

Description

The ITE FSP separation plant is specially designed for dewatering of slurries and recycling of track ballast.

In the process water circuit system of wet-mechanical processing operation all mineral particles adhering to the spent ballast (down to 20 micron) are washed off into suspension phase. The sedimentation requires an instant and effectively operating solids/ liquid separation system to permanently guarantee circuit stability to prevent frequent plant failure and reduced throughput on account of blocked lines and process water tanks.

The ITE FSP is an integrated component in the track ballast processing plant and makes wet-mechanical cleaning of spent ballast reliable. The cleaned track ballast can be reused in rail track beds.



Equipment

The ITE FSP is equipped with:

- a unit of 2 x 12" hydro vacuum cyclones and 16 x 4"-hydrocyclones for separation of solids down to 20 microns.
- a 2-chamber tank system, integrated into a 20 ft. standard frame
- a screening machine, equipped with 4 screen panels for separation of critical fines from 100- 45 μm
- integrated feed pump for feeding the cyclones with slurry
- an integrated control cabinet



Dimensions for transport

- Length: 6058 mm
- Width: 2438 mm
- Height: 3783 mm
- Weight: ap. 10 000 kg

Technical specifications

• Cyclones

- Hydro vacuum cyclones
 - Quantity: 2 pcs.
 - Cyclone size: 12 inches
 - Pressure: 0.8- 1 bar
 - Cut-point (d_{50}): 45 μm^{*1}
- Hydrocyclones
 - Quantity: 16 pcs.
 - Cyclone size: 4 inches
 - Pressure: 2.0-2.8 bar
 - Cut-point (d_{50}): 20 μm

• Shaker

Screen area (4 panel screens) 3.2 m²

- Angular adjustment: 0° to +3°

▪ Power supply

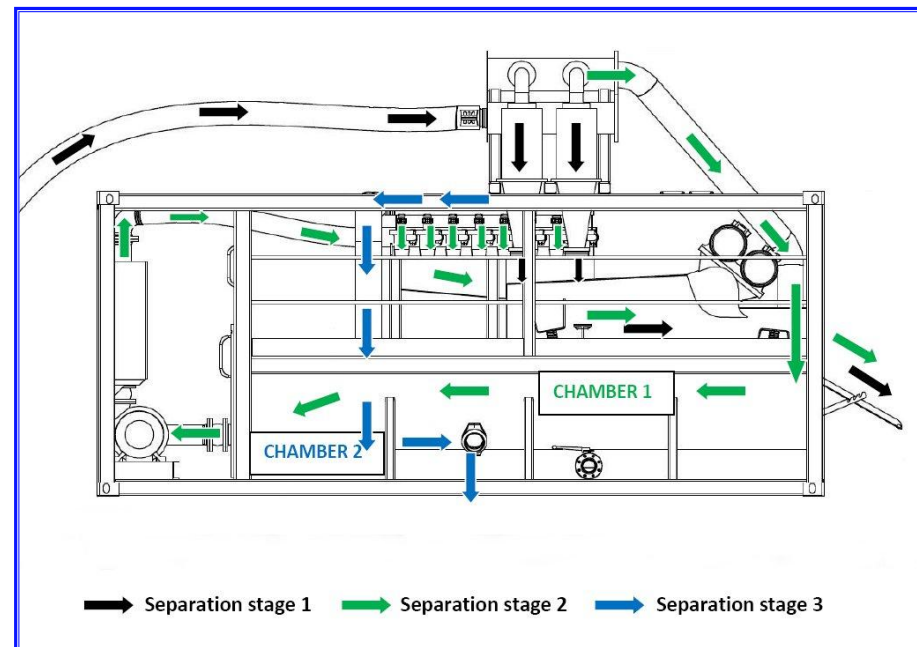
- Rated power (total) (2x1.86 kW): 3.72 kW
- Supply voltage 400 V / 50 Hz

• Feed pump

- Centrifugal pump 6 x 5 x 14, pumps with mechanical seals
 - Speed (fix): 1500 U/min
- Power supply
 - Rated power 37 kW
 - Supply voltage: 400 V / 50 Hz

• Tank (2 chambers)

- 1. chamber: underflow screening machine
- 2. chamber: cleaned water
- Tank volume: approx. 8 m³



*¹ depending on the characteristics of the material to be separated.