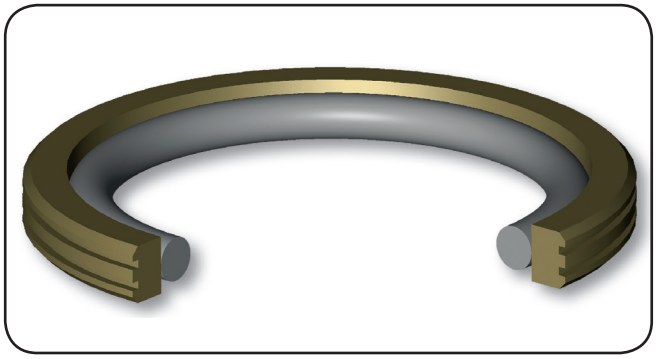
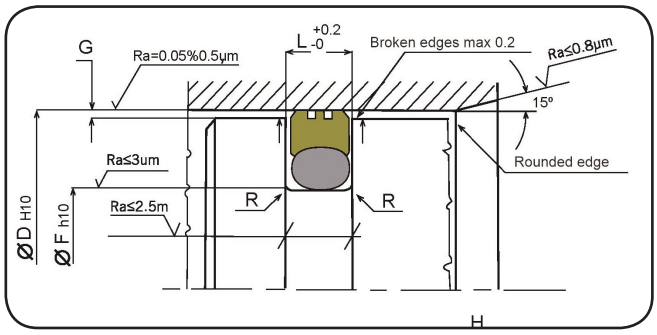


ROTARY PISTON SEAL



MAIN FEATURES

The ISPR is a double-acting seal for rotating applications. It consists of a PTFE ring energised by an O-ring. The seal configuration ensures effective leakage control over the entire pressure range from zero to 400 bar.
The low friction properties and anti stick-slip compounds ensure smooth rotation.
The small installation sizes enable a compact design. This is a great advantage in rotary applications with a large number of openings to be sealed.

- Long durability
- High pressure and stable temperature.
- Low operating torque.
- Smooth operation
- Compact design
- Compatible with most fluids.

ISPR

DESCRIPTION

PTFE rotary piston seal

MATERIAL

PTFE WITH LOAD + NBR OR FKM

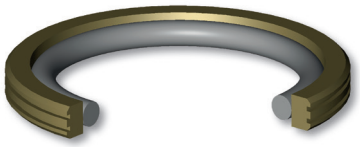
WORKING CONDITIONS

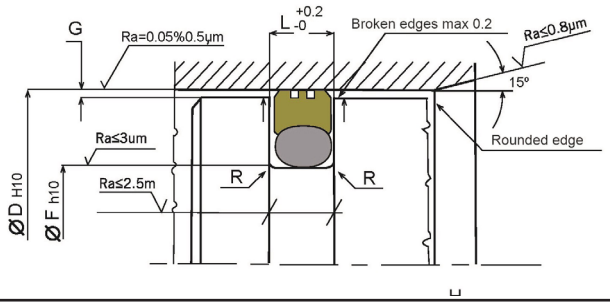
Speed: Reciprocating up to 5 m/sec.
Continuous up to 1 m/sec.
Pressure: From zero to < 400 Bar.
For higher pressures contact the Technical Department.
Temperature: -40 to + 120ºC+
(depending on O-Ring material)
For temperatures exceeding this range, please contact our Technical Department.

Durability:
The durability of the ISPR is affected by a number of factors, the most important being pressure, speed, surface roughness, fluid and the ability of the seal to reject heat. Only testing under actual operating parameters can determine the exact durability.

Fluid	Contact surface	ISPR Material
Hydraulic oil Engine oil Grease Other oils	Steel Chrome-plated steel Cast Iron	66
Water Steam Non-lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	22

ISPR





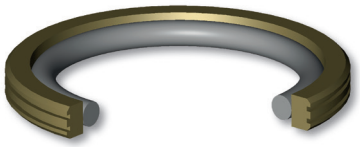
MEASUREMENT CALCULATION TABLE

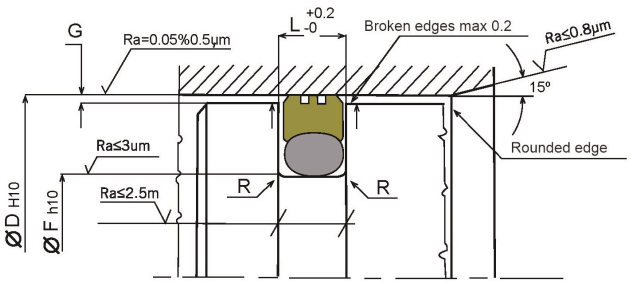
Standard Piston Ø D	Housing Diameter Ø F h10		Gap Depth	Housing width L + 0.2	Radius R	Diametral clearance = Pressure		Chamfer H	O-ring size	O-ring Ø thickness
						10 Mpa G	20 Mpa G			
8÷39.9	D -	4.9	2.45	2.2	0.4	0.15	0.1	2	F	1.78
40÷79.9	D -	7.5	3.75	3.2	0.6	0.2	0.15	2.5	F	2.62
80÷132.9	D -	11	5.5	4.2	0.8	0.25	0.2	3.5	F	3.53
133÷329.9	D -	15.5	7.75	6.3	1.3	0.3	0.25	5	F	5.33
330÷669.9	D -	21	10.5	8.1	1.5	0.3	0.25	6.5	F	6.99
670÷999.9	D -	28	14	9.5	2.5	0.45	0.3	7.5	F	8.4

Always follow O-Ring recommendations on fluids

MEDIUM	O - RING MATERIAL
Synthetic Hydraulic Fluids Hydraulic oil Engine oil Grease Other mineral oils Water Air, dry or lubricated	Special Compounds NBR (Bruna N) At temperatures above 120ºC, use Viton O-Ring.
Water Steam	EPDM (Ethylene propylene)
Synthetic Hydraulic Fluids	Special Compounds

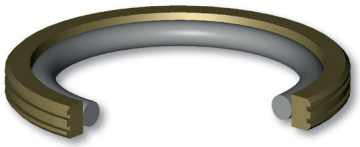
ISPR

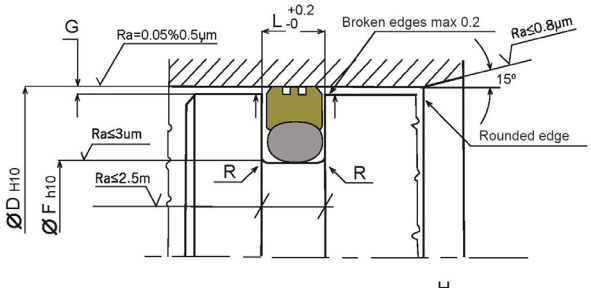




Type	Reference	ØExt.	Øint	Width L+0.2	O-Ring		
ISPR	0080-66	8.00	3.10	2.20	2.90	x	1.78
ISPR	0120-66	12.00	7.10	2.20	6.70	x	1.78
ISPR	0150-66	15.00	10.10	2.20	9.25	x	1.78
ISPR	0160-66	16.00	11.10	2.20	10.82	x	1.78
ISPR	0180-66	18.00	13.10	2.20	12.42	x	1.78
ISPR	0200-66	20.00	15.10	2.20	14.00	x	1.78
ISPR	0220-66	22.00	17.10	2.20	17.16	x	1.78
ISPR	0250-66	25.00	20.10	2.20	18.77	x	1.78
ISPR	0280-66	28.00	23.10	2.20	21.85	x	1.78
ISPR	0300-66	30.00	25.10	2.20	25.12	x	1.78
ISPR	0320-66	32.00	27.10	2.20	26.70	x	1.78
ISPR	0350-66	35.00	30.10	2.20	29.87	x	1.78
ISPR	0400-66	40.00	32.50	3.20	31.47	x	2.62
ISPR	0420-66	42.00	34.50	3.20	33.00	x	2.62
ISPR	0450-66	45.00	37.50	3.20	36.17	x	2.62
ISPR	0480-66	48.00	40.50	3.20	39.34	x	2.62
ISPR	0500-66	50.00	42.50	3.20	42.52	x	2.62
ISPR	0520-66	52.00	44.50	3.20	44.12	x	2.62
ISPR	0550-66	55.00	47.50	3.20	47.29	x	2.62
ISPR	0600-66	60.00	52.50	3.20	52.07	x	2.62
ISPR	0630-66	63.00	55.50	3.20	55.25	x	2.62
ISPR	0650-66	65.00	57.50	3.20	56.82	x	2.62
ISPR	0700-66	70.00	62.50	3.20	61.60	x	2.62
ISPR	0750-66	75.00	67.50	3.20	67.95	x	2.62
ISPR	0800-66	80.00	69.00	4.20	68.26	x	3.53
ISPR	0850-66	85.00	74.00	4.20	72.62	x	3.53
ISPR	0900-66	90.00	79.00	4.20	78.97	x	3.53
ISPR	0950-66	95.00	84.00	4.20	82.14	x	3.53
ISPR	1000-66	100.00	89.00	4.20	88.50	x	3.53
ISPR	1050-66	105.00	94.00	4.20	94.84	x	3.53
ISPR	1100-66	110.00	99.00	4.20	98.02	x	3.53
ISPR	1150-66	115.00	104.00	4.20	104.37	x	3.53
ISPR	1200-66	120.00	109.00	4.20	110.72	x	3.53
ISPR	1250-66	125.00	114.00	4.20	113.90	x	3.53
ISPR	1300-66	130.00	119.00	4.20	120.25	x	3.53
ISPR	1350-66	135.00	119.50	6.30	120.02	x	5.33

ISPR





Type	Reference	ØExt.	Øint	Width L+0.2	O-Ring		
ISPR	1400-66	140.00	124.50	6.30	123.20	x	5.33
ISPR	1500-66	150.00	134.50	6.30	135.90	x	5.33
ISPR	1600-66	160.00	144.50	6.30	145.42	x	5.33
ISPR	1700-66	170.00	154.50	6.30	155.00	x	5.33
ISPR	1800-66	180.00	164.50	6.30	164.47	x	5.33
ISPR	1900-66	190.00	174.50	6.30	170.82	x	5.33
ISPR	2000-66	200.00	184.50	6.30	183.52	x	5.33
ISPR	2100-66	210.00	194.50	6.30	189.87	x	5.33
ISPR	2200-66	220.00	204.50	6.30	202.57	x	5.33
ISPR	2300-66	230.00	214.50	6.30	208.92	x	5.33
ISPR	2400-66	240.00	224.50	6.30	221.62	x	5.33
ISPR	2500-66	250.00	234.50	6.30	234.32	x	5.33
ISPR	2800-66	280.00	264.50	6.30	253.37	x	5.33
ISPR	3000-66	300.00	284.50	6.30	278.77	x	5.33
ISPR	3200-66	320.00	304.50	6.30	304.17	x	5.33
ISPR	3500-66	350.00	329.00	8.10	316.87	x	6.99
ISPR	4000-66	400.00	379.00	8.10	367.67	x	6.99
ISPR	4200-66	420.00	399.00	8.10	393.07	x	6.99
ISPR	4500-66	450.00	429.00	8.10	417.96	x	6.99
ISPR	4800-66	480.00	459.00	8.10	456.06	x	6.99
ISPR	5000-66	500.00	479.00	8.10	468.76	x	6.99
ISPR	6000-66	600.00	579.00	8.10	557.86	x	6.99