

DERRICK[®]

12-MSS

Mini Separation System



Derrick® 12-MSS (Mini Separation System) Components

1 – Derrick FLC 423 Double Deck Screening Machine:

- A) Scalping on lower deck using high open area, long life Urethane screens (2.0 to 0.15 mm/10 to 100 mesh)
- B) 10-Way 4" Derrick desilting cones (.0025 mm separation)
- C) Desilting underflow across upper deck equipped with Pyramid™ screens (0.106 to 0.053/140 to 270 mesh)
- D) Super G® vibrating motors provide continuous high G-force linear motion

2 – Desilter Feed Pump:

- 6 x 5 x 11 with mechanical seal

3 – Control Panel:

- 440/480 volt, 3 phase, 60 Hz
(110 single phase accessory plug available)

4 – 12' Skid Mounted Tank:

- Walkway, grating, handrail and stairs assure safe operation



12-MSS Principle of Operation

The 12-MSS offers ultra-fine separation in a very small footprint. Coarse mesh scalping is achieved by the lower deck of the Derrick FLC 423 linear motion shaker, outfitted with long life, high open area, fine urethane screen panels. Screen underflow is then processed through ten 4" Derrick desilting cones. Cone underflow is routed onto the upper fine screening deck with 140 to 200 mesh screens. Cleaned fluid (less than 1/2 of 1% sand) is returned to excavation.



Portable ultra-fine screening system



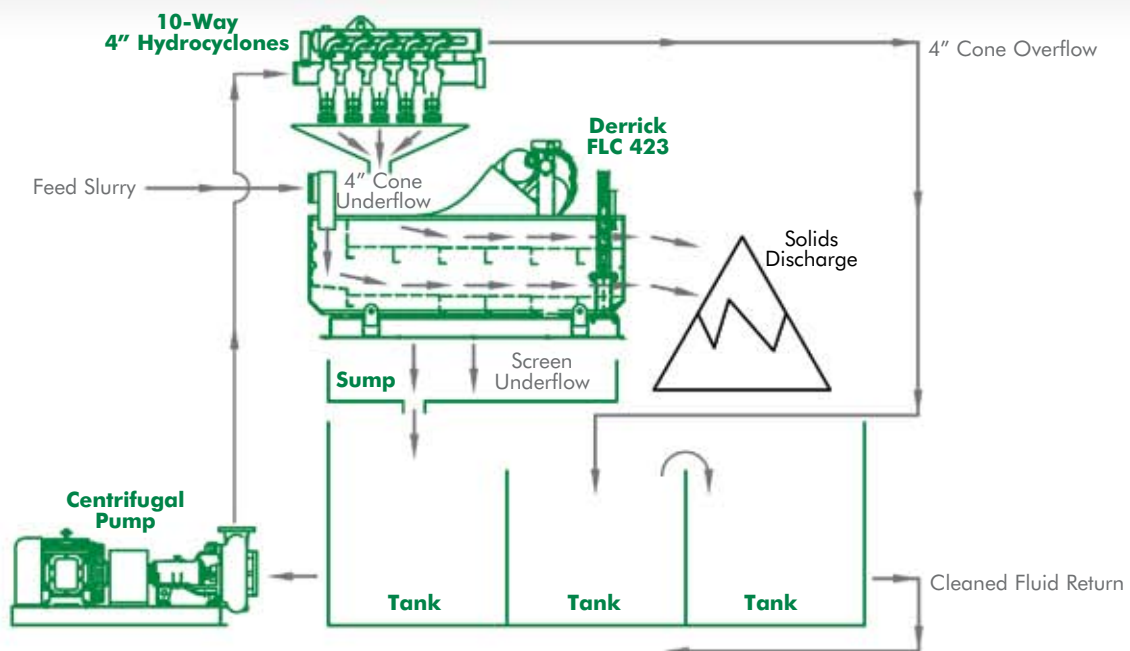
Lower (coarse) scalping deck



10-way 4" desilting cones



Upper (fine) screening deck



12-MSS Components & Specifications

Application:	Gravel, sand, and silt separation utilizing ultra-fine mesh screening and hydrocyclones
System Capacity:	Scalping: Up to 400 GPM / Desilting: 750 GPM
Base Tank:	12' skid mounted, 3 compartment tank, crimped wall construction; floor grating, walkways, handrails, stairs and control panel
Separation Equipment:	(1) Derrick FLC 423 double deck scalping shaker with (10) Derrick 4" hydrocyclones; (2) Derrick Super G® 2.5 HP; 460 Volt, 3 Phase, 60 Hz, vibrating motors
<u>Lower Scalping Deck:</u>	Excavated fluid is routed to the lower deck for primary scalping separation
Scalping Capacity:	Up to 400 GPM/80 m ³ /hr
Screen Size / Lower Deck:	20 to 80 mesh / 0.85 to 0.180 mm
Upper Deck Screening Area:	15.9 sq. ft. flat screens / 24.9 sq. ft. Pyramid™ screens
Available Screen Types:	Derrick Urethane screens Derrick stainless flat screen (SWG™) Derrick stainless flat screen with Perforated Backing Plate (PWP™) Derrick stainless 3-dimensional Pyramid screen (PMD™)
<u>Desanding/Desilting:</u>	(10) Derrick 4" hydrocyclones mounted over upper deck
Desilting Capacity:	750 GPM / 170 m ³ /hr
Desilting Cone Cut Point d50:	15 to 40 micron / .15 to .40 mm
<u>Cone Feed Pump:</u>	6 x 5 x 11 Derrick centrifugal pump with mechanical seal 50 HP, 460 Volt, 3 Phase, 60 Hz, Non-explosion proof electric motor
<u>Upper Deck/Cone Dewatering:</u>	Cone underflow is routed across upper screening deck
Screen Size / Upper Deck:	140 to 250 mesh / 0.106 to 0.053 mm
Upper Deck Screening Area:	24.9 sq. ft. Pyramid screens; 35.7 sq. ft. Pyramid Plus screens
Available Screen Types:	Derrick stainless flat screen with Perforated Backing Plate (PWP) Derrick stainless 3-dimensional Pyramid screen (PMD) Derrick stainless 3-dimensional Pyramid Plus screen (PMD+)
Slurry Feed Pump:	Not included. Typically supplied with TBM package
Clean Fluid Transfer Pump:	Not included. Separate transfer pump required to return clean fluid to TBM slurry tank. Typical installation provides clean fluid over-flow to customer provided volume tank.
Electrical Requirement:	Not included. 150 kW 460/480 Volt, 3 Phase, 60 Hz
Overall Dimensions:	8'6" (W) x 12' (L) x 10'4" (H); Weight: 15,500 lbs (approx.)



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