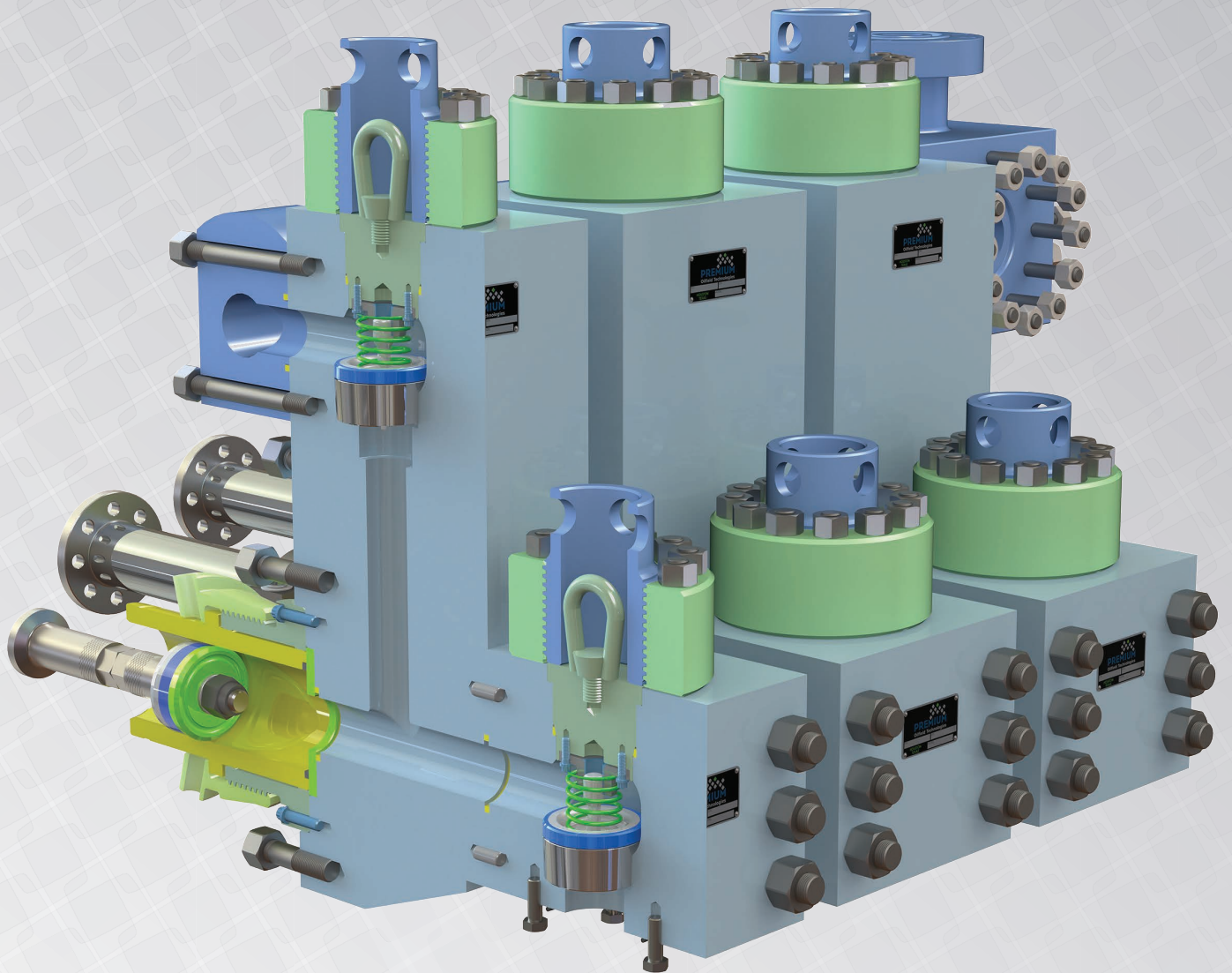


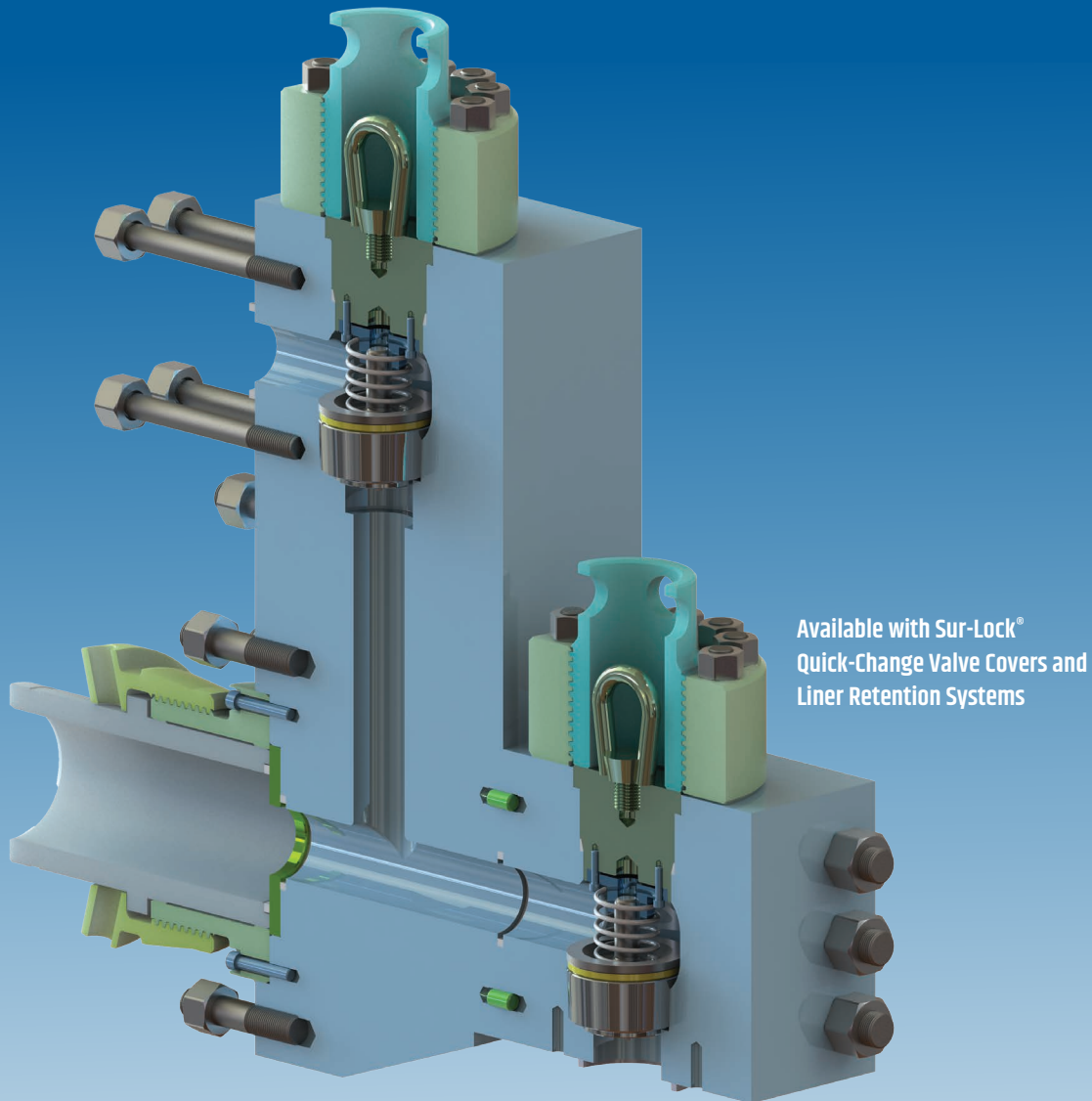
CALIBER[®]

F-7500




PREMIUM[®]
Oilfield Technologies

Premium Oilfield Technologies offers a complete line of fluid end modules and components that are manufactured to OEM specifications and interchangeability. We offer 7500 psi designs for all major pump configurations. **Our Caliber® modules start with high-tensile strength steel and are machined to precise engineering tolerances.** Each forging is machined and heat treated to maintain the best physical properties inside the module and on the surface, thus minimizing washing and stress cracking.



Available with Sur-Lock®
Quick-Change Valve Covers and
Liner Retention Systems

Caliber F-7500 2-Piece Design

F-1600 Compatible Fluid End Modules

The 2-piece 7500 psi fluid end module for the F-1600 pumps is based on industry-standard design and is 100% compatible with parts from the OEM and other manufacturers.

EXPENDABLES AND PERFORMANCE

| Size (inches) | Liners | | Liner Gaskets | |
|------------------|-------------------------|----------------------------|----------------|--------------|
| | Caliber® Steel Liner | Patriot™ Zirconia Liner | Nitrile Rubber | Urethane |
| 4" | 100-51C40-00 | 101-51Z40-00 | 202-50N50-00 | 202-50U50-00 |
| 4-1/2" | 100-51C44-00 | 101-51Z44-00 | 202-50N50-00 | 202-50U50-00 |
| 5" | 100-51C50-00 | 101-51Z50-00 | 202-50N50-00 | 202-50U50-00 |
| 5-1/2" | 100-51C54-00 | 101-51Z54-00 | 202-50N54-00 | 202-50U54-00 |
| 6" | 100-51C60-00 | 101-51Z60-00 | 202-50N60-00 | 202-50U60-00 |
| 6-1/2" | 100-51C64-00 | 101-51Z64-00 | 202-50N64-00 | 202-50U64-00 |
| 7" | 100-51C70-00 | 101-51Z70-00 | 202-50N70-00 | 202-50U70-00 |

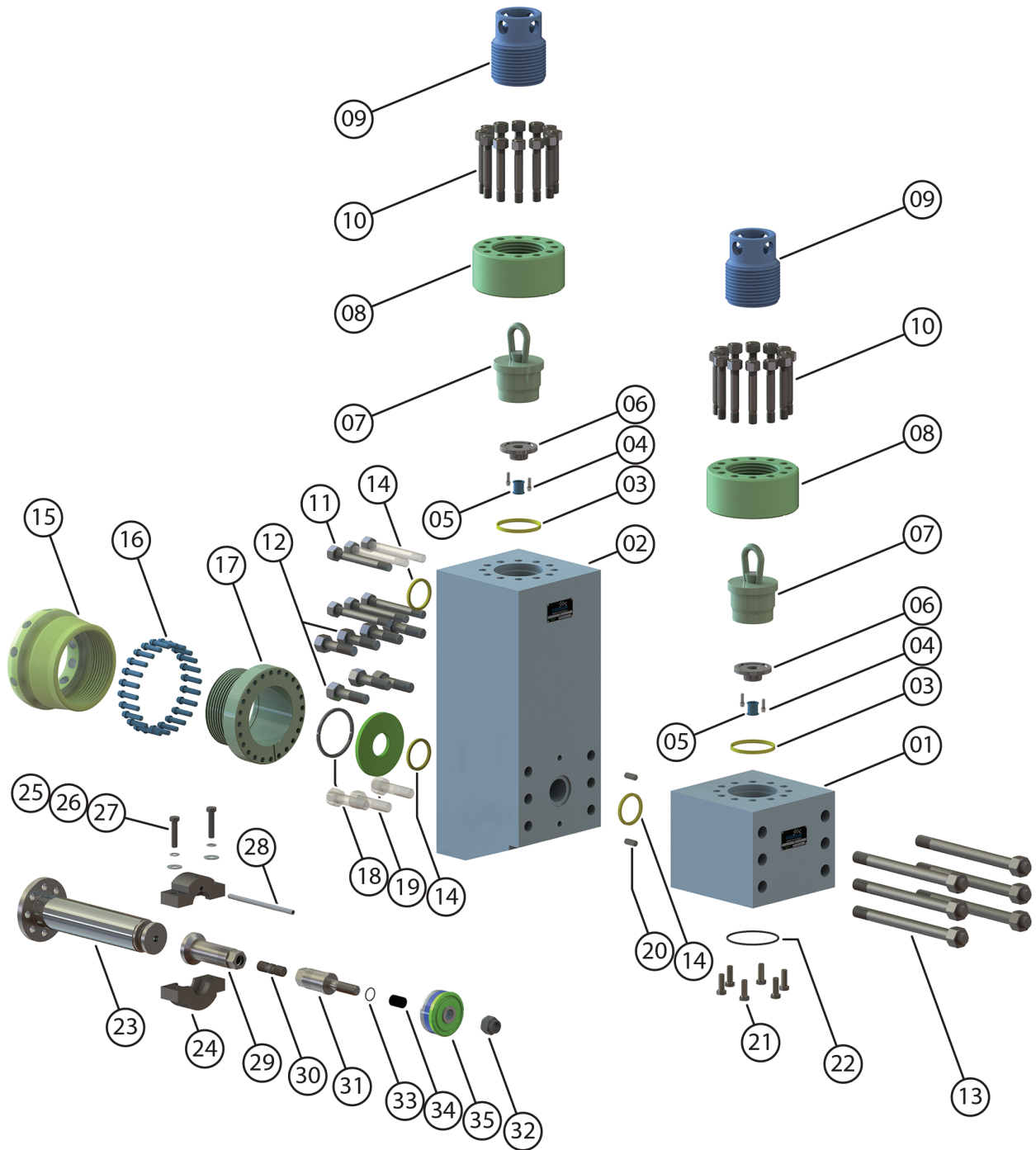
¼" sizes available on request

| 7,500 PSI Operating Pressure | | Strokes Per Min. | 120 | 110 | 100 | 90 | 80 | 70 | 60 | 50 | 40 |
|---------------------------------|---------------------------------|---------------------|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| 12" STROKE | | Input HP | 1600 | 1467 | 1333 | 1200 | 1067 | 933 | 800 | 667 | 533 |
| Piston Size | Discharge Pressure Rating | Output Gal/Rev | OUTPUT - Gallons Per Minute (L/min)* | | | | | | | | |
| 6-3/4" | 3,688 | 5.577 | 669 (2533) | 613 (2322) | 558 (2111) | 502 (1900) | 446 (1689) | 390 (1478) | 335 (1267) | 279 (1055) | 223 (844) |
| 6-1/2" | 3,977 | 5.171 | 621 (2349) | 569 (2153) | 517 (1957) | 465 (1762) | 414 (1566) | 362 (1370) | 310 (1174) | 259 (979) | 207 (783) |
| 6-1/4" | 4,302 | 4.781 | 574 (2172) | 526 (1991) | 478 (1810) | 430 (1629) | 383 (1448) | 335 (1267) | 287 (1086) | 239 (905) | 191 (724) |
| 6" | 4,668 | 4.406 | 529 (2001) | 485 (1835) | 441 (1668) | 397 (1501) | 353 (1334) | 308 (1167) | 264 (1001) | 220 (834) | 176 (667) |
| 5-3/4" | 5,082 | 4.047 | 486 (1838) | 445 (1685) | 405 (1532) | 364 (1379) | 324 (1225) | 283 (1072) | 243 (919) | 202 (766) | 162 (613) |
| 5-1/2" | 5,555 | 3.703 | 444 (1682) | 407 (1542) | 370 (1401) | 333 (1261) | 296 (1121) | 259 (981) | 222 (841) | 185 (701) | 148 (561) |
| 5-1/4" | 6,097 | 3.374 | 405 (1532) | 371 (1405) | 337 (1277) | 304 (1149) | 270 (1022) | 236 (894) | 202 (766) | 169 (638) | 135 (511) |
| 5" | 6,722 | 3.060 | 367 (1390) | 337 (1274) | 306 (1158) | 275 (1042) | 245 (927) | 214 (811) | 184 (695) | 153 (579) | 122 (463) |
| 4-3/4" | 7,448 | 2.762 | 331 (1254) | 304 (1150) | 276 (1045) | 249 (941) | 221 (836) | 193 (732) | 166 (627) | 138 (523) | 110 (418) |
| 4-1/2" | 7,500 | 2.479 | 297 (1126) | 273 (1032) | 248 (938) | 223 (844) | 198 (751) | 174 (657) | 149 (563) | 124 (469) | 99 (375) |
| 4-1/4" | 7,500 | 2.211 | 265 (1004) | 243 (920) | 221 (837) | 199 (753) | 177 (669) | 155 (586) | 133 (502) | 111 (418) | 88 (335) |
| 4" | 7,500 | 1.958 | 235 (890) | 215 (815) | 196 (741) | 176 (667) | 157 (593) | 137 (519) | 118 (445) | 98 (371) | 78 (297) |

Max PSI calculations do not exceed maximum fluid end pressure testing.

*Based on 100% volumetric efficiency and 90% mechanical efficiency

OEM STYLE MODULE COMPONENTS



MODULE COMPONENTS

| Item No. | Part Number | OEM Part Number | Part Description | Torque Ft. Lbs. | Qty. Per Pump |
|----------|----------------|-----------------|--|-----------------|---------------|
| | 140-24S75-00 | | Fluid End Assembly (3- Module Assemblies, 1- Discharge Manifold, Studs, Nuts, and Gaskets) | | 1 |
| | 142-24S75-00 | 8404-25A | Module Assembly, Complete with Accessories (complete with 1-17 and 19-21) | | 3 |
| 1 | 144-24S75-00 | 8404-26 | Module, Suction (studded only) | | 3 |
| 2 | 145-24S75-00 | 8404-27 | Module, Discharge (studded only) | | 3 |
| 3 | 204-01U15-00 | P115 | Seal, Valve Cover - Urethane (available in NBR) | | 6 |
| 4 | 170-04B13-06 | 4018-18 | Capscrew, Valve Guide - 1/2-13 X 1-1/2 12PT ASTM 193 B16 | 80 | 12 |
| 5 | 206-44U07-00 | 47001U | Bushing, Valve Guide - Urethane (available in NBR) | | 6 |
| 6 | 154-51S75-00 | 4788-25R | Valve Guide with Bushing (complete with 5) | | 6 |
| 7 | 153-51S75-00 | 4690-25A | Plug, Valve Cover (complete with 4,5, and 6) | | 6 |
| 8 | 151-51S75-00 | 4488-25 | Valve Cover Flange/Threaded Ring | | 6 |
| 9 | 152-51S75-00 | 4588-25 | Screw Gland | | 6 |
| 10 | 170-12A07-06S | 4015-2 | Stud- 1-1/4 - 7 X 9-1/2 B7, Valve Cover with Hvy Hex Nut 170-12A07-00 | 970 | 72 |
| 11 | 170-12A07-15S | 4019-60 | Stud, 1-1/4 - 7 X 12.25 B7, Discharge Manifold with Hvy Hex Nut 170-12A07-00 | 1098 | 18 |
| 12 | 170-14A08-15S | 4017-33 | Stud, 1-1/2-8 X 7-1/2 B7, Power End with Hvy Hex Nut 170-14A08-00 | 875 | 30 |
| 13 | 170-16A08-15S | 4019-61 | Stud, 1-3/4-8 X 22 1/2 B7, Suction Module with Hvy Hex Nut 170-16A08-00 | 3299 | 18 |
| 14 | 202-00U88-00 | 2988 | Seal, Module/Wear Plate - Urethane (available in NBR) | | 3 |
| 15 | 182-51S00-00 | 6590-25 | Nut, Liner Retainer Flange/Bushing | | 3 |
| 16 | 170-06B10-09 | 4019-51 | Capscrew, Liner Retainer - 3/4-10 X 3-1/2 12PT ASTM 193 B16 | 282 | 72 |
| 17 | 181-11S00-00 | 6490-25 | Liner Retainer Flange/Bushing | | 3 |
| 18 | See Chart pg 4 | 2930-XX | Gasket, Liner | | 3 |
| 19 | 183-11S75-SS | 8490-28 | Wear Plate - Stainless Steel (available in carbon steel) | | 3 |
| 20 | 170-07A09-05 | 8488-5 | Dowel Pin | | 6 |
| 21 | 170-07B09-06 | 4018-19 | Capscrew, Suction Manifold - 7/8-9 X 2-1/2 Hvy Hex Head SAE J429 | 292 | 18 |
| 22 | 200-04N42-00 | 568-442 | O-Ring, Suction Manifold | | 3 |
| 23 | 16-0145-P | 1200G74 | Crosshead Extension/Pony Rod | | 3 |
| 24 | 132-12C00-00 | 6274CWY | Rod Clamp, includes 25, 26, 27 | | 3 |
| 25 | 202-1701 | 4020-29 | Capscrew, Rod Clamp - 7/8-9 X 3-1/2 Hvy Hex Head Grade 8 Zinc Plated | 455 | 6 |
| 26 | 208-008-ZP | LW875 | 7/8 Lock Washer | | 6 |
| 27 | 207-008-ZP | N/A | 7/8 Flat Washer | | 6 |
| 28 | 1200120 | 1286CWYFP | Water Spray Pipe | | 3 |
| 29 | 131-12S00-00 | 6284-1 | Sub Rod | | 3 |
| 30 | 170-14A06-06 | 1290-2 | Connecting Stud, Sub and Piston Rod | 2025 | 3 |
| 31 | 130-12S14-00 | 6278-25 | Piston Rod with Nut (complete with 32) | | 3 |
| 32 | 170-14A06-01 | API-4ESN | Nut, Piston Rod | | 3 |
| 33 | 301-0006 | 568-225 | O-Ring, Piston Rod Seal | | 3 |
| 34 | 1.5-1.625-P | 2932 | Bushing, Piston | | 3 |
| 35 | see insert | XX-BYY | Piston | | 3 |

Recommended torque type expressed in foot-pounds with use of moly grease

QUICK CHANGE DRILLING TECHNOLOGIES

Sur-Lock® Valve Cover

Save time and **eliminate the unsafe practices of using cheater pipes and sledge hammers** to tighten and loosen valve covers. In current practice, one rig hand will hold a pipe in the valve cover holes and another will swing a large sledge hammer at the pipe in order to loosen or tighten the assembly.

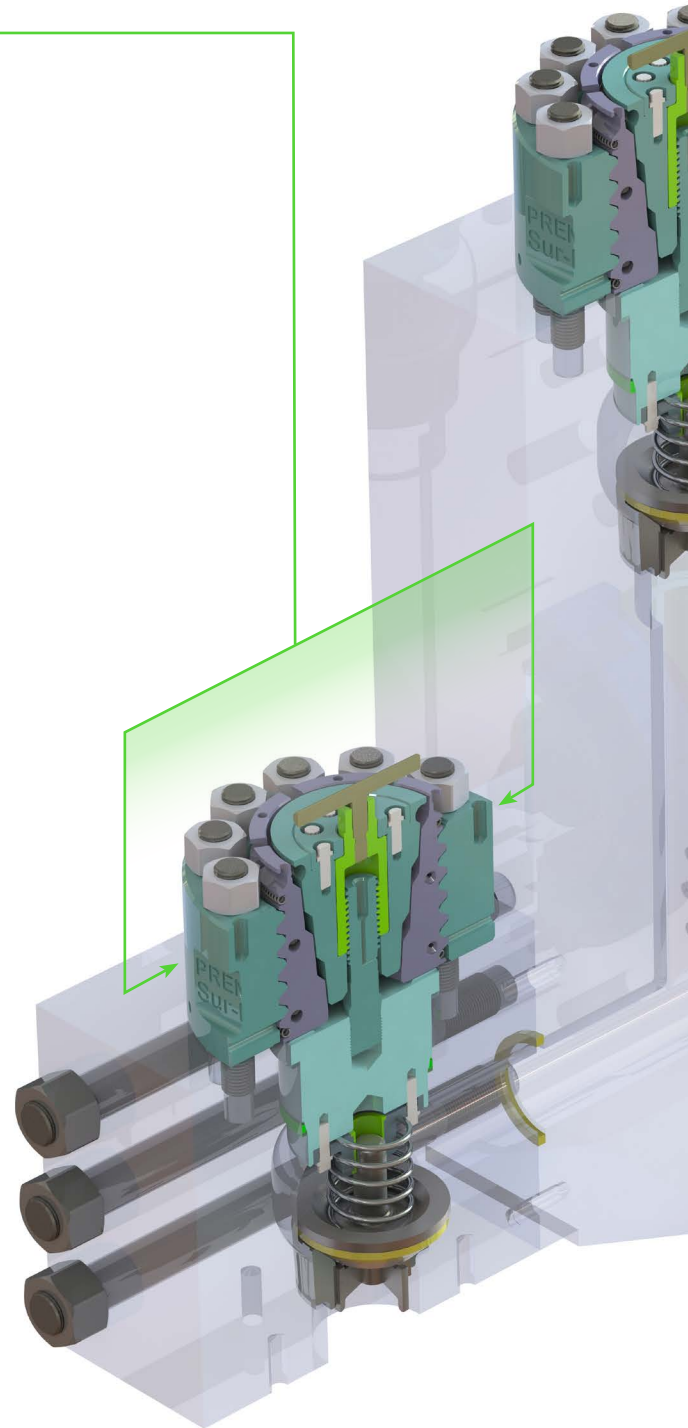
The Sur-Lock® Valve Cover system eliminates this unsafe practice and radically decreases the time it takes to remove valve covers, and replace valves and seats. **Sur-Lock requires no special tooling** and weighs about the same as a conventional valve cover assembly. **With the use of an impact wrench or just a torque wrench, the valve cover can be removed and replaced with minimal safety risk.**

Caliber® F-7500

F-1600 Compatible
7500 psi Two Piece Fluid End

SUR-LOCK

**HAMMERLESS™
TECHNOLOGY**





Sur-Lock[®] Rod Link

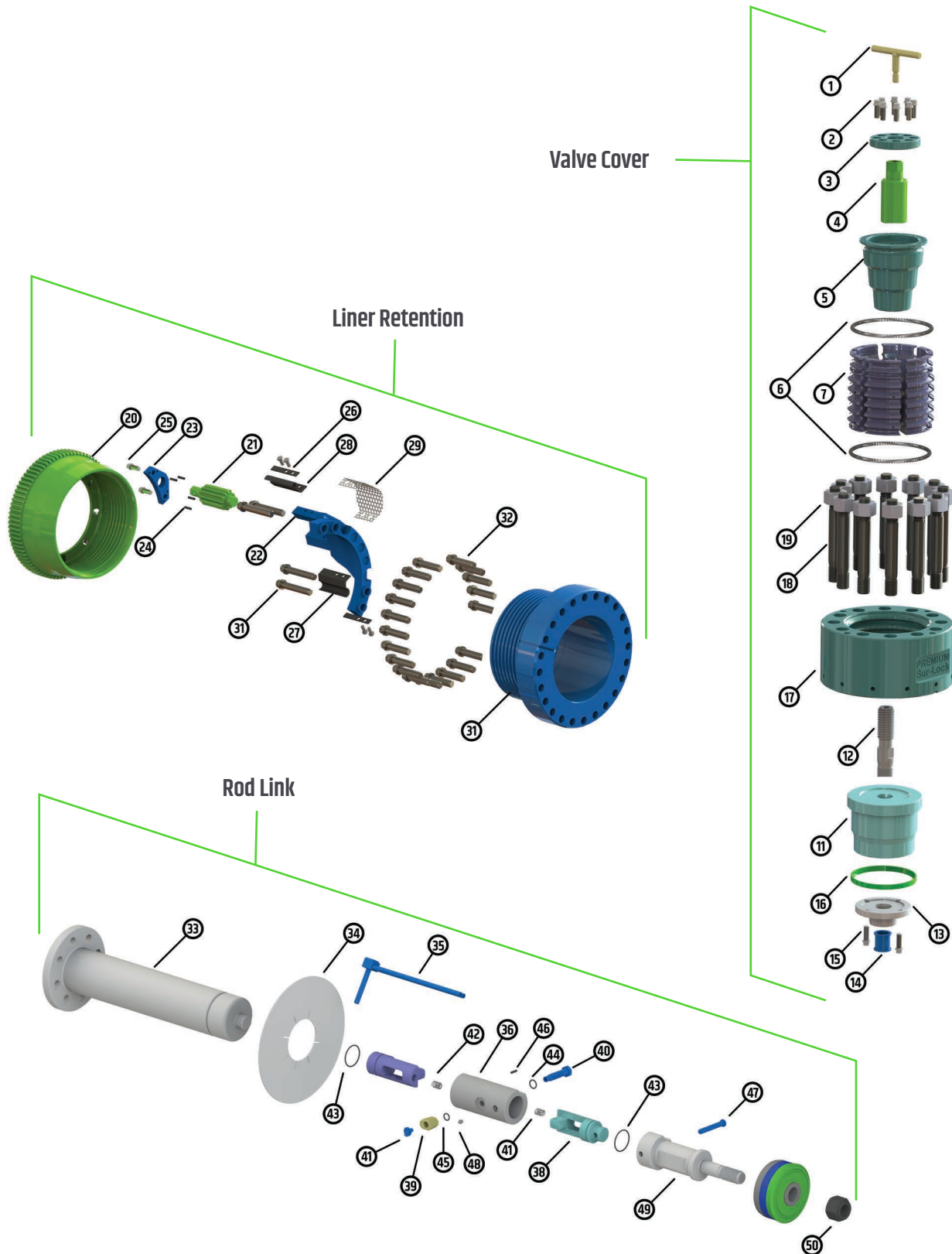
Save time and reduce failure points by eliminating the need for a hydraulic pump. **With our proprietary “taper lock” mechanism you simply use a standard wrench to unload the pins for removal.**

Our low profile water jet design can be used on pistons 4.5” and up. This system is fully interchangeable with P-Quip’s Rod Link System allowing you to effortlessly replace only the sub rod in “plug & play” fashion.

Sur-Lock[®] Liner Retainer

Designed to drastically reduce the amount of time it takes to change a liner, the Sur-Lock[®] Liner Retainer **eliminates the need for hammers** to generate the necessary torque required by integrating a torque multiplying pinion and bull gear into a conventional liner retention system. **We also reduced the weight of our liner nut to make change-outs safer and easier. The time to install a liner and tighten to the required torque is reduced to 45 seconds.**

SUR-LOCK[®] MODULE COMPONENTS



MODULE COMPONENTS

| Item No. | Part Number | Part Description | Qty. Per Pump |
|--|---------------|---|---------------|
| Sur-Lock Valve Cover Assembly | | | |
| | 627-0029 | Cone Assembly (items 2-5) | 6 |
| 1 | 627-0036 | T-Handle | 6 |
| 2 | 204-843 | 12PT Cap Screw | 48 |
| 3 | 627-0026 | Nut Retainer | 6 |
| 4 | 627-0025 | Cone Nut | 6 |
| 5 | 627-0024 | Locking Cone | 6 |
| | 627-0027 | Segment Assembly (items 6 - 10) | 6 |
| 6 | 601-0047 | Extension Spring | 12 |
| 7 | 627-0023 | Locking Segments (6 to a set) | 6 |
| 8 | 601-0043 | Dowel Pin .5" x 1.5" | 72 |
| 9 | 601-0082 | Connector Link | 12 |
| 10 | 627-0038 | Handle | 6 |
| | 627-0028 | Valve Cover Assembly (items 11 - 15) | 6 |
| 11 | 627-0021 | Valve Cover | 6 |
| 12 | 627-0022 | Valve Cover Stud | 6 |
| 13 | 154-51S75-01 | Valve Guide | 6 |
| 14 | 206-44U07-00 | Valve Guide Bushing | 6 |
| 15 | 170-04B13-06 | Valve Guide Capscrew | 12 |
| 16 | 204-01U15-00 | Valve Cover Seal | 6 |
| 17 | 627-0020 | Ring Flange | 6 |
| 18 | 170-12A07-06S | Stud 1.250-7 | 72 |
| 19 | 170-12A07-00 | Nut 1.250-7 | 72 |
| Sur-Lock Liner Retention Assembly | | | |
| 20 | 629-0075 | Liner Nut | 3 |
| | 629-0076 | Pinion Bracket Assembly (items 21 - 29) | 3 |
| 21 | 629-0079 | Pinion | 3 |
| 22 | 629-0077 | Bracket | 3 |
| 23 | 629-0078 | Retainer | 3 |
| 24 | 601-0121 | Spring Pin .250 x 1.000 | 12 |
| 25 | 204-841 | 12PT Cap Screw .500-13UNC x 1.000 | 6 |
| 26 | 629-0109 | Side Rail | 6 |
| 27 | 629-0080 | Guard Angle, Left Side | 3 |
| 28 | 629-0081 | Guard Angle, Right Side | 3 |
| 29 | 629-0082 | Pinion Guard | 3 |
| 30 | 204-1287 | 12PT Screw .750-10UNC x 4.250 | 12 |
| 31 | 181-11S00-00 | Liner Bushing | 3 |
| 32 | 170-06B10-09 | 12PT Screw .750-10UNC x 4.250 | 60 |

RECOMMENDED: Torque type expressed in foot-pounds with use of moly grease

| Item No. | Part Number | Part Description | Qty. Per Pump |
|-----------------------------------|-------------|----------------------------------|---------------|
| Sur-Lock Rod Link Assembly | | | |
| 33 | 628-0021 | Pony Rod | 3 |
| 34 | 628-0036 | Splash Shield | 3 |
| 35 | 628-0030 | Water Jet Assembly | 3 |
| | 628-0033-N | Sub Rod Assembly (items 36 - 48) | 3 |
| 36 | 628-0022 | Housing | 3 |
| 37 | 628-0023 | Female Coupling | 3 |
| 38 | 628-0024 | Male Coupling | 3 |
| 39 | 628-0150 | Wedge Block | 3 |
| 40 | 628-0151 | Lock Screw | 3 |
| 41 | 628-0152 | Lock Screw Retainer | 3 |
| 42 | 601-0052 | Spring, 3/4"OD x 1" LG | 6 |
| 43 | 3N7-2228 | 2-228 O-Ring, NBR 70 DURO | 6 |
| 44 | 3N7-2211 | 2-211 O-Ring, NBR 70 DURO | 3 |
| 45 | 3N7-2208 | 2-208 O-Ring, NBR 70 DURO | 3 |
| 46 | 601-0113 | Spring Pin, 1/4" x 7/8" Long | 3 |
| 47a | 628-0031 | Pin, Standard 5" & Up | 3 |
| 47b | 628-0032 | Pin, Low Profile 4.5" & Up | 3 |
| 48 | 601-0009 | Grease Fitting 1/8 NPT | |
| | 628-0034 | Piston Rod w/Nut (Items 49 & 50) | 3 |
| 49 | 628-0020 | Piston Rod | 3 |
| 50 | 211-027 | Piston Rod Nut | 3 |

| Tools (not shown) | | | Qty/Rig |
|-------------------|----------|---|---------|
| 51 | 601-0107 | Torque Wrench (100-600 Ft Lbs) | 1 |
| 52 | 627-0039 | Jacking Spacer Ring | 1 |
| 53 | 601-0188 | Socket (1" Hex, 1" Drive) | 1 |
| 54 | 601-0189 | Torque Multiplier (1" Drive, 3:1 ratio) | 1 |
| 55 | 628-0039 | Rod Puller | 1 |
| 56 | 628-0145 | Rod Holder | 1 |

Since 2003, Premium Oilfield Technologies has been supplying quality products to the oil and gas industry.

Our core focus is to provide performance enhancing solutions that meet the strictest safety standards. We have developed, tested, and enhanced mud pump components, top drives, mud valves, RCD/MPD systems, shaker screens, and other drilling products that decrease downtime, improve safety, and perform in the toughest drilling environments.

Premium Oilfield Technologies has worldwide locations and operations in all of the U.S. major shale plays. Our field locations boast a crew of experienced technical sales representatives that visit each rig several times per month. Geographic positioning allows us to directly supply our products to more than 500 drilling rigs every day.

- ◆ Industry standard, fully interchangeable parts and systems
- ◆ Performance-enhancing hammerless technology
- ◆ Time saving safety enhancements
- ◆ Field-based rig site technical support
- ◆ Managed rig site inventory 24/7/365
- ◆ Strict onsite testing and quality assurance





**NO
TIME
FOR
DOWN
TIME**

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SUR·LOCK

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PATRIOT™



LOGAN
Power Swivel