

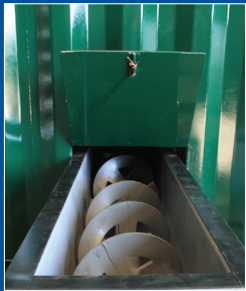


ClearWave 20™ Containerized Dewatering System

System Features



Dedicated Polymer Tanks with Top Mounted Agitators and Injection Pumps



Exterior Screw Conveyor for Solids Discharge

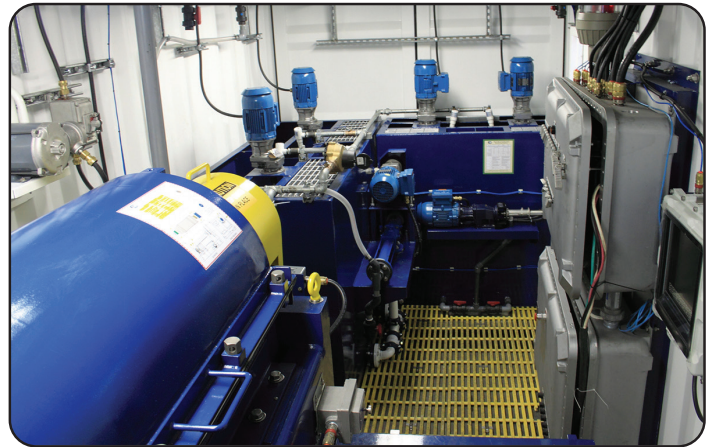


Cabinet Enclosure with Integrated Touch Screen Human Machine Interface (HMI)



Dedicated Progressive Cavity Feed Pump

As industry environmental regulations continue to become more stringent, having the right solids control and dewatering equipment has become vital to operations. Dewatering presents a great deal of benefits and advantages. One such benefit includes discharge compliance, in which many cases result in a “zero-discharge” or “closed-loop system.” In addition, the importance of recovering oil from waste is vital to maximizing profits. With the correct combination of chemicals, effective removal of solids, while recovering high quality oil and water, can be achieved.



Dewatering also maximizes drilling fluid recovery, ultimately lowering overall mud costs as well as disposal and transportation expenses. Furthermore, these systems improve rate of penetration. With a “zero-discharge” or “closed-loop system,” operations can operate without open pits, therefore reducing the location footprint and environmental impact.

For over 25 years, Astec has been designing solids management and dewatering systems for the most demanding environments. With this experience, Astec has designed a variety of Containerized Dewatering Units. These units are designed with the customer in mind by being mobile and compact. Furthermore, they also incorporate sophisticated graphical user interfaces, chemical additive injection systems, Apex 14MVD™ or Apex 16FVFD™ decanter centrifuge, and in-line mixing systems. By utilizing proprietary polymer hydration manifolds, the polymer enhanced flocculation of colloidal and ultra-fine drilled solids can be efficiently removed with a decanter centrifuge.

This versatile unit can be customized by our engineering team to meet any specific needs or challenges. It may be operated as a stand-alone device or can be incorporated as the cornerstone of a sophisticated closed-loop solids control and waste management treatment system. Systems can be climate controlled and insulated, upon request.





Apex 14VFD™ Centrifuge

Astec's Apex 14VFD™ is fitted with a NEMA premium, continuous duty, energy-efficient, poly-chain driven, 50 hp main drive. The 50 hp main drive can operate the centrifuge up to a maximum rotational speed of 3,250 rpm, thus, generating more than 2,100 G's of force.




Select Floc™ Polymer Conditioning System

By using existing equipment at the rig, the Select Floc™ allows customers to optimize existing assets, while incorporating the advances of Astec's polymer make-down and feed systems to create on-site dewatering.

Overview of Unit Features:

- Compact design for small footprint.
- 200 gpm progressive cavity feed pump for homogenous feed.
- Apex 14MVD™ or Apex 16FVFD™ decanter centrifuge capable of producing 2,100 G's of force.
- 12" shafted screw conveyor for easy cuttings discharge.
- Easy to use VFD HMI control panel with proprietary touch screen interface.
- Top mounted polymer tank agitators and PC injection pumps.
- Integrated plumbing to achieve hydration residence time.

Model Number:	ClearWave 20™
Description:	20' HMI Containerized Dewatering Unit
Length:	20' (6.1m)
Width:	8' (2.4m)
Height:	9.5' (2.9m)
Centrifuge (rpm / G's):	Apex 14MVD™ (3,200 / 2,000)
Coagulant Tank:	2 qty. 160 gallon (606 liter)
Flocculant Tank:	2 qty. 330 gallon (1,250 liter)
Dissolution / Transfer Tank:	460 gallon (1,750 liter)
Tank Agitators:	4 x 1 hp
Electrical:	380V / 50Hz or 460V / 60Hz - 3 Phase

Apex 14VFD™ Centrifuge	
Equipment Image:	
Maximum G-Force:	2,100
Maximum Speed:	3,250 rpm
Capacity:	200 gpm (12.6 lps)
Bowl Construction:	304 or 316 Stainless Steel
Bowl Diameter:	14" (356 mm)
Bowl Length:	49.5" (1,257 mm)
Weight:	6,583 lbs (2,986 kgs)
Skid Dimensions:	103" (2,616 mm) L x 75" (1,905 mm) W x 48" (1,219 mm)
Gearbox Ratio:	52:1 or 125:1

Chemically Enhanced Mechanical Separation

By combining expertise in both dewatering polymers and solid/liquid separation technologies, Astec has developed an organization capable of providing complex chemically-enhanced mechanical separation solutions. As a service oriented organization, Astec's focus is on providing timely value. This value is further enhanced when customers take advantage of Astec's integration, modularization, and customization capabilities. Astec will continue to be an industry leader in bringing mobile and/or modular turn-key solutions to the industry's toughest fluid management problems.