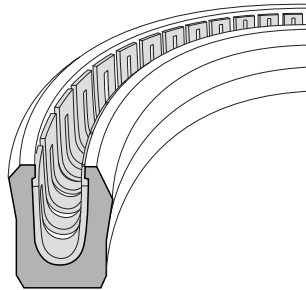
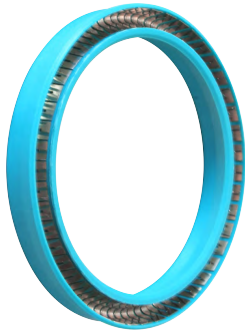


Rod Seals

SP-11-2100, DS 19

(Metric Size)

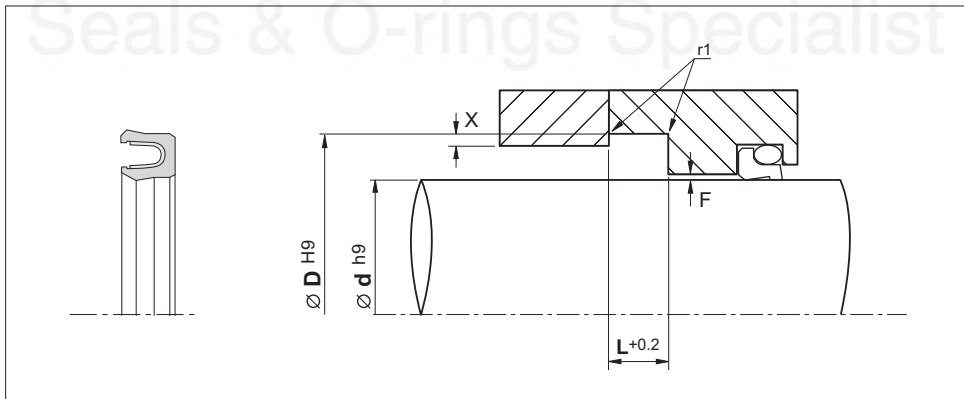


SP-11-2100, DS 19

Material	Pressure (Bar)	Temp. (°c)	Speed (m/s)
PTFE-Stainless Spring	450	-150 +225	15

- Resistant to most fluids and chemicals.
- Low coefficients of friction.
- Can handle rapid changes in temperature.
- High temperature range.

Installation Recommendation



Surface roughness	Ra	Rt
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Sliding surface	$\leq 0.3 \mu\text{m}$	$\leq 4 \mu\text{m}$
Surface of housing	$\leq 1.8 \mu\text{m}$	$\leq 10 \mu\text{m}$
Sides of housing	$\leq 3.0 \mu\text{m}$	$\leq 16 \mu\text{m}$

# PTFE Seal - 2100



Installation Dimensions for grooves made for O-ring without back-up ring

Series No.	Rod Dia.		Groove Dia. D	Groove Width. L	Radius r1	Step Height X min	Radial Clearance F max.*			
	Recommended Range	Extended Range					20 Bar	100 Bar	200 Bar	400 Bar
2100	3 - 9.9	3 - 40	d + 2.9	2.4	0.4	0.4	0.20	0.10	0.08	0.05
2110	10 - 19.9	6 - 200	d + 4.5	3.6	0.4	0.6	0.25	0.15	0.10	0.07
2120	20 - 39.9	10 - 400	d + 6.2	4.8	0.6	0.7	0.35	0.20	0.15	0.08
2130	40 - 119.9	20 - 700	d + 9.4	7.1	0.8	0.8	0.50	0.25	0.20	0.10
2140	120 - 630.0	35 -1600	d +12.2	9.5	0.8	0.9	0.60	0.30	0.25	0.12

Installation Dimensions for grooves made for O-ring with one back-up ring

Series No.	Rod Dia.		Groove Dia. D	Groove Width. L	Radius r1	Step Height X min	Radial Clearance F max.*			
	Recommended Range	Extended Range					20 Bar	100 Bar	200 Bar	400 Bar
2300	3 - 9.9	3 - 40	d + 2.9	3.80	0.4	0.4	0.20	0.10	0.08	0.05
2310	10 - 19.9	6 - 200	d + 4.5	4.65	0.4	0.6	0.25	0.15	0.10	0.07
2320	20 - 39.9	10 - 400	d + 6.2	5.70	0.6	0.7	0.35	0.20	0.15	0.08
2330	40 - 119.9	20 - 700	d + 9.4	8.50	0.8	0.8	0.50	0.25	0.20	0.10
2340	120 - 630.0	35 -1600	d + 12.2	11.20	0.8	0.9	0.60	0.30	0.25	0.12

(Metric Size)

Rod Dia. d	Groove Dia. D	Groove Width L	Reference (For order processing)
3.0	5.9	2.4	
4.0	6.9	2.4	SP-11-2100-0040
5.0	7.9	2.4	SP-11-2100-0050
6.0	8.9	2.4	SP-11-2100-0060
8.0	10.9	2.4	SP-11-2100-0080
10.0	14.5	3.6	SP-11-2110-0100
12.0	16.5	3.6	SP-11-2110-0120
14.0	18.5	3.6	SP-11-2110-0140
15.0	19.5	3.6	SP-11-2110-0150
16.0	20.5	3.6	SP-11-2110-0160
18.0	22.5	3.6	SP-11-2110-0180
20.0	26.2	4.8	SP-11-2120-0200
22.0	28.2	4.8	SP-11-2120-0220
25.0	31.2	4.8	SP-11-2120-0250
28.0	34.2	4.8	SP-11-2120-0280

(Metric Size)

Rod Dia.	Groove Dia.	Groove Width	Reference (For order processing)
d	D	L	
30.0	36.2	4.8	SP-11-2120-0300
32.0	38.2	4.8	SP-11-2120-0320
35.0	41.2	4.8	SP-11-2120-0350
36.0	42.2	4.8	SP-11-2120-0360
40.0	49.4	7.1	SP-11-2130-0400
42.0	51.4	7.1	SP-11-2130-0420
45.0	54.4	7.1	SP-11-2130-0450
48.0	57.4	7.1	SP-11-2130-0480
50.0	59.4	7.1	SP-11-2130-0500
52.0	61.4	7.1	SP-11-2130-0520
55.0	64.4	7.1	SP-11-2130-0550
56.0	65.4	7.1	SP-11-2130-0560
60.0	69.4	7.1	SP-11-2130-0600
63.0	72.4	7.1	SP-11-2130-0630
65.0	74.4	7.1	SP-11-2130-0650
70.0	79.4	7.1	SP-11-2130-0700
75.0	84.4	7.1	SP-11-2130-0750
80.0	89.4	7.1	SP-11-2130-0800
85.0	94.4	7.1	SP-11-2130-0850
90.0	99.4	7.1	SP-11-2130-0900
95.0	104.4	7.1	SP-11-2130-0950
100.0	109.4	7.1	SP-11-2130-1000
105.0	114.4	7.1	SP-11-2130-1050
110.0	119.4	7.1	SP-11-2130-1100
115.0	124.4	7.1	SP-11-2130-1150
120.0	132.2	9.5	SP-11-2140-1200
125.0	137.2	9.5	SP-11-2140-1250
130.0	142.2	9.5	SP-11-2140-1300
135.0	147.2	9.5	SP-11-2140-1350
140.0	152.2	9.5	SP-11-2140-1400
150.0	162.2	9.5	SP-11-2140-1500
160.0	172.2	9.5	SP-11-2140-1600
170.0	182.2	9.5	SP-11-2140-1700
180.0	192.2	9.5	SP-11-2140-1800
190.0	202.2	9.5	SP-11-2140-1900
200.0	212.2	9.5	SP-11-2140-2000
210.0	222.2	9.5	SP-11-2140-2100
220.0	232.2	9.5	SP-11-2140-2200
230.0	242.2	9.5	SP-11-2140-2300
240.0	252.2	9.5	SP-11-2140-2400

# PTFE Seal - 2100



(Metric Size)

Rod Dia.	Groove Dia.	Groove Width	Reference (For order processing)
d	D	L	
250.0	262.2	9.5	SP-11-2140-2500
280.0	292.2	9.5	SP-11-2140-2800
300.0	312.2	9.5	SP-11-2140-3000
320.0	332.2	9.5	SP-11-2140-3200
350.0	362.2	9.5	SP-11-2140-3500

Select the material of seal ring and o-ring from Compounds for Fluid Technology (page 8)

Order No.	SP-11 - 2100 - 0060
Seal ring material code	_____
Series No.	_____
Rod diameter x 10	_____

Seals & O-rings Specialist