

Sealing Solution for Food & Pharma Industry



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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SPAREAGE[®]
Sealing Solutions



Sealing Solutions in the field of Food & Pharmaceutical Industry

Spareage, as India's leading seal manufacturer providing standard & customized sealing solutions to clients across industries. Having more than five decades of experience and expertise in serving the industrial clients. Spareage with its wide range of seal profile and elastomers is fully capable of serving the Food, Beverage and Pharmaceutical Industries.

In these industries, processing environments are demanding in different stages & applications, hence many requirements to be met by sealing components.

- Sealing Material Compliance
- Application Fluids - CIP & SIP process
- High Temperature Solutions in bakery product
- Pressurized conditions in dairy equipments
- Speed & heavy duty challenges in Meat Process Units
- Non-Lubricated & Leakages free solution in Pharma Industry

As a manufacturer of high quality product, Spareage thus understand these field demands and with its perfect sealing technology can deliver its sealing solutions across the globe. So whether you are an OEM or into maintenance of equipment, you can place your trust in Spareage to provide top quality seals and solutions quickly at an economical cost.

Spareage have an ability to produce standard as well as customize products for small quantity orders also. Thanks to the in-house CNC base mould making facility & rubber compounding in accordance with FDA norms, Spareage can deliver seals faster than anybody else.

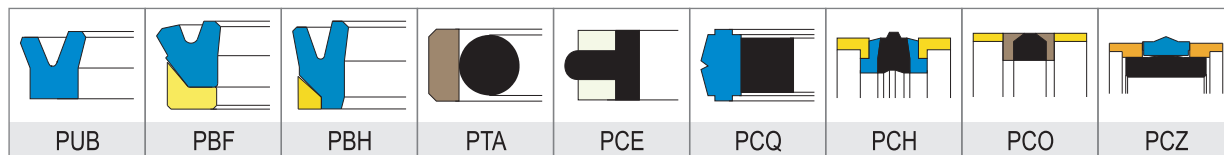
Hence in short, Spareage with its Technical expertise, field support, wide network can be your reliable source to cater your needs for this segment.



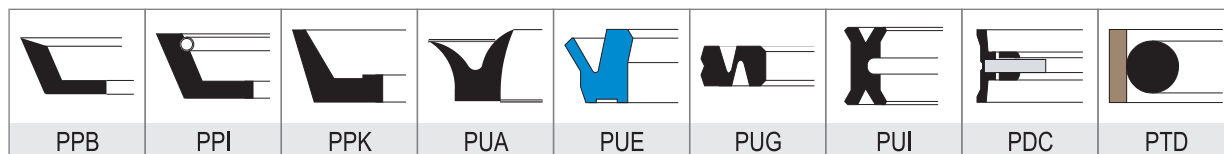
Seal Profiles

Spareage Product Line for Food & Pharma Industry -

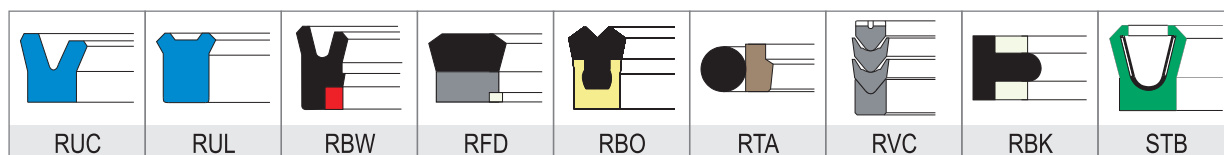
Piston Seal - Hydraulic



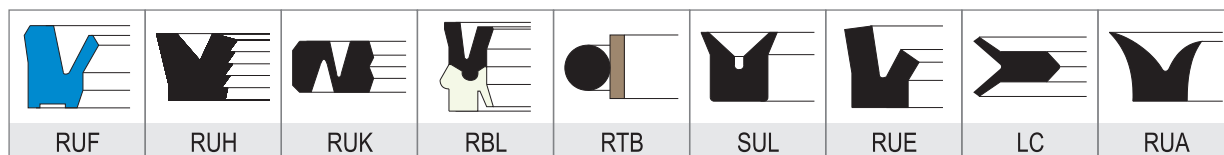
Piston Seal - Pneumatic



Rod Seal - Hydraulic

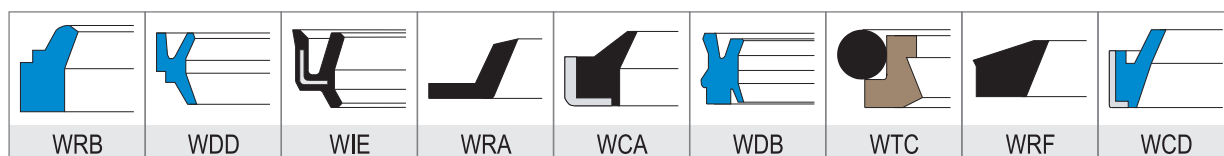


Piston / Rod Seal - Pneumatic

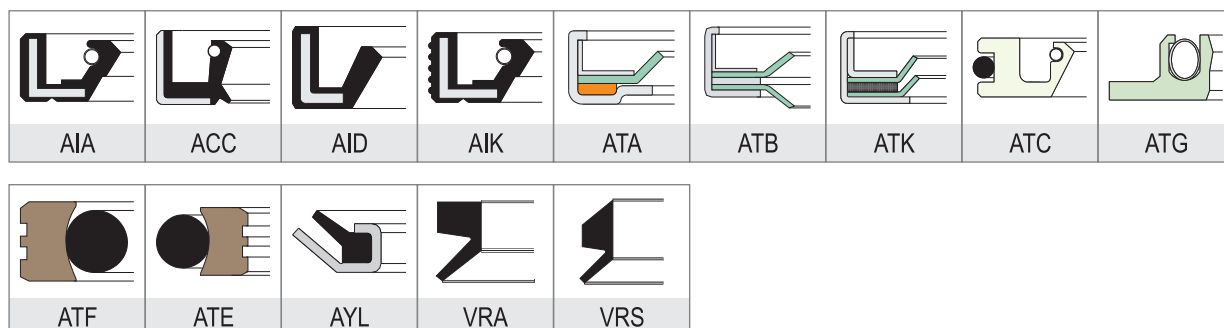


Piston / Rod Seal - Hydraulic

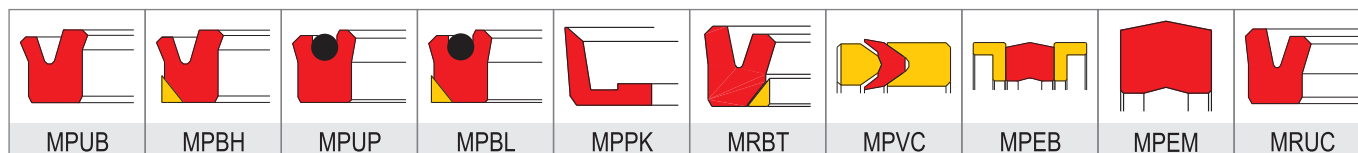
Wiper Seals - Hydraulic & Pneumatic



Rotary Seals



Jet Express Seals



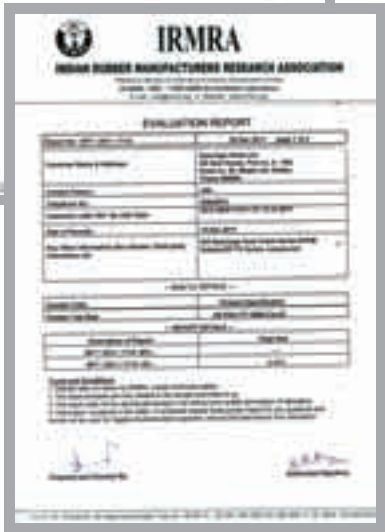
Food Compliant Material

Sealing material plays an important role in food, beverages & pharma industries application. As seals may come into contact with products that are intended for human consumption. Therefore, sealing material ingredients and process should be comply with the FDA regulations & norms.

Spareage had developed special compounds which are compliant with FDA and had been approved & certified by an government testing laboratory.

Material	Spareage Code	Hardness (Min. to Max.)	Colour	Complies With
NBR	NT2/b (FG) to NT6/a (FG)	50 Shore 'A' to 90 Shore 'A'	Green	177-2600.Cla.(F)
FKM (Viton®)	VT1/a (FG) to VT4/a (FG)	55 Shore 'A' to 90 'A'	Green	177-2600.Cla.(F)
EPDM	EP2/b (FG) to EP6/a (FG)	50Shore 'A' to 90 Shore 'A'	Green	177-2600.Cla.(F)
Silicon	SL3/b (FG) to SL4/b (FG)	60 Shore 'A' to 75 Shore 'A'	Green	177-2600.Cla.(F)
Polyurethane	PU 5 FG)	90 Shore 'A'	Red	177-2600.Cla.(F)
PTFE	PFT	65 D	White	--
UHMWPE	UHMW	65 D	White	--
ACETAL	ACT	M 84	White	--

Viton® is a registered trademark of Dupont.





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Agressive Fluids

CIP (Cleaning in Place) and SIP (Sterlization in Place) are the general method for cleaning processing systems. This process ensures safety and toxic contamination of products and minimize recontamination of the process.

Sealing material should be compatible with the chemicals used in CIP & SIP process. Spareage thus take care of this while selecting an appropriate sealing material.

Compatibility Chart

Chemical	Content	NBR	FKM	EPPM	SILICON	PU	PTFE
Chlorinated Alkalies	Caustic Soda (Mild)	+	0	0	-	+	+
Strong Alkalies	Caustic Soda (Strong)	+	0	0	-	+	+
Strong Acid	Nitric Acid	-	0	0	-	+	+
Sanitizer	Sodium Hypochlorite	x	0	0	x	+	+
Hot Water	-	+	0	+	+	+	+
Steam	-	-	-	+	x	-	+

Legend: (+) Excellent (0) Moderate
 (-) Not Recommended (x) Insufficient Data

* The above data mention is within specific limits.
 Please contact our Technical Department for more details.

* Please refer Spareage Technical Handbook for more material compatibility.



Beverages

Spareage is involved in manufacturing static, dynamic & customised elastomeric & plastic components in different stages of beverage industry.

Due to continuous online process, stoppage of the line is a costly issue. High performance & functionality are the need of sealing systems in this area.

Application

Valve - Static Seal - 'O' Ring

Custom Designed - Rod Seal

Valve Seat Seal - Custom Designed

Valve Stem - Rotary Seal

Wear Ring

Filling Valve - Piston Seal

Rod Seal

Wear Ring

Scrappers

Rotary Distributors - Rotary Seals

Other Related applications & its related Seals

Couplings - Static Seals

Feed Pump - Rotary Seal

Rotary Slide Valve - Rotary Seal

Compensator Piston - Piston Seal

Rod Seal

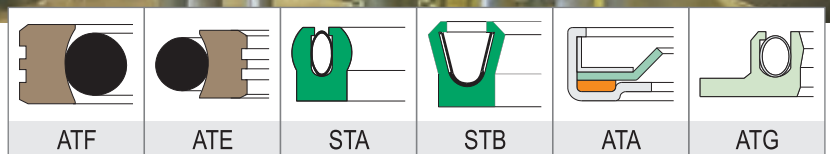
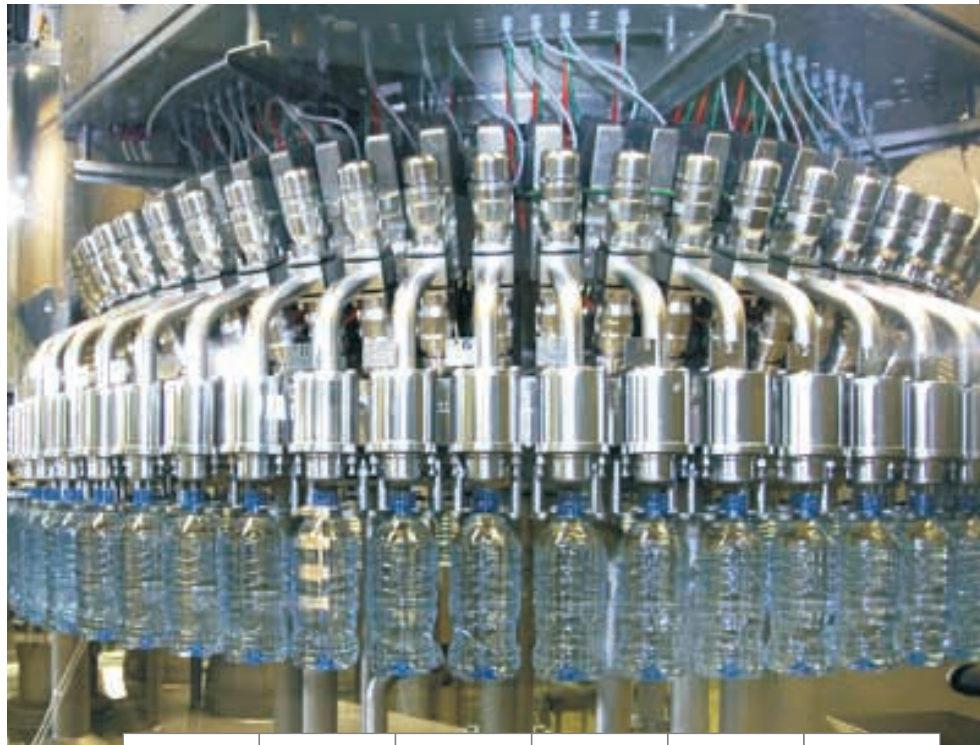
Wear Ring

Scrappers

Piston Metering Pump - Piston Seal

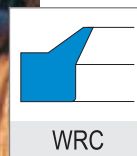
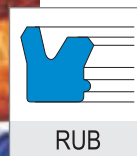
Rod Seal

Wear Ring

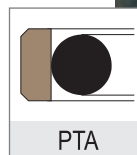


High Temperature

Temperature is a most common factor in food industry. Especially in Bakery Production Units. Low temperature during frizzing process and rising high during heating process. Seals material should be capable to resist the effects in these variable temperature factors.



Bakery Products



Kneading Machine





Pressure

Many processes in dairy products are applied under vacuum or high pressure. Hence seals used in such application are bound to seals vacuum or under high pressure.

Static Seals, Dynamic Seals, Gaskets & Customized are rubber products use in these equipments.



Dairy Products



Pressure System



High Pressure Seal



Meat Processing

High sliding speed & pressure are the demand in the Meat Cutting Processing Units. Hydraulic & Rotary Equipments are used in this process.

Hydraulic & Pneumatic Seals are used in -

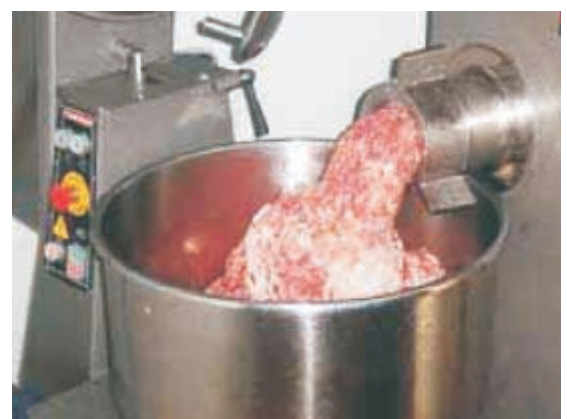
- Hide puller machine
- Charet pushing machine
- Meat cutting machine
- Moving platform
- Lifting Jack
- Stubbing Machine

Rotary Seals are used in -

- Dehairing Machine
- Karkass Splitting
- Tripe Cleaning



Meat Products



Meat cutting machines

Pharma

The production in pharmaceuticals industries are done under strict hygienic conditions and regulations of cleanliness, in order to prevent contamination.

Hence the machine lubrication for the moving parts is a concern. Spareage, supplies self lubricated sealing material for the dynamic application to work under non-lubricated condition at a very high process frequency.

Seals for -

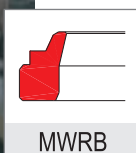
- Tablet processing machine
- Drip tray
- Valves
- Pumps
- Gear Boxes



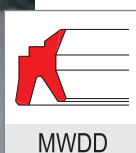
MSTB



MATG



MWRB



MWDD





Clients -

Nestle India

Cadbury India

Glaxo Smithkline

Pfizer Ltd.

Cadila India

IDMC

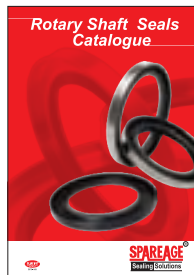
Mother Dairy

CORE BUSINESS



HYDRAULIC SEALS

- More than 6000 std. sizes.
- Wide range of seal profiles.
- Medium & heavy duty application.
- Mould available up to 2 mtr. Dia.
- Extended information..



ROTARY SEALS

- More than 7000 std. sizes.
- Wide range of seal profiles.
- Mould available up to 2 mtr. Dia.
- Extended information.



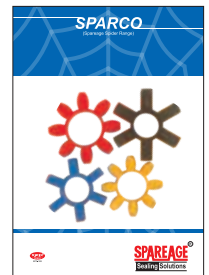
PNEUMATIC SEALS

- More than 4000 std. sizes.
- Wide range of seal profiles.
- Extended information.



O-RINGS

- Listed more than 7000 B.S sizes.
- JIS standard also available.
- Orings available in NBR & FPM matl.



SPIDER RANGE

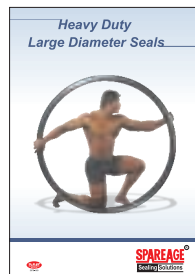
- All std. sizes available with 6 different profiles.
- Mechanical Flexibility.
- Available in NBR and PU matl.
- Metal coupling available.
- Protection against overloads.

COMPANY FACILITIES



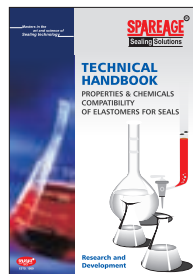
Production Site

- Delivering 30,000 types of standard seal profiles in 1 hour.
- More than 100 specific seal profiles in sizes of upto 300 mm dia. within 8 hours.
- Express seals helpline.
- Metal Seals upto 200 mm in 24 hrs.



LARGE DIA SEALS

- Mfg. seals upto 4000 mm. in various elastomer compounds.
- Services to MRO & OEM Mfg.
- Large size dia making on VTL.
- High tonnage presses.
- Large size metal & rubber moulding.



Tech. Support

- Reverse Engineering.
- Indigenization & Import substitution.
- Endurance testing.
- Polymer & Compound testing.

PROVIDING SEALING SOLUTIONS



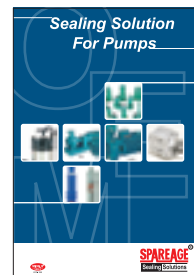
Steel Mill



Oil & Gas



Food & Pharma



Pump & Motor



Forging Presses



Cement



Wind Mill



SPM & Engineering

Segments -

- Automobile Industry
- Aluminium Industry
- Cement Industry
- Chemicals & Fertilizers
- Earth Moving Equipment
- Engineering & Fabrication
- Food & Pharma
- Presses
- Hydraulic Cylinder Mfg.
- Oil & Gas
- Pulp & Paper Mills
- Pharmaceutical
- Pneumatic Cylinder Mfg.
- Power Plant
- Press
- Pump & Motor
- SPM & Engineering
- Steel Mills
- Sugar Mills
- Textile
- Tyre Industry
- Valve Mfg.
- Wind Mills

