SEPARATORS™

McLanahan®

mclanahan.com

McLanahan offers the original patented "controlled under-flow" Separator™ cyclone. McLanahan's Separator™ out-performs all other equipment including Screws, Bucket-Wheels and Disc Dewaterers. It may be used for primary production or as a scavenger after other types of equipment.

Separators™ have many functions:

- Primary Sand Production
- Fines Scavenger Systems
- Fines Recovery
- Dewatering
- Desliming

When Separators™ are mounted on a tower or at the top of a radial stacker, finished material can be stockpiled, eliming the costs of maintaining conveyor components. The stockpiles can be placed further away from the plant, which improves housekeeping.

When used as a scavenger or to improve the performance of an existing primary dewatering or classification system, the Separator's™ ability to retain fines is maximized. Effluent from the existing system is pumped to the Separator™ and material that was previously lost is recovered, dewatered and blended with solids from the primary device.

INDUSTRIES SERVED

Aggregates

- Primary Sand Production
- Fines Recovery
- Stockpiling
- Desliming

Industrial Minerals

- Stockpiling
- Thickening Prior To Conditioning Or Attrition
- Desliming

Hardrock Mining

- Counter Current Washing
- Mine Dewatering
- Backfilling Mines
- Tailings Dams

Coal

- Refuse Dewatering
- Mine Clean-up

BENEFITS

- Accepts Variations In Feed Solids Content
- Consistent Underflow Densities
- Adjustable Underflow Densities
- Resists Plugging
- Better Separation Efficiencies Than Traditional Classifying Equipment

SAND PROCESSING

Sand Separator™ Systems

Separator™ Systems retain more of the critical finer fractions instead of sending them to settling ponds. This retained tonnage moves across your scale as a saleable product. The combination of pump and separator provides additional "scrubbing" action to the sand resulting in improved sand equivalencies (SE) and durabilities.

Benefits of Separators in Primary Sand Production

- Higher Product Yield – More Efficient At Recovering The +200 Mesh Solids
- Produces Cleaner Product Resulting In Higher SE Values

McLanahan offers a standard series of Separator™ sizes ranging from 4" diameter to 36" diameter. For larger flow-rates multiple units are mounted on a distribution manifold.

FINES RECOVERY

As an industry innovator, McLanahan has developed the largest range of fines recovery equipment available. McLanahan's customized systems recover usable product and reduce environmental liability.

Separator™ Systems

Recovery of +200/325 mesh (75/45 micron) material using the Separator™ System is the simplest, most cost-effective way of recovering saleable "fines" from waste streams. Systems that feature the original Separator™ (either single or multiple units) coupled with the rubber lined McLanahan Slurry Pump provide trouble free, low maintenance operation. Recovered material can be selectively blended back into Screws, road base mix or stockpiled as a stand-alone product such as mortar, tile, cable fill, flowable fill, AgLime, etc.

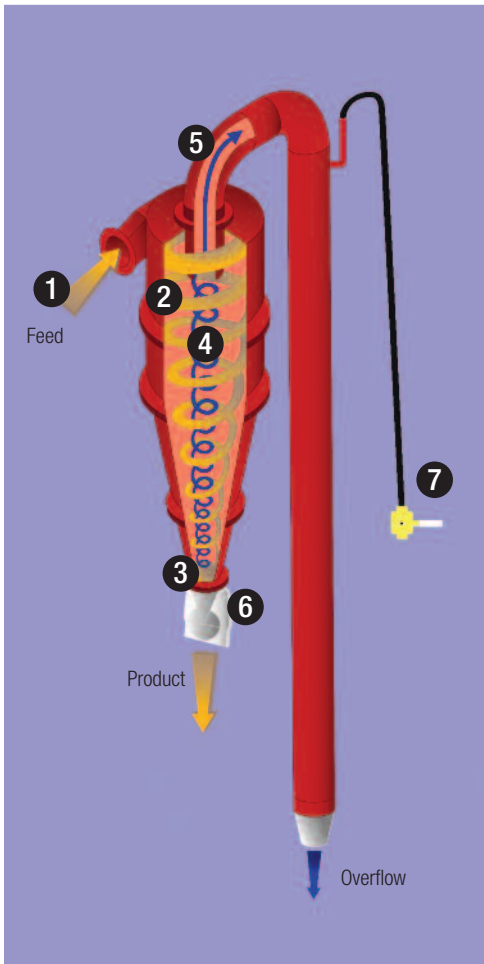
Benefits Of +200 Mesh And +325 Mesh Sand Recovery

- Recovered Solids Can Be Blended Into Crusher Run, Concrete Sand, Mason/Mortar Sand
- May Be Stand Alone Product Such As Mortar Sand, Fill Sand, Cable Backfill Or AgLime
- Reduces Pond Maintenance Costs

SAFER. SIMPLER. SMARTER.

How Separators Work

1. Slurry feed is pumped into the separator through the feed inlet.
2. Centrifugal force throws the solids towards the separator's outside wall.
3. Solids make their way down the outer wall of the separator crowding the outlet at the spigot.
4. Because the water cannot exit the spigot, a vortex is formed and the water works it way upward towards the vortex finder taking with it slimes contained in the feed.
5. As water moves through the vortex finder and into the specially designed "overflow pipe" a siphon is created within the separator.
6. As the siphon is created, the underflow regulator is sucked shut eliminating excess water from discharging with the product.
7. The overflow siphon valve allows the vacuum to be adjusted manually thus controlling the separator underflow density. As the valve is opened, the separator underflow density decreases which allows more fines to report with the product. As the valve is closed, the separator underflow density increases which allows more fines to be removed from the product.



McLANAHAN OFFERS PARTS AND SERVICE 24 HOURS A DAY, EVERY DAY!

OUR ENGINEERING CAPABILITIES

McLanahan Corporation provides cost effective solutions to issues facing today's sand and aggregate producers as well as complete plant and equipment designs.

Process Engineering – McLanahan is unique in its experienced team of qualified Process Engineers who can analyze current plant configurations, provide solutions utilizing the latest technologies and help you make money by designing processes to achieve highest product yields and reducing the amount of saleable material sent to waste. McLanahan will reduce inefficiencies (horsepower and manual operations), reduce water usage, eliminate excess equipment, and provide practical answers to deal with environmentally troublesome waste.

Design Engineering – Using the latest CAD software McLanahan's highly qualified and experienced engineers have a tradition of creating innovative equipment and system designs. Technologies such as vibration and finite element analysis are used to provide customers with the highest quality products. Having been field tested and trained in process engineering, McLanahan's engineers can provide better solutions for the industry's problems.

Offering The Widest Range Of Processing Equipment Available From A Single Manufacturer

Bulk Material Handling | Contaminant Removal | Crushing | Feed Preparation
Density Separation | Dewatering | Fines Recovery | Lab Testing | Mixing/Blending
Sampling | Sand Processing | Scrubbing | Sizing/Screening | Washing/Classifying
Water Management

NORTH AMERICA	CORPORATE OFFICE Pennsylvania, USA	+1 (814) 695 9807	sales@mclanahan.com
	Florida, USA	+1 (863) 667 2090	polymers@mclanahan.com
	Iowa, USA	+1 (319) 365 0441	sales@mclanahan.com
	Tennessee, USA	+1 (615) 451 4440	sales@mclanahan.com
AUSTRALIA	New South Wales	+61 2 4924 8248	sales@mclanahan.com.au
	Queensland	+61 7 4952 3377	sales@mclanahan.com.au
EUROPE	England, UK	+44 (0) 1420 542489	infoUK@mclanahan.com
INDIA	Hyderabad	+91 (40) 2355 4071	info@mclanahan-nawa.com

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