Vibrating Screens

Since 2005
As per Technology from
M/S JÖST, Germany

About Electro Zavod Screens:
Screen selection is about selecting the correct screening area, supported by the correct metallurgical screen parameters, i.e. stroke, operating frequency, drive angle, and deck angle. This is to ensure screening efficiency through proper stratification of material, determined by vertical acceleration of the screen, given that an acceptable bed depth is achieved on the chosen width of the machine.

The decision to select a particular vibrating screen is critical. It impacts the operating life, efficiency of screening machine, maintenance requirement, inventory cost, environmental factors and of course investment. Electro Zavod has the latest technology which will provide a cost-effective solution for almost any application.

Electro Zavod screens are rugged and designed for a long time. Due to the vast experience of JÖST and the wide choice of vibratory drives available, Electro Zavod selects and delivers the most efficient and economical screen for each individual application. Selection of the correct drive is very important for screening efficiency and highest possible output especially for prolonged usage over the life of the machine.

Electro Zavod has the complete range of Vibrating Screens which enable us to make the optimum selection.

Screening performance is affected by various characteristic of the feed material including particle shape, bulk density, flow-ability and surface moisture. Most important perhaps, is the particle size distribution of the feed. It is essential to choose the correct screening motion and configuration for performance and durability.

There are two basic types of screening motion - Circular and Linear.
CIRCULAR MOTION SCREENS:
Circular Motion Screens are operated either by a single shaft vibrator or by a single unbalance motor. Due to the eccentricity of the shaft in the case of single shaft drive, a controlled circular motion is produced. In the case of a single unbalance motor drive, the circular motion is produced by the unbalanced weights on the rotor shaft. These screens have a slope varying between 15 and 25. They are commonly used with a combination of low amplitude of vibration and high frequency.

The most common circular motion drives are:

Single shaft drive:
These screens have a simple design. The drive is through a carden shaft or 'V' belt. In case of a 'V'-belt drive, speed variation is possible. The single shaft drive is mostly used for medium to large sized screens.

Single Unbalance Motor:
These are primarily used for small to medium sized screens, and have a fixed rotational speed which depends on the Unbalance motor selected.
LINEAR MOTION SCREENS:
Linear Motion Screens are operated either by a mechanical exciter or two unbalance motors. In both cases rotation in opposite directions creates linear vibration. Linear motion screens are very high performance machines, in terms of capacity and efficiency. They have a low inclination which varies between 0 and 15. The drive is a combination of high amplitude and low frequency of vibration.

The common linear motion drives are:

Two Unbalance Motors:
These are arranged as a double drive which produces linear vibrations. They are mainly used for medium sized vibratory screens. Due to linear vibrations, these screens have a much lower downward inclination than those with shaft drivers. In special cases the screens can even run without any inclination or with a slight incline.

Exciters:
Drive units of this type also produce linear vibrations. They are mainly used for vibrating heavy duty large and very large screens. When more than one exciter is being used in very large screens, the vibratory force is uniformly and efficiently transferred from the exciter to the screen. The drive motor of the exciter is a standard foot-mounted motor. The motor torque is transmitted to the exciter either directly via a carden shaft or indirectly by a V-belt drive or a variable speed gear. The indirect drive allows the user to adjust the rotational speed.
FINES PARTICLE SCREENING:

Conventional screening machines are not able to screen fine particles very efficiently. Electro Zavod multiple slope screens ensure a good precise separation even for materials which are difficult to screen.

The operating principle of multiple slope vibrating screen is based on maintaining an uniformly thin bed of material, right from the feed to the discharge end of the screen. This allows stratification of fines at the bottom of the bed and increases the probability of separation. By designing the screens with varying deck slopes, Electro Zavod screens have improved screening efficiencies at higher capacities compared to conventional horizontal type screens.

GRIZZLY SCREEN FOR COARSE SCREENING:

Grizzly screens are usually employed to extract coarse material from storage bins or storage hoppers and convey it to downstream crushers. They are used for screening smaller grain size in the feed are specially designed for such application.

Electro Zavod Grizzly Screens are produced with one or two decks. The top deck feeds coarse material to the crusher and the lower deck screens the balance material in two separate grain sizes.
DEWATERING SCREENS:

Dewatering Screens are used for separation of solids from liquids. Best results are achieved with screens which are slightly inclined so that the mass of solids can accumulate and build up. An adjustable discharge plate allows for fine-tuning. A high frequency of vibration increases efficiency of sizing and dewatering.

OPTIONAL ACCESSORIES:

Electro Zavod screens are supported by suitable springs which isolate the vibration. Electro Zavod Screens can also be supported by vibration dampening frames, if required. This ensures that the residual dynamic forces are Negligible.

*Electro Zavod vibrating screens can be equipped with the following optional components:*

- Inlet feed box
- Dust-tight covers (stationary or vibratory)
- Suction hood for dust suppression
- Rubber bellows
- Outlet connectors
- Inspection windows with covers
- Wear liners