

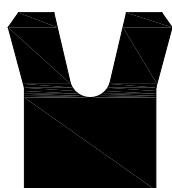
Lip seals

Symmetrical and non symmetrical rubber lip seals for reciprocating movements.



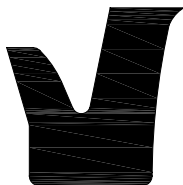
U/UM

UM are the strongest kind of moulded lip seals with a hardness of 90 ShA. They can be assembled both on pistons and cylinders and withstand pressure up to 120 bar/cm². U seals are the same as UM, but their sizes are in inches.



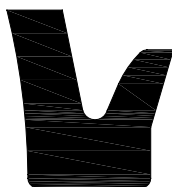
M

Same structure as the UM type, but different in sizes and in the negative cut of the lips. They are produced in 85 ShA.



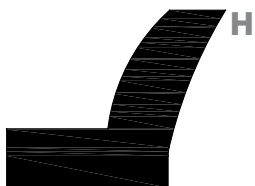
DE/DEM

They are produced with a hardness of 75 ShA for easier assembling. These seals are made for dynamic external sealing on only one lip. They withstand a pressure of up to 80 bar/cm². DE seals are used on pistons with inch dimensions and have lips with sharp cut edges; DEM seals are used on pistons with metric dimensions and have lips with tapered negative cut.



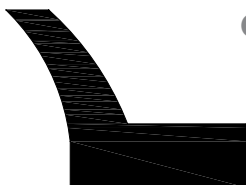
DI/DIM

They are produced with a hardness of 90 ShA and made for dynamic internal sealing on only one lip. The external lip is higher and stronger than the internal one and they are suitable for operating pressure up to 120 bar/cm². DI seals are used on rods with inch dimensions and have lips with sharp cut edges; DIM seals are used on rods with metric dimensions and have lips with tapered negative cut.



H

They are made with a hardness of 90 ShA and withstand a working pressure of 40 bar/cm². They are used on cylinders as oil control rings or dust covers and must be axially pressed in the seat with a ring.



C

They are made with a hardness of 90 ShA and withstand a working pressure not exceeding 40 bar/cm². They are known as caps and are installed on pistons as rod wipers.

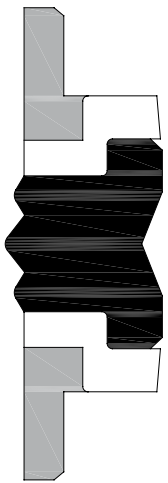
Special rubber hardness or different elastomers available on request.

Polyurethane hydraulic seals



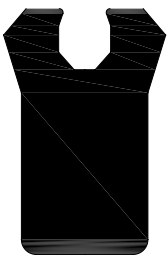
DKD

The piston seal type DKD assures a good reaction against shock pressure peaks and low friction in the low pressure range. The asymmetric lips are designed to differentiate the behavior of the lips on the static and dynamic surfaces: the static lip is flexible, more sensitive to pressure fluctuations and it guarantees a wide contact area; the dynamic lip is shorter and stronger to concentrate load against the dynamic surface. They can also be used in back-to-back arrangement for double acting piston. Pressure up to 400 bar.



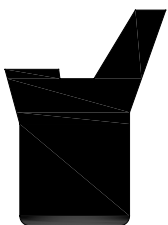
DKGD

The piston seal DKGD has a sealing rubber element with low permanent deformation that assures good sealing performance, two anti-extrusions rings with stabilizers to avoid the rotation of the rubber element, two angular wear rings which guide the piston in the cylinder and support radial loads. Pressure up to 400 bar.



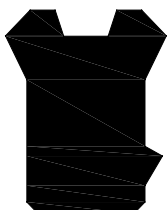
DUP

The seal type DUP is a high performance all purpose lip seal suitable for both rod and piston. The DUP profile assures a good reaction against shock pressure peaks and low friction in all conditions. Pressure up to 400 bar.



DSA

The function of the DSA wiper ring is to prevent introduction of dust, dirt and foreign matter into the system. This is achieved by a special wiper lip which produces a very effective cleaning action, prevents the development of scores, protects the guiding parts and extends the service life of the axial moving rod seals. An external sealing lip on the outside diameter contacts the housing in order to prevent moisture entering the groove. The internal ribs give stability and prevent twisting and sticking of the wiper in the groove.



DSD

Wear and dry run are largely prevented by additional lubricant retained within the gap created by the secondary lip. In some cases this second sealing lip may even acts as a substitute for a costly tandem sealing system when complete sealing under certain working conditions can only been achieved by two seals placed one behind the other in separate housing. Pressure up to 400 bar.



Springs

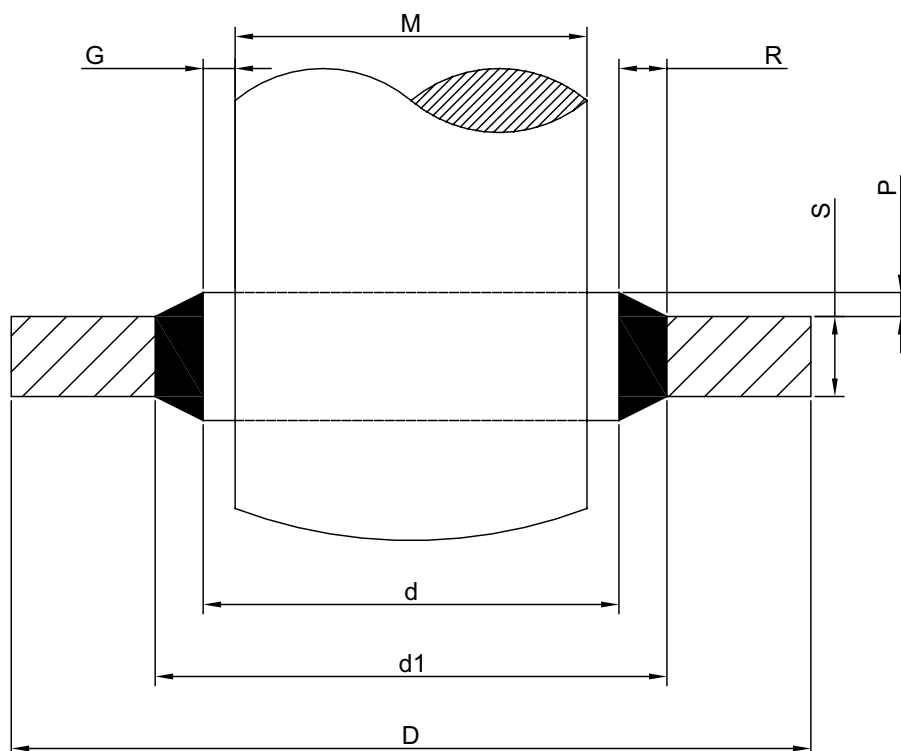
All our FPM oil shaft seals are supplied with stainless steel springs AISI 302/304, whereas the NBR seals are fitted with carbon steel springs. In our stock we have a wide range of stainless steel springs AISI 302 that, on customers' request, can either be fitted on the NBR seals or can be dispatched singularly for customers' service.

For special applications we can also supply stainless steel springs AISI 316; a more limited range of dimensions is available in our stock for immediate delivery.



Bonded seals

Bonded seals are static seals used as sealing rings threaded fittings and flange connections. To avoid any damage on the sealing lip, the inside diameter of bonded seal should be larger than the external thread diameter and the rubber should be bonded to the inside metal only.



Hydraulic seals for high pressure

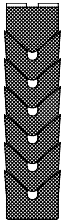
TO - TG Packing seals

TO and TG packing seals are composed of lip rings made of cotton fabric reinforced elastomer. TO and TG packing seals are suitable for reciprocating movements and can be fitted on rods as well as on pistons. They are available in a variety that covers all applications from light duty to the heaviest working conditions.

	ENERGISING RING: cotton fabric reinforced rubber; its function is to ensure a uniform pre-load to the seal.
	ENERGISING RING: special compound with resins to obtain a great resistance.
	INTERMEDIATE RING: cotton fabric reinforced rubber; the sealing ring.
	INTERMEDIATE RING: rubber; for application with low pressure and continuous vibrations.
	SUPPORT RING: cotton fabric reinforced rubber; its function is to support the entire series, it also has an optimal extrusion resistance.

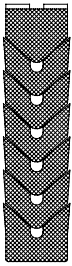
TO Series

Pressure: up to 40 MPa
 Speed: up to 0,5 m/s
 Temperature: up to 200°C depending on the elastomer

Type	TO 3	TO 5	TO 6	TO 7	TO 7/1	TO 7/0
COMPOSITION						
ENERGISING RING	1	1	1	1	1	1
FABRIC RUBBER INTERMEDIATE RING	1	2	3	3	4	5
RUBBER INTERMEDIATE RINGS	-	1	1	2	1	-
SUPPORT RING	1	1	1	1	1	1

TG Series

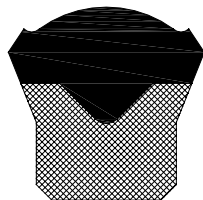
Pressure: up to 40 MPa
 Speed: up to 0,5 m/s
 Temperature: up to 200°C depending on the elastomer

Type	TG 5	TG 6	TG 7
COMPOSITION			
ENERGISING RING	1	1	1
FABRIC RUBBER INTERMEDIATE RINGS	3	4	5
SUPPORT RING	1	1	1



Hydraulic seals for medium high pressure

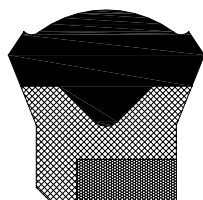
TEOL Packing seals



TEOL 1 (S8)

Rod seal manufactured as an integral element, vulcanising a NBR sealing element on a reinforced cotton fabric base. Compact seal, even for standard housings according to ISO 5597.

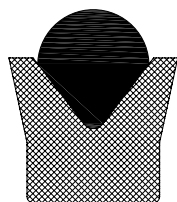
Pressure: up to 20 MPa
Speed: up to 0,5 m/s



TEOL 1A (S24)

Similar to TEOL/1 with an anti extrusion synthetic resin ring.

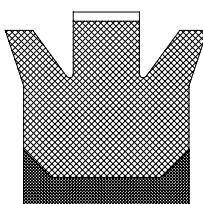
Pressure: up to 20 MPa
Speed: up to 0,5 m/s



TEOL 2 (G10)

Rod seal manufactured as an integral element by vulcanising together cotton fabric and NBR. Excellent resistance to wear and low friction.

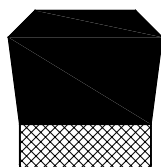
Pressure: up to 20 MPa
Speed: up to 0,5 m/s



TEOL 8 (G18)

Two parts rod seal: lip sealing part in fabric reinforced rubber and support part moulded in a special rigid fabric. Suitable in cases where hydraulic equipment is subjected to severe vibrations, shock and high pressure.

Pressure: up to 40 MPa
Speed: up to 0,5 m/s



TEOL 1/B

Rod seal manufactured as an integral element by vulcanising together cotton fabric and NBR.

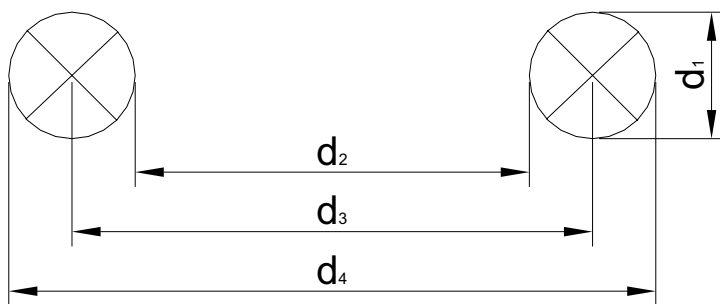
Pressure: up to 20 MPa
Speed: up to 0,5 m/s

O-Rings

We can produce from mould all the standard metric and inch O-rings sizes in different compounds, such as NBR 70° ShA and FPM 75° ShA. Other compounds and/or hardness are available on request.

Hot vulcanized O-rings

We can produce spliced O-rings on request with our hot vulcanization technology. With this procedure the O-ring is endless and without any evidence of splice: endurance and elasticity are very similar to those of moulded O-rings.

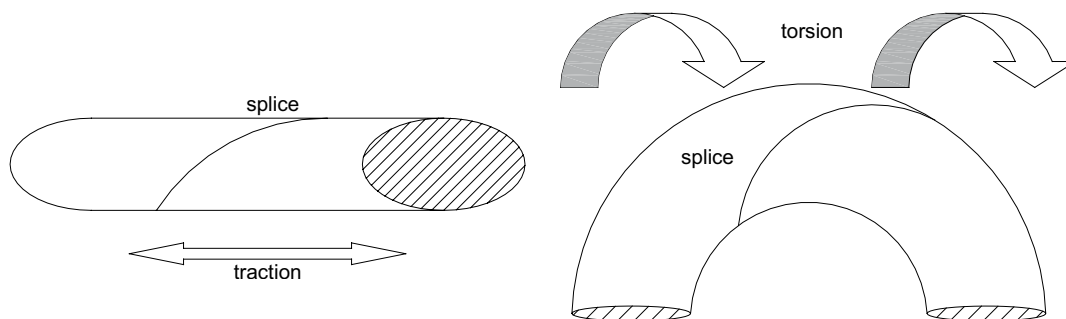


d_1 = cord diameter
 d_2 = inner diameter
 d_3 = medium diameter
 d_4 = outer diameter

Upon request we can vulcanize any rubber extruded profile.

Although this technology avoids the majority of joint O-rings problems, it is important to take some cautions when handling vulcanized O-rings, and specifically :

no excessive traction on splice



bending radius on splice not bigger than $\frac{1}{4}$ of cord diameter

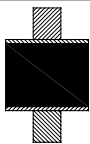
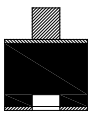
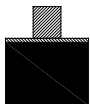
Encapsulated O-rings

Encapsulated O-rings are O-rings consisting of a seamless and uniform Teflon® FEP/PFA encapsulation/jacket which completely encloses a core material of either Silicone or FPM elastomers. The encapsulated O-ring behaves like a highly viscous fluid, any pressure exerted on the seal is transmitted practically undiminished in all directions.

Vibration dampers

The vibration dampers are extremely well suitable for making elastic contact. They are widely used in industrial and agricultural application, especially in flexible suspension, and for vibration absorption of machines and several mechanic structures. These vibration dampers are produced from molded rubber between two parallel metal sheets. Screw, screw-nut or their combination is placed on its two sides.

ST SERIES

	ST-1 M/M
	ST-2 M/F
	ST-3 F/F
	ST-4 M
	ST-5 F

SS SERIES

	SS-1
	SS-2
	SS-3

CM & CF SERIES

	CM
	CF