



Plunger Pump Packing  
Valve Insert Seal  
Hammer Union Seal  
Swivel Joint Ball Plug  
Oil Scraper Ring



**Well Service Equipment Seals**

Guangzhou JST Seals Technology Co., Ltd.

## Company Profile

JST has a complete technical system, including material formulation laboratory, comprehensive performance laboratory For high & low temperature and high Pressure products, - 196 °C cryogenic temperature laboratory, equipped with high and low temperature tensile testing Machine , material abrasion testing machine, material immersion testing machine, low temperature retraction testing machine, DSC vulcanization tester, carbon black dispersion analyzer , creep tester, finite element analysis (FEA) , and in combination with the company's PLM system, it can make deeper researches on elastomer materials, polymer composites and product performance.



We have elastomer seal production workshop, polymer seal production workshop, class 10,000 clean room, and tooling processing workshop.

JST's products and services cover oil & gas drilling, chemicals, semiconductor, new energy, construction machinery, LNG, aerospace, nuclear & wind power, medical equipment and other industries, and meet the complex and harsh working conditions and technical requirements of various industries with its strength.



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## Plunger Pump Packing

In order to eliminate extrusion and provide excellent wear resistance for fracturing, acidizing and cementing pumps, JST has developed high performance well service pump packings; It provides maximum sealing for high-pressure oil well service pump.

JST manufactures well service plunger pump packings in a wide variety of materials to suit specific well conditions and operating parameters, they are available in a wide range of elastomeric materials and high performance resins, including NBR, HNBR, FKM, filled PTFE, fabric reinforced rubber. To suit specific well conditions, operating parameters, and fracturing fluids.

### Main applications:

Used in various fracturing and cementing applications.

Used where high pressure, chemical fracturing and carbon dioxide are present.

Used for extreme performance under high pressure and where abrasive proppant is required.

They are manufactured with superior quality and workmanship to provide exceptional sealing. JST produces complete packing assemblies: header ring, pressure ring and female adapters, as well as custom machined lantern rings and spacers.



### Advantages:

- ◆ More cost-effective
- ◆ Suitable for various well conditions
- ◆ Standard and custom sizes are available
- ◆ Longevity of service life

### Working Conditions

Temperature range	Pressure	Medium
-46°C ~ +165°C	≤ 20,000 PSI	Mud, acid liquid, emulsion, hydraulic oil

### Size:

2" ~ 5"

Other size can be customized

The JST **valve insert seal** is mainly used for sealing valve seat of fracturing pump. It is made of modified polyurethane material of excellent extrusion resistance, puncture resistance and fatigue resistance, which guarantees the fracturing work under various working conditions.

Valve insert has the properties of damage and extrusion resistance. It has good compatibility with various fluids in industry, especially some harsh substances, such as H<sub>2</sub>S. Because of its ability to resist acid gas, it has become a high-quality sealing material in industry.

JST valve insert is also widely used in cementing trucks, plunger pumps, mud pumps in oil fields. JST offers the best quality and price.

The valve assembly is composed of valve disc, valve cover, valve seat, guide claw, nut, etc. the valve is sealed and buffered by the valve insert.



### Advantages:

- ◆ Good oil resistance, corrosion resistance, wear resistance, and high elasticity
- ◆ Suitable for high sand volume, high pressure fracturing work
- ◆ Fracturing life:  $\geq 15$  stages (80~100MPa)

Working Conditions		
Temperature range	Pressure	Medium
-35°C ~ +100°C	$\leq 25,000$ PSI	Mud, acid liquid, emulsion, hydraulic oil

### Size:

2" ~ 5"

Other size can be customized



## Hammer Union Seal

The **hammer union seal** is used for one-way/high-pressure/static sealing. It is used for working conditions with pressure outside. It is widely used in various static sealing and slow speed east sealing occasions.

Hammer union seals help to prevent leakage in hammer union pipe connections and are generally applied in applications within the Chemical Processing, Offshore Drilling, Petrochemical, and Water and Gas industries.

JST's hydraulic hammer union seals have a variety of configurations and materials to choose from, including NBR, HNBR and Viton. For cold weather applications we offer both a low temperature rated (-50°C to +120°C) NBR and HNBR elastomers.

In addition to standard molded rubber seals, the brass or stainless steel anti-extrusion ring can also reinforce hammer union seals. It can fully meet the specific performance requirements of your demanding operating environment.



### Advantages:

- ◆ Good oil resistance, corrosion resistance, wear resistance and aging resistance
- ◆ A range of elastomer hardnesses from 70 to 90 durometer
- ◆ Widely used in cementing, fracturing, acidizing, testing, and choke-and-kill lines

Working Conditions		
Temperature range	Pressure	Medium
-46°C ~ +180°C	≤ 33,000 PSI	Drilling fluid, acidizing fluid, fracturing fluid, 15% hydrochloric acid

### Size:

1" ~ 5"

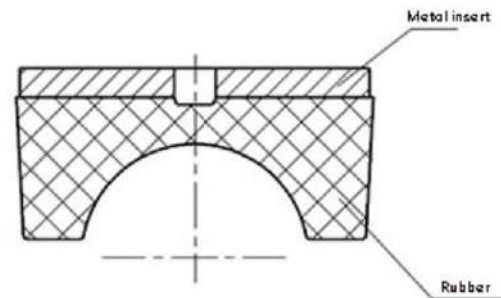
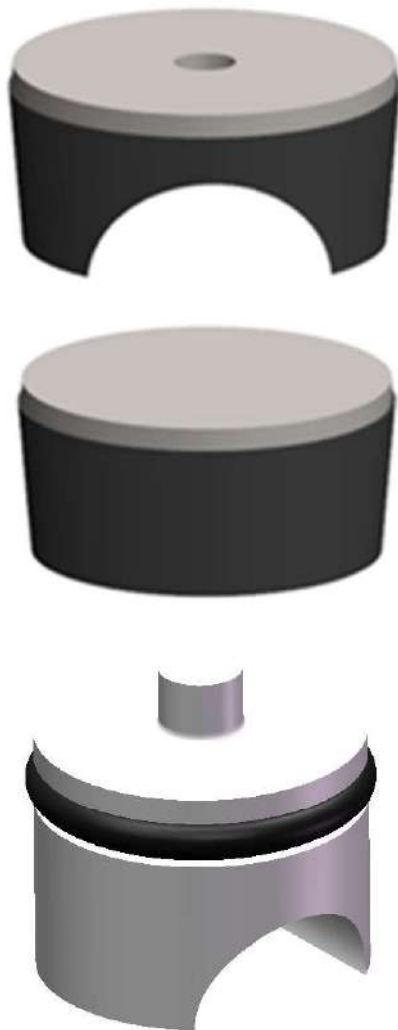
Other size can be customized

## Swivel Joint Ball Plug

**Swivel joint ball plug** is working together with hammer union seals, to seal the balls of high pressure elbows and grease.

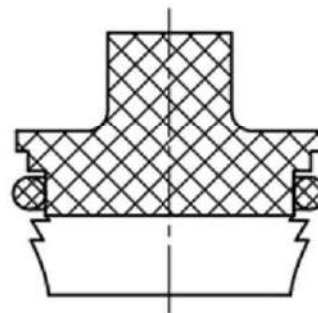
The ball plug can ensure that the movable elbow has good rotation performance and impact resistance, avoid rigid connection, reduce the auxiliary weight of the joint and prolong the service life of the rotary joint.

JST produces swivel joint ball plug with PA66 material or stainless steel.



### Advantages:

- ◆ Easy to install and disassemble
- ◆ Good resistance to chemicals and grease
- ◆ Work together with hammer union seals on high pressure elbows



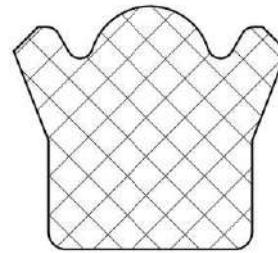
### Working Conditions

Temperature range	Pressure	Medium
-46°C ~ +160°C	≤ 13,000 PSI	Grease, lubricating oil

## Oil Scraper Ring

The **oil scraper ring** is a part located at the rear of the packing seal. Its main function is to scrap excess lubricating oil on the piston rod to prevent the lubricating oil seeping out from the gland or causing other failures with the rapid movement of the piston rod.

It ensures effective lubrication and cooling of the Plunger Pump Packaging.



### Advantages:

- ◆ Excellent sealing performance
- ◆ High wear resistance
- ◆ Good resistance to chemicals and grease.
- ◆ Work together with Plunger Pump Packing

Working Conditions		
Temperature range	Pressure	Medium
-46°C ~ +160°C	≤13,000 PSI	Grease, lubricating oil

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