



Turn-Key Fluid Recycling Solutions Products Overview

2020 – Revision N

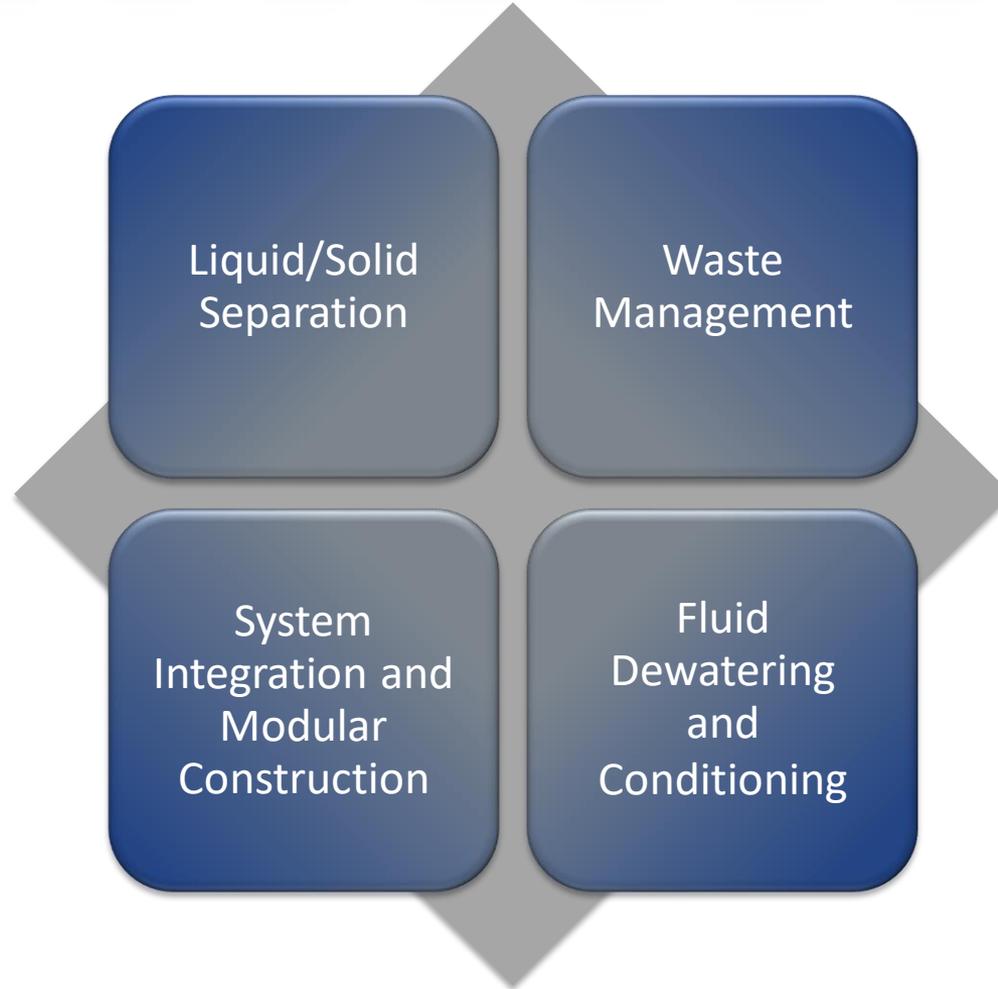
Mining • Power • Water Intake
Oil & Gas • Dredging • Trenchless
Rendering • Screening • Aggregate



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Turn-key Solutions Provider

Engineering, Design, Manufacturing, Commissioning and Servicing



As a turn-key solutions company, we are able to tackle both the small and the big projects, regardless of location.

Solids Control Management

Turn-Key Fluid Recycling Solutions Hierarchy



Elgin Separation Solutions has been the industry leader in providing effective turn-key mud recycling systems for over 30 years.

Features and Benefits

Turn-Key Fluid Recycling Solutions

- Multi-pass cleaning system maximizes shaker and hydrocyclone performance helping to maintain target mud weights.
- Most efficient tank agitation per unit volume of mud utilizing top mounted agitators and mud guns ensures complete mixing performance.
- Hyper-G™ shaker with Firestone's Marsh Mellow™ vibration isolators, providing reduced noise, long-lasting, maintenance free operation.
- Dedicated centrifugal pumps, inset on the side of the tank for easy maintenance, provide independent transfer, mud circulation/hopper, and hydrocyclone operations.
- Elgin's tanks are fully lined with a phenolic lining to maximize tank life and reduce the effects associated with the circulation of abrasive/erosive solids to extend equipment life.
- Smart-Panel technology with Wi-Fi network for lowest cost operator oversight of any reclaimer in the industry.
- Winterization Package for harsh environmental conditions. Elgin has an in-house engineering department capable of customizing your system to meet any harsh weather needs.

KEMTRON 200HD2

Turn-Key Mud Reclamation System for Small Rigs

Fitted with two 0.67 HP synchronized linear motion vibrator motors.



Utilizes a dual deck system with **22 ft² (2 m²)** of screening surface area.



Fitted with (2) 10 HP 2x3 118 Series self-priming closed-coupled pumps.



Three 4" hydro-cyclones, with screen savers and valve isolation.



Fully integrated controls capable of operating a remote trash pump.



1,000 gallon partitioned tank with integrated venturi mixing hopper.

The KEMTRON 200HD2 is an excellent fit for small volume fluid systems where space constraints exist. Available in both skid-mounted and trailer-mounted configurations.



KEMTRON 200HD2 Options

Turn-Key Mud Reclamation System for Small Rigs



Custom Colors and Branding

Full branding customization, inclusive of custom paint and custom decals, is available. Simply provide your RAL color codes and decals.



Trailer Mounted Options

The KEMTRON 200HD2 can be fitted with a dual-axle 10,000 pound car trailer with a pintle hook hitch. The trailer provides sufficient room for a generator.



On-Board Generator

On-Board premium 20KW generator package provides power to the entire mud management package, including the submersible trash pump for up to 16 hours.



Hydraulically Operated System

The KEMTRON 200HD2 can be provided as fully hydraulic with onboard engine, reservoir tank, cooling system, hydraulic motors, and controls.



Push Button Control System

Heavy duty control panel with remote pendant for transfer and trash pump operation. Built in audible alarm alerts operator of operation error.

Additional options included ceramic inserts for extended hydrocyclone life, sound attenuate generators and tank level sensors



KEMTRON 400HD2

Turn-Key Mud Reclamation System for Small and Medium Rigs



Fitted with two 2.0 HP linear motion vibrator shaker motors.



Utilizes a dual-deck shaker with **38 ft²** (3.5 m²) of screening surface area.



Fitted with (3) independent 15/15/20 HP 2x3 250 Series Pedestal Pumps.



2,350 gallon partitioned tank with venturi mixing hopper.



Fully integrated controls capable of operating a remote trash & transfer pump.



Six 4" desilter hydrocyclones, with screen savers and valve isolation.

The KEMTRON 400HD2 is an excellent fit for small & medium volume fluid systems where a compact, yet fully complete mud reclamation package is required.



KEMTRON 400HD2 Options

Turn-Key Mud Reclamation System for Small and Medium Rigs



Custom Colors and Branding

Full branding customization, inclusive of custom paint and custom decals, is available. Simply provide your RAL color codes and decals.

Trailer Mounted Options

The KEMTRON 400HD2 is perfectly fit for a dual-axel 20,000 pound car trailer with pintle hook hitch. The trailer provides sufficient room for a generator.

On-Board Generator

On-Board premium 60KW generator package provides power to the entire mud management package, including the submersible trash pump for up to 20 hours.

Hydraulically Operated System

The KEMTRON 400HD2 can be provided as fully hydraulic with onboard engine, reservoir tank, cooling system, hydraulic motors, and controls.

Standard Control System

Standard push-button control panel configuration with remote pendant for trash & transfer pump operation.

Additional options include ceramic inserts for extended hydrocyclone life, sound attenuated Tier-4 generators and tank level sensors.



KEMTRON 600HD2

Turn-Key Mud Reclamation System for Medium Rigs



Fitted with two 3.3 HP (Dual-Motion Upgrade Option) synchronized linear motion vibrator motors.



6-Panel Dual Deck Linear Motion Shaker with **56 ft² (5.2m²)** of total screening surface area.



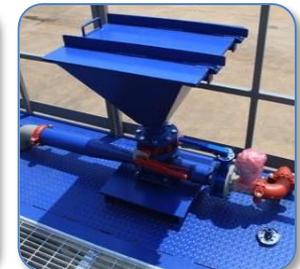
Fitted with (3) independent 20/20/25 HP 3x4 250 Series Pedestal Pumps.



Eight 4" desilter hydrocyclones, with screen savers and valve isolation.



Smart panel control system with local wi-fi accessible network for remote operation.



Valve-isolated venturi mixing hopper with fold-out table.

Our most popular packaged fluid reclamation system has been used on thousands of job sites over the last decade.



KEMTRON 600X

Turn-Key Mud Reclamation System for Medium Rigs



Fitted with two 3.3 HP (Dual-Motion Upgrade Option) synchronized linear motion vibrator motors.



Onboard pressure washer with isolated polyurethane high-capacity water tank.



Fitted with (3) independent 20/20/25 HP 3x4 250 Series abrasion resistant slurry pumps.



Eight 4" desilter hydrocyclones, with screen savers and valve isolation.



Smart panel control system with local Wi-Fi accessible network for remote operation.



Valve-isolated 4" venturi mixing hopper with jet shear manifold.

Next generation of the industry leading turn-key fluid recycling system.



KEMTRON 600HD2 & 600X Options

Turn-Key Mud Reclamation System for Medium Rigs



Custom Colors and Branding

Full branding customization, inclusive of custom paint and custom decals, is available. Simply provide your RAL color codes and decals.

Winterization Packages

The KEMTRON 600HD2 can be fitted with a complement of winterization packages including, emersion heaters, convective heat ports, pump cabin enclosures and working deck enclosures.

Generator Packages

On-Board 100KW Tier-4 generator package sound-attenuated provides power to the entire mud management package, including the submersible trash pump for up to 14 hours.

Hydraulic Jacking System

The KEMTRON 600HD2 can be provided with four fully hydraulically operated jacks with a central operating console for easy onsite installation.

Integrated Pressure Washer

Fully integrated within the tank structure, this high- pressure washer will keep screens from blinding and allow for rig clean-up at the end of the job.

Additional options include ceramic inserts for extended hydro-cyclone life, tank level sensors, air-break trailers, and goose-neck trailers.



KEMTRON 600HD2 Centrifuge Options

Maximum Solids Control Through Centrifuge Technology



ESS-1450HD2 Centrifuge Module

This module adds to a standard KEMTRON 600HD2 and includes a ESS-1450HD2 high speed centrifuge, on-board PC pump, screw conveyor, centrate pump, independent controls.



Integrated ESS-1450SL Centrifuge

The KEMTRON 600 XPS, fully integrates a ESS-1450SL centrifuge directly within the footprint of the standard KEMTRON 600. Includes feed pump and VFD HMI touch-screen interface.



ESS-1655 XP Polisher with Select Floc LP3

For those that wish to mate their current fluid reclamation system with a low gravity solids polishing treatment system. ESS's XP Polisher can also be fully integrated with a Select Floc LP3 Polymer Injection System.

All Elgin fluid systems can be fully integrated with our proprietary line of high-speed decanter centrifuges to maximize drilling fluid life.



Smart Panel Control System

A New Paradigm in Integrated Fluid Reclamation System Controls.
KEMTRON 600HD2 & 600X Models Only.

- Elgin's Proprietary Smart Panel Allows Operators to Run and Monitor the Reclaimer from a Smart Phone, Tablet or Laptop.
- Comes integrated with Operation Data Logging for Performance Monitoring and Failure Tracking.
- Desilter and Hopper Pump Pressure Monitoring to Ensure Optimum Drilling Fluid Conditions
- Tank Fluid Level Indicators and Alarms.
- Automated Pump Operation with Interlocks.
- Audible and Visual Alarm System Interlocks.
- Automated Operator Alerts to Ensure Proper Preventative Maintenance.



Elgin's Smart Panel Control System provides for the lowest cost operator oversight of any reclaimer in the industry.

Remote Network Control Interface

Directly From Your Smart-Phone, Tablet or Laptop.

KEMTRON 600HD2 & 600X Models.

PUMP and SHAKER CONTROL

The interface displays controls for several pieces of equipment:

- DESILTER SHAKER:** START (green), STOP (red), STOPPED (red)
- DESILTER PUMP:** START (green), STOP (red), STOPPED (red), Desilter Pump Pressure: 0 psi, BYPASS: ON (red)
- HOPPER PUMP:** START (green), STOP (red), STOPPED (red), Hopper Pump Pressure: 0 psi, BYPASS: ON (red), Pump Auto-Restart Time: 60 Seconds
- POWER WASHER:** START (green), STOP (red), STOPPED (red)
- TRASH PUMP:** START (green), STOP (red), STOPPED (red), Pump Auto-Restart Time: 60 Seconds
- TRANSFER PUMP:** START (green), STOP (red), STOPPED (red), Pump Auto-Restart Time: 60 Seconds

Navigation buttons at the bottom: MAIN SCREEN, SYSTEM STATUS, RUN TIMES.

Further Integration with Optional Upgrades, Including an On-Board Pressure Washer.

Pressure Monitoring of Pumps to Maximize System Performance.

Touch Screen Interface to Control all On-Board Pumps, Trash Pump and Shaker.

SYSTEM RUN TIMES

Desilter Shaker:	0 hours and 0 minutes
Desilter Pump:	0 hours and 0 minutes
Hopper Pump:	0 hours and 0 minutes
Transfer Pump:	0 hours and 0 minutes
Trash Pump:	0 hours and 0 minutes
Power Washer:	0 hours and 0 minutes

Navigation buttons: MAIN MENU, SYSTEM OPERATION, SYSTEM STATUS.

Integrated Run-Time Counters for All Systems to Enhance Preventative Maintenance.

KEMTRON 800C

Containerized, Field-Erected Mud Systems for Maximum Fluid Volume

Includes a bank of (2) 12" hydrocyclone desanders.

Dual 6-Panel Dual Deck Linear Motion Shakers with **112 ft² (10.4m²)** of total screening surface area.

Dual man-holes for complete internal access to all internal systems.

Includes a bank of (10) 5" hydrocyclone desilters, with screen savers.

Fitted with (3) recessed independent 40/40/40 HP 6x5 250 Series centrifugal pumps.

4,500 gallon, triple partitioned tank constructed from a 20' CSC Certified Shipping Container.



The KEMTRON 800C Provides Up To 1,000 gpm of Cleaning Capacity.



KEMTRON 1000HDX

Turn-Key Mud Reclamation System for Medium and Large Rigs



Fitted with (2) 3.3HP High-G linear motion vibrator motors.



Dual 6-panel dual-deck linear motion shakers with **112 ft² (10.4m²)** of surface area.



Fitted with (3) independent 40/40/40 HP 6x5 250 series centrifugal pumps.



Includes two desanders (12") and ten desilters (5"), screen savers & valve isolation.



Fully integrated controls with remote pendant for feed and transfer pump control.



6,000 gallon, triple axle mounted tank with venturi mixing hopper.

The KEMTRON 1000HDX provides great flexibility to support both medium and large rigs given its size and hydraulic capacity.



KEMTRON 1000HDX Options

Turn-Key Mud Reclamation System for Midi and Maxi-Class Rigs



Custom Colors and Branding

Elgin can provide full branding customization, inclusive of custom paint and custom decals. Simply provide your RAL color codes and decals.

Winterization Packages

The KEMTRON 800 can be fitted with a complement of winterization packages including, emersion heaters, convective heat ports, pump cabin enclosures and working deck enclosures.

Generator Packages

On-Board 150KW generator package (sound-attenuated versions available) provides power to the entire mud management package, including the submersible trash pump for up to 14 hours.

Hydraulic Jacking System

Fully convert the KEMTRON 800 trailer to a fully hydraulically operated jacking system. Dual axel 45,000 pound trailers are available.

Integrated Pressure Washer

Fully integrated within the tank structure, this high pressure washer will keep screens from blinding and allow for rig clean-up at the end of the job.

Other available options include air-break trailers or goose-neck trailers.



KEMTRON 1500HDX

Turn-Key Solids Control and Fluid Reclamation System for Large Rigs



9,000 gallon triple-partitioned tank with continuous recirculation cleaning system.



Three 5HP top-mounted agitators with gear-boxes are coupled with a series of mud guns.



Dual Hyper-G dual-deck shakers, fitted with overhead "rock boxes".



(3) 10" desander hydrocyclones provide the next solids cut. Includes a single-deck Hyper-G shaker.



(18) 5" desilter hydrocyclones provide the polishing solids cut. Includes a single-deck Hyper-G shaker.



6" Venturi Mixing Hopper with sufficient deck space for an entire pallet of barite.

Our most advanced fluid reclaimer is fully customizable and capable of managing a variety of construction and drilling fluids.



KEMTRON 1500HDX Options

Turn-Key Mud Reclamation System for Maxi-Class Rigs



250 to 300KW Generators

On-Board 250KW generator package (sound-attenuated versions available) provides power to the entire mud management package, including the submersible trash pump for up to 17 hours.

Winterization Packages

The KEMTRON 1500 can be fitted with a complement of winterization packages including, emersion heaters, convective heat ports, pump cabin enclosures and working deck enclosures.

ESS-1450 SL Centrifuge

The KEMTRON 1500TDS, fully integrates an ESS-1448SL centrifuge directly within the footprint of upper deck. Includes feed pump and VFD HMI touch-screen interface.

Dual Motion, Multi-G Shakers

The KEMTRON 1500HDX can be fully fitted with dual motion, multi-G and/or high-G shaker motors to maximize shaker performance.

Integrated Pressure Washer

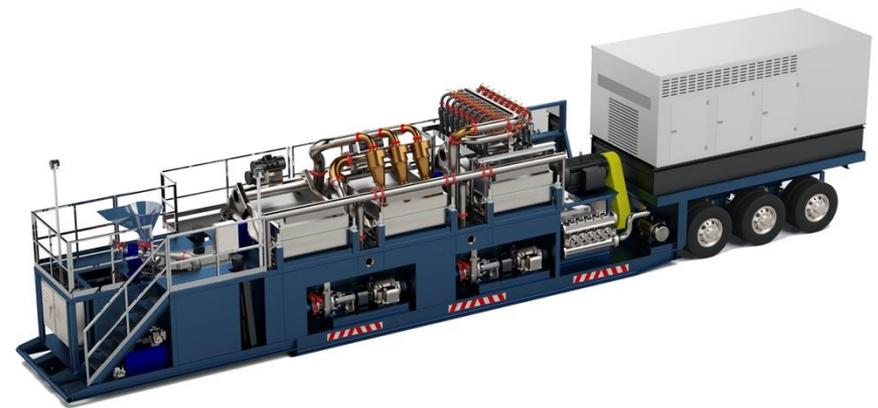
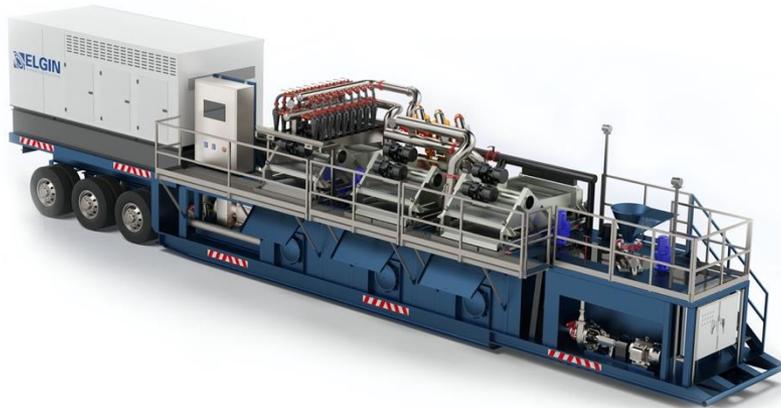
Fully integrated within the tank structure, this high pressure washer will keep screens from blinding and allow for rig clean-up at the end of the job.

Other available options include, tank level sensors, triple-axel trailers, integrated dewatering systems, and integrated triplex pump packages.



KEMTRON 1500MPX

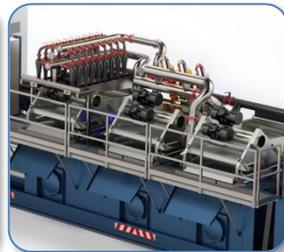
Turn-Key Solids Control and Fluid Reclamation System with Quintuplex Pump



8,000 gallon triple-partitioned tank with continuous recirculation cleaning system.



One 5HP top-mounted agitator with gearbox for clean tank agitation.



Three Hyper-G dual-deck shakers allows for initial scalp cut across all shakers.



(3) 10" desander hydrocyclones provide the secondary solids cut.



(18) 5" desilter hydrocyclones provide the polishing solids cut.



Electrically variable Quintuplex pump with pulsation dampener and direct-drive gearbox assembly.

The KEMTRON 1500MPX is the industry's first high-capacity mud reclamation system to feature a high-pressure pump that is electrically variable.



KEMTRON 1500MPX Quintuplex Pump

The Industry's First High-Capacity Mud Reclamation System to Feature a High-Pressure Pump That is Electrically Variable.



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.

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.



Common System Pairings

Pairings with Popular Geothermal, Water & Pipeline Drilling Rigs

	American Auger™					Ditch Witch™				Herrenknecht™							
	DD-110	DD-240T	DD-440T	DD-660RS	DD-1100RS	JT20	JT30	JT60	JT100	HK30CK	HK100C	HK150C	HK250C	HK400C	HK500T	HK600T	
KEMTRON 200HD2																	
KEMTRON 400HD2																	
KEMTRON 600HD2																	
KEMTRON 1000HDX																	
KEMTRON 1500HD2																	

Selecting the most appropriate fluid reclamation system depends on the total circulating volume inclusive of the “bulked-up” volumetric flow as a result of suspended solids.

	Prime Direct™				Universal HDD™								Vermeer™												
	PD 70/13 CU	PD 110/25 CU	PD 180/33 CU	PD 225/52 CU	UNI 22 x 22	UNI 30 x 40	UNI70 X 90	UNI 80 x 100	UNI 110 x 120	UNI 160 x 240	UNI 220 X 240	UNI 250 X 400	UNI 440 X 700	D20 x 22	D36 x 50	D60 x 90	D100 x 120	D100 x 140	D220 x 300	D330 x 500	D500 x 500	D1000 x 900	D1320 x 900		
KEMTRON 200HD2																									
KEMTRON 400HD2																									
KEMTRON 600HD2																									
KEMTRON 1000HDX																									
KEMTRON 1500HD2																									

Waste Cuttings Treatment

Elgin's Patent-Pending Direct Drive Vertical Cuttings Dryer



CSI-D4™

Elgin Separation Solutions new patent-pending CSI-D4™ Vertical Cuttings Dryer has been designed to revolutionize the pipeline, micro-tunneling, and dredging industry in treating water-based drill cuttings and spoils.

Elgin's new dryer technology brings a whole new level in solids dewatering and recovery of drilling fluid from waste cuttings typically hauled off and disposed of. Operators can recover up to 95% (+/-) of the drilling fluid from slurry discharged from shakers and/or produce dewatered solids down to 3%.

Dry Water-Based
Waste Cuttings
After Being
Processed thru
CSI-D4™ VCD.



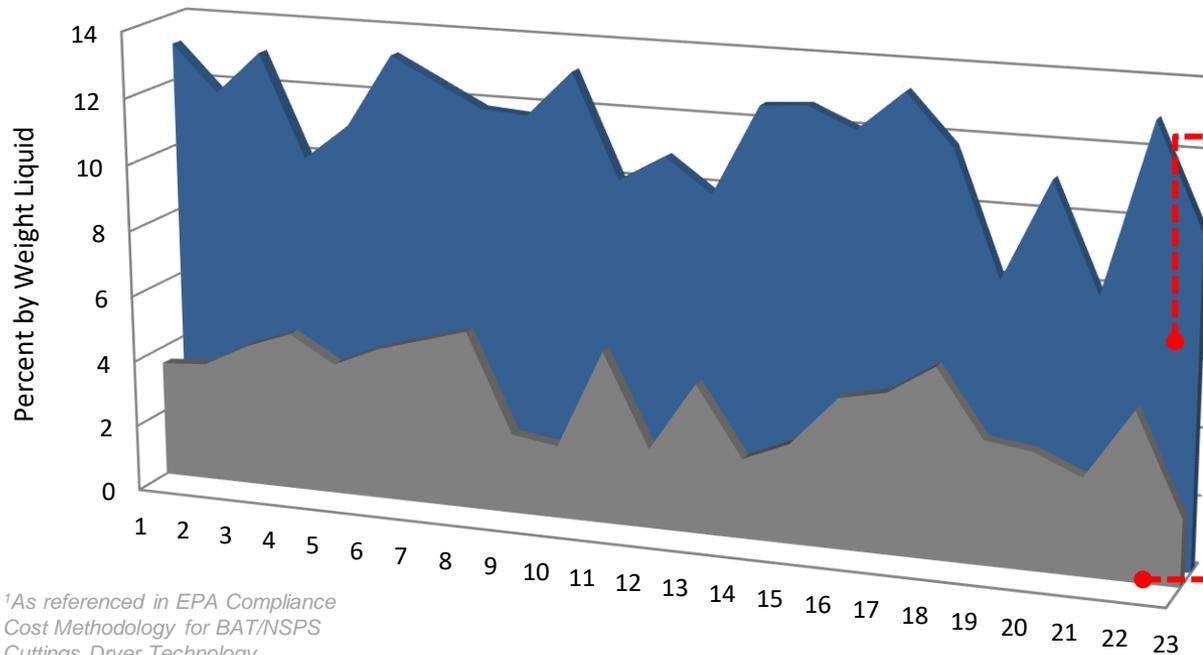
Recovered Drilling
Fluid from Waste
Cuttings Processed
thru CSI-D4™ VCD.

Not only does Elgin's technology eliminate the need to enter the dryer to service the drive belt system, but it provides guaranteed Class I – Division 1 and Class I – Division 2 drive system compliance.



VCD Application

Representative vertical cuttings dryer performance capability¹.



BEFORE – Drill cuttings prior to feeding through a VCD.



AFTER – Drill cuttings after being processed by a VCD.

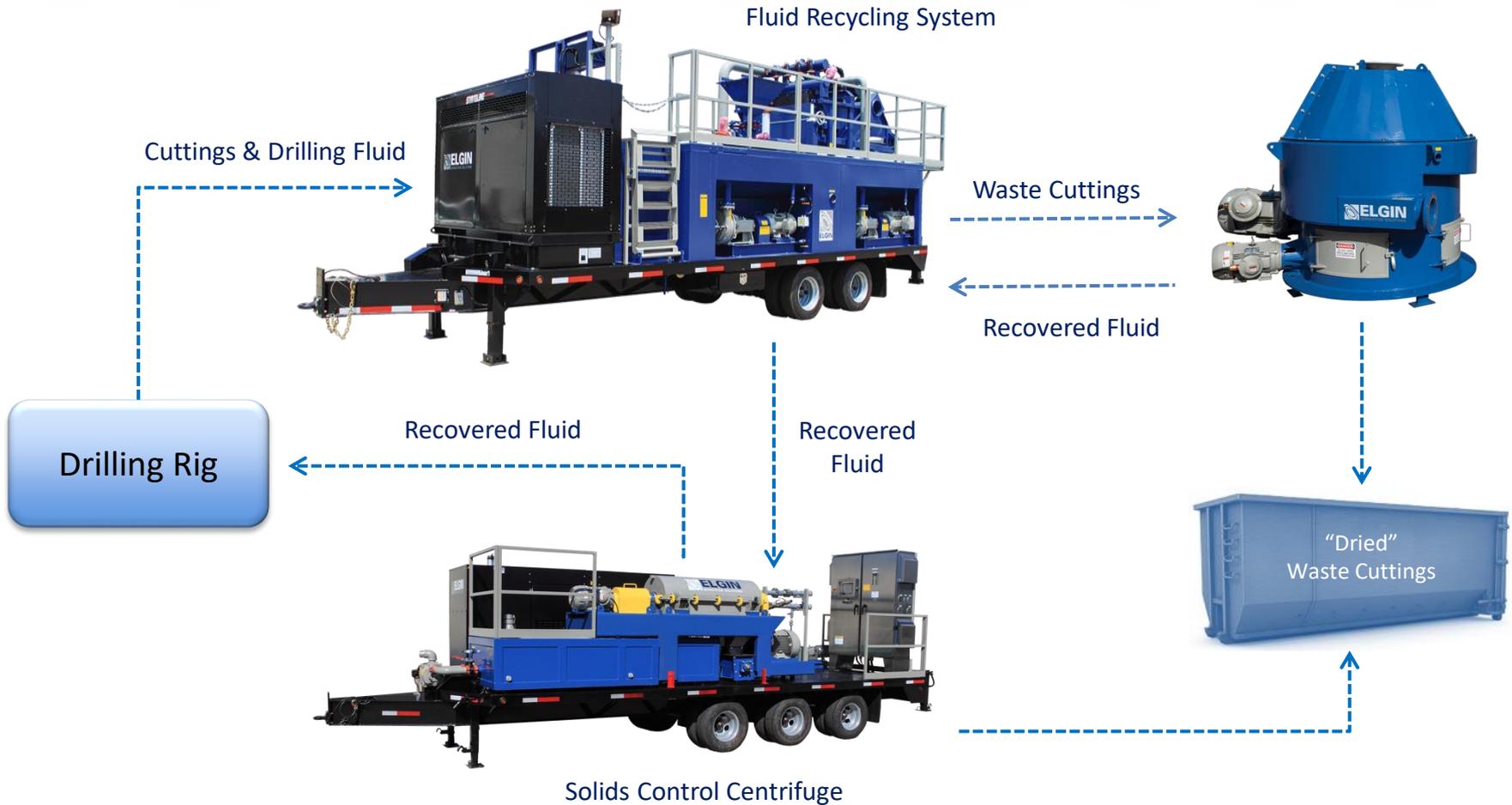
¹As referenced in EPA Compliance Cost Methodology for BAT/NSPS Cuttings Dryer Technology, performance data from 23 wells revealed that the Synthetic On Cuttings (SOC) was reduced from 11.7% to 4.15% by weight after being processed.

- Standard VCD Discharge Liquid Content (% Weight)
- Shaker Discharge Liquid Content (% Weight)

A 2/3 reduction in drilling fluid loss can be achieved depending on the formation being drilled.

Closing the Loop

Management of Colloidal / Ultra-Fine Solids and Waste Cuttings



Our product portfolio of proprietary polymers and capital equipment provides a "one-stop" shop for any fluid challenge and waste management.



Unsurpassed Value

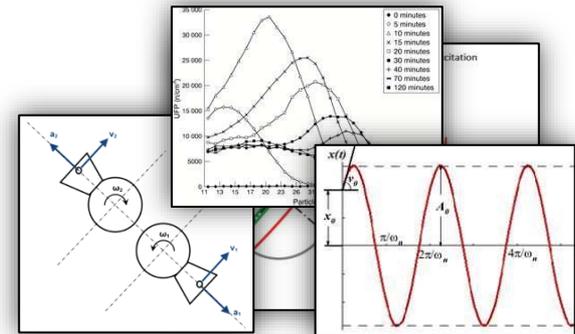
Definitive Value Proposition in Utilizing KEMTRON Packaged Reclaimers



30+ Years



10 Years



Unsurpassed Experience

As the trend-setting leader in turn-key mobile fluid reclamation system, we have been shipping on average one reclamation system per week. No other manufacture ships more packaged fluid reclamation systems.

Unsurpassed Durability

With decades of experience building package fluid reclamation systems, we have developed a reputation for the most durable systems in the market. The average asset life ranges from 7 to 10 years.

Full-Scale Engineering Support

Our dedicated Engineering team evaluates system hydraulics, frictional losses, predictive reliability, and failure mode evaluation analysis ("FMEA") for each system built. Combined with our ability to creatively customize your system, there is no better choice.

In addition to the above, we are the only reclaimer OEM that manufactures its own shakers and screens ensuring 100% integrated accountability for the entire system.





Turn-Key Fluid Recycling Solutions Products Overview

Mining • Power • Water Intake
Oil & Gas • Dredging • Trenchless
Rendering • Screening • Aggregate



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