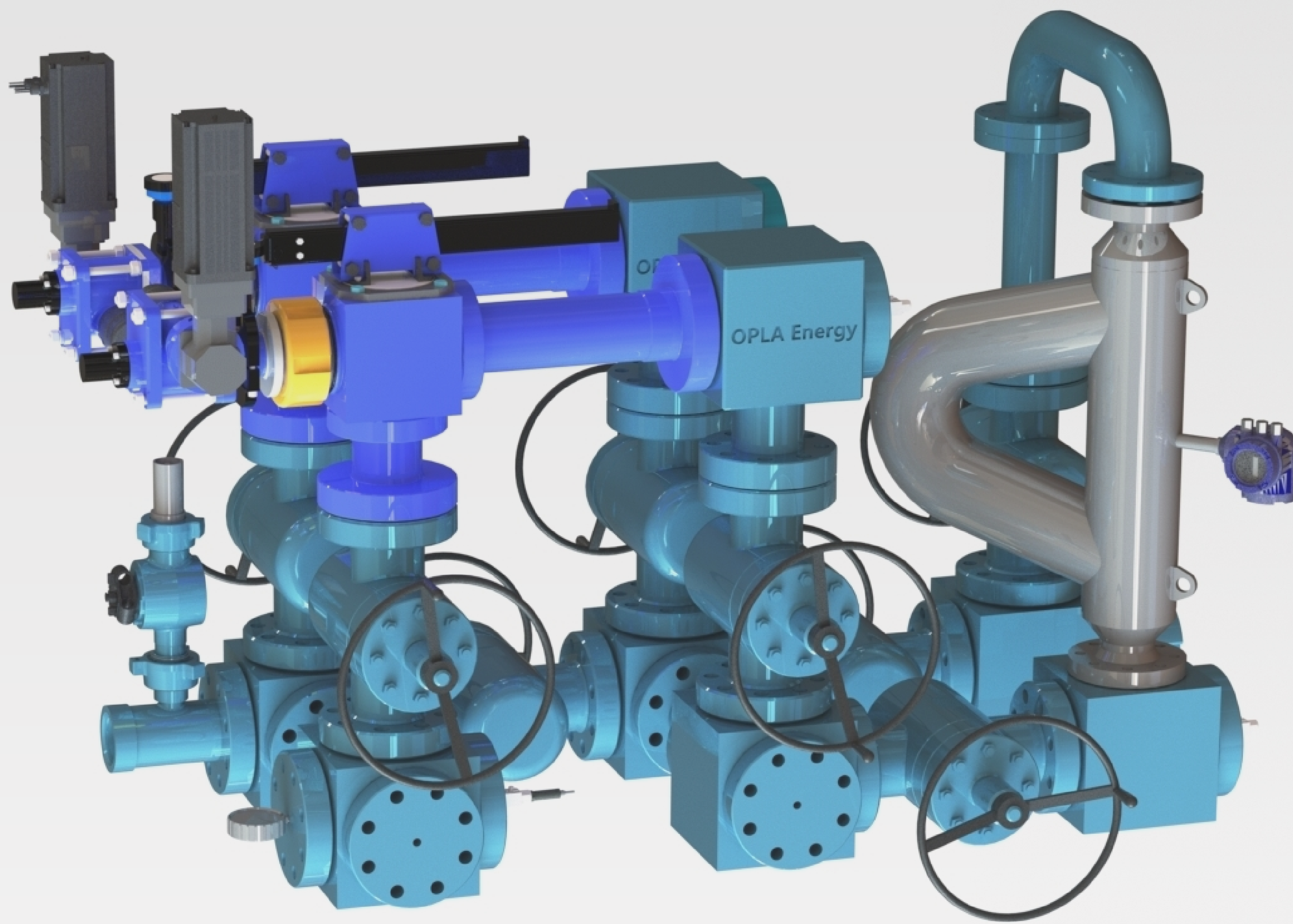


MPDSmart™ Automated Manifold

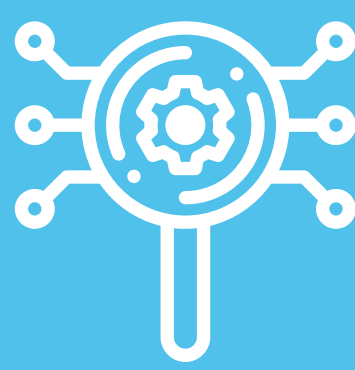


Control



dual fully electric, powerful chokes

Accuracy



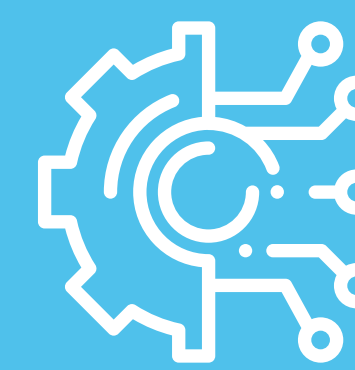
proprietary non-linear choke algorithms

Intelligence



built in real-time mud rheology

Automation



integrated hydraulics software



Choke

Dual Electric Chokes

Two powerful (2kW) servo motors drive Opla electric chokes to achieve fast and smooth control of the surface pressure under all drilling conditions.

Flowmeter

Real-Time Mud Rheology

The Opla Coriolis flowmeter reports density and flowrate and then takes it one step further and reports real-time mud rheology. This patent pending process provides incremental data on the mud quality and increases the accuracy of the fluid model utilized in hydraulic calculations.

Automation

Intelligent Control Unit

Opla utilizes high performance servo drive and fast processors PLC in the intelligent control unit to maximize accuracy and precision in monitoring and controlling of MPD sensors and equipment.

Non Linear Choke Algorithms

The Opla MPDSmart™ Manifold is controlled via a patent pending non-linear closed-loop controller minimizing reaction times and pressure overshoot under all drilling conditions.

Software

MPDSmart™ Software

Opla's real-time hydraulics modeling is integrated with our MPD manifold and has three different control modes (SBP, BHP, ECD). MPDSmart™ Software leverages data from various points around the rig to calculate real-time accurate bottom-hole pressures.

Manifold

- ✓ FC Type Gate Valve (4 1/16" 5000 psi)
- ✓ Inlet: Fig 602 4"; Outlet: Fig 206 4"
- ✓ Sour Services & Zone 1, Div 2 Rated
- ✓ Manifold Weight: 8000 kg
- ✓ Skid Dimensions: 19'x10'x9' (LxWxH)

Dual Electric Chokes

- ✓ Power: 2 kW
- ✓ Pressure rating: 5000 psi
- ✓ Trim size: 3"
- ✓ Reaction time: 6 s from 0 to 100%
- ✓ Setpoint Pressure Relief

Coriolis flowmeter

- ✓ Realtime Fluid Rheology
- ✓ Flowrate: 5-1000 gpm
- ✓ Mud Density, Temperature & Flow
- ✓ Accuracy: 99 - 99.9%
- ✓ Flow readings with gas presence (<4%)