

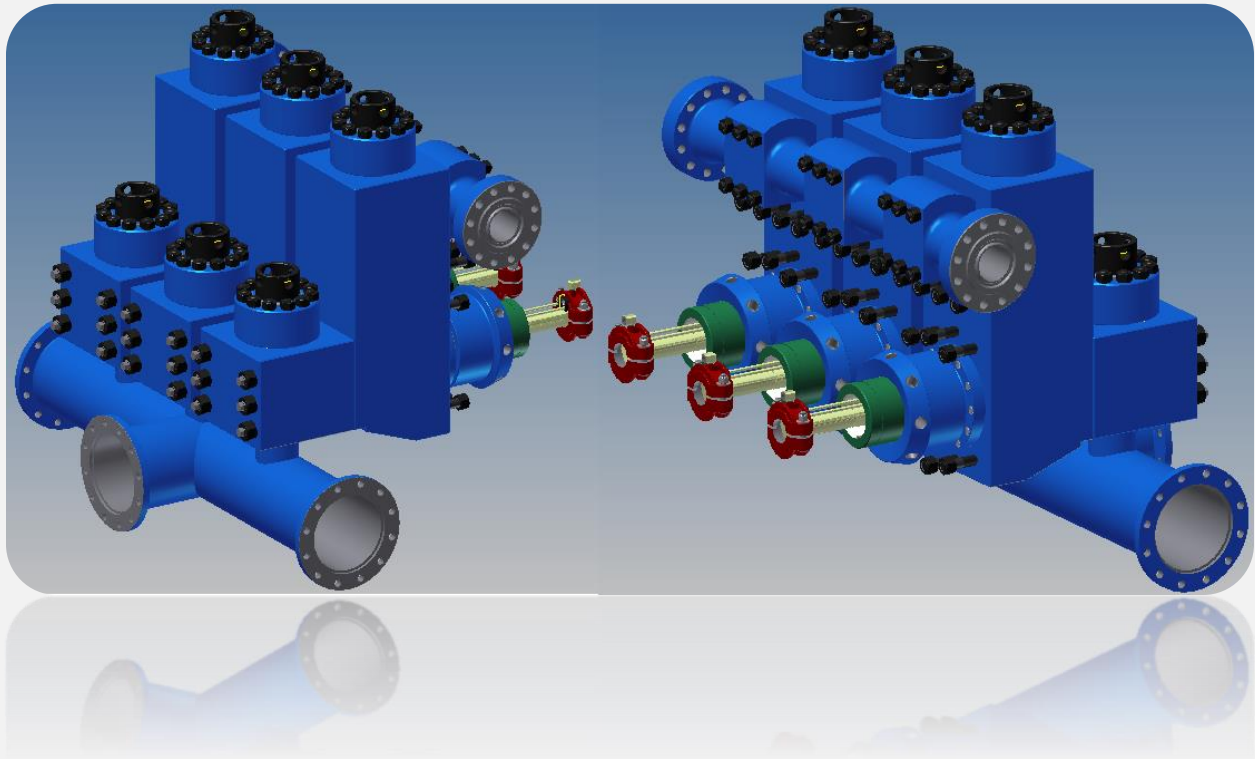


**Boss Oilwell Products & Manufacturing offers a complete line of oilfield mud pump parts,**

***-----The ultimate parts solution for onshore & offshore mud pumps-----***

At BOPM, we constantly maintain 5 million worth of mud pump parts on the shelf at our Houston warehouse location. It includes modules, liners, extension rods, piston rods, pistons, threaded rings, caps, valve covers, valve guides, valves, seats etc. for all major brands of pumps: Gardner Denver®, Ideco®, Emsco®, National®, Oilwell®, Skytop Brewster®, Lanshi(3NB1300C)®, Bomco®, HH®.

- **Mud Pump Fluid End Module(7500psi fluid ends are available)**
- **High Chrome Sleeve Liner**
- **Zirconia Liner**
- **US-made Valves and Seats (urethane, rubber & HTHP Urethane)**
- **Piston Rods and Extension Rods**
- **US-MADE Pistons (urethane, rubber & high temp. Urethane)**
- **Other Accessories**



***-----Performance Matter, Service Count-----***

## COMPLETE “L” SHAPE 7500 PSI FLUID-END UPGRADES

### The High-Performance L-Shaped Fluid-End benefits:

- Two-piece L-shaped fluid-ends superior design and performance has become industry standard for 7500psi fluid end.
- The L-shaped two-piece fluid-end was designed and developed to improve over one piece modules.
- Due to discharge & suction module is separate; it is possible to replace one module instead of the whole fluid end.
- Replacing valves on a two piece module is much easier, safer and faster than on a one piece module.
- L-shaped fluid-end is manufactured from high-strength forgings and equipped with quick-change valve cover system



### 7500 P.S.I. Fluid-End Upgrade assembly

In addition to replacing the existing valve-over-valve module with our proven L-Shaped design, a typical conversion also includes an upgraded liner retainer system, discharge strainer Cross, high-pressure discharge manifold and 7500 psi pulsation dampener.

#### Available 7500 P.S.I. Models include:

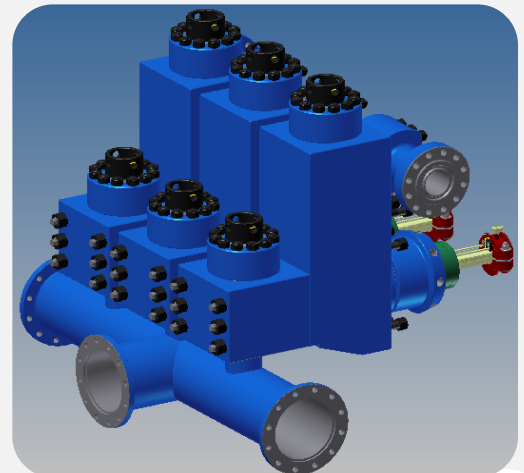
- EMSCO®FB1600
- GARDNER DENVER® PZ11
- BOMCO®F1600
- HH®F1600
- Weatherford ® F1600

#### OEM One-piece Style Fluid-End Disadvantages

- More expensive to maintain
- When wear occurs, entire fluid-end must be replaced
- Difficult to change valves
- Stress point analysis reveals design is susceptible to cracking
- Must remove lower valve guide to change valve

#### “L” shape two-piece Fluid-End Advantages

- Less expensive and easier to maintain
- More metal to support internal pressures
- Designed to run with liner wear plates
- No Lower valve guide needed
- Only module that offers a 4 year warranty against cracking
- Comes with HP Quick-Change Valve Cover assemble



-----*Performance Matter, Service Count*-----

## FLUID-END MODULES & REPLACEMENT PARTS

BOPM offers a complete line of interchangeable fluid end modules and accessories for triplex mud pumps, such as National, Emsco, Gardner Denver, Bomco, Ideco and Oilwell. We offer both standard OEM style replacement parts and Two piece "L" Shaped fluid ends.

Our high-strength, triple reduction, forged steel triplex fluid end modules are made from highest alloy steel. Heat treated for long working life, they are machined to perfection and packaged for delivery with anticorrosion protection. The precisely made jewelry-like exterior finish reflects our superior quality.

### FEATURES

- Completely interchangeable with OEM
- Premium forged alloy steel
- Made on CNC boring mills
- Rig Inspection
- Strict computer controlled heat treatment procedures
- Rated for all drilling operations up to 7500psi.



-----*Performance Matter, Service Count*-----

## RODS AND CLAMPS

BOPM piston rods are made with premium grade, heat treated alloy steel. The rods offer excellent resistance to fatigue, corrosion and heavy loads. A full line of piston rods are available for various pumps.

BOPM extension rods are made from high strength alloy steel, and are either heat treated or chrome plated. The rod offers excellent resistance to fatigue, corrosion and heavy loads. BOPM extension rods are machined and polished to ensure a perfect seal to protect the mud pump gear end.

### FEATURES

- Fabricated with high quality alloy steel
- Numerically controlled machining
- Long-lasting service life
- Clamped and threaded.



## POWER END PARTS

BOPM offers a complete line of interchangeable gear set and accessories for triplex mud pumps, such as Emsco, Gardner Denver, National, Bomco.

All of our gear set adopt high-end carburization heat treatment and precise grinding machining to offer unparalleled durability; first we use high strength alloy steel, then adopt the Carburization heat treatment to enhance the hardness and wearability, finally adopt the grinding fine machining to ensure the smooth gear teeth surface; Resulting in consistent and rugged performance throughout pump operation.

### FEATURES

- Completely interchangeable with OEM
- Premium High-strength Alloy steel forging
- High-end Carburization heat treatment to significantly enhance the hardness and durability
- Precise Grinding machining ensure perfectly smooth gear teeth surface for smooth pump operation



-----*Performance Matter, Service Count*-----

## HIGH-PERFORMANCE LINERS

### High Chrome Sleeve Liner

BOPM high-Chrome sleeve liners meet the highest quality standards. The outer hull of the liner is manufactured using high-strength forging, with molybdenum added to increase hardness.

BOPM zirconia liners offer lifetime cost savings, significantly longer service, better performance and safer operation than these made of more commonly used alumina ceramic.

### FEATURES

- Rated for all drilling operations up to 7,500psi
- Bore hardness is 62-69 Rockwell
- "HP" lip design to prevent inner sleeve slippage
- Extremely long service life.
- Zirconia exhibits better impact strength
- Zirconia is harder than alumina. Hardness is HV 0.3 kg/mm - 1100/1200 (92-94Rc)
- Zirconia can be honed to finer surfaces than alumina
- Three to four times finer than alumina.



-----*Performance Matter, Service Count*-----



## US-MADE HIGH PERFORMANCE PISTONS

**BOPM Bull Nose Style urethane pistons** designed to meet pressures of 7500 psi and temperature up to 220 degrees F, The solid lip “Bullnose” designed piston head is composed of two different durometer urethane compounds bonded together for superior performance.

### FEATURES

- Rated for 7,500psi High Pressure operations
- Maximum operating temperature is 220 °F
- Designed for High pressure, abrasion, heat and extrusion service
- Multi-durometer bonded urethane allows for longer piston life
- “Bull nose” lip design seals for less ‘squirt’ which reduces flush system contamination



**BOPM bonded urethane pistons** are constructed of urethane, bonded to a steel hub. The double durometer urethane is designed to provide optimal performance in oil or water based mud and high drilling pressures.

### FEATURES

- Rated for 7,500psi High Pressure operations
- Maximum operating temperature is 175 °F
- High pressure and High Temp. service
- Double-durometer bonded urethane allows for longer piston life



**BOPM HTHP bonded urethane piston** is engineered for high temperature & high Temperature service and other demanding drilling conditions

### FEATURES

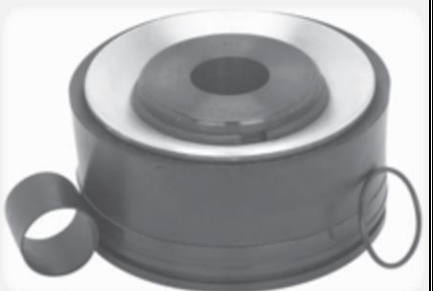
- Rated for 7,500psi High Pressure operations
- Maximum operating temperature is 325 °F
- Multi-durometer bonded urethane allows for longer piston life
- Designed to withstand extreme drilling conditions in all applications
- Our High Temp piston will perform in all types of drilling mud allowing it to be used at any point in the drilling process



**BOPM Replaceable Rubber Piston** is made with tough and durable Buna N rubber for all pressures, and is ideally suited for water-base mud. A special processing of the fabric provides an unusually waterproof bond of fabric to piston which assures longer life.

### FEATURES

- Maximum operating temperature is 250 °F
- Suitable for water and some synthetic-based drilling muds
- Available for single and double-acting pump designs
- Replaceable piston rubber reduces operating expense
- Synthetic fabric yields a stronger, denser and stiffer heel for superior performance



-----**Performance Matter, Service Count**-----

**BOPM Bonded Rubber Piston** is made with tough and durable Buna N rubber for all pressures, and is ideally suited for water-base mud. A special processing of the fabric provides an unusually waterproof bond of fabric to piston which assures longer life.

#### FEATURES

- Maximum operating temperature is 250 °F
- Suitable for all type of water-based drilling muds
- The piston is bonded to the hub for optimal strength and extrusion resistance.

#### US-MADE API VALVE AND SEATS

BOPM manufactures and supply a full range of full open, 3 web, 4 web and plate type design valves and seats available in API 4 thru 8 sizes to fit all major mud pumps and accommodate for all types of drilling conditions, mud properties and temperatures reaching up to 325°F.

#### FEATURES

- Maximum operating temperature is 325 °F
- Carburized premium alloy steel
- Precision machined to API standards
- Premium Urethane inserts.
- Easy insert replacement with minimum downtime
- Significantly extended service life.

#### US-MADE GASKETS, SEALS AND O-RINGS

BOPM offers an extensive range of rubber & elastomer products. Common offerings are urethane or rubber/fabric.

#### FEATURES

- Extension rod seals;
- Valve guide bushings;
- Manifold O-ring;
- Baffle splash guards;
- Valve cover & cylinder head seals;
- Liner gaskets, wear plate gaskets.



-----Performance Matter, Service Count-----