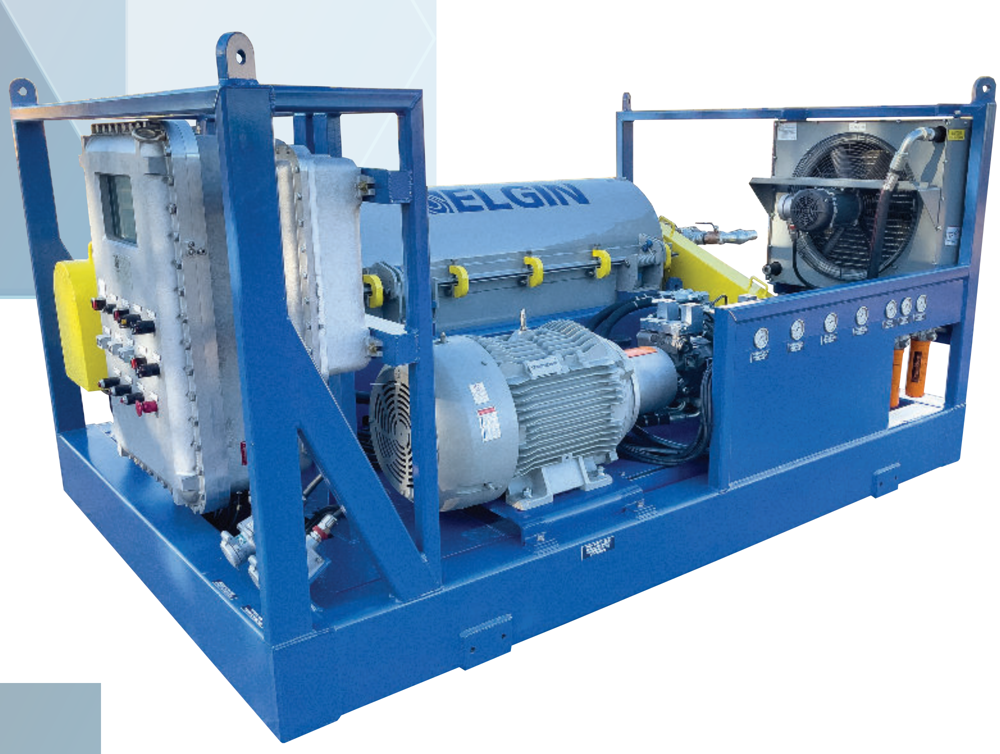
Apex 16FHD™

ELECTRONICALLY-CONTROLLED HYDRAULIC DECANTER CENTRIFUGE



Whether you are working toward maximizing product recovery or looking to get the most out of your "zero-discharge" closed-loop system, Astec's field proven solids control and dewatering centrifuges are a perfect choice. With over 800 centrifuges delivered worldwide, Astec's Apex 16FHD™ is a field proven solution.

Electronically-Controlled Hydraulic Centrifuge

Astec's Apex 16FHD™ is fitted with a NEMA premium, continuous duty, 75hp main drive motor coupled to a variable speed hydraulic, dual displacement, pump that powers a hydraulic variable speed motor. The hydraulic motor can operate the centrifuge from 100 to 3,400 rpm, therefore generating more than 2,300 G's of force. Using an inclined motor mount, motor and belt maintenance is made easy by the adjustment of two jack screws. No additional motor mounts, brackets or tensioning devices are required.

Featuring a 56:1 planetary gearbox which generates an industry-leading speed differential, which ultimately translates into a larger performance window. This performance window is what grants the Apex 16FHD™ maximum flexibility when managing the cut-point and the moisture content of discharged solids.

Onboard hydraulic fluid reservoir, desiccant breather, heat exchanger, and dedicated gauges to monitor speed increase, speed decrease, oil and charge pressure ensures maximum performance of hydraulic operations.

System operation is managed with a NEMA 4X explosion proof push-button control panel with built-in PLC and HMI display screen. Featuring safety interlocks and sensors designed to protect the system in the event pillow block bearing temperature increase, abnormal vibration, over torque conditions and hydraulic pressure loss. Internal variable frequency drives allow the operator to control the material feed rate and rpm's to achieve maximum performance.

Primary Components

- 75hp Explosion Proof Electric Motor
- Variable Hydraulic Pump, Dual Displacement, 75cc/R Max.
- Variable Speed Hydraulic Motor for Main Drive, Range Of 100 To 3400 Rpm
- Variable Speed Hydraulic Motor for Back Drive
- Hydraulic Reservoir, 40 Gal. Capacity
- Hydraulic Heat Exchanger With 3/4hp Explosion Proof Motor
- NEMA 4x Explosion Proof Electrical Control Panel
- NEMA 4x Explosion Proof Disconnect Control Box

Astec's proprietary user interface provides complete control of all systems, as well as, a sophisticated set of diagnostic tools, information libraries and fault logs. Control systems include 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.

Panel upgrades can include onboard Wi-Fi network module allowing for remote operation/monitoring via laptop, tablet or smart phone.

Liquid-End Effluent Management

Astec's Apex 16FHD™ centrifuge uses six, stainless steel, epicentric liquid-end discharge ports. Each port can be rotated to the desired pond depth setting, therefore allowing the operator to make efficient changes in pond depth by simply loosening the set screws.

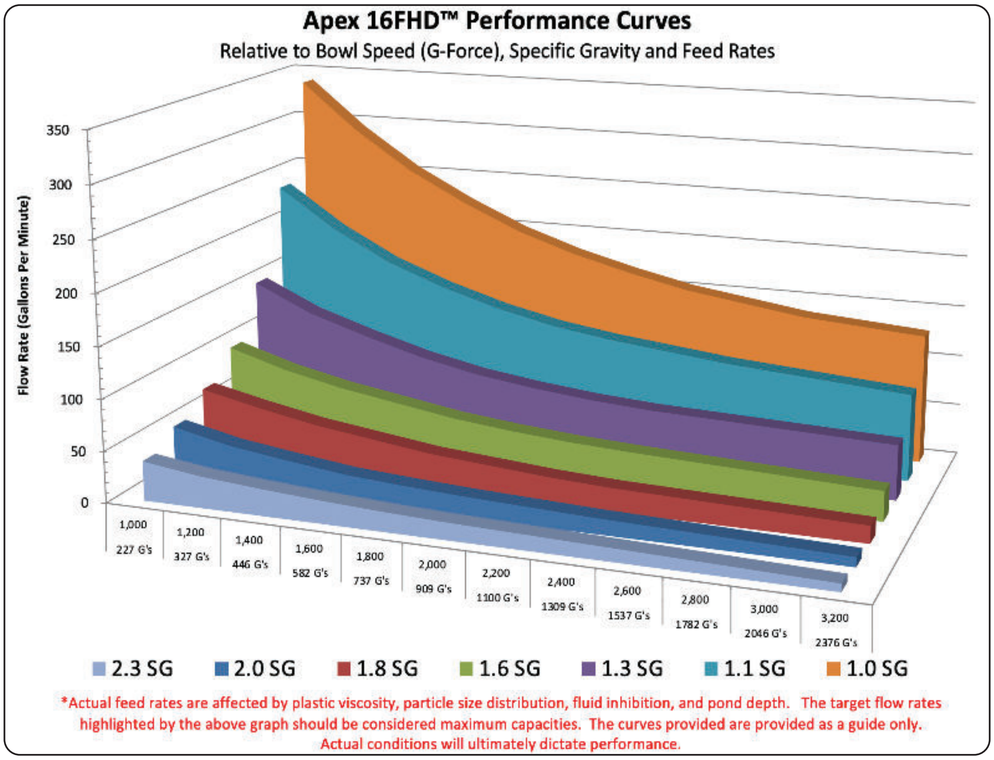
Solids-End Discharge Management

The Apex 16FHD utilizes four, "wide-mouth" tungsten carbide discharge ports and plows. These features allow the Apex 16FHD to handle large volumes of erosive solids without damaging the centrifuge.

Rotating Assembly

The Apex 16FHD's stainless steel rotating assembly is 16" (406 mm) in diameter and 55" (1,397 mm) in length. The rotating assembly is given further stability by the use of two premium bearings. Both bearings are installed in precision-machined pillow blocks.

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



General Performance			
Maximum Hydraulic Flow Rate		Cut Size	
280 GPM	17.67 lps	2-5 µ (Without Polymer Addition)	

Major Equipment			
Maximum G Force		Maximum Practical Speed	
2,300		3,400 rpm	
Bowl Construction		Bowl Diameter	
304 Stainless Steel		16”	406 mm
Gearbox Ratio		Bowl Length	
56:1		55”	1,397 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		8,350 lbs (3,787 kgs)	
Main Motor		Hydraulic Oil Reservoir	
75HP 460v/60hz	3-Phase	35 Gallon (133 Liters)	