

## DOUBLE-ACTING ROD SEAL

### MAIN FEATURES

**Durability** - The excellent wear properties of the materials ensure that ISVD seals have a long durability, even under tough working conditions. Extrusion resistance. The hardness of the seal material makes them highly resistant to extrusion. Low friction, the materials used have a very low coefficient of friction (one of the lowest known) so, when used as a dynamic seal, they absorb much less energy and generate much less heat than conventional seals. The dynamic and static coefficients of friction are almost identical. This ensures smooth, jerk-free travel from start to finish, adding the possibility of precise positioning. Unlike many other materials, it never vulcanises on the surface to be sealed. Even after several years without being used, ISVDs will operate smoothly and trouble-free.

**Wide temperature range** - ISVDs will retain their good properties from low to high temperatures. By properly selecting the O-Ring material, ISVD seals will perform flawlessly over a wide temperature range. **Wide range of fluids.** The materials used are resistant to almost all types of fluids, by properly matching the O-Ring material, ISVDs can be used with almost all fluids. **High Speed** - They can be used in reciprocating motion applications, with speeds up to 15 m/sec.

# ISVD

### DESCRIPTION

Double-acting rod seal.

### MATERIAL

PTFE WITH LOAD + NBR OR FKM

### OPERATING CONDITIONS

Working pressure - < 400 bar. For higher pressures, please contact our Technical Department

Temperature: -40 +120°C.

For temperatures exceeding this range, please contact our Technical Department.

Speed: Reciprocating up to 15 m/sec.

Helical motion up to 5 m/sec.

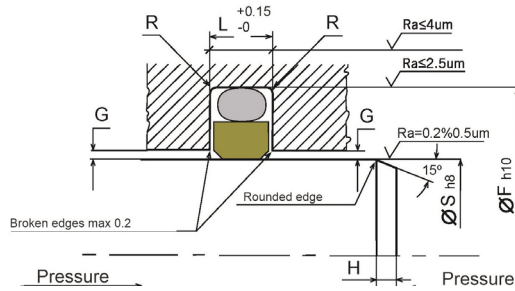
Frequency up to 5 Hz.

They should not be used for rotary applications.

### PROPERTIES

In systems with rapid pressure changes and constant reciprocating motion, it is necessary to equip ISVs with grooves in the side walls. The grooves ensure a quick response of the seal against pressure changes.

# ISVD

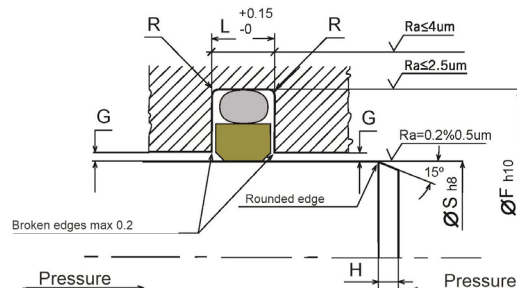


Standard ISV	ØD rod		ØF H10	L + 0.15	Radius	Radius	H	Working pressure			O-ring Øthk
	Light ISV/L	Heavy ISV/P						10 Mpa G	20 Mpa G	40 Mpa G	
3 - 7.9	8 - 18.9	-----	D+ 4.9	2.20	0.40	2.00	0.30	0.20	0.15	1.78	
8 - 18.9	19 - 37.9	-----	D+ 7.3	3.20	0.60	2.50	0.40	0.25	0.15	2.62	
19 - 37.9	38 - 199.9	8 - 18.9	D+ 10.7	4.20	1.00	3.50	0.40	0.30	0.20	3.53	
38 - 199.9	200 - 255.9	19 - 37.9	D+ 15.1	6.30	1.30	5.00	0.70	0.40	0.20	5.33	
200 - 255.9	256 - 649.9	38 - 199.9	D+ 20.5	8.10	1.80	6.50	0.80	0.60	0.25	6.99	
256 - 649.9	650 - 999.9	200 - 255.9	D+ 24.0	8.10	1.80	6.50	0.90	0.70	0.30	6.99	
650 - 999.9	≥1000.0	256 - 649.9	D+ 27.3	9.50	2.30	7.50	1.00	0.80	0.40	8.40	
≥1000.0	-----	650 - 999.9	D+ 38.0	13.80	3.00	7.50	1.20	0.90	0.50	12.00	

MEDIUM	O - RING MATERIAL
Hydraulic oil	NBR (Bruna N)
Engine oil	
Grease	
Other mineral oils	
Water	
Air, dry or lubricated	In temperatures above 120° use Viton O-Ring
Water, Steam	EPDM (Ethylene propylene)
Hydraulic fluids Synthetics	Special Compounds

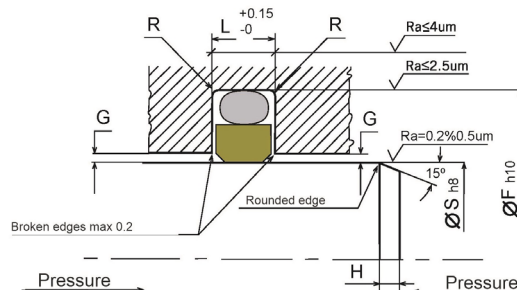
SERIES	
ISVD	Standard
ISVD/L	Light
ISVD/P	Heavy

# ISVD



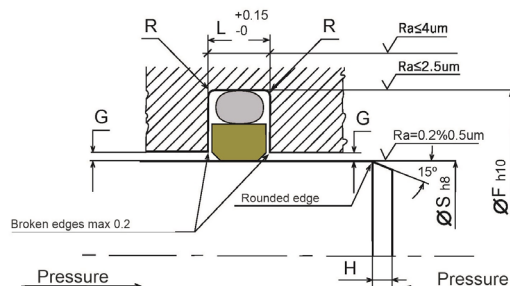
$\varnothing$ ROD D h8	$\varnothing$ EXTERNAL F	WIDTH L	REFERENCE	O-RING
3.00	7.90	2.20	ISVD 0030-55	4.47 x 1.78
4.00	8.90	2.20	ISVD 0040-55	5.60 x 1.78
5.00	9.90	2.20	ISVD 0050-55	6.70 x 1.78
6.00	10.90	2.20	ISVD 0060-55	7.65 x 1.78
7.00	11.90	2.20	ISVD 0070-55	8.75 x 1.78
8.00	12.90	2.20	ISVD/L 0080-55	9.50 x 1.78
8.00	15.30	3.20	ISVD 0080-55	10.77 x 2.62
10.00	14.90	2.20	ISVD/L 0100-55	11.78 x 1.78
10.00	17.30	3.20	ISVD 0100-55	12.37 x 2.62
12.00	16.90	2.20	ISVD/L 0120-55	14.00 x 1.78
12.00	19.30	3.20	ISVD 0120-55	13.94 x 2.62
14.00	18.90	2.20	ISVD/L 0140-55	15.60 x 1.78
14.00	21.30	3.20	ISVD 0140-55	17.12 x 2.62
15.00	19.90	2.20	ISVD/L 0150-55	17.17 x 1.78
15.00	22.30	3.20	ISVD 0150-55	17.12 x 2.62
16.00	20.90	2.20	ISVD/L 0160-55	17.17 x 1.78
16.00	23.30	3.20	ISVD 0160-55	18.72 x 2.62
18.00	22.90	2.20	ISVD/L 0180-55	20.35 x 1.78
18.00	25.30	3.20	ISVD 0180-55	20.29 x 2.62
19.00	29.70	4.20	ISVD 0190-55	23.39 x 3.53
20.00	27.30	3.20	ISVD/L 0200-55	21.89 x 2.62
20.00	30.70	4.20	ISVD 0200-55	23.39 x 3.53
22.00	29.30	3.20	ISVD/L 0220-55	25.07 x 2.62
22.00	32.70	4.20	ISVD 0220-55	26.57 x 3.53
24.00	31.30	3.20	ISVD/L 0240-55	26.64 x 2.62
25.00	32.30	3.20	ISVD/L 0250-55	28.24 x 2.62
25.00	35.70	4.20	ISVD 0250-55	29.74 x 3.53
25.40	32.70	3.20	ISVD/L 0254-55	28.24 x 2.62
25.40	36.10	4.20	ISVD 0254-55	29.74 x 3.53
26.00	33.30	3.20	ISVD/L 0260-55	28.24 x 2.62
26.00	36.70	4.20	ISVD 0260-55	29.74 x 3.53
27.00	34.30	3.20	ISVD/L 0270-55	29.82 x 2.62
28.00	35.30	3.20	ISVD/L 0280-55	29.82 x 2.62
28.00	38.70	4.20	ISVD 0280-55	32.92 x 3.53
29.00	36.30	3.20	ISVD/L 0290-55	31.42 x 3.53
30.00	37.30	3.20	ISVD/L 0300-55	32.99 x 2.62
30.00	40.70	4.20	ISVD 0300-55	34.52 x 3.53
32.00	39.30	3.20	ISVD/L 0320-55	34.59 x 2.62

# ISVD



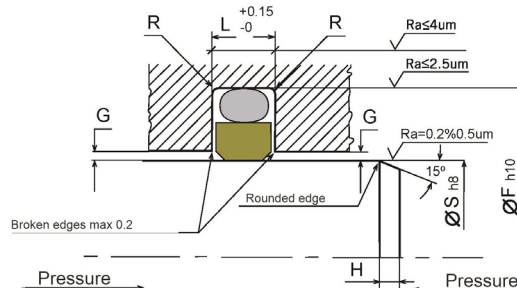
Ø ROD D h8	Ø EXTERNAL F	WIDTH L	REFERENCE	O-RING
32.00	42.70	4.20	ISVD 0320-55	36.09 x 3.53
35.00	42.30	3.20	ISVD/L 0350-55	37.77 x 2.62
35.00	45.70	4.20	ISVD 0350-55	37.69 x 3.53
36.00	43.30	3.20	ISVD/L 0360-55	39.34 x 2.62
36.00	46.70	4.20	ISVD 0360-55	40.87 x 3.53
38.00	48.70	4.20	ISVD/L 0380-55	40.87 x 3.53
38.00	53.10	6.30	ISVD 0380-55	43.82 x 5.33
39.00	49.70	4.20	ISVD/L 0390-55	44.04 x 3.53
40.00	50.70	4.20	ISVD/L 0400-55	44.04 x 3.53
40.00	55.10	6.30	ISVD 0400-55	43.82 x 5.33
42.00	52.70	4.20	ISVS/L 0420-55	47.22 x 3.53
42.00	57.10	6.30	ISVD 0420-55	46.99 x 5.33
44.00	54.70	4.20	ISVD/L 0440-55	47.22 x 3.53
45.00	55.70	4.20	ISVD/L 0450-55	50.39 x 3.53
45.00	60.10	6.30	ISVD 0450-55	50.17 x 5.33
48.00	58.70	4.20	SVD/L 0480-55	51.49 x 3.53
48.00	63.10	6.30	ISVD 0480-55	53.34 x 5.33
50.00	60.70	4.20	ISVD/L 0500-55	53.57 x 3.53
50.00	65.10	6.30	ISVD 0500-55	56.52 x 5.33
52.00	62.70	4.20	ISVD/L 0520-55	56.74 x 3.53
52.00	67.10	6.30	ISVD 0520-55	56.52 x 5.33
54.00	69.10	6.30	ISVD 0540-55	59.69 x 5.33
55.00	65.70	4.20	ISVD/L 0550-55	59.92 x 3.53
55.00	70.10	6.30	ISVD 0550-55	59.69 x 5.33
56.00	66.70	4.20	ISVD/L 0560-55	59.92 x 3.53
56.00	71.10	6.30	ISVD 0560-55	62.87 x 5.33
58.00	73.10	6.30	ISVD 0580-55	62.87 x 5.33
60.00	70.70	4.20	ISVD/L 0600-55	63.09 x 3.53
60.00	75.10	6.30	ISVD 0600-55	66.04 x 5.33
63.00	73.70	4.20	ISVD/L 0630-55	66.27 x 3.53
63.00	78.10	6.30	ISVD 0630-55	69.22 x 5.33
65.00	80.10	6.30	ISVD 0650-55	69.22 x 5.33
70.00	80.70	4.20	ISVD/L 0700-55	75.79 x 3.53
70.00	85.10	6.30	ISVD 0700-55	75.57 x 5.33
72.00	82.70	4.20	ISVD/L 0720-55	75.79 x 3.53
75.00	85.70	4.20	ISVD/L 0750-55	78.97 x 3.53
75.00	90.10	6.30	ISVD 0750-55	81.92 x 5.33
80.00	90.70	4.20	ISVD/L 0800-55	85.32 x 3.53

ISVD



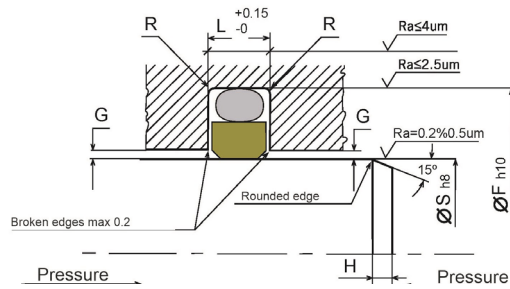
Ø ROD D h8	Ø EXTERNAL F	WIDTH L	REFERENCE	O-RING
80.00	95.10	6.30	ISVD 0800-55	85.09 x 5.33
83.00	93.70	4.20	ISVD/L 0830-55	88.49 x 3.53
85.00	100.10	6.30	ISVD 0850-55	91.44 x 5.33
86.00	96.70	4.20	ISVD/L 0860-55	91.67 x 3.53
90.00	100.70	4.20	ISVD/L 0900-55	94.84 x 3.53
90.00	100.70	4.20	ISVD/L 0900-55	94.84 x 3.50
90.00	105.10	6.30	ISVD 0900-55	94.62 x 5.33
92.00	102.70	4.20	ISVD/L 0920-55	98.02 x 3.53
95.00	105.70	4.20	ISVD/L 0950-55	101.19 x 3.53
95.00	110.10	6.30	ISVD 0950-55	100.97 x 5.33
100.00	110.70	4.20	ISVD/L 1000-55	104.37 x 3.53
100.00	115.10	6.30	ISVD 1000-55	107.32 x 5.33
105.00	115.70	4.20	ISVD/L 1050-55	110.72 x 3.53
105.00	120.10	6.30	ISVD 1050-55	110.49 x 5.33
110.00	120.70	4.20	ISVD/L 1100-55	113.89 x 3.53
110.00	125.10	6.30	ISVD 1100-55	116.84 x 5.33
110.00	130.50	8.10	ISVD/P 1100-55	120.02 x 6.99
112.00	127.10	6.30	ISVD 1120-55	116.84 x 5.33
115.00	125.70	4.20	ISVD/L 1150-55	120.24 x 3.53
115.00	130.10	6.30	ISVD 1150-55	120.02 x 5.33
118.00	133.10	6.30	ISVD 1180-55	123.19 x 5.33
120.00	130.70	4.20	ISVD/L 1200-55	123.42 x 3.53
120.00	135.10	6.30	ISVD 1200-55	126.37 x 5.33
125.00	135.70	4.20	ISVD/L 1250-55	129.77 x 3.53
125.00	140.10	6.30	ISVD 1250-55	129.54 x 5.33
129.00	139.70	4.20	ISVD/L 1290-55	132.94 x 3.53
130.00	140.70	4.20	ISVD/L 1300-55	136.12 x 3.53
130.00	145.10	6.30	ISVD 1300-55	135.89 x 5.33
135.00	145.70	4.20	ISVD/L 1350-55	139.29 x 3.53
135.00	150.10	6.30	ISVD 1350-55	142.24 x 5.33
140.00	150.70	4.20	ISVD/L 1400-55	145.64 x 3.53
140.00	155.10	6.30	ISVD 1400-55	145.42 x 5.33
145.00	155.70	4.20	ISVD/L 1450-55	148.82 x 3.53
145.00	160.10	6.30	ISVD 1450-55	151.77 x 5.33
150.00	165.10	6.30	ISVD 1500-55	158.12 x 5.33
160.00	175.10	6.30	ISVD 1600-55	164.47 x 5.33
160.00	180.50	8.10	ISVD/P 1600-55	170.82 x 6.99
165.00	180.10	6.30	ISVD 1650-55	170.82 x 5.33

# ISVD



Ø ROD D h8	Ø EXTERNAL F	WIDTH L	REFERENCE	O-RING
170.00	180.70	4.20	ISVD/L 1700-55	x 3.53
170.00	185.10	6.30	ISVD 1700-55	x 5.33
175.00	190.10	6.30	ISVD 1750-55	x 5.33
180.00	190.70	4.20	ISVD/L 1800-55	x 3.53
180.00	195.10	6.30	ISVD 1800-55	x 5.33
180.00	200.50	8.10	ISVD/P 1800-55	x 6.99
190.00	200.70	4.20	ISVD/L 1900-55	x 3.53
190.00	205.10	6.30	ISVD 1900-55	x 5.33
200.00	215.10	6.30	ISVD/L 2000-55	x 5.33
200.00	220.50	8.10	ISVD 2000-55	x 6.99
205.00	220.10	6.30	ISVD/L 2050-55	x 5.33
210.00	235.10	6.30	ISVD/L 2100-55	x 5.33
220.00	240.50	8.10	ISVD 2200-55	x 6.99
230.00	245.10	6.30	ISVS/L 2300-55	x 5.33
230.00	250.50	8.10	ISVD 2300-55	x 6.99
240.00	255.10	6.30	ISVD/L 2400-55	x 5.33
240.00	260.50	8.10	ISVD 2400-55	x 6.99
250.00	270.50	8.10	ISVD 2500-55	x 6.99
260.00	284.00	8.10	ISVD 2600-55	x 6.99
270.00	290.50	8.10	ISVD/L 2700-55	x 6.99
270.00	294.00	8.10	ISVD 2700-55	x 6.99
275.00	299.00	8.10	ISVD 2750-55	x 6.99
280.00	300.50	8.10	ISVD/L 2800-55	x 6.99
280.00	304.00	8.10	ISVD 2800-55	x 6.99
290.00	310.50	8.10	ISVD/L 2900-55	x 6.99
290.00	314.00	8.10	ISVD 2900-55	x 6.99
300.00	324.00	8.10	ISVD 3000-55	x 6.99
310.00	330.50	8.10	ISVD/L 3100-55	x 6.99
310.00	334.00	8.10	ISVD 3100-55	x 6.99
320.00	344.00	8.10	ISVD 3200-55	x 6.99
330.00	354.00	8.10	ISVD 3300-55	x 6.99
340.00	364.00	8.10	ISVD 3400-55	x 6.99
350.00	370.50	8.10	ISVD/L 3500-55	x 6.99
350.00	374.00	8.10	ISVD 3500-55	x 6.99
360.00	384.00	8.10	ISVD 3600-55	x 6.99
370.00	390.50	8.10	ISVD/L 3700-55	x 6.99
370.00	394.00	8.10	ISVD 3700-55	x 6.99
380.00	404.00	8.10	ISVD 3800-55	x 6.99

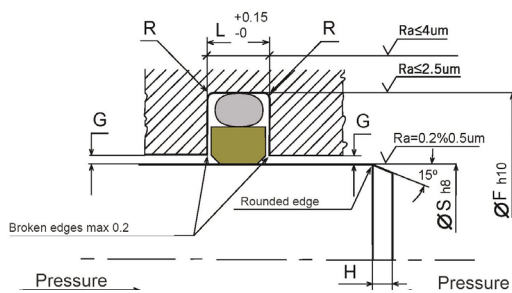
ISVD



Ø ROD D h8	Ø EXTERNAL F	WIDTH L	REFERENCE	O-RING
390.00	414.00	8.10	ISVD 3900-55	405.26 x 6.99
400.00	420.50	8.10	ISVD/L 4000-55	417.96 x 6.99
400.00	424.00	8.10	ISVD 4000-55	417.96 x 6.99
410.00	434.00	8.10	ISVD 4100-55	417.96 x 6.99
420.00	444.00	8.10	ISVD 4200-55	430.66 x 6.99
430.00	454.00	8.10	ISVD 4300-55	443.36 x 6.99
440.00	464.00	8.10	ISVD 4400-55	456.06 x 6.99
450.00	474.00	8.10	ISVD 4500-55	468.76 x 6.99
460.00	484.00	8.10	ISVD 4600-55	468.76 x 6.99
470.00	494.00	8.10	ISVD 4700-55	481.46 x 6.99
480.00	504.00	8.10	ISVD 4800-55	494.16 x 6.99
490.00	514.00	8.10	ISVD 4900-55	506.86 x 6.99
500.00	524.00	8.10	ISVD 5000-55	506.86 x 6.99
510.00	534.00	8.10	ISVD 5100-55	532.26 x 6.99
520.00	544.00	8.10	ISVD 5200-55	532.26 x 6.99
530.00	554.00	8.10	ISVD 5300-55	557.66 x 6.99
540.00	564.00	8.10	ISVD 5400-55	557.66 x 6.99
550.00	574.00	8.10	ISVD 5500-55	557.66 x 6.99
560.00	584.00	8.10	ISVD 5600-55	582.68 x 6.99
570.00	594.00	8.10	ISVD 5700-55	582.68 x 6.99
580.00	604.00	8.10	ISVD 5800-55	608.08 x 6.99
590.00	614.00	8.10	ISVD 5900-55	608.08 x 6.99
600.00	624.00	8.10	ISVD 6000-55	608.08 x 6.99
610.00	634.00	8.10	ISVD 6100-55	633.48 x 6.99
620.00	644.00	8.10	ISVD 6200-55	633.48 x 6.99
630.00	654.00	8.10	ISVD 6300-55	658.88 x 6.99
640.00	664.00	8.10	ISVD 6400-55	658.88 x 6.99
650.00	677.30	9.50	ISVD 6500-55	663.00 x 8.40
660.00	687.30	9.50	ISVD 6600-55	673.00 x 8.40
670.00	697.30	9.50	ISVD 6700-55	683.00 x 8.40
680.00	707.30	9.50	ISVD 6800-55	693.00 x 8.40
688.00	715.30	9.50	ISVD 6880-55	701.00 x 8.40
690.00	717.30	9.50	ISVD 6900-55	703.00 x 8.40
700.00	724.00	8.10	ISVD/L 7000-55	712.00 x 7.00
710.00	737.30	9.50	ISVD 7100-55	723.00 x 8.40
740.00	767.30	9.50	ISVD 7400-55	753.00 x 8.40
760.00	784.00	8.10	ISVD/L 7600-55	772.00 x 7.00
770.00	797.30	9.50	ISVD 7700-55	783.00 x 8.40



ISVD



Ø ROD D h8	Ø EXTERNAL F	WIDTH L	REFERENCE	O-RING
800.00	827.30	9.50	ISVD 8000-55	x 8.40
850.00	877.30	9.50	ISVD 8500-55	x 8.40
870.00	897.30	9.50	ISVD 8700-55	x 8.40
900.00	927.30	9.50	ISVD 9000-55	x 8.40
910.00	937.30	9.50	ISVD 9100-55	x 8.40
950.00	977.30	9.50	ISVD 9500-55	x 8.40
960.00	987.30	9.50	ISVD 9600-55	x 8.40
1000.00	1027.30	9.50	ISVD/L 10000-55	x 8.40
1000.00	1038.00	13.80	ISVD 10000-55	x 12.00
1050.00	1077.30	9.50	ISVD/L 10500-55	x 8.40
1050.00	1088.00	13.80	ISVD 10500-55	x 12.00
1100.00	1138.00	13.80	ISVD 11000-55	x 12.00
1160.00	1187.30	9.50	ISVD/L 11600-55	x 8.40
1200.00	1227.30	9.50	ISVD/L 12000-55	x 8.40
1200.00	1238.00	13.80	ISVD 12000-55	x 12.00