

Description

The ITE TSP400-2 is a compact separation plant and specially designed for processing of slurries and removal of drilled solids from the slurry circuit in tunneling, horizontal drilling or deep hole drilling applications.

The TSP400-2 is composed of one double deck vibration screening machine, one 4-panel vibration screening machine, three hydro-vacuum-cyclones, one 20' process tank with one integrated centrifugal feed pump, one control cabinet and accessories.

Adjustable discharge chutes, fold-away platform and pluggable railing for safe working and good access provide a plug-and-play solution. Assembly time is therefore reduced to a minimum. Feeding of the shakers and cyclones is accomplished by an integrated fixed piping and wiring system in a minimal footprint.

Instead of a collection of equipment from various sources, the ITE TSP400-2 is a field-proven network of separation components specifically designed to function as a single unit. During each separation stage, a maximum of solid particles are removed from the slurry. The modular system guarantees continuous and fast advance rates, reducing downtimes to a minimum. The innovative screening technology combined with hydrocyclones constitutes a complete recycling concept, providing optimal removal of critical fine particles down to 45 microns and guaranteeing constant slurry properties.

The vibration screening machines can be equipped with a wide range of different ITE hookstrip and panel screens which are available from 4mm mesh width down to 45µm.



Transport Dimensions

Plant component	Length x Width x Height [mm]	Weight [kg]
Tank	6062 x 2438 x 2591	approx. 8000
Platform (folded in)	6062 x 2438 x 450	approx. 2000
Screening machine K2D	3020 x 1740 x 3805	approx. 4000
Screening machine 4PSM	3410 x 1690 x 1620	approx. 2400
Cyclone unit	3500 x 1600 x 2100	approx. 1500

Technical Specifications

Capacity (as per spec. below)*¹: max. 400 m³/h

Power consumption (total plant): 91 kW

- **Hydro-vacuum-cyclone - unit**
 - Number: 3 hydro-vacuum-cyclones
 - Dimensions: 15 inch (381 mm)
 - Cut-point (d_{50}): 45 μm *¹
- **Vibration screening machines**
 - 1 x K2D for scalping and coarse separation
 - 1 x 4PSM to dewater the hydro-vacuum-cyclone underflow
 - Total screen area: 8 m²
 - Electrical power
 - Power (total) (6 x 2.2 kW): 13.2 kW
 - Voltage: 400 V / 50 Hz
- **Screens*¹**
 - Hook-strip screen
 - Number: 1 pcs. (K2D top deck)
 - Screen area: 2.4 m²
 - Deck inclination adjustment: -3° to +8°
 - Dewatering screens (fine)
 - Number: 3 x panel screen (2.4 m² total on lower deck K2D)
 - Number: 4 x panel screen (3.2 m² on 4PSM)
 - Screen area (total): 5.6 m²
 - Deck inclination adjustment: -3° to +7°

*¹ The capacity of the ITE TSP400-2 is subject to the viscosity and density of slurry, solids loading, grain size distribution, screen selection, and properties along with operating conditions, and might be actually lower than specified.

- **Feed Pump**
 - Wear resistant centrifugal pump 6 x 5 x 14 with expeller seal, soft packing and frequency inverter (optional: mechanical seal)
 - Desanding circuit: 3 x 15" hydro-vacuum-cyclones
 - Power installed
 - Power (total): 75 kW
 - Voltage: 400 V / 50 Hz
- **Tank (2 compartments)**
 - 1. Compartment: Underflow K2D
 - 2. Compartment: Overflow hydro-vacuum-cyclones
 - Tank Volume: approx. 24 m³

