10.5 x 18 x 3.2	9.19 x 2.62	135.00	84 x 95 x 4.2	82.14 x 3.53	756.00	239 x 260 x 8.1	236.00 x 7.00	3,726.00
11.55 x 19.05 x 3.2	10.77 x 2.62	135.00	79.5 x 95 x 6.3	78.74 x 5.33	756.00	244 x 265 x 8.1	240.67 x 6.99	3,402.00
12.5 x 20 x 3.2	12.37 x 2.62	135.00	89 x 100 x 4.2	88.49 x 3.53	756.00	249 x 270 x 8.1	240.67 x 6.99	3,888.00
14.5 x 22 x 3.2	13.94 x 2.62	135.00	84.5 x 100 x 6.3	81.92 x 5.33	756.00	254 x 275 x 8.1	253.37 x 6.99	3,630.00
17.5 x 25 x 3.2	17.12 x 2.62	135.00	79 x 100 x 8.1	78.0 x 7.0	810.00	259 x 280 x 8.1	253.37 x 6.99	4,077.00
14 x 25 x 4.2	13.87 x 3.53	162.00	86.1 x 101.6 x 6.3	85.09 x 5.33	810.00	264 x 285 x 8.1		3,750.00
17.9 x 25.4 x 3.2	17.12 x 2.62	135.00	89.5 x 105 x 6.3	88.27 x 5.33	837.00	269 x 290 x 8.1	266.07 x 6.99	4,239.00
20.5 x 28 x 3.2	20.29 x 2.62	162.00	94.5 x 110 x 6.3	94.62 x 5.33	864.00	274 x 295 x 8.1		3,870.00
17 x 28 x 4.2	17.04 x 3.53	162.00	89 x 110 x 8.1	88.0 x 7.0	864.00	279 x 300 x 8.1	278.77 x 6.99	4,401.00
19 x 30 x 4.2		162.00	99.5 x 115 x 6.3	97.79 x 5.33	891.00	284 x 305 x 8.1		4,740.00
22.5 x 30 x 3.2	21.89 x 2.62	162.00	94 x 115 x 8.1	93 x 7	891.00	289 x 310 x 8.1	278.77 x 6.99	4,602.00
24.2 x 31.7 x 3.2	23.47 x 2.62	162.00	104.5 x 120 x 6.3	100.97 x 5.33	945.00	294 x 315 x 8.1		4,860.00
24.5 x 32 x 3.2	23.47 x 2.62	162.00	99 x 120 x 8.1	98.00 x 7.00	1,170.00	299 x 320 x 8.1	291.47 x 6.99	4,725.00
21 x 32 x 4.2	20.22 x 3.53	189.00	109.5 x 125 x 6.3	107.32 x 5.33	999.00	300.5 x 325 x 8.1		6,372.00
27.5 x 35 x 3.2	26.64 x 2.62	189.00	104 x 125 x 8.1	103.00 x 6.99	1,485.00	304 x 325 x 8.1	304.17 x 6.99	6,372.00
24 x 35 x 4.2	23.4 x 3.53	189.00	111.5 x 127 x 6.3	110.49 x 5.33	999.00	305.5 x 330 x 8.1	304.17 x 6.99	6,180.00
28.5 x 36 x 3.2	28.24 x 2.62	189.00	114.5 x 130 x 6.3	113.67 x 5.33	1,026.00	310.5 x 335 x 8.1		8,670.00
25 x 36 x 4.2	24.99 x 3.53	189.00	109 x 130 x 8.1	107.31 x 6.99	1,539.00	315.5 x 340 x 8.1	316.87 x 6.99	8,388.00
30.5 x 38 x 3.2	29.82 x 2.62	216.00	119.5 x 135 x 6.3	116.84 x 5.33	1,053.00	320.5 x 345 x 8.1		9,330.00
29 x 40 x 4.2	28.17 x 3.53	216.00	114 x 135 x 8.1	113.67 x 6.99	1,593.00	325.5 x 350 x 8.1	316.87 x 6.99	9,240.00
31 x 42 x 4.2	29.75 x 3.53	216.00	124.5 x 140 x 6.3	123.19 x 5.33	1,107.00	330.5 x 355 x 8.1		10,890.00
32.5 x 40 x 3.2		210.00	119 x 140 x 8.1	116.84 x 6.99	1,647.00	335.5 x 360 x 8.1	329.57 x 6.99	10,590.00
36.95 x 44.45 x 3.2	36.17 x 2.62	243.00	129.5 x 145 x 6.3	126.37 x 5.33	1,161.00	340.5 x 365 x 8.1		11,190.00
34 x 45 x 4.2	32.92 x 3.53	243.00	124 x 145 x 8.1	123.19 x 6.99	1,701.00	345.5 x 370 x 8.1	342.27 x 6.99	11,544.00
34.5 x 50 x 6.3		390.00	134.5 x 150 x 6.3	132.72 x 5.33	1,755.00	350.5 x 375 x 8.1		12,390.00
37 x 48 x 4.2	36.09 x 3.53	243.00	129 x 150 x 8.1	126.37 x 6.99	1,755.00	355.5 x 380 x 8.1	354.97 x 6.99	12,330.00
39 x 50 x 4.2	37.69 x 3.53	270.00	131.4 x 152.4 x 8.1	129.54 x 6.99	1,782.00	360.5 x 385 x 8.1		13,170.00
39.5 x 55 x 6.3		396.00	139.5 x 155 x 6.3	139.07 x 5.33	1,809.00	365.5 x 390 x 8.1	354.97 x 6.99	12,870.00
39.8 x 50.8 x 4.2	38.70 x 3.53	270.00	134 x 155 x 8.1	132.72 x 6.99	1,809.00	370.5 x 395 x 8.1		13,530.00
41 x 52 x 4.2		276.00	144.5 x 160 x 6.3	142.54 x 5.33	1,269.00	375.5 x 400 x 8.1	367.67 x 6.99	13,440.00
44 x 55 x 4.2	44.04 x 3.53	297.00	139 x 160 x 8.1	139.07 x 6.99	1,863.00	385.5 x 410 x 8.1		15,990.00
44.5 x 60 x 6.3		432.00	144 x 165 x 8.1	142.54 x 6.99	1,917.00	395.5 x 420 x 8.1	393.07 x 6.99	17,640.00
45 x 56 x 4.2	44.04 x 3.53	297.00	154.5 x 170 x 6.3	154.48 x 5.33	1,350.00	405.5 x 430 x 8.1		19,350.00
46.1 x 57.1 x 4.2	45.00 x 3.53	297.00	149 x 170 x 8.1	148.59 x 6.99	1,971.00	415.5 x 440 x 8.1		21,120.00
47 x 58 x 4.2		306.00	159.5 x 175 x 6.3	154.48 x 5.33	2,226.00	425.5 x 450 x 8.1	417.96 x 6.99	22,950.00
49 x 60 x 4.2	47.22 x 3.53	297.00	154 x 175 x 8.1	151.77 x 6.99	2,226.00	435.5 x 460 x 8.1		24,840.00
52 x 63 x 4.2	50.39 x 3.53	351.00	159 x 180 x 8.1	158.12 x 6.99	2,106.00	445.5 x 470 x 8.1		26,790.00
47.5 x 63 x 6.3	46.99 x 5.33	513.00	164 x 185 x 8.1	158.12 x 6.99	2,346.00	455.5 x 480 x 8.1	456.07 x 6.99	27,660.00
49.5 x 65 x 6.3		468.00	169 x 190 x 8.1	164.47 x 6.99	2,214.00	465.5 x 490 x 8.1		28,800.00
52.5 x 63.5 x 4.2	50.39 x 3.53	351.00	174.5 x 190 x 6.3	170.82 x 5.33	1,485.00	475.5 x 500 x 8.1	468.76 x 6.99	30,000.00
54 x 65 x 4.2	53.57 x 3.53	351.00	174 x 195 x 8.1		2,496.00	505.5 x 530 x 8.1	494.16 x 6.99	36,900.00
58.85 x 69.85 x 4.2	56.74 x 3.53	378.00	184.5 x 200 x 6.3	183.52 x 5.33	1,593.00	525.5 x 550 x 8.1	506.86 x 6.99	37,500.00
59 x 70 x 4.2	56.74 x 3.53	378.00	184 x 205 x 8.1		2,610.00	545.5 x 570 x 8.1	540.00 x 7.00	P.O.R.
54.5 x 70 x 6.3	53.34 x 5.33	567.00	179 x 200 x 8.1	177.17 x 6.99	2,322.00	575.5 x 600 x 8.1	556.00 x 7.00	P.O.R.
64 x 75 x 4.2	63.09 x 3.53	405.00	189 x 210 x 8.1	183.52 x 6.99	2,430.00	605.5 x 630 x 8.1	600.00 x 7.00	P.O.R.
59.5 x 75 x 6.3	59.69 x 5.33	594.00	194 x 215 x 8.1		2,772.00	625.5 x 650 x 8.1		P.O.R.
65.2 x 76.2 x 4.2	63.09 x 3.53	405.00	199 x 220 x 8.1	196.22 x 6.99	2,538.00	655.5 x 680 x 8.1	650.00 x 7.00	P.O.R.
69 x 80 x 4.2	66.27 x 3.53	405.00	204 x 225 x 8.1	202.57 x 6.99	2,619.00			

Note: -**P. O. R. means prices available on request.****All above prices are for NBR O Rings. Prices with the Viton O Rings will be available on request.****dn - means Inner Dia of the Piston Composite Seal.****DN - means Outer Dia of the Piston Composite Seal.****B - means Height (Thickness) of the Piston Composite Seal.****Gurudev Says : God is not there just to fulfill your petty demands; God is the very core of your existence.**

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