

**LIQUITECH™**  
**SEALS**

Mfg. of Mechanical Shaft Seal & Components



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## CONICAL SPRING UNBALANCED SEAL



The LTS61U series seal are extremely rugged & reliable & therefore used in wide range of sealing applications. These Seals have very few parts & hence can be easily assembled or dismantled.

### Applications :

Generally used for handling corrosive chemicals, hydrocarbons, general & light chemicals

### Materials

Seal Faces : Sic/carbon/TC Vs Ceramic/Sic./TC

Secondary Seals : Viton/PTFE/GFT

Metal Components : SS-316

### Operating Limits :

Shaft Dia.

Pressure : 10 to 100mm

Temp. : up to 10 Bars

Speed : -50 to 180°C

: up to 25 m/s

## SINGLE COIL SPRING UNBALANCED SEAL



TYPE LS13 : are single coil unbalanced seals, these seals are simple in design & reliable & rugged enough for the most difficult applications. In LS13 'V' packing used as Secondary seals respectively. Special notches enhance the required driving torque & hence the seal is Independent of direction of rotation.

### Applications :

Generally used in refineries, fertilizers, nuclear plants & petroleum pipelines.

### Materials

Seal Faces : Carbon/TC/Sic. Vs Ceramic/RB Sic./Tc

Secondary Seals : Viton/PTFE/GFT

Metal Components : SS-316

### Operating Limits :

Shaft Dia. : 25 to 150mm

Pressure : up to 10 Bars

Temp. : -50 to 280°C

Speed : up to 15 m/s

## MULTI SPRING UNBALANCED SEAL



TYPE LTS81U : are general-purpose multi spring unbalanced seals. Designated as LTS81B for the unbalanced Versions with 'O' Ring & PTFE wedge respectively. Shaft fretting is minimized due to lower spring loads provided through wedge or 'O' Rings, occupies less stuffing box area due to its narrow cross-section & compact design.

### Applications :

Generally used in Petrochemicals, Light Hydrocarbons & General Industrial Fluids.

### Materials

Seal Faces : Carbon vs Ceramic/Sic./TC

Secondary Seals : Viton/PTFE/GFT

Metal Components : SS-316

### Operating Limits :

Shaft Dia. : 14 to 150mm

Pressure : up to 10 Bars

Temp. : -50 to 280°C

Speed : up to 25 m/s

## MULTI SPRING BALANCED SEAL



TYPE LTS81B : are pushers type balanced multi spring seals generally used where high-pressure sealing is required. Due to its compact radial & axial dimensions these seals required lower stuffing box space for installation. These seals can be provided with single, double or tandem arrangement with external seal support systems & devices.

### Applications :

Generally used in Petrochemicals, Petroleum refinery, Light Hydrocarbons & General Industrial fluids.

### Materials

Seal Faces : Carbon vs Ceramic/Sic./TC

Secondary Seals : Viton/PTFE/GFT

Metal Components : SS-316

### Operating Limits :

Shaft Dia. : 14 to 150mm

Pressure : up to 30 Bars

Temp. : -50 to 280°C

Speed : up to 25 m/s

## TEFLON BELLOW SEAL



TYPE LTS-TF51 : are Teflon Bellow seals designed to handle highly corrosive liquids. These seals are outside mounted with simple installation procedure and hence cost effective for corrosive media sealing. Type LTS-TF51 & LTS-TF52 designated as Fixed & replaceable bellow face respectively.

### Applications :

Used in acids, alkalis & extremely corrosive services.

### Materials

Seal Faces : GFT/Sic./Carbon vs Ceramic/Sic.

Secondary Seals : PTFE

Metal Components : SS-316/Hast-C

### Operating Limits :

Shaft Dia. : 18 to 100mm

Pressure : up to 5 Bars

Temp. : -20 to 80°C

Speed : up to 25 m/s



## WELDED ENDS METAL BELLOW SEAL



TYPE LTS-MT41GB : is Inherently balanced metal bellow seal. This seals are independent of direction of rotation. The unique feature of this type of seal is that, there is no dynamic 'O' rings and therefore it will never hangup or damage the shaft and sleeve.

### Applications :

Generally used in for handling highly corrosive chemicals, high Temperature applications, etc.

### Materials

Seal Faces : Carbon/TC/ Vs Sic./Tc  
Secondary Seals : Viton/PTFE/  
GFT/Graphite  
Metal Components : SS-316

### Bellow Material :

Hast-alloy-C  
AM305  
Alloy C 276  
Alloy 20  
Inconel 625

### Operating Limits :

Shaft Dia. : 19 to 100mm  
Pressure : up to 15 Bars  
Temp. : -50 to 350°C  
Speed : up to 25 m/s

## CARTRIDGE SEAL



LTS-31SC Cartridge seals are self-contained units consisting of a shaft sleeve, seal, and gland plate. The unit is fitted onto the pump shaft as a built assembly, and no further fitting is required. Cartridge seals are an attempt to over-come the fitting problems of conventional seals. They are supplied in single and double form, and the gland plate is often fitted with various tappings to provide for flushing, cooling water injection, and disaster control.

### Materials

Seal Faces : Ceramic / Sic/Carbon Vs Ceramic / RB Sic./TC  
Secondary Seals : Viton/PTFE/GFT  
Metal Components : SS-316

### Operating Limits :

Shaft Dia. : 25 to 150mm  
Pressure : up to 15 Bars  
Temp. : -50 to 180°C  
Speed : up to 25 m/s

## DRY RUNNING AGITATOR SEAL



TYPE LTS-21DR : seals are outside mounted balanced seal, which require no shaft or sleeve step for balancing LS102 seal shows good performance in high vacuum conditions. Since no auxiliary equipments are needed for installation, it is very cost effective & economical.

### Applications :

Used in top entry mixer vessels in pharmaceuticals & chemical industries.

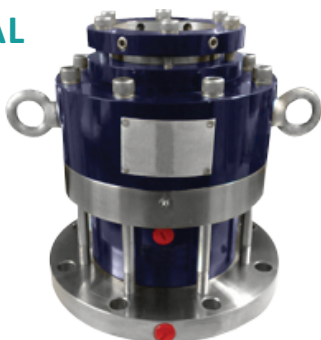
### Features

- Simple, rugged drive design that withstands shaft movement vibration & deflection.
- Seal design eliminates the need of auxiliary equipments for cooling & lubricants for mixer application.

### Operating Limits :

Shaft Dia. : 25 to 100mm  
Pressure : up to 1.40 MPa  
Temp. : -10 to 150°C  
Speed : up to 1 m/s

## TOP ENTRY AGITATOR SEAL



TYPE LS101 : is a top entry agitator double mechanical seal designed for medium to high-pressure applications. These seal are successfully used for many years in all kinds of mixers, reactors, driers & mills in the Pharmaceuticals, Paints, Pulp & Plastic industries.

### Applications :

Used in Pulper, Plastics & Pharmaceuticals industries

### Materials

Seal Faces : Carbon/Sic./TC Vs Ceramic/Sic/TC  
Secondary Seals : Nitrile/Neoprene/Viton/PTFE  
Metal Components : SS-316

### Operating Limits :

Shaft Dia. : 40 to 200mm  
Pressure : up to 60 Bars  
Temp. : -20 to 200°C  
Speed : up to 25 m/s

## GRUNDFOS PUMP SEAL



LTS-12GS Grundfos pumps seals are very easy to replace and gives maximum reliability. It is durable and made from hardwearing material which prevent the downtime and prolong the lifetime of the seal. All axial movement has been eliminated, preventing wear of the shaft and the rubber parts. There is no special tool required to replace the seal or dismantling the pump.

### Features :

It gives long and reliable seal life. Easy to install without any tool.

### Materials

Seal Faces : Carbon / SiC  
Secondary Seals : PTFE / EPDM / Nitrile / Neoprene /  
Silicon / FKM  
Metal Components : SS 304 / SS 316

### Operating Limits :

Pressure : Upto 20 kg/cm<sup>2</sup>  
Temp. : -200 to 180°C  
Speed : -3000 RPM





## GENERAL PURPOSE RUBBER BELLOW SEAL



Most commonly used rubber bellow seal, Due to its compact design it can be easily mounted. This has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentricity of the shaft & misalignment & wear due to thrust movement of the shaft.

### Applications :

Generally used in sewage applications, waste water pumps & fuel injection pumps.

### Materials

Seal Faces : Carbon Vs Ceramic / Sic./TC  
Secondary Seals : Nitrile / Neoprene / Viton  
Metal Components : SS-304

### Operating Limits :

Shaft Dia. : 10 to 100mm  
Pressure : up to 10 Bars  
Temp. : -20 to 150°C  
Speed : up to 25 m/s

## SINGLE COIL SPRING ELASTOMER BELLOW SEAL



This has been designed for general sealing purpose which includes easy installation of the seal. This has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentricity of the shaft & misalignment & wear due to thrust movement of the shaft.

### Applications :

Generally used in hot & cold-water pumps, Oil pumps, refrigeration compressor & fuel injection pumps.

### Materials

Seal Faces : Carbon Vs Ceramic/Sic./TC  
Secondary Seals : Nitrile / Neoprene/Viton  
Metal Components : SS-304

### Operating Limits :

Shaft Dia. : 10 to 100mm  
Pressure : up to 10 Bars  
Temp. : -20 to 180°C  
Speed : up to 25 m/s

## ROTARY JOINTS



The Series LTSRJ96 rotary joint can be used in a wide variety of settings, from low speed to high speed and from low pressure to high pressure. Using a special seal, this rotary joint is manufactured to be suitable for use in a wide range of industries.

### Features :

The housing made with G.M. / Brass, the rest of metallic components are made with S.S.

### Materials

Seal Faces : Tungsten Carbide,  
Silicon Carbide, Carbon  
Secondary Seals : Viton, Nitrile, PTFE,  
Silicon, Kalrez

### Pressure (Max) :

Size : 1/2" - 3/4" - 1440 RPM  
Size : 1" - 2" - 1000 RPM

### Temperature (max) :

Water : 950C  
Thermic Fluid : 2500C  
Steam : 1500C

## Rubber Diaphragm Seal



Type LTS-01DF Seal has been designed for most general application in textile Industries for used to yarn , fibre dyeing plants, cloth dyeing application plants, & high speed jet dyeing plants. Specially designed LTS-01DF type seal used for diaphragm elastomer to normal pressure machine like a mercerizing machine & Pretreatment machine.

### Materials

Seal Faces : Carbon / TC / SiC  
Secondary Seals : PDM / Nitrile / Neoprene / Silicon / FKM  
Metal Components : SS 304 / SS 316

### Operating Limits :

Pressure : Upto 15kg/cm<sup>2</sup>  
Temp. : -200 to 160° C  
Speed : 3000 RPM

