



### Technical features

- Single seal
- Unbalanced
- Uni-directional
- Conical spring

### Operating limits

P = 232 PSI  
T = -95 to 320°F  
V = 49 ft/s

Description	Materials
Primary rings	silicon carbide, tungsten carbide, ceramic, stainless
Mating rings	silicon carbide, carbon graphite, tungsten carbide
Secondary seals	NBR, EPDM, Viton
Metal parts	Stainless 304 / Stainless 316*

\* upon request

### Available products:

- São Paulo 1 (SP1)
- São Paulo 2 (SP2)
- São Paulo 3 (SP3)
- São Paulo 4 (SP4)

### Mating rings

- DE3 (monolithic short seat) standard for SP1, SP2
- DE2 (monolithic long seat, anti-rotation pin slot)
- NL2 (monolithic short seat, to DIN24960) standard for SP3, SP4.
- NL1 (monolithic long seat, anti-rotation pin slot, to DIN24960)
- DE1 (face shrink fitted, anti-rotation pin slot)
- NL3 (face shrink fitted, anti-rotation pin slot, to DIN24960)

For more details on mating rings see page 29

d	D	SP1		SP2		SP3		SP4		DE2 - DE3		NL1 - NL2	
		L1	L2	L4	L5	D1	L3	D2	L6				
10	19.3	20	15	15	25.5	18.1	5.5	21	7				
12	21.8	22	18	18	25.5	20.6	5.5	23	7				
14	24.4	27	22	22	28.0	23.1	6.0	25	7				
15	28.5	27	22	23	28.0	26.9	7.0	27	7				
16	28.5	28	23	23	28.0	26.9	7.0	27	7				
18	32.5	30	24	24	27.5	30.9	8.0	33	10				
19	32.5	30	25	25	27.5	30.9	8.0	35	10				
20	32.5	30	25	25	27.5	30.9	8.0	35	10				
22	37.0	30	25	25	27.5	35.4	8.0	37	10				
24	37.0	32	27	27	30.0	35.4	8.0	39	10				
25	40.6	33	27	27	30.0	38.2	8.5	40	10				
28	46.5	36	29	29	32.5	43.3	9.0	43	10				
30	46.5	37	30	30	32.5	43.3	9.0	45	10				
32	46.5	37	30	30	32.5	43.3	9.0	48	10				
33	56.5	48	39	39	32.5	53.5	11.5	48	10				
35	56.5	48	39	39	32.5	53.5	11.5	50	10				
38	56.5	48	39	42	32.0	60.5	11.5	56	13				
40	63.5	48	39	42	32.0	60.5	11.5	58	13				
43	63.5	48	39	47	32.0	60.5	11.5	61	13				
45	68.5	51	41	47	32.0	65.5	11.5	63	13				
48	68.5	51	41	47	32.0	65.5	11.5	66	13				
50	74.5	55	45	46	33.5	72.5	11.5	70	14				
53	74.5	57	47	56	33.5	72.5	11.5	73	14				
55	74.5	57	47	56	33.5	72.5	11.5	75	14				
58	82.9	61	49	56	38.5	79.3	11.5	78	14				
60	82.9	61	49	56	38.5	79.3	11.5	80	14				
63	88.1	63	51	56	38.5	84.5	11.5	83	14				
65	88.1	63	51	66	38.5	84.5	11.5	85	14				
68	93.1	63	51	64	36.5	89.5	11.5	90	16				
70	93.1	63	51	64	44.0	89.5	11.5	92	16				
75	98.1	68	57	64	44.0	94.5	11.5	97	16				
80	103.5	70	59	72	42.0	99.5	11.5	105	18				
85	109.5	72	59	72	42.0	105.5	13.5	110	18				
90	115.5	75	62	72	47.0	111.5	13.5	115	18				
95	123.0	75	62	72	47.0	116.5	13.5	120	18				
100	129.0	85	75	72	47.0	119.5	13.5	125	18				