

Pistons

Premium's urethane bonded pistons are bonded in the U.S. with genuine U.S. made urethane compounds. Premium's replaceable rubber pistons are assembled with a premium quality U.S. made rubber kit. Our piston hubs are available in size of 4" to 8" in series of A, K, B and L for most duplex and triplex mud pumps.



Bonded Urethane Piston

These pistons are constructed of urethane, bonded to a solid metal hub. Double durometer urethane is designed to provide optimum performance in oil base or water base mud and high drilling pressures.

Features:

- Rated for all drilling operations
- Maximum operating temperature is 180°F
- High pressure mud pump service
- Extended service life

Bullnose Extreme Piston

Designed to perform in the harshest of drilling conditions, its oil-resistant high-temperature premium urethane homogenous compound has excellent abrasion resistance, low friction surface, and high tensile strengths. It is compatible with all applications and mud types and will withstand operating temperatures from -20°F up to 350°F with pressures up to 7500psi. Superior design and ultra-durable quality adds value through increased run times in extreme conditions, reduced maintenance, and reduced cost per pumping hour.

Features:

- Wide Temperature Range, -20°F to 350°F, 7500 psi.
- "Bull nose" lip design provides better sealing to reduce flush system contamination
- Fully compatible with all types of drilling and mud during any point of the drilling process

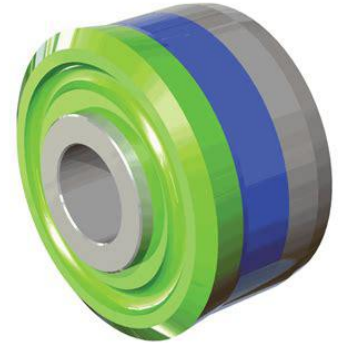
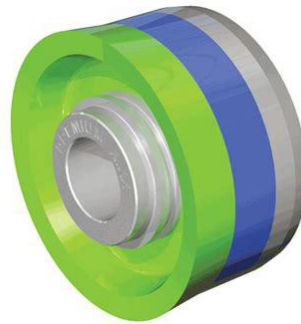
Replaceable Rubber Piston

Premium's replaceable rubber pistons are made with nitrile rubber to resist extrusion and abrasion. These pistons are fully interchangeable with most other manufactures products. Available sizes are from 3" through 7½" and series are A, B, K and L. If flange is not worn past these marks, rubber kit can be installed

Fabric anti-extrusion device reduces extrusion of the rubber even at maximum pressure rating

Features:

- High tensile strength
- Rated for all drilling operations
- Maximum operating temperature is 250°F
- Extended service life



Bullnose Piston

Manufactured from highly engineered premium urethane homogenous compound, Bull nose Piston outperforms all other polyurethane pistons on the today's market. The compound provides superior resistance to tear, abrasion, and extrusion, and is capable of operating in fluid temperature from -20°F up to 225°F. It is compatible with water, oil and synthetic designed piston head is composed of two different urethane compounds bonded together for superior performance.

Features:

- The piston body, while made of high strength alloy steel, is compatible with existing piston rods
- Resistant to high pressure, abrasion, heat and extrusion
- Averages 30%+ longer life than offer mud pump pistons
- Dual-durometer bonded urethane allows for longer piston life
- "Bull nose" lip design provides better sealing to reduce flush system contamination

Flex Lip Piston

Manufactured from highly engineered premium urethane homogenous compound, Flex Lip Piston outperforms all other polyurethane piston on the today's market. The compound provides superior resistance to tear, abrasion, and extrusion, and is capable of operating in fluid temperatures from -20°F. It is compatible with water, oil and synthetic based drilling fluids and delivers superior resistance.

Features :

- The piston body, while made of high strength alloy steel, is compatible with existing piston rods.
 - Resistance abrasion and chemical resistance urethane
- Excellent abrasion and chemical resistance urethane

Flex Lip EXTREME Piston

Designed to perform in the harshest of drilling conditions, its oil-resistance high-temperature premium urethane homogenous compound has excellent abrasion resistance, low friction surface, and high tensile strengths. It is compatible with all applications and mud types and will withstand operating temperatures from -20°F up to 350°F with pressure up to 7500 psi. Superior design and ultra-durable quality adds value through increase run times in extreme conditions, reduced maintenance, and reduced cost per pumping hour.

Features:

- Designed to withstand extreme drilling conditions in all applications
- Wide Temperature Range, -20°F to 350°F
- Excellent abrasion and chemical resistance urethane
- Fully compatible with all types of drilling and mud during any point of the drilling process

Premium's Pistons are replaceable to following brands pistons:

1. **National:** Mission White Lightning Bonded Piston, Mission Green Duo Piston, Blue Lightning Piston, Supreme Piston, Mission Slip Seal Bullitt Piston
2. **Weatherford**
3. **Southwest**
4. **Mud King**
5. **Texma**
6. **Baker**
7. **Premium Oilfield Technologies**
8. **Drillmec**
9. **Bomco**
10. **Honghua**

Piston Application

Excellent	Blue
Very Good	Green
Good	Yellow
Poor/NR	Red

FEATURES:	Blue Lightning	White Lightning	Green Duro	Supreme	Regular	Flex Lip
Abrasion Resistance	Blue	Blue	Blue	Green	Blue	Green
Tear Resistance	Blue	Blue	Blue	Green	Blue	Green
Resistance to Oil	Green	Green	Green	Green	Red	Green
Chemical Resistance	Green	Green	Green	Green	Red	Green
Resistance to Synthetic Oil	Green	Green	Green	Green	Red	Green
Temperature Resistance	Blue	Green	Yellow	Blue	Yellow	Green
Extrusion Resistance	Blue	Yellow	Green	Yellow	Yellow	Yellow
Use in Oil Base Muds	Blue	Blue	Blue	Green	Red	Green
Use in Synthetic Base Muds	Blue	Blue	Green	Yellow	Red	Yellow
Use in Water Based Mud >#10	Yellow	Yellow	Yellow	Green	Blue	Green
Use in Water Based Mud <#10	Red	Red	Red	Green	Blue	Green
Use in Water Based Mud >#11	Yellow	Yellow	Yellow	Green	Blue	Green
Use in Water Based Mud <#11	Red	Red	Red	Green	Blue	Green
Use in Clear Water	Red	Red	Red	Yellow	Blue	Yellow
Use in Salt Water	Red	Red	Red	Yellow	Blue	Yellow
Use in Low Solids	Blue	Blue	Blue	Green	Green	Green
Use in Moderate Solids	Blue	Green	Green	Green	Green	Green
Use in High Solids	Green	Yellow	Yellow	Yellow	Yellow	Red
Linear Wear Characteristics	Blue	Blue	Blue	Yellow	Yellow	Green
Use with Ceramic Liners	Blue	Green	Green	Green	Green	Yellow
Maximum Temperature (Flow Line) (°F)	200	200	180	225	180	210

Table: Piston Application