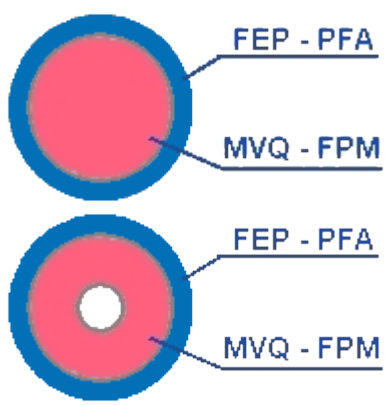
O-Ring and Backup |FEP - PFA incapsulated O-Rings

The simple shape of a rubber O-Ring with the chemical resistance of a fluorinated polymer.
A fulfilling alternative choice to FFKM O-Rings.
A reliable sealing solution for the chemical, pharma and food processing industry.

- FDA Approved
- 3A (Sanitary Standard) Approved
- Available in any diameter
- Temperature range
  - -25 + 200 °C with FPM core (fluorinated rubber)
  - -50 + 200°C with MVQ core (silicone rubber)
- Good compression set
- Wide chemical resistance
- Low friction coefficient
- Don't stick to the surfaces
- No ageing
- Static applications (recommended), and slow non demanding dynamic applications



FINISHES

SURFACE FINISH ACCORDING WITH FLUID		
application	**max Ra µm dynamic surface**	**max Ra µm static surface**
CRYOGENICS	0,1	0,2
FREON HELIUM HYDROGEN	0,2	0,3
AIR NITROGEN ARGON METHANE FUELS	0.2	0.4
WATER OIL	0.3 - 04	0.6
ROTARY SEALS		
Shaft surface	**Shaft hardness**	**Surface treating deep**
Ra 0.2 - 0.3 micron max. Rz 1.0 - 2.5 micron max. R max. < 4 micron	55 HRC min. for pressure up to 5 bar 60 HRC min. for pressure > di 5 bar 60 HRC for speed > 4m/sec	0.3 mm min.

SEAT

Image

STANDARD GROOVES for FEP encapsulated O-Rings

AS 568- ISO 3601/1

O-Ring Cross Section	STATIC APPLICATIONS H	GROOVE WIDTH G	DINAMC APPLICATIONS H (avoid any excessive stress)	GROOVE WIDTH G
1,78	1,25	2.7	1.50	2.3
2,62	1,90	3.8	2.25	3.3
3,53	2,70	5.0	3.10	4.4
5,33	4,30	7.3	4.70	6.5
7,00	5,75	9.5	6.10	8.6
8.00	6.50	10.9	7.00	9.8
9.00	7.30	12.3	7.90	11.0
10.0	8.20	13.5	8.80	12.2
12.0	10.00	16.1	10.50	14.7

For any furher informations, please contact our application engineers

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GROOVE DESIGN AND ASSEMBLING

Unlike elastomeric ones, FEP encapsulated O-Rings show poor diametrical elasticity, consequently they must be ordered according with the actual groove dimensions.
For the same reasons, open groove assembling should be preferred.
The closed groove assembling (not suggested) requires pre-heating in water/oil bath; a preliminary test is strongly recommended.

CROSS SECTION B TOLERANCES **Encapsulated O-Rings show greater cross section tolerances when compared with elastomeric ones.**		
cross section **B**	**Inner Diameter** A	tolerances
1.50 / **1.78** / 2.00 / 2.5	12 <= ID < 16 ID >=16	-0.12 / + 0.14 -0.08 / + 0.08
2.62	12.5 <= ID < 18 ID >= 18	-0.12 / +0.14 -0.08 / +0.08
3.00	16 <= ID < 22 ID >= 22	-0.12 / +0.16 -0.08 / +0.08
3.53	17<= ID < 24 ID >= 24	-0.14 / +0.18 -0.08 / +0.08
4.00	26<= ID < 32 ID >= 32	-0.15 / +0.20 -06010 / +0.10
4.50 / 5.00 / **5.33**	30<= ID < 37 ID >= 37	-0.18 / +0.26 -0.13 / +0.13
6.00	45 <= ID < 53 ID >= 53	-0.18 / +0.26 -0.13 / +0.13
6.50	45 <= ID < 55 ID >= 55	-0.20 / +0.30 -0.15 / +0.15

7.00	50 <= ID < 60 ID >= 60	-0.20 / 0.30 -0.15 / 0.15
8.00	70<= ID < 85 ID >= 85	-0.22 / +0.32 -0.16 / +0.16
9.00	100 <= ID < 110 ID >= 110	-0.24 / +0.34 -0.16 / 0.16
10.00	108 <= ID < 125 ID >= 125	-0.24 / +0.34 -0.17 / +0.17
12.00	135 <= ID < 145 ID > 145	-0.25 / +0.35 -0.17 / 0.17

PRODUCT CODE

Image

EXAMPLE:

FEP O-Ring 98 x 3.53 MVQ Where:

- Jaket = FEP
- Inner Diameter A=98
- Cross section B= 3.53
- O-Ring material= MVQ