



Apex 14FHD™

Electronically-Controlled Hydraulic-Driven
Precision Decanter Centrifuge



Next-Generation Centrifuge Engineering

The Apex 14FHD™ is Elgin's most advanced decanter centrifuge to date—blending the raw power of hydraulic drives with the precision of digital control. Built with a patented electronically-controlled, hydraulic-driven platform, this unit delivers unmatched performance, protection, and control in the most demanding separation environments.

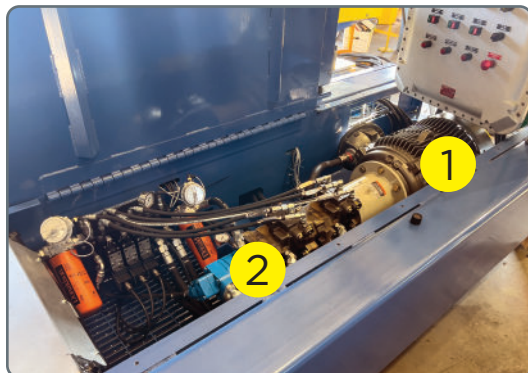
Key Performance Advantages

- **Hydraulic Efficiency with Digital Precision**
Powered by an electronically controlled hydraulic motor, the Apex 14FHD™ ensures consistent bowl and scroll performance, even under fluctuating loads. The ELGIN-NOW™ platform fine-tunes torque and speed transfer to within ± 1 RPM at over 3,000 RPM, outpacing traditional analog systems.

- **Rapid Shutdown Technology** - Unlike conventional systems that may take minutes to decelerate, the Apex 14FHD™ uses hydraulic braking via relief valve engagement—shutting down in seconds to minimize damage and downtime.
- **Scalable and Future-Ready** - ELGIN-NOW™ is a digitally native platform, laying the groundwork for machine learning, predictive maintenance, and AI optimization, future-proofing your operation.

Applications

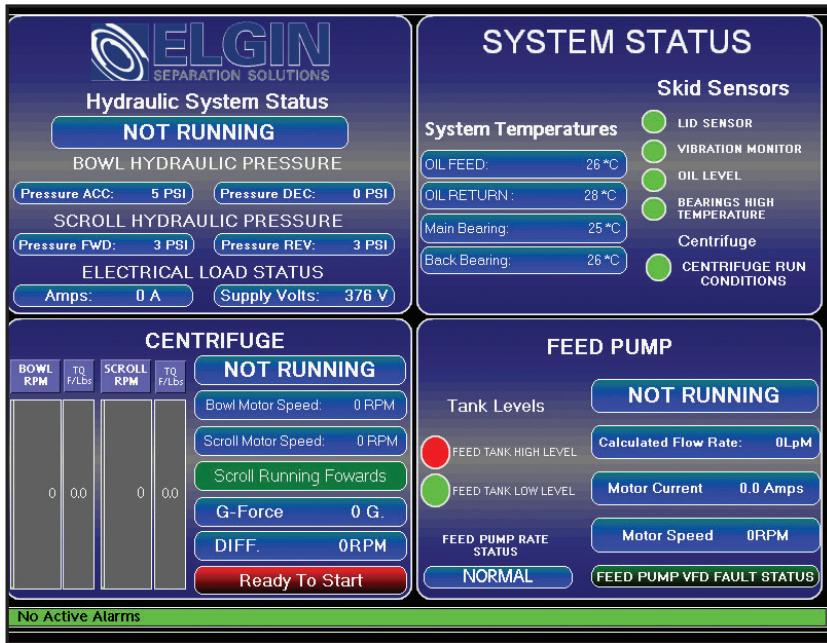
- Drilling Fluid Recovery
- Municipal Wastewater Dewatering
- Industrial Sludge Separation
- Mining and Minerals Processing
- Environmental Remediation



Primary Components

1. 75hp Explosion Proof Electric Power Motor
2. Variable Hydraulic Pump, Dual Displacement, 55cc/R Max.
3. Variable Speed Hydraulic Motor for Main Drive
4. Variable Speed Hydraulic Motor for Back Drive
5. Hydraulic Reservoir, 60 Gal. Capacity
6. Hydraulic Heat Exchanger With 3/4hp Explosion Proof Motor
7. Type 7 Explosion Proof Electrical Control Panel
8. 14" x 50" Stainless-Steel Rotating Assembly





Elgin's proprietary user interface provides complete control of all systems, as well as, a sophisticated set of diagnostic tools, safety interlocks, and fault logs.

Control systems offer a variety of enhanced features including, internal lighting, ventilation and heating, Ethernet porting for diagnostics and programming updates, and a custom designed user interface that allows for maximum operating flexibility and control.



Multiple control panel configurations available.



Built for Demanding Environments

- **Heat-Resistant Hydraulics** - An integrated heat exchanger keeps hydraulic fluid stable, while a breather-filtered reservoir ensures clean operation and low maintenance.
- **Rugged Construction** - Built with stainless steel rotating assemblies and ASTM A36 tubular framing, the Apex 14FHD™ is powder-coated and sealed to perform in corrosive, high-vibration environments.
- **Compact & Configurable** - Hydraulic components built into the base protects components from extreme environments while providing open space for easy maintenance of the rotating assembly.

Proactive Automation for Uptime and Safety

The Apex 14FHD™ comes standard with Elgin's Type 7 explosion-proof control panel, featuring a proprietary HMI interface. This isn't just control—it's complete oversight.

Integrated Features:

- Full system visibility with real-time diagnostics & alerts
- Maintenance schedules with smart reminders
- System alarm notifications to avoid unplanned shutdowns
- Remote monitoring via optional Wi-Fi module
- Operational control of connected pumps and discharge conveyors

Complete System Customization

Whether it's a stand-alone centrifuge, trailer-mounted, or part of a fully containerized dewatering unit, Elgin's engineering team can deliver your ideal setup.

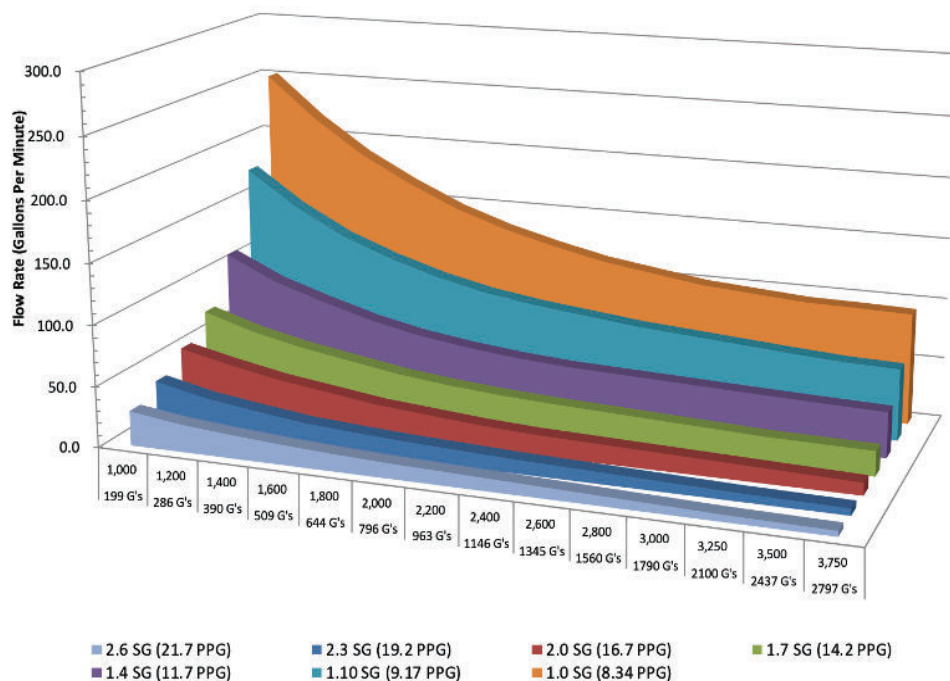
Optional Components Include:

- Progressive cavity or self-priming feed pumps
- Solids discharge screw conveyors
- Polymer injection systems with inline static mixers
- Telescoping stands or mobile trailer platforms
- Fluid tanks with high/low sensors for feedback control

When it comes to optimal operation performance, it is key to integrate safety interlocks to prevent equipment malfunction during operation. Elgin centrifuges are equipped with a host of premium industry-standard safety interlocks.

Apex 14FHD™ Performance Curves

Relative to Bowl Speed (G-Force), Specific Gravity and Feed Rates*



*Actual feed rates are affected by plastic viscosity, particle size distribution, fluid inhibition, and pond depth. The target flow rates highlighted by the above graph should be considered maximum capacities. The curves provided are provided as a guide only. Actual conditions will ultimately dictate performance.



General Performance

Maximum Hydraulic Flow Rate		Cut Size
250 GPM	12.6 lps	2-5 μ (Without Polymer Addition)

Major Equipment

Maximum G Force		Maximum Practical Speed	
2,100		3,250 rpm	
Bowl Construction		Bowl Diameter	
304 Stainless Steel		14"	356 mm
Gearbox Ratio		Bowl Length	
52:1		50"	1,270 mm
Dimensions (L x W x H)		Weight	
120" (3,048 mm) L x 80" (2,032 mm) W x 61" (1,549 mm) H		8,200 lbs (3,719 kgs)	
Main Motor		Hydraulic Oil Reservoir	
75HP 460v/60hz	3-Phase	60 Gallon (227 Liters)	