



PAPER MILL APPLICATION

APPLICATIONS: press section – paper industry





APPLICATIONS: spreader rolls





A SOLUTION FOR ANY TYPE OF SEALING PROBLEM

APPLICATIONS: bending compensation rolls





APPLICATIONS: suction rolls





A SOLUTION FOR ANY TYPE OF SEALING PROBLEM

SPECIAL OIL SEAL –L2M

"L2M" rotary shaft oil seal is an FP-ATS product specifically developed for severe operating conditions, where HARDINESS, high MISALIGNMENT, and high SPEEDS occur.

groove on the outer diameter

On the external diameter there is a groove that allows the operator to center the oil seal in the housing bore, helping in the assembling operation.



steel inner ring

The steel inner ring placed inside the oil seal endures an accurate assembly of the finger spring, and it provides the rigidity and the hardiness required.

sealing lip

The sealing lip is bounded to the steel outer metal case, as vulcanized on the case itself.

In this way there are not leakages between the rubber and the metal case, moreover the internal and the external diameters are perfectly centered (the centering is given by the mould).

garter spring finger spring

The Finger and the Garter springs, parts of the oil seal, enable to have a higher interference on the internal diameter, without compromising the high flexibility of the rubber sealing lip.

The two springs help the sealing lip to recover the important shaft deflections avoiding leakages, and letting the oil seal to reach high speeds without compromising the lasting.

steel outer metal case

The outer metal case of the oil seal is realized in one unique piece, there are no welded joints, and it is machine finished according to DIN standard.

Wide contact surface between the seal and the housing.

No O-Ring is necessary to ensure a perfect retain.

- the interference, the profile, and the different components of the oil seal (finger spring, garter spring, steel inner reinforcement
- ring) can be modified in accordance with the working conditions
- dedicated equipment and modern generation machineries are used to produce these special oil seals
- every lot of production is totally traceable by the laser engraving of the lot number on every oil seal



SPECIAL OIL SEAL –L2M

TECHNICAL FEATURES OF THE "L2M" OIL SEAL





Maximum speed = 20-30 m/sMinimum I.D. = 180 mmMaximum E.D. = 2000 mmMaximum pressure = 0.5 barMisalignment = up to 5 mmMachine finished on the external diameter

MATERIAL INFORMATION OF THE "L2M" OIL SEAL

Steel outer metal case:	FE DC 04
Steel inner reinforcement ring:	FE 37
Finger spring:	AISI 301
Garter spring:	AISI 316
Compounds used for the sealing lip:	NBR – HNBR – FKM – FKM Low Friction - VQM

- all the L2M type oil seals can be realized with the additional dust lip
- the L2M oil seal is available also with spacers
- FP-ATS produces a special oil seal type called L2M-BP realized to resist up to a pressure of 2-3 bar
- thanks to the structure of our L2M oil seal, preload, lip profile and compound can be modified according to the working conditions



SPECIAL OIL SEAL –L2M

FP-ATS can provide special types of this oil seal:

L2M-PL

"L2M-PL" oil seal has a special sealing lip designed in order to obtain lower interference with the shaft for high speed applications. The compound contains a percentage of self-lubricant elements. It is only available in FKM compound.



Maximum speed = 25-35 m/sMinimum I.D. = 180 mmMaximum E.D. = 2000 mmMaximum pressure = 0.5 barMisalignment = up to 3 mmMachine finished on the external diameter

L2M-VF

"L2M-VF" oil seal is characterized by a PTFE insert vulcanized on the sealing lip. This type of oil seal combines the flexibility of the rubber in FKM with the chemical-physical resistance features typically of the PTFE element.

It is recommended for applications with very high speeds.



Maximum speed = 35-45 m/sMinimum I.D. = 300 mmMaximum E.D. = 1000 mmMaximum pressure = 0.5 barMachine finished on the external diameter



SPECIAL OIL SEAL -L2M

<u>L2M-TE</u>

"L2M-TE" type is an external lip oil seal. It is used in machineries with stationary axis and rotating shell. It is available only in self-lubricating FKM special compound.



Maximum speed = 20-30 m/sMinimum I.D. = 300 mmMaximum O.D. = 1000 mmMaximum pressure = 0.5 barMisalignment = up to 3 mmMachine finished on the internal diameter







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EXPERIENCE

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