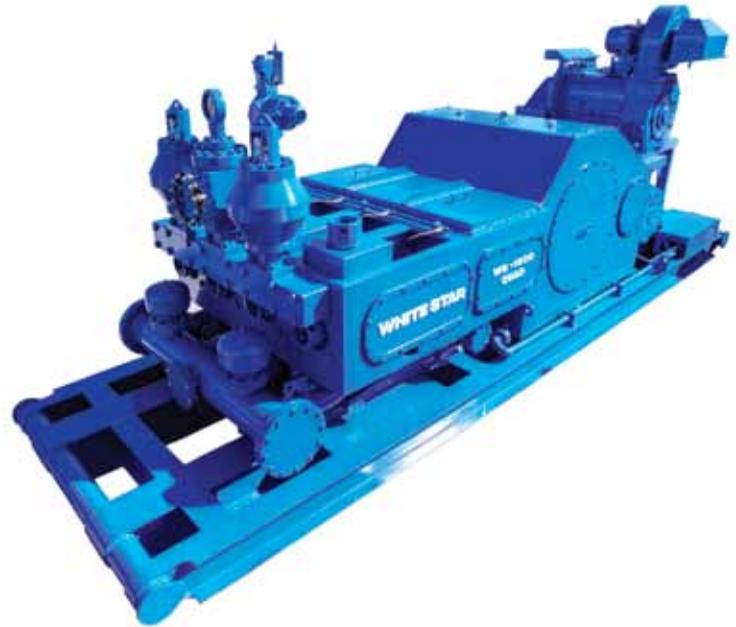


See informative videos at whitestarpump.com/videos

The White Star Quatro pump is designed to outlast and outperform any mud pump on the market today. With its innovative design and compact construction along with its quick change fluid modules, superior flow and pressure ratings and low discharge pulse, the Quatro has raised the bar on mud pump technology, performance and value.

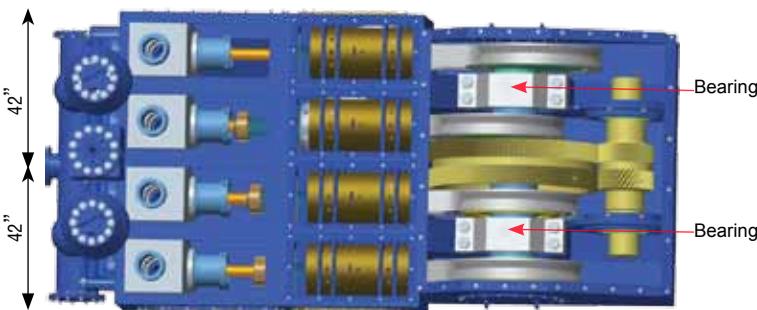
■ Overview

- New “Quatro X” with a 1597 GPM flow rate
- Standard 7500 PSI rating
- Smoothest discharge in the industry
- Easy 45-minute fluid module replacement in the field
- Only 84” wide and easily fits on standard width trailer
- Fully assembled crankshaft with no cast or welds
- **Pump house:**
 - 2450 electric and 1800 hp mechanical
 - 24” walk around and under 100,000 lbs



■ Innovative Design

The transition from a “triplex” to “quadraplex” naturally balances the pump. The fourth cylinder improves crankshaft timing, which means a smoother running pump with less vibration. The innovative and compact frame is designed to efficiently carry load forces directly to the “double roller” bearing. The modern bearing placement between cylinders reduces load and flexing of the frame and crankshaft, improving bearing, crankshaft and gear life.



■ Fully Assembled Crankshaft

Fully machined and assembled crankshaft. No castings or welding. Shortest distance between cylinder and bearing of any mud pump. Virtually eliminates crankshaft flex.

■ Offshore

The 2450 hp Quatro's compact unitizations weigh 25- 50% less than a triplex 2200 hp pump and requires 50% less pump room space. The Quatro: a better pump in half the space.

■ Quality Construction

The Quatro boasts a quality workmanship that is second to none, with all components manufactured from the highest grade materials. All parts and components have mill cert traceability and go through a rigorous three-step quality assurance and quality control screening.

■ Industry Leading Flow Rates

The QuatroX achieves a 1597 GPM continuous duty flow rate at industry standard piston speeds and without over-running the pump.

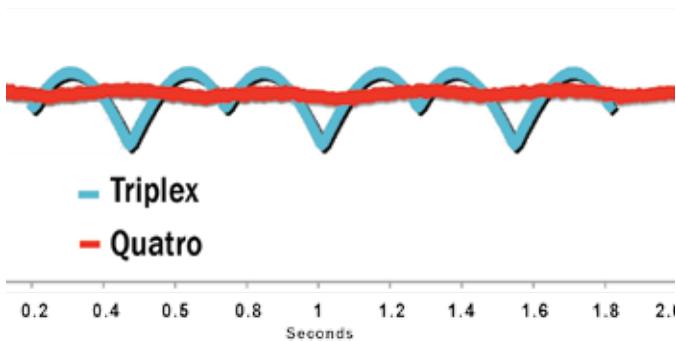
■ Revolutionary Fluid End Modules

The Quatro's fluid modules sitting inside the frame are in a class of their own. The innovative seal assemblies and revolutionary module mounting system, with only six bolts to remove, reduces module changes from hours to just minutes . . . it's all about up time!

■ Near-zero Pulse

The Quatro's simple but revolutionary design translates into a mechanically efficient, well balanced and incredibly smooth running pump. The Quatro's design symmetry allows for near perfect fluid balance with one suction desurger and pulsation dampener per pair of cylinders. It is this naturally stable power and fluid balance that delivers a near-zero discharge pulse, giving the Quatro the smoothest fluid flow of any drilling mud pump. We don't just claim to be the best pump for MWD/LWD, we prove it.

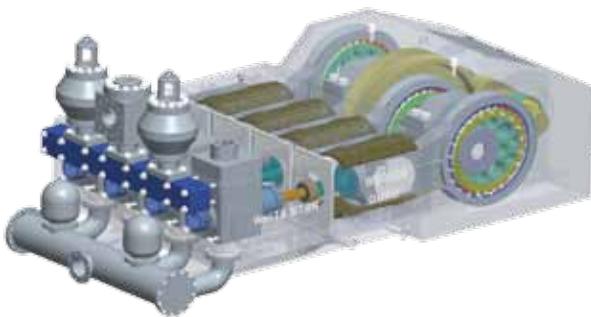
**Pump Pulsation Comparison
Quatro vs Triplex**



Quadruplex actual real-time data ref test Houston May 30th, 2009

The Quatro's almost pulse-free discharge is shown in red, overlaid against the typical theoretical discharge pulse and vibration of a triplex pump shown in blue. The Quatro's discharge data, obtained by the proprietary White Star Smart Safety Alarm System's Data Acquisition Sensors, further illustrates this pump's ultra smooth flow. To witness the Quatro's almost perfect discharge, visit whitestarpump.com/1800 or contact White Star to schedule a live demonstration.

For more on mud pump pulses, please read a recent article in Upstream Pumping Solutions magazine (Fall 2010): "Anatomy of a Mud Pump Pulse"

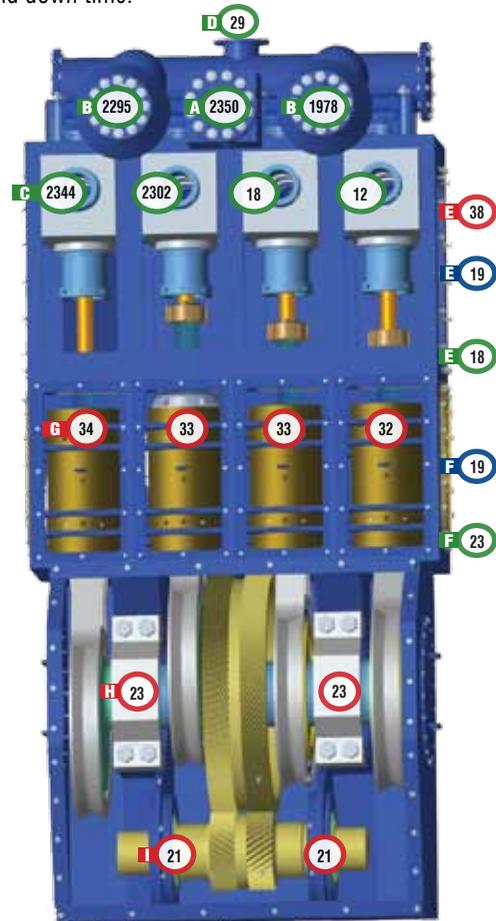


More information on the science and field experience behind the advanced features of the Quatro can be found at whitestarpump.com or by speaking directly with your local White Star Pump Company agent.

■ Real Time Monitoring that Reduces Downtime and Costs

The WSP "Pump System Monitor"

Designed to detect and warn the operator of problems and maintenance issues in real-time, both locally and remotely. The WSP's proprietary data system allows the operator to closely monitor all aspects of the mud pump system. The data acquisition sensors will detect deviations from normal operating conditions and alert the operator long before they are perceivable by humans, thus creating a larger time window for preventing critical failures. Sensing whether the top or bottom valve in a particular cylinder is starting to leak or stick with 100% accuracy, the Pump System Monitor will reduce guesswork and down time.



- A. Discharge pressure (PSI)
- B. Pulsation dampener pressure (PSI)
- C. Fluid module pressure (PSI)
- D. Intake pressure (PSI)
- E. Liner rinse pressure (PSI), flow (GPM), and temperature (Celsius)
- F. Oil lube pressure (PSI) and flow (GPM)
- G. Cross head and guide temperature (Celsius)
- H. Bearing temperature (Celsius)
- I. Pinion bearing temperature (Celsius)

■ Warranty

- Field commissioning at no additional cost
- 10 year limited warranty against manufacturers defect