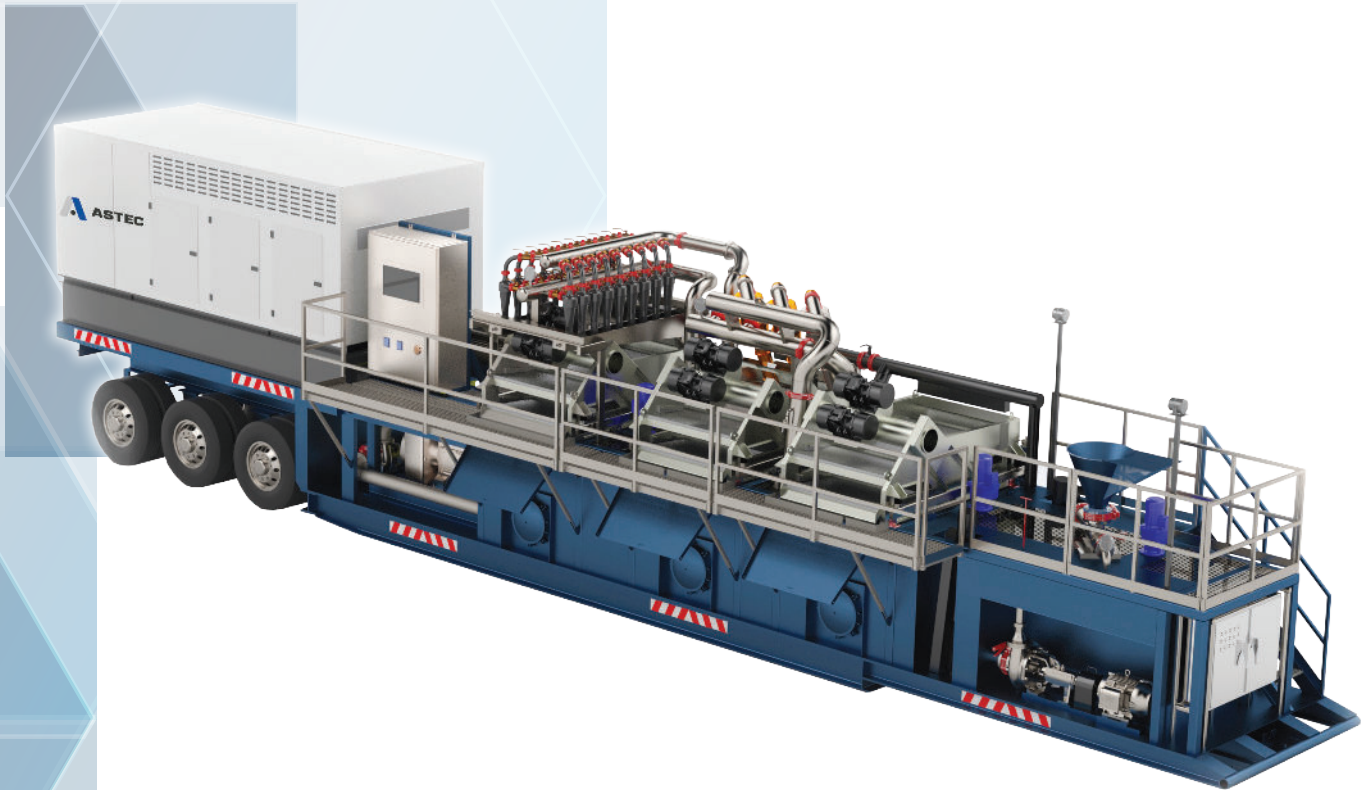




# KEMTRON 1500MPX Pro™

PACKAGED FLUID RECLAIMER

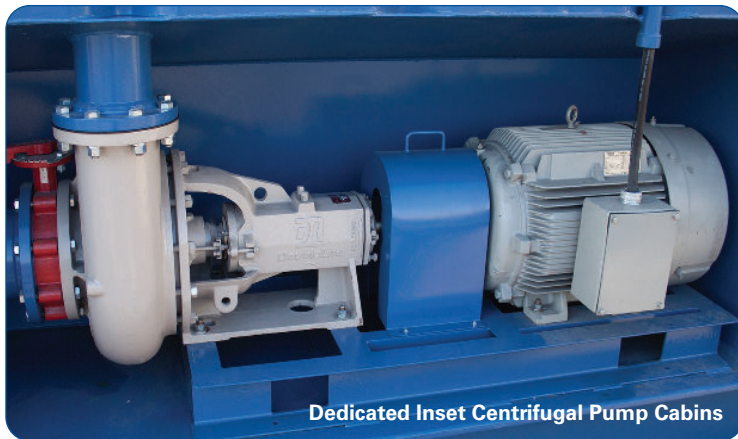


More than an original equipment manufacturer, Elgin Separation Solutions offers innovative turn-key solutions for today's operators in the trenchless industry. As such, Elgin has become the leading provider of effective packaged fluid recycling systems. With the introduction of our electrically-variable high-pressure ESS-WDD-550 Quintuplex pump package, Elgin now provides the market with the best combination of performance and turn-key integration.

Built on a 56' long triple-axel rock over trailer with an impressive 8,000 gallon tank capacity and three (3) dual-deck Hyper-G™ shakers providing 168 square feet of screening surface area. Inset pump cabins along the side of the unit providing more efficient pump pressure which reduces hydraulic friction losses during operation. Additionally, inset pump cabins provide an additional advantage of direct maintenance access to each pump. Onsite installation is enhanced with Astec's proprietary cat-walk lift assist cylinders that allows for two operators to erect and secure the side deck and railing.

### Hydraulically Balanced Mud System

With the 8,000 gallon tank capacity, the KEMTRON HDD 1500MPX Pro™ is able to provide a hydraulically balanced mud system at 1,500 gallons per minute (8,000 gallons / 1,500 gpm = 5.3 minutes residence time, the design target for a hydraulically tuned mud system). To achieve 1,500 gpm, the hydrocyclone packages are designed with (3) 10" hydrocyclone desanders and eighteen (18) 5" valve-isolated hydrocyclone desilters.



Dedicated Inset Centrifugal Pump Cabins

### Dedicated Hydrocyclone Centrifugal Pumps

To achieve a 1,500 gpm capacity, both the desilter manifold and desander manifold feed pumps feature 60HP Series 250 6x8 Centrifugal Pumps. These pumps ensure that the unit has the required pressure head to operate the hydrocyclones at 1,500 gpm.

### Highest Mixing Power

With the large tank size and reduced pipe congestion, Astec is able to enhance mixing with one 5HP, top-mounted, 36" hydrofoil agitator in each of the three tank compartments. Coupled with a series of mud guns, the KEMTRON HDD 1500MPX Pro™ has the highest mixing



Top-Mounted Tank Agitator

### KEMTRON 1500MPX Pro™ Benefits:

- Electrically-variable Ellis Williams WDD-550 HDD Quintuplex Pump.
- Multi-pass cleaning system maximizes shaker and hydrocyclone performance helping to maintain target mud weights.
- Three (3) dual-deck Hyper-G™ shakers with a combined 168 square feet screening surface.
- Three (3) 10" hydrocyclone desanders and eighteen (18) 5" hydrocyclone desilters with pressure guages and dedicated isolation valves for operation efficiency.
- Most efficient tank agitation per unit volume of mud utilizing top mounted agitators and mud guns ensures complete mixing performance.
- Proprietary 'Cat-Walk Lift Assist' for easy onsite installation of side deck and rails.

power per gallon found in the industry. Top mounted agitators are also significantly less expensive to maintain over their life and reduce the horsepower demand on the generator package when compared to submersible mixers.

### 'Smart Panel' Control Technology

As a new paradigm in integrated mud system controls evolves, Astec has developed a proprietary control panel that features a VFD driven HMI touch-screen with Wi-Fi network integration. This technology allows the operator complete graphical interface control of the entire mud system via a laptop, tablet or smart phone. In addition, 'Smart Panel' technology offers system-wide automation features that independently activate and deactivate pumps during operation for maximum efficiency with minimal staff required to operate the system.



Desilter Hydrocyclone Manifold with Valve Isolation

## Electrically Variable Quintuplex Pump

The KEMTRON HDD 1500MPX is the industry's first high-capacity mud reclamation system to feature a high-pressure pump that is electrically variable. Instead of using a clutch and belt / chain driven system, Astec's new KEMTRON HDD 1500MPX Pro deploys a direct coupled VFD-driven Ellis Williams WDD-550 HDD Quintuplex Pump that is powered from a single 500KW Tier 4 Final diesel-fired generator used to power the rest of the drilling fluid reclamation system. Not only does this provide for a road-legal package, but it provides a lower total cost of construction and total cost of ownership.



Fitted with a pulsation dampener and direct-drive gearbox assembly, the ESS-WDD-550 HDD Quintuplex Pump is a compact, high-efficiency, reliable continuous duty pump. Its design allows for easy maintenance and low total cost of ownership. By focusing on improved wear protection, the ESS-WDD-550 HDD Quintuplex Pump provides both value and performance.

## Quintuplex Pump Features:

### Wear

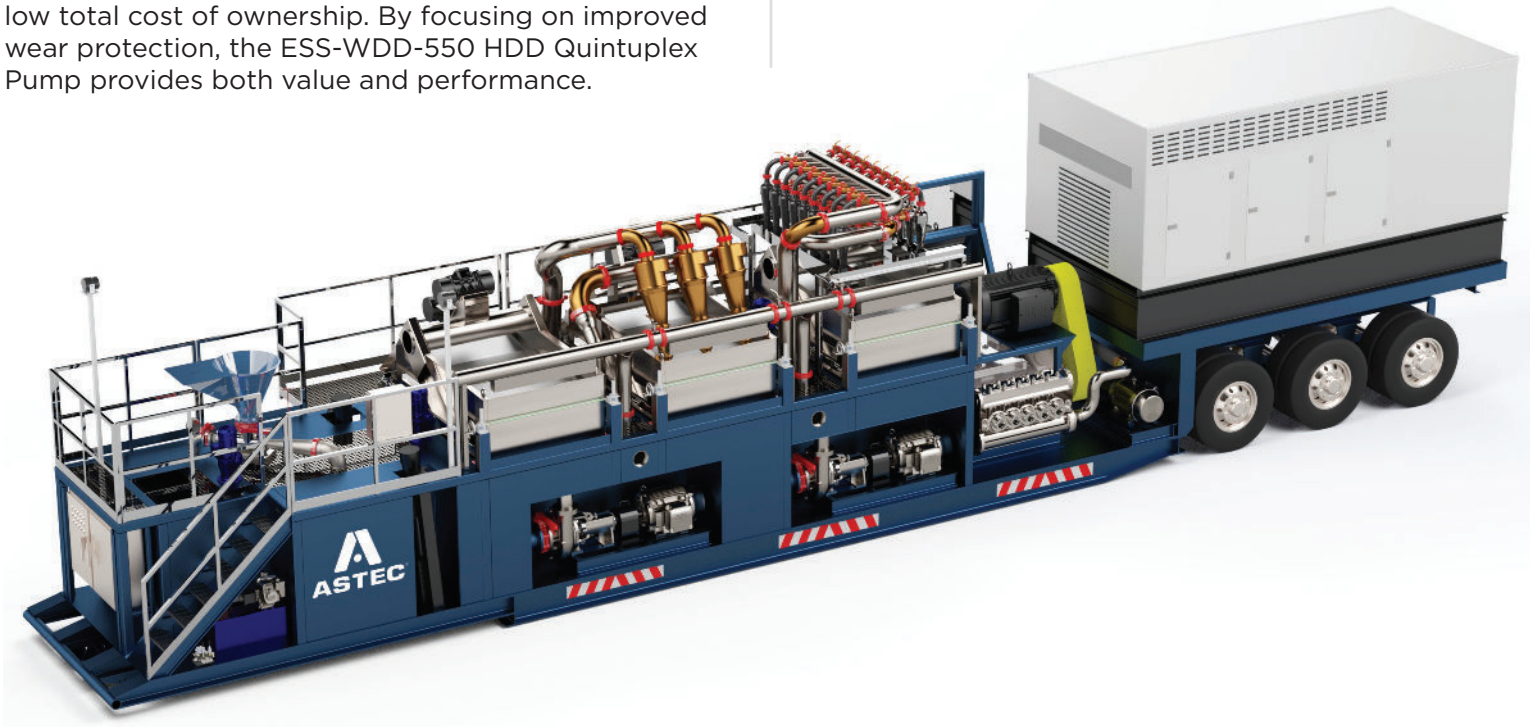
- All fluid cylinders are made from cast ductile iron material for increased durability and extended life.
- Abrasion resistant valves to reduce drilling fluid wear.
- Chrome iron liners.
- Premium oilfield style pistons.
- Fully supported crankshaft with double taper main and cylindrical center roller bearings for long life and durability.

### Ease of Use

- Pistons are easily removed through the front of the cylinder and do not require the fluid cylinder or even the liners to be removed.
- Built-in power end lube system to ensure proper lubrication even at low speeds and non-level operating locations.
- Four seals to keep power end oil clean.

### Flange Connections

- Discharge - 4" API 2000 RJ / Suction - 8" ANSI 150 FF.





Model Number:	KEMTRON HDD 1500MPX Pro™
<b>Description:</b>	1,500 gpm recycling / cleaning capacity (95 lps)
<b>Screen Type:</b>	BlueCrest 28™ / BlueWave 28™ Composite Screens
<b>Centrifugal Pumps:</b>	(2) Vision 65™ (40 hp) & (2) Vision 86™ (60 hp)
<b>Linear Motion Shaker Motors:</b>	(6) 3.3 hp (2.3 kW)
<b>Number of Screen Panels on Double Deck Shaker:</b>	Six (6) Screens 56 sq. ft. (5.2 m <sup>2</sup> ) total screening area
<b>Screen Surface Area:</b>	168 sq. ft. (15.61 m <sup>2</sup> ) total on all three shakers
<b>Vortex Desilter Hydrocyclones:</b>	(18) Vortex 5" Desilter Hydrocyclones (10.16 cm)
<b>Vortex Desander Hydrocyclones:</b>	(3) Vortex 10" Desander Hydrocyclones (25.4 cm)
<b>Maximum Flow Rate:</b>	1,500 gpm (95 lps)
<b>Dimensions:</b>	L 56' (17 m) x W 8' (2.4 m) x H 13.5' (4.1 m)
<b>Total Unit Weight:</b>	98,000 lbs (40,823 kg)
<b>Tank Capacity:</b>	8,000 gallon (30,283 liters)

**Upgrade Options:**

- For superior fluid cleaning capacity add an Elgin decanter centrifuge and create the perfect closed loop environment.
- Upgrade to dual-motion shaker motors capable of linear motion and balanced elliptical motion for managing sticky solids.
- Winterization Package - Add full canopy structure to upper deck and pump pockets to protect from elements and immersion tank heaters to severe cold climate environments.

Model Number:	ESS-WDD-550 Pump
<b>Rated:</b>	550 HP / 410 kW
<b>Stroke Length:</b>	5 in / 127 mm
<b>Maximum Discharge Pressure:</b>	2,000 PSI / 138 Bar
<b>Rated Rod Load:</b>	21,000 lb / 9,525 kg
<b>Maximum/Minimum Speed:</b>	350 rpm / 25 rpm
<b>Crankshaft Dimensions</b>	
<b>Diameter:</b>	4,875 in / 124 mm
<b>Length (Long):</b>	11.69 in / 297 mm
<b>Length (Short):</b>	5.62 in / 143 mm
<b>Keyway Width x Depth:</b>	1.25 x .62 in / 32 x 16 mm
<b>Oil Capacity</b>	
<b>Pump:</b>	12 Gal / 46 L
<b>Reducer:</b>	3.5 to 6.5 Gal / 13 to 25 L
<b>Weight (Quintuplex Pump Only)</b>	
<b>Pump:</b>	7,800 lb / 3,538 kg
<b>Bolt on Reducer:</b>	1,100 lb / 499 kg
<b>Mechanical Efficiency:</b>	90%

[www.KEMTRONHDD.com](http://www.KEMTRONHDD.com)

