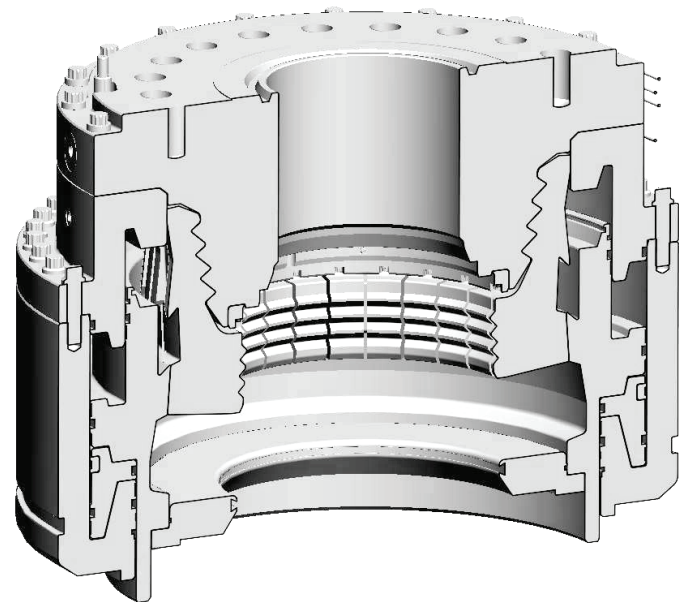




CHX WLHD Connector Overview



The CHX model connector is an industry leader in bending load capacity.

Mechanical engagement of the unlocking piston to the finger segments, a 27% higher unlocking force to locking force, and a secondary unlocking piston ensures full release of the connector segments from the wellhead.

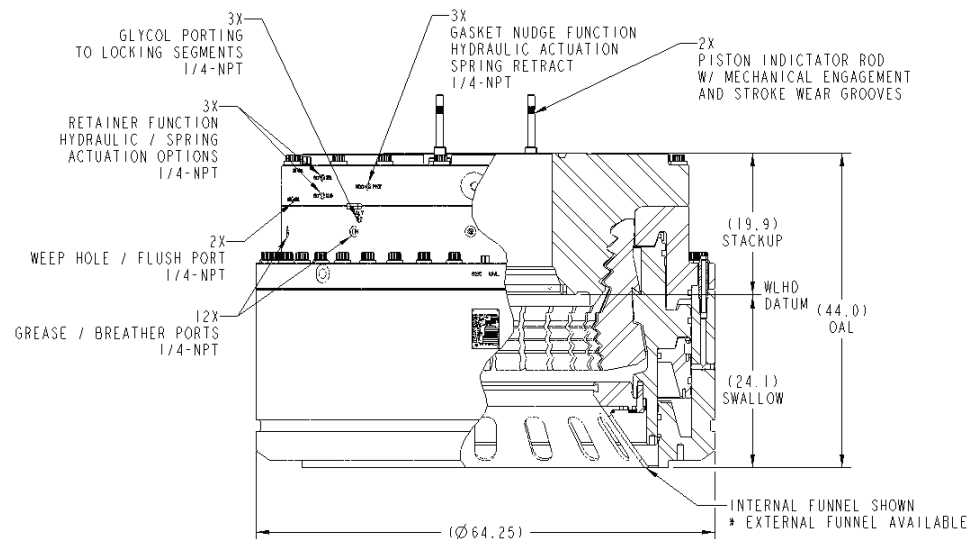
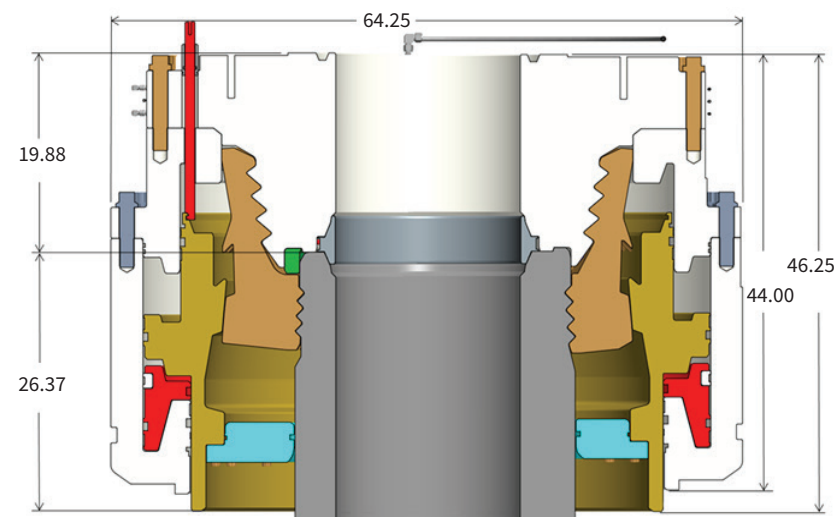
A wide variety of option features including top connection, gasket control features, porting types, and corrosion prevention measures, provide flexibility to meet customer satisfaction.

Standard Features

- Industry leading bending and tension capacity
- Unlock force 27% greater than locking force
- Load path directly through self locking segments
- Secondary unlocking piston for increased detachment reliability
- Two visual piston position indicator rods that engage with the annular piston to ensure an accurate reading. Both with life cycle grooves for easy connector life wear inspections
- Hydraulic and spring operated gasket retention pins
- Hydraulic gasket nudge pins
- Inconel inlay on all sealing surfaces
- Weep hole porting for quick testing validation
- ID running tool alignment slot
- Molded, bi-directional T seals with dual polyurethane back up extrusion protection
- Wear band protection against piston cylinder galling

Available Options

- CREP level packages
- Detachable WLHD funnel down assembly
- Various API top flange connections
- Multiple gasket control feature configurations
- Various hydraulic porting connection types
- Adapter kit which allows for a 27" H4 locking profile



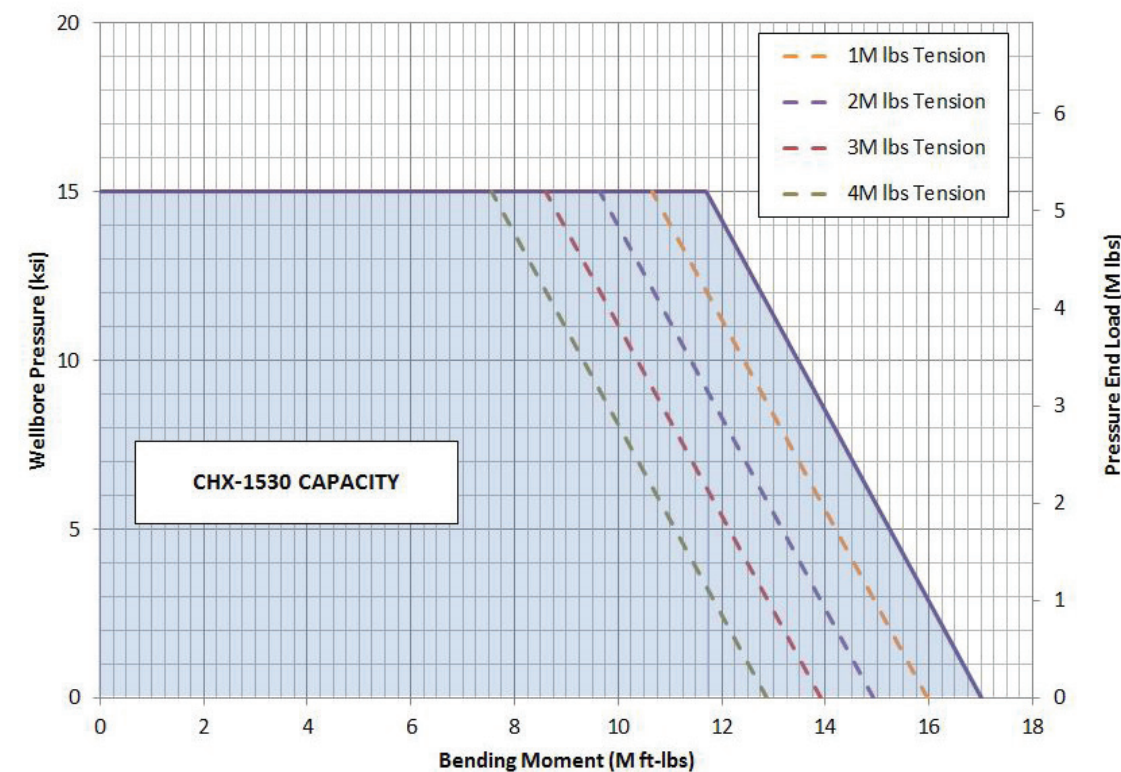
Other Benefits

- 92% Surface coverage on locking profile allows for higher pre-load without damaging wellhead / mandrel
- Lead in alignment that eliminates potential gasket contact when landing on the wellhead
- Design flexibility with integrated stack controls

Design Validation Testing

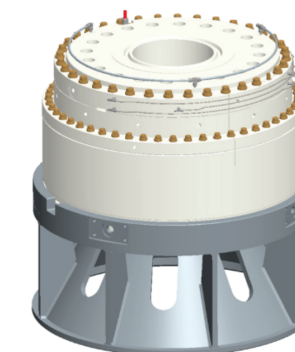
- Sealing Mechanism (Wellbore Shell)
- Tension / Bending Capacity
- Seal Life Cycle Fatigue
- Piston Displacement
- Hub Separation
- Stack Pull (Gimbal) Simulation
- Vibration Simulation
- Locking Relationship Validation
- High & Low Temperature Testing
- Function Life Cycle Fatigue
- Friction Validation

CHX-1530 Capacity Envelope



All values are preliminary and are subject to change. Full capacity values are based on FEA and will be confirmed with testing.

CHX-1530 Technical Specs	
Pure Bending Load Capacity	17.0 MM ft-lbs
Pure Tension Load Capacity	16.5 MM lbs
Preload	4.64MM lbs
Locking Volume	14.9 Gal
Unlocking Volume	18.9 Gal
Max Service Pressure	15,000 psi
Max Hydraulic Operating Pressure	3,000 psi
Stack Up Height	19.88 in
Swallow Height	26.37 in
Weight	24,700 lbs



Bending Test Fixture



Low Temperature Test