



Decanter Centrifuges Products Overview

2017 – Revision H

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



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Full-Service OEM

Engineering, Design, Manufacturing, Commissioning and Servicing.



Solids Control

Waste Management

System Integration and Modular Construction

Fluid Management and Conditioning



As a division of the Elgin Equipment Group, Elgin Separation Solutions is able to tackle both the small and the big projects, regardless of location or well complexity.



Organizational Footprint

And Key Customers.



Centrifuge Portfolio

Fine and Ultra-Fine Solids Removal.



	ESS-1450 HD2	ESS-1655 HD	ESS-1850 HD
Maximum G Force:	2,100	2,300	1,130
Maximum Speed:	3,250 rpm	3,400 rpm	2,100 rpm
Capacity:	200 gpm (12 Lps)	265 gpm (17 Lps)	265 gpm (17 Lps)
Bowl Diameter:	14" (356 mm)	16" (406 mm)	18" (475 mm)
Bowl Length:	50" (1,270 mm)	55" (1,397 mm)	50" (1,270 mm)
Gearbox Ratio:	52:1 or 125:1	56:1	80:1

Elgin's decanter centrifuges can be fitted with a host of VFD, FHVD, MVD control options in both explosion proof and non-explosion proof configurations.



Centrifuge Portfolio

Fine and Ultra-Fine Solids Removal.



	ESS-2460 BD	ESS-1967 HD2	ESS-2567 HD
Maximum G Force:	2,350	2,600	3,200
Maximum Speed:	2,600 rpm	3,100 rpm	3,000 rpm
Capacity:	450 gpm (28.4 Lps)	500 gpm (31 Lps)	650 gpm (41 Lps)
Bowl Diameter:	24" (610 mm)	19" (470 mm)	25" (635 mm)
Bowl Length:	60" (1,524 mm)	67" (1,702 mm)	67" (1,702 mm)
Gearbox Ratio:	SA-69 80:1 or SA-69 140:1	80:1	76:1

Elgin's decanter centrifuges can be fitted with a host of VFD, FHVD, MVD control options in both explosion proof and non-explosion proof configurations.



Centrifuge Controls Portfolio

Available options are dependent on the centrifuge and application



NEMA 7X Cast Aluminum Enclosure (MVD)	NEMA 4X SS VFD Cabinet Enclosure with HMI	NEMA 4X SS VFD with HMI Air Conditioning and Purged Air	NEMA 7X Cast VFD Enclosure	Hydraulically Driven (FHVD)
Class I – Division I Explosion Proof (ATEX Zone I Panel Available)	Class I – Division II Non-Explosion Proof	Class I – Division I Explosion Proof	Class I – Division I Explosion Proof	Class I – Division I Explosion Proof (ATEX Zone I Panel Available)
Manual Stop/Start with Fluid Clutch Soft Start	Fully Variable Frequency Controlled	Fully Variable Frequency Controlled	Main Drive Variable Frequency Controlled	Fully Variable Speed Controlled
Push-Button Controls	HMI Touch-Screen	HMI Touch-Screen	Push-Button Controls	Push-Button Controls
Dual-Sheave Poly-chain	Poly-chain Sheave	Poly-chain Sheave	Standard Sheave	N/A

ESS-1450 HD2

High Speed Decanter Centrifuge



ESS-1450 HD2

Key Features Overview



Four replaceable "wide-mouth", Delchome 90™ discharge ports and plows for easy field maintenance.



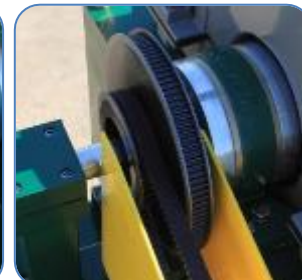
Pond depth set by four, adjustable 304SS, epicentric liquid-end discharge ports. easy to field manage & durable.



Fitted with a 50HP NEMA Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



52:1 or 125:1 Gear Box (for dewatering) with an industry-leading 3.2 kN torque. Excellent for heavy drilling fluids.



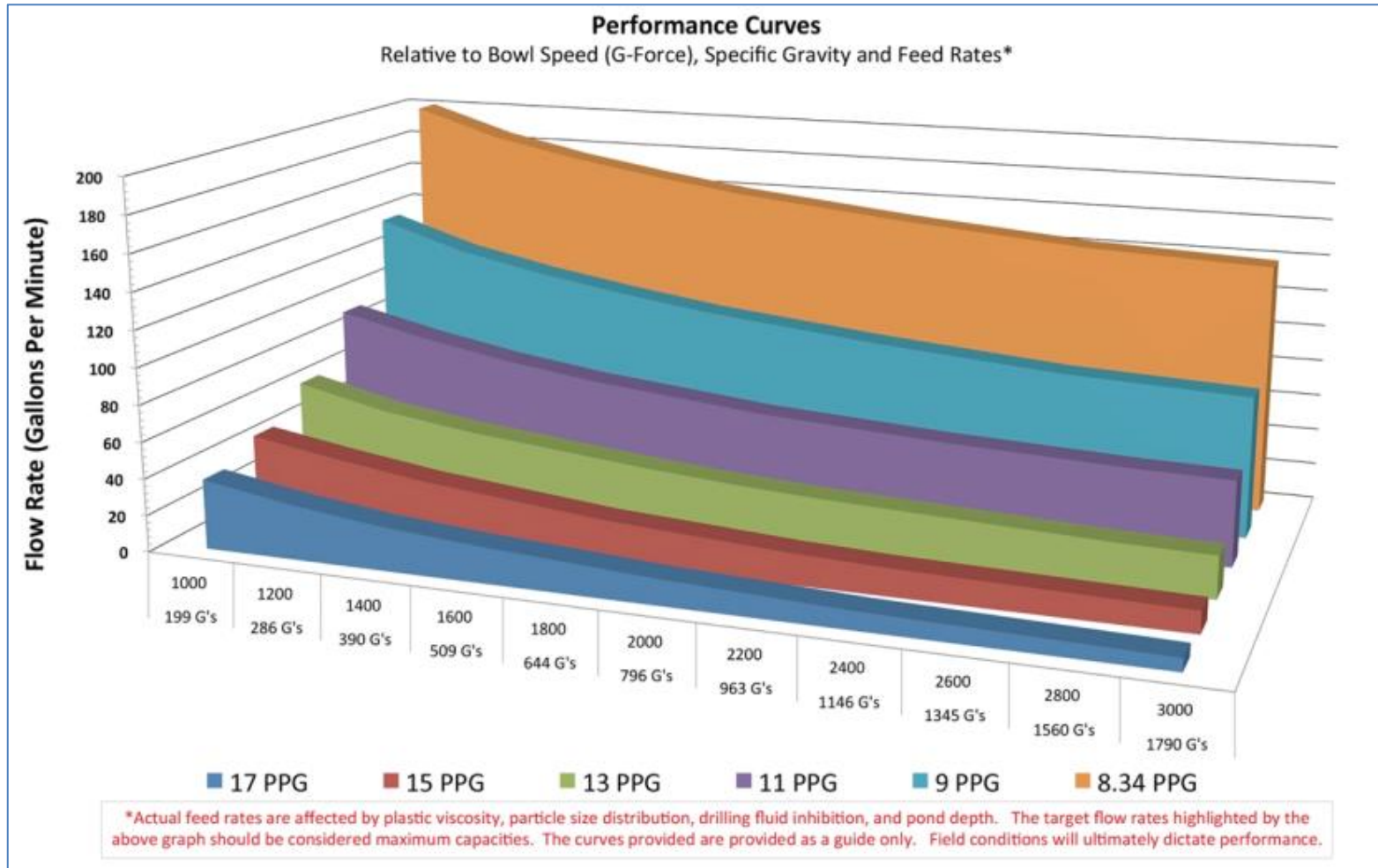
Standard Dual-Sheave Carbon-Fiber Poly-Chain Drive System provides for dual speeds without the use of a VFD.



Standard Main Drive Bearing Thermal-Couple Protection Interlock System.

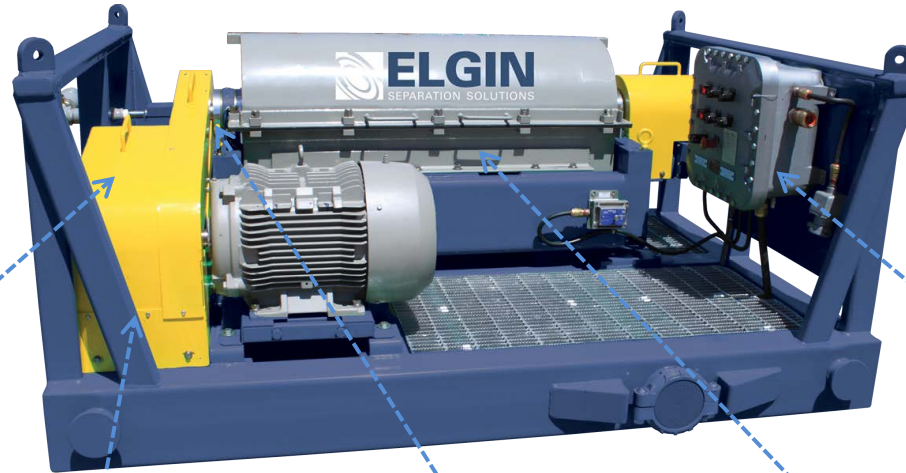
ESS-1450 HD2

Hydraulic Performance Curve – Flow Loop Validated



ESS-1450 HD2

Designed for Durability and Dependability



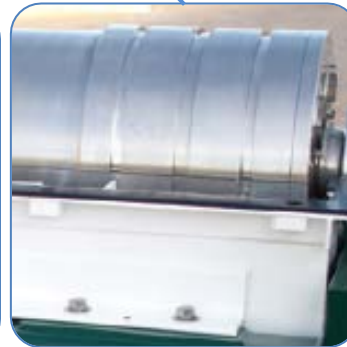
All surfaces fully sand-blasted and powder-coated for maximum wear protection under harsh conditions.



Skid and frame made from ASTM A36 ¼" tubular and plate steel to maximize equipment life.



Redesigned main-drive pillow block utilizing high-quality, premium ball bearings.



Stainless steel machined rotating assembly for maximum corrosion protection.

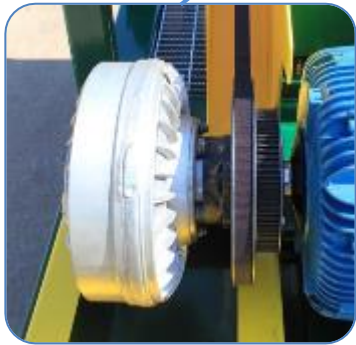


Heavy duty cast NEMA 7X control panel.



ESS-1450 HD2

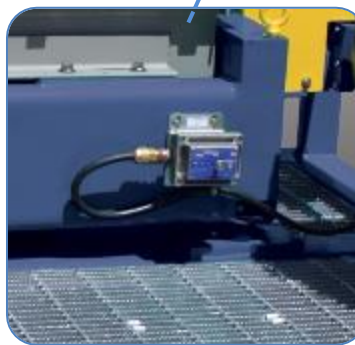
Safety Interlocks and Equipment Protection Systems



Fluid clutch installed to protect motor during start-up and when “pack-off” conditions arise; fully disengages motor.



Main drive bearing thermal-couple sensor protection system to shut down centrifuge when bearings start to fail.



Centrifuge frame vibration sensor protection system to shut down centrifuge with heavy imbalances.



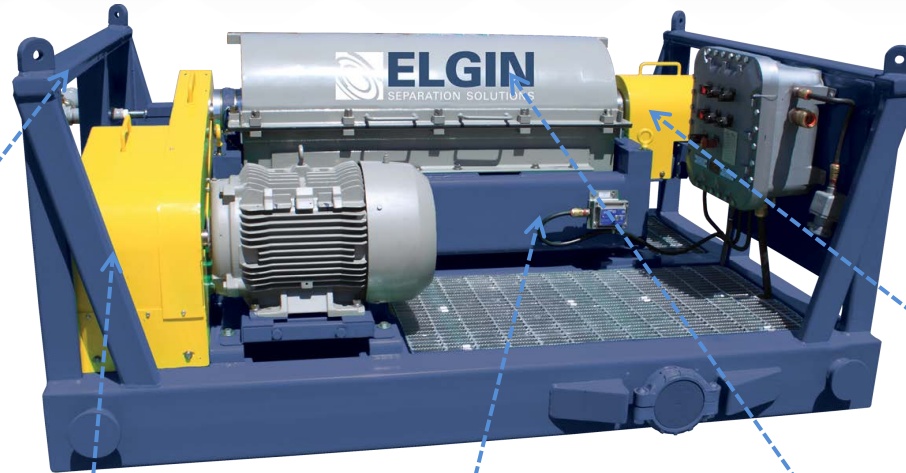
Back-drive high-torque protection system will protect the centrifuge during “pack-off”. Interlocked with controls.



Motor overload protection & centrally located E-Stop.

ESS-1450 HD2

Ergonomic Design and Improved Machine Guards



DNV 2.7.1 compliant lifting eyes. Additional lifting points installed on the skid base to provide full installation flexibility.



Full coverage main-drive belt guard to protect employees, the sheaves, and the belt.



Lowered centrifuge center of gravity and direct access to motor, belts, and sheaves to improve maintenance.



Stainless steel top cover, bottom cover and machine guards to ensure maximum equipment life.



Full cage machine guard for the gear box and torque-arm assembly.

ESS-1655HD

High Speed Decanter Centrifuge



ESS-1655 HD2

Key Features Overview



The ESS-1655HD utilizes four, large-mouth, hardened solids discharge wear inserts to maximize equipment life.



Pond depth is set by six, adjustable 304SS, epicentric liquid-end discharge ports. Easy to manage & durable.



Fitted with a 60HP NEMA-Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



56:1 premium gear box powered by a 20HP back-drive. excellent for heavy drilling fluids.



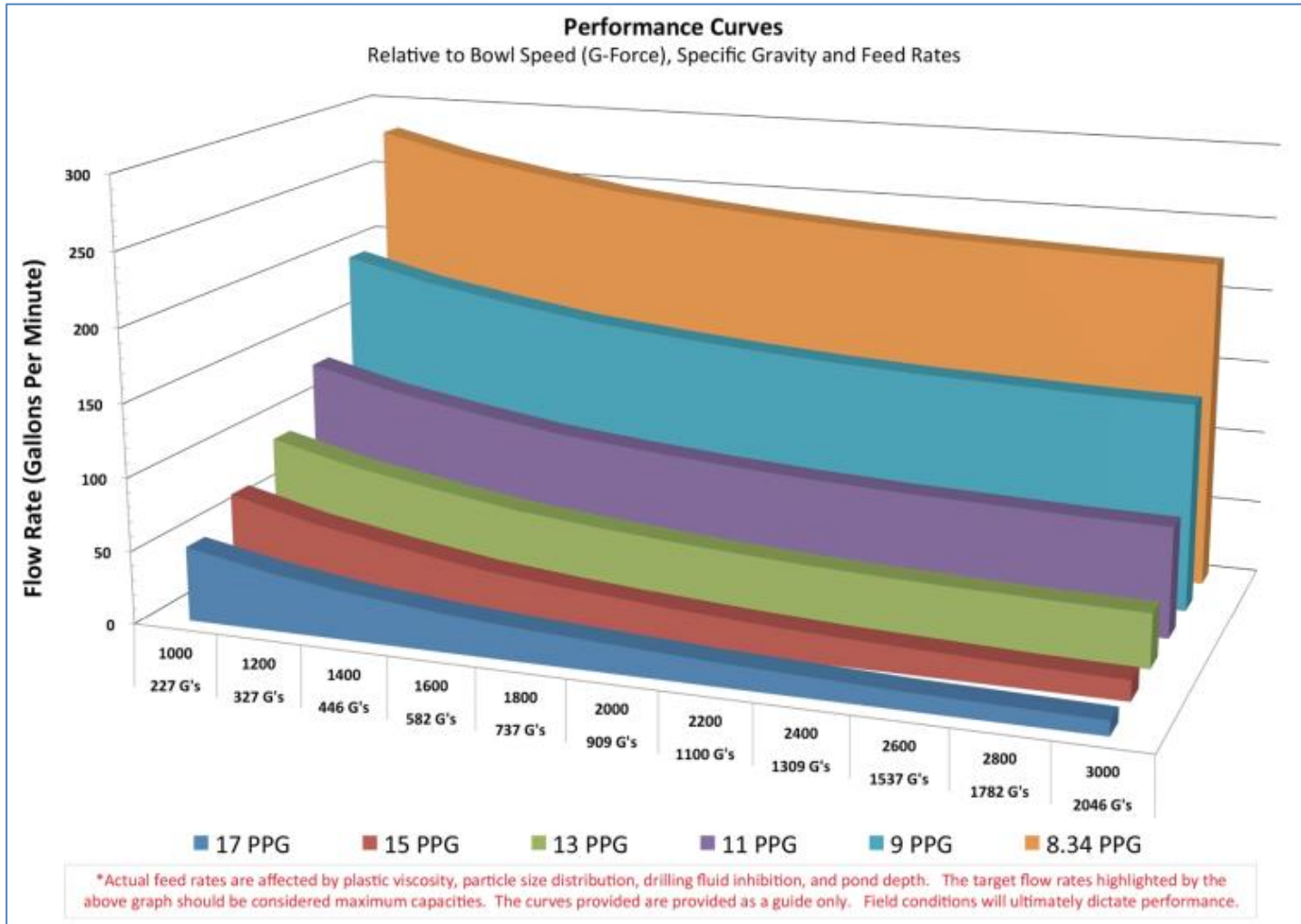
Standard carbon-fiber poly-chain drive system for maximum life. No belt re-tensioning required.



Standard main drive bearing thermal-couple protection interlock system.

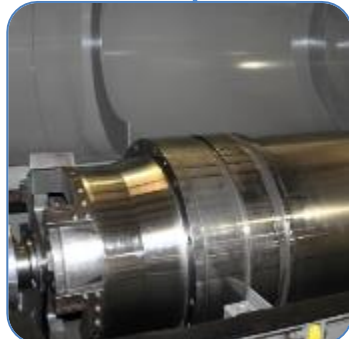
ESS-1655 HD2

Hydraulic Performance Curve



ESS-1655 HD2

Designed for Durability and Dependability



All surfaces fully sand-blasted and powder-coated for maximum wear protection under harsh conditions.

304 stainless steel machined rotating assembly and cover for maximum corrosion protection.

Skid and frame made from ASTM A36 3/8" tubular and plate steel to maximize equipment life.

Sectioned plates on the inside cover direct fluid into discharge valve.

High-speed precision ball-bearings installed in both pillow blocks and conveyor bearings.



ESS-1655 HD2

Safety Interlocks and Equipment Protection Systems



Main drive overload protection automatically built into HMI control interface.



Main drive bearing thermal-couple sensor protection system.



Centrifuge frame vibration sensor protection system.



Front-mounted Emergency Stop and centrifuge cover sensor interlock.



Back drive overload protection automatically built into HMI controls.

ESS-1655 HD2

Ergonomic Design and Improved Machine Guards



DNV 2.7.1 compliant lifting eyes on the upper edge of centrifuge frame to support unobstructed lifts.



OSHA compliant full coverage main-drive belt guard to protect employees, the sheaves, and the belt.



Lift-assist spring hinges reduce operator strain when opening the top cover.



Stainless steel top cover, bottom cover and machine guards to ensure maximum equipment life.



Full cage machine guard for the gear box and motor coupling.

ESS-1850 HD

Low Speed Decanter Centrifuge



ESS-1850 HD

Key Features Overview



The ESS-1850 HD utilizes a 360 degree discharge port arrangement that ensures smooth directed discharge of the solids.



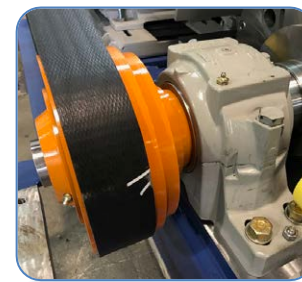
Pond depth Set by four, adjustable 304SS, epicentric liquid-end discharge ports. Easy to manage & durable.



Fitted with a 150HP NEMA-Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



80:1 premium gear box powered by an industry leading 40HP back-drive. excellent for heavy drilling fluids.



High strength V-belt for continuous motor performance to rotating assembly.



Heavy duty pillow block with SKF bearings.

ESS-2460 BD

Low Speed Decanter Centrifuge



ESS-2460 BD

Key Features Overview



The ESS-1850 HD utilizes a 360 degree discharge port arrangement that ensures smooth directed discharge of the solids.



Pond depth Set by four, adjustable 304SS, epicentric liquid-end discharge ports. Easy to manage & durable.



Fitted with a 75HP NEMA-Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



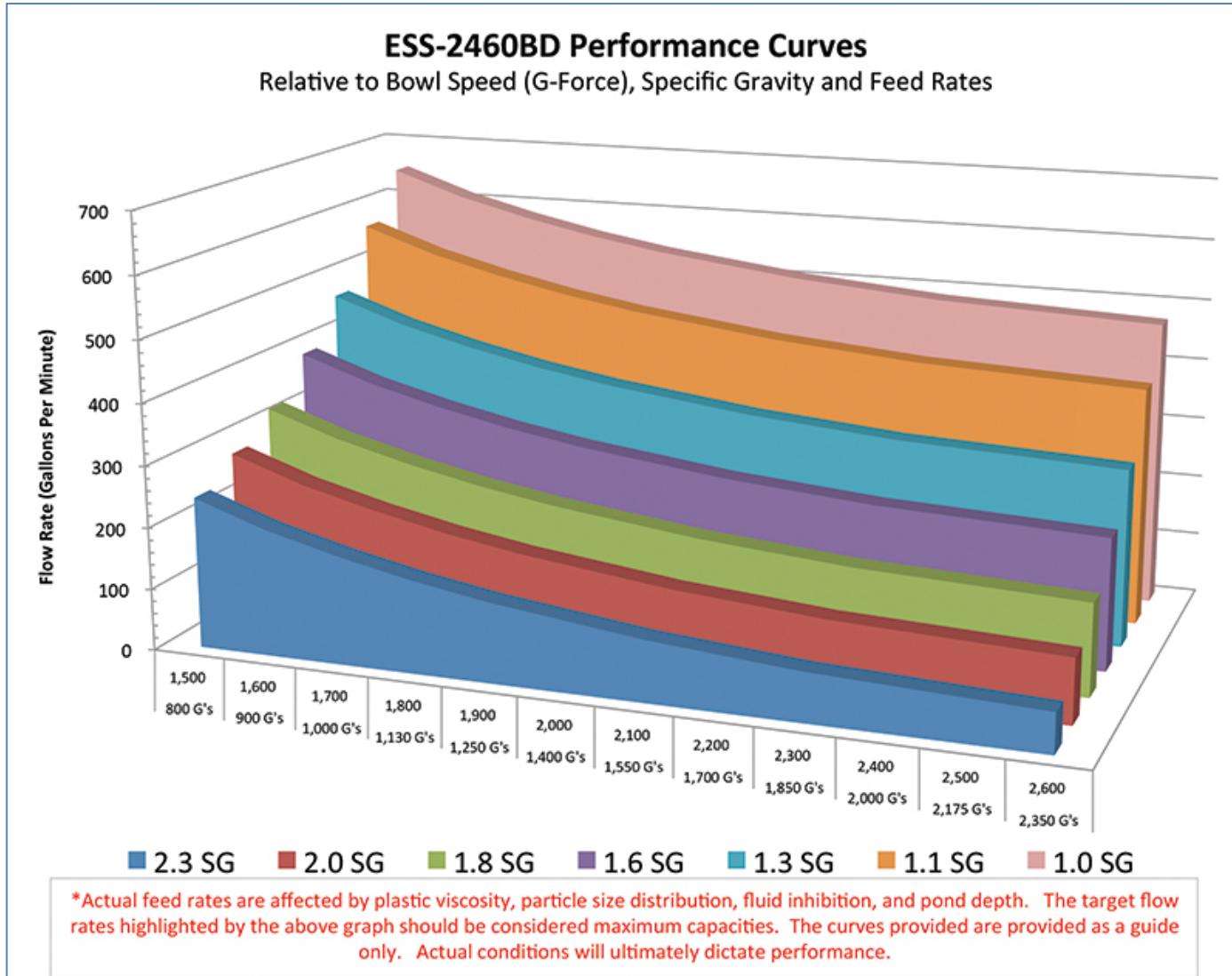
80:1 premium gear box powered by a industry leading 40HP back-drive. excellent for heavy drilling fluids.



Heavy duty, precision machined pillow block with SKF bearings.

ESS-2460 BD

Hydraulic Performance Curve – Flow Loop Validated



ESS-1967 HD2

High Speed Decanter Centrifuge



ESS-1967 HD2

Key Features Overview



The ESS-1967HD2 utilizes a 360 degree discharge port arrangement that ensures smooth directed discharge of the solids.



Pond depth Set by six, adjustable 304SS, eccentric liquid-end discharge ports. Easy to manage & durable.



Fitted with a 125HP NEMA-Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



80:1 premium gear box powered by an industry leading 40HP back-drive. excellent for heavy drilling fluids.



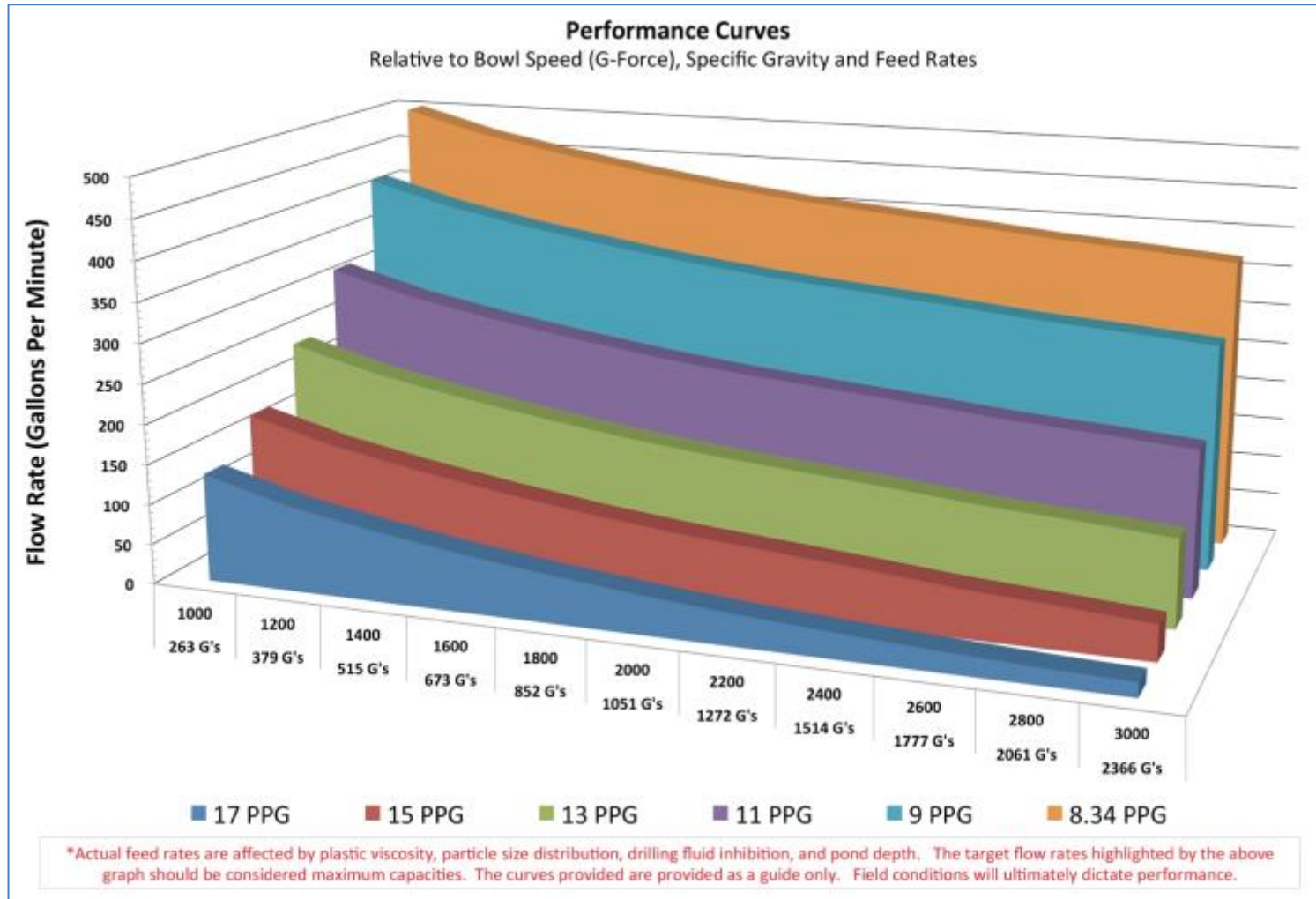
Standard carbon-fiber poly-chain drive system for maximum life. No belt re-tensioning required.



Standard main drive bearing thermal-couple protection interlock system.

ESS-1967 HD2

Hydraulic Performance Curve – Flow Loop Validated



ESS-1967 HD2

Designed for Durability and Dependability



All surfaces fully sand-blasted and powder-coated for maximum wear protection under harsh conditions.



Skid and frame made from ASTM A36 3/8" tubular and plate steel to maximize equipment life.



Dual mated high-speed precision ball-bearings provide for double the L10 life and more stable bearing operation.



304 stainless steel machined rotating assembly and cover for maximum corrosion protection.



304 stainless steel solids-discharge wear ring.



ESS-1967 HD2

Safety Interlocks and Equipment Protection Systems



Back drive overload protection automatically built into HMI control interface.



Front-mounted Emergency Stop and centrifuge cover sensor interlock.



Centrifuge frame vibration sensor protection system.



Main drive bearing thermal-couple sensor protection system.



Main drive overload protection automatically built into HMI control interface.

ESS-1967 HD2

Ergonomic Design and Improved Machine Guards



Full cage machine guard for the gear box and motor coupling.



DNV 2.7.1 compliant lifting eyes on the upper edge of centrifuge frame to support unobstructed lifts.



Lift-assist spring hinges reduce operator strain when opening the top cover.



Stainless steel top cover, bottom cover and machine guards to ensure maximum equipment life.



OSHA compliant full coverage main-drive belt guard.

ESS-1967 HD2

A Myriad of Available Options

Centrifuge Electrical Standards Options

- Class I – Division I Centrifuge
- Class I – Division II Centrifuge
- CE / ATEX / GOST R / Australian

Coating Options

- Custom Paint
- Custom Branding
- Marine Offshore Coating

Electrical Ratings

- 460V / 60Hz – 3 Phase
- 415V / 50Hz – 3 Phase
- 380V / 50Hz – 3 Phase
- 600V / 60Hz – 3 Phase



Support Systems

- Progressive Cavity Feed Pump
- Telescoping Stand
- Screw Conveyors
- Discharge Chutes
- Integrated Dewatering Systems

VFD Controls Options

- Class I – Division II Non-Explosion Proof VFD with HMI
- Class I – Division I Explosion Proof Purge Air VFD with HMI

ESS-2567 HD

High Speed Decanter Centrifuge



ESS-2567 HD2

Key Features Overview



The ESS-1967HD2 utilizes a 360 degree discharge port arrangement that ensures smooth directed discharge of the solids.



Pond depth Set by six, adjustable 304SS, epicentric liquid-end discharge ports. Easy to manage & durable.



Fitted with a 150HP NEMA-Premium continuous duty main drive motor. Ensures "sweet spot" motor demand.



76:1 premium gear box powered by a industry leading 40HP back-drive. excellent for heavy drilling fluids.



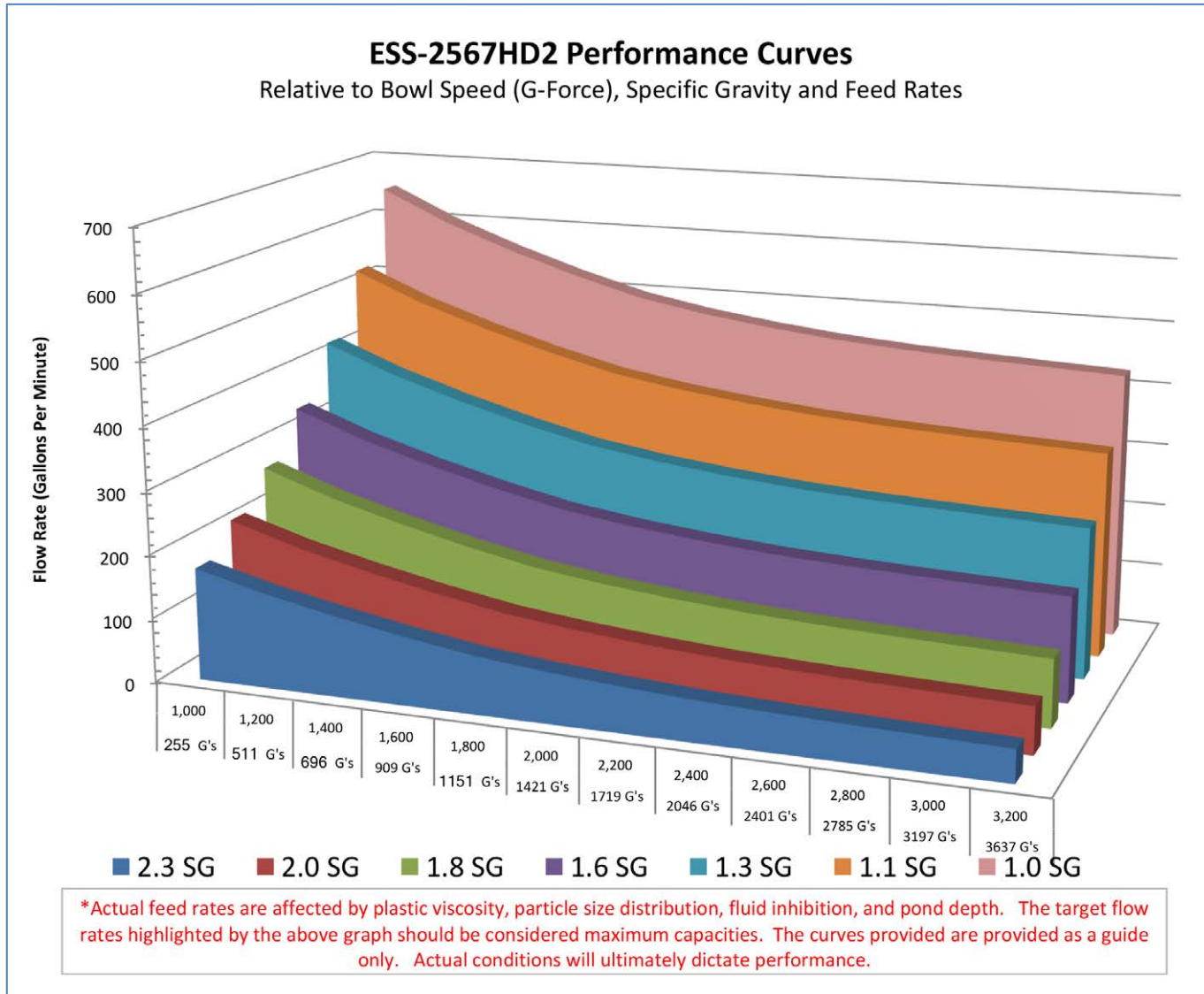
Standard carbon-fiber poly-chain drive system for maximum life. No belt re-tensioning required.



Standard main drive bearing thermal-couple protection interlock system.

ESS-2567 HD2

Hydraulic Performance Curve – Flow Loop Validated



VFD HMI Centrifuge Controls

ESS-1967 HD2 Proprietary VFD Controls



NEMA 4X SS VFD Cabinet Enclosure with Integrated Touch-Screen Human/Machine Interface

NEMA 4X SS VFD Cabinet Enclosure with Integrated Touch-Screen HMI, Nitrogen Purged Cabinet and Air Conditioning

Class I – Division II Non-Explosion Proof

Class I – Division I Explosion Proof

Fully Variable Frequency Controlled Main Drive and Back Drive

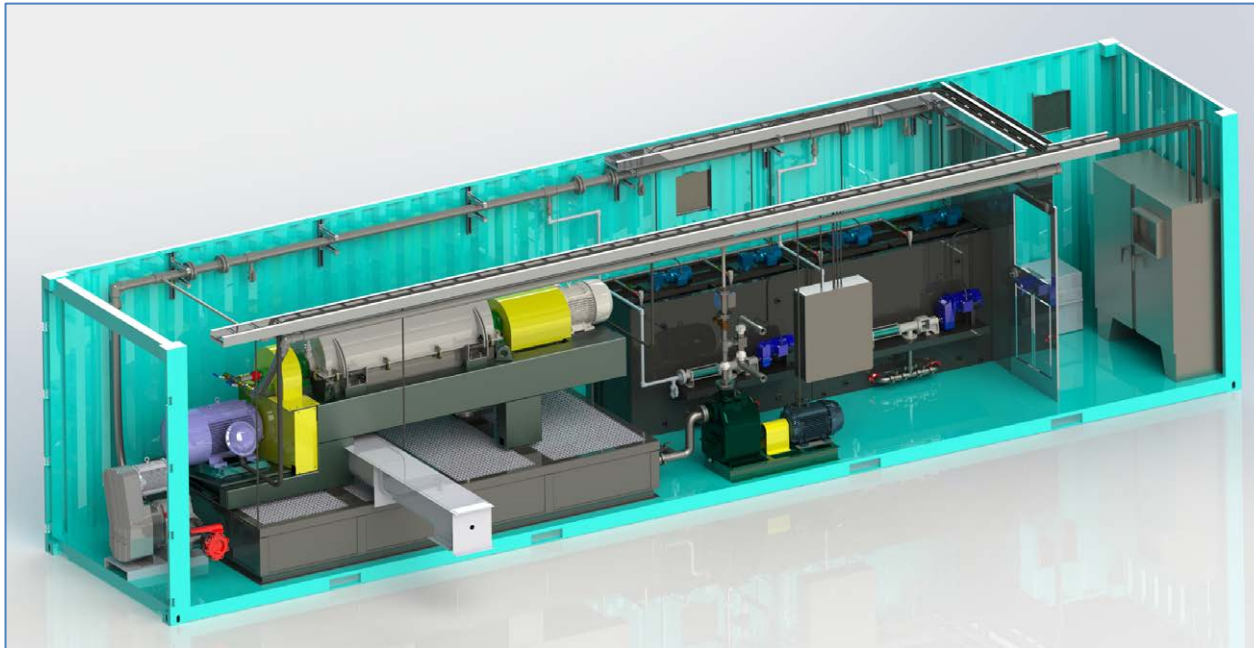
Fully Variable Frequency Controlled Main Drive and Back Drive

High Contrast Weather-Resistant HMI Touch-Screen

High Contrast Weather-Resistant HMI Touch-Screen

Packaged Dewatering Solutions

Centrifuge Packages



Packaged Dewatering Systems

Centrifuge Technology Integrated with Polymer Injection



20 Foot Containerized Dewatering System

Built inside a 20' container featuring the ESS-1450HD2 decanter centrifuge. Polymer tanks for coagulant and flocculant with dedicated pumps for injection into manifold with static mixers. Nema 4x control panel with HMI interface controls the entire system. Explosion proof configurations available.



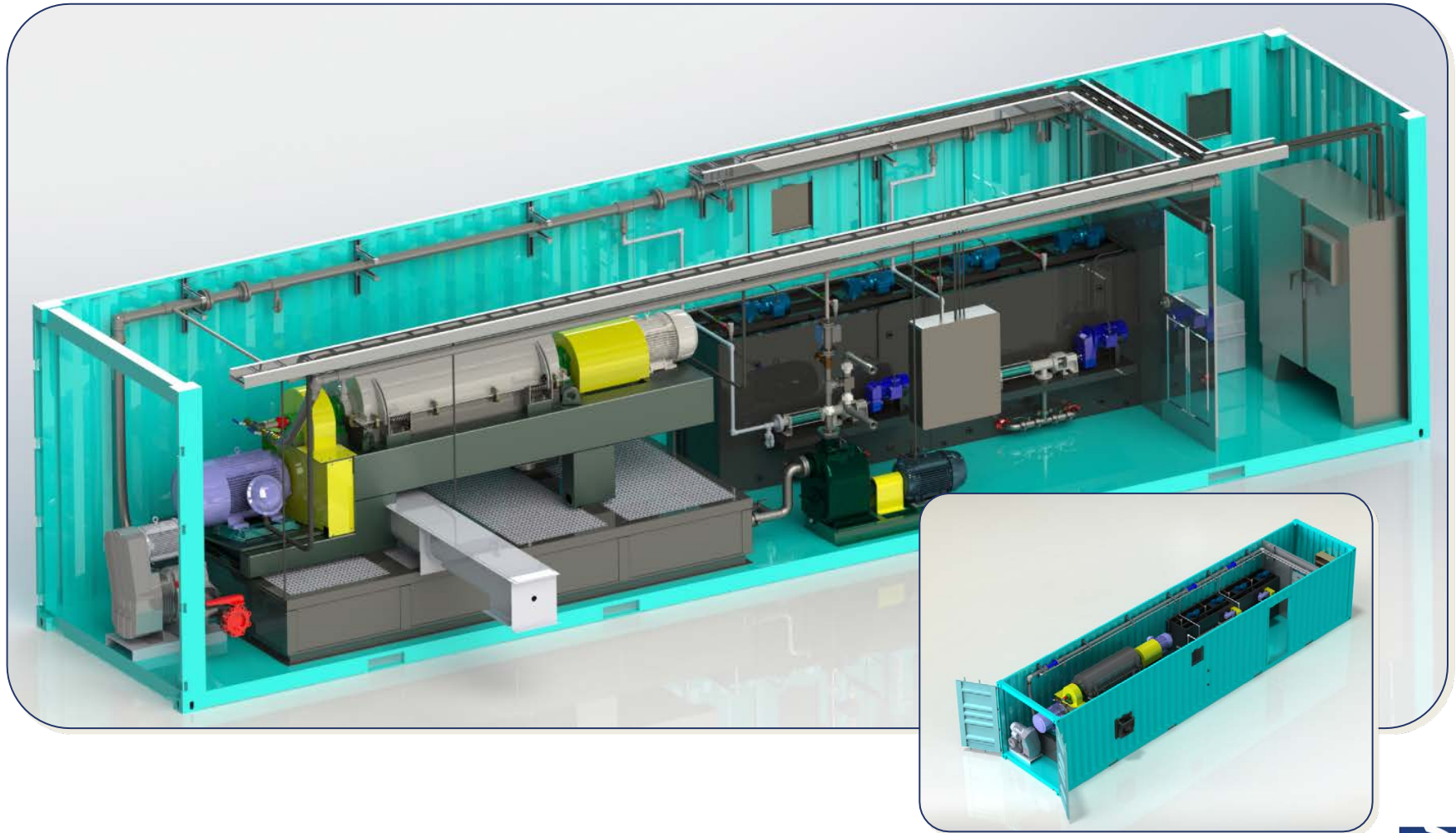
40 Foot Containerized Dewatering System

Built inside a 40' container featuring the ESS-1967HD2 decanter centrifuge. Polymer tanks for coagulant and flocculant with dedicated pumps for injection into manifold with static mixers. Nema 4x control panel with HMI interface controls the entire system. Explosion proof configurations available.

Each XP Polisher system can be integrated with a number of customer-specified customizations.

Packaged Dewatering Systems

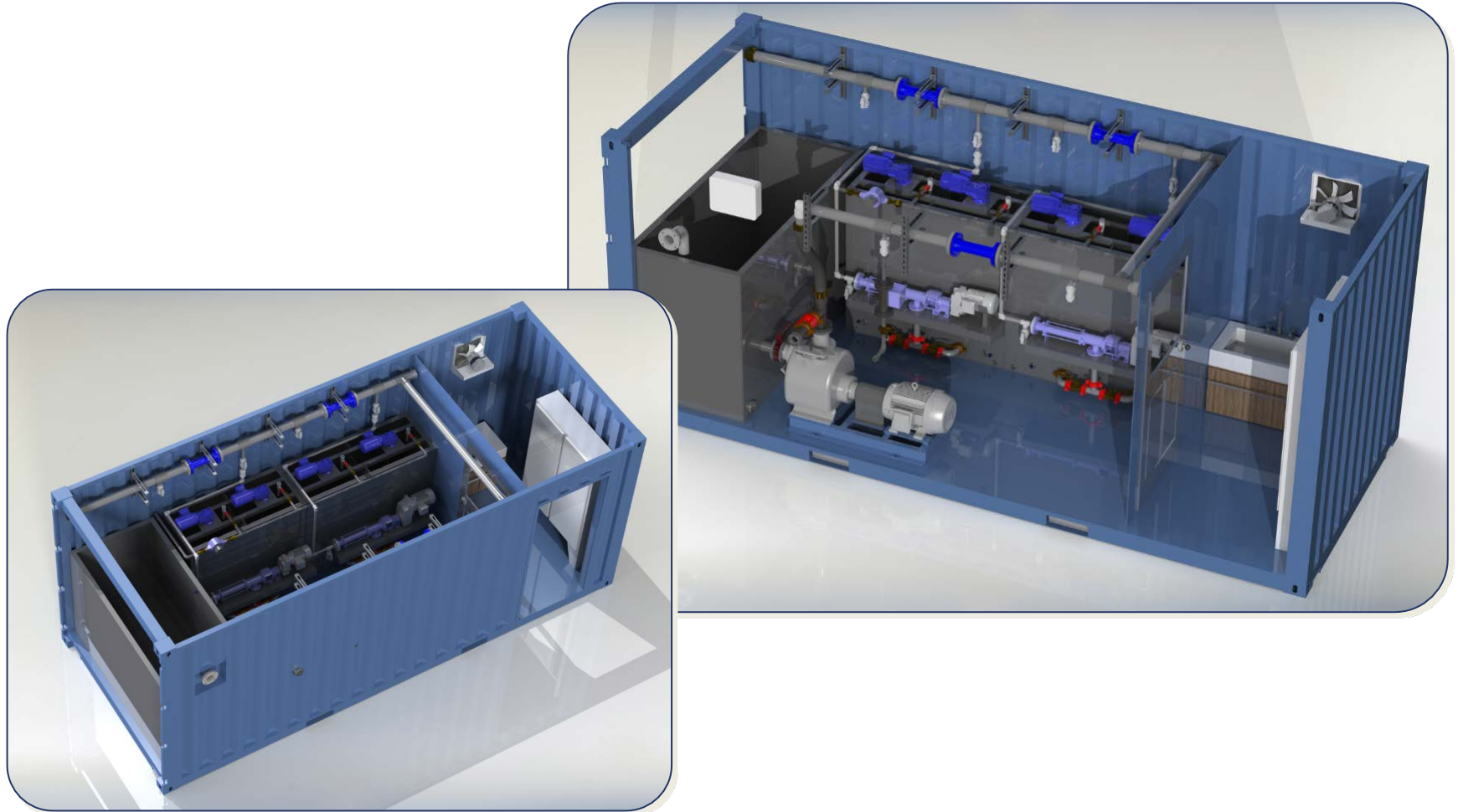
Highly Engineered, Full-Integrated, Solids Control Management Systems.



Elgin can fully integrate a number of processes into a single 20' or 40' standard shipping container.

Packaged Chemical Injection Systems

Highly Engineered, Full-Integrated, Solids Control Management Systems.



Elgin can fully integrate a number of processes into a single 20' or 40' standard shipping container.

XP Polishers

Mobile Centrifuge Packages



HDD Centrifuge Integration

Centrifuge Technology Targets Near Colloidal and Ultra Fine Solids



Tango 600 XPT or XPS Integrated ESS-1448 HD2 Centrifuge System

Build seamlessly into the primary mud system, the XPT and XPS Polishing Systems provide maximize drilling fluid life. Fully integrated centrifuge, dilution tank, PC pump, screw conveyor and centrate pump.



Independent ESS-1967 HD2 XP Polisher Mobile Centrifuge Packages

Built into a 36K triple-axel when using a single ESS-1967HD2 centrifuge or a 56' dual-axel rock-over trailer, when using two ESS-1967HD2 centrifuges, these systems are designed to handle large volumes of drilling fluids without slowing down drilling operations.



Independent ESS-1448 HD2 XP Polisher Mobile Centrifuge Package

Utilizing a 30K triple-axel trailer, the ESS-1448 XP Polisher integrates with existing solids control assets (i.e. Tango 400, Tango 600, Tango 800, etc.). On board power and chemical injection (Select Floc LP3) systems are available for 100% removal of suspended solids.

Each XP Polisher system can be integrated with a number of customer-specified customizations.



Tango 600 XPS System

Mobile Systems are Designed to Provide a Series of Integrated Processes:

Fluid Transport, Flow & Mixing

Provides feed to hydro-cyclone system, mixing systems, and tank agitation.

Tertiary Treatment

Performed via decanter centrifuge to achieve a tertiary cut down to 5 microns.

Fluid Mixing & Containment

Provides drilling fluid management & mixing through the use of tanks & agitators.

Secondary Separation

Performed via hydro-cyclones to achieve a secondary cut down to 30 microns.

Primary Separation

Performed via a shaker system to achieve a primary cut down to 100 microns.



Packaged mud reclamation systems are designed to integrate a number of processes into one platform and may include generator packages and trailers.

ESS-1967HD2 XP Polishing System

Mobile Systems are Designed to Provide a Series of Integrated Processes:

Maximum Control

Integrated proprietary HMI touch-screen VFD control system.

Fluid Management

Integrated centrate tank and self-priming centrate pump.

Centrifuge Feed System

Performed via an on-board VFD adjustable progressive cavity feed pump.

High Volume Treatment

Uses our most advanced ESS-1967 HD2 centrifuge with variable speed drives.

On-Board Generator Power

Powered by a 100KW prime on-board generator package with remote controls.



Packaged mud reclamation systems are designed to integrate a number of processes into one platform and may include generator packages and trailers.



ESS-1967HD2 XP Polishing System

Mobile Systems are Designed to Provide a Series of Integrated Processes:

On-Board Generator Power

Powered by a 300KW prime on-board generator package with remote controls.

Maximum Control

Integrated proprietary HMI touch-screen VFD control system.

High Volume Treatment

Uses dual ESS-1967 HD2 centrifuges with variable drives.

Fluid Management

Integrated centrate tanks and self-priming centrate pump.

Centrifuge Feed System

Performed via dual on-board self-priming solids-handling feed pumps.

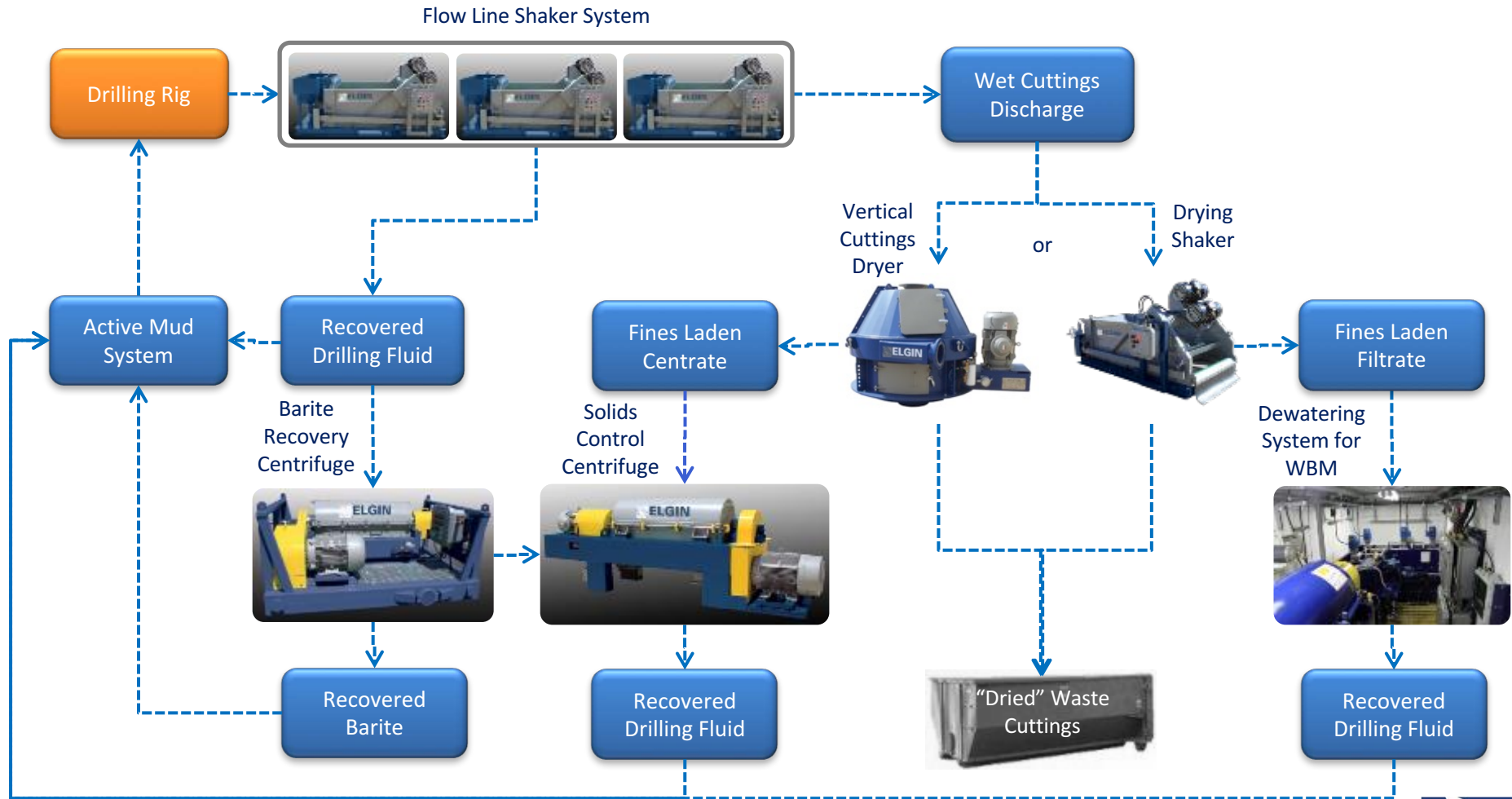


Packaged mud reclamation systems are designed to integrate a number of processes into one platform and may include generator packages and trailers.



Closing the WBM & OBM Loop

Integrated Solids Control and Waste Management Products.



Elgin's product portfolio provides a "one-stop" shop for any solids control management or waste management challenge.



Elgin Value

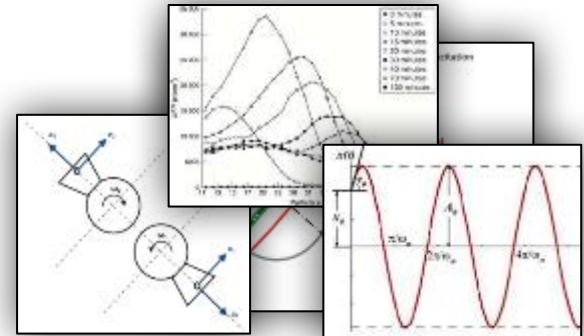
Definitive Value Proposition in Utilizing Elgin Centrifuges



25+ Years



10 Years



Unsurpassed Experience

Elgin has shipped more than 500 newly manufactured decanter centrifuges, 200 remanufactured centrifuges, 800 newly manufactured VCD's and over 100 remanufactured VCD's to over 40 different countries.

Unsurpassed Durability

With more than 25 years of experience building centrifuges for the oil and gas industry, Elgin has developed a reputation for the most durable systems in the market. The average asset life exceeds 10 years with proper preventative maintenance.

Full-Scale Engineering Support

Elgin's dedicated Engineering team evaluates system hydraulics, frictional losses, predictive reliability, and failure mode evaluation analysis ("FMEA") for each centrifuge designed. Months of product validation testing is performed prior to the release of any Elgin centrifuge.

Elgin manufactures its own spare parts and consumables ensuring 100% integrated accountability for the entire centrifuge.

