We Help Our Customers Make Gem out of the Soil

We are beside you in :

- Equipment installation to commissioning and optimization.
- Supplying genuine quality of spare and wear parts.
- Providing regular and troubleshooting vibration tests upon client requirements.
- Training and engineering services during installation and commissioning.
- Fast and qualified assistance by our engineers for proper selection of vibrating screen/feeder, simulation and process analysis.

www.fms-co.com sales@fms-co.com

FAKOOR MEGHNATIS SPADANA

Vibratory Screen | Feeder

- Maximum screening quality for mining industry

Sales | Parts | Services
www.fms-co.com

ABOUT FMS

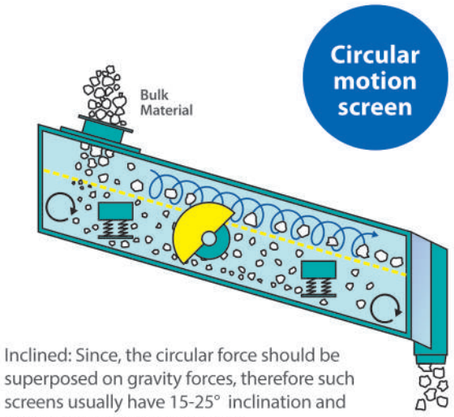
Fakoor Meghnatis Spadana Co. (FMS) is comprised of a number of specialized and highly motivated groups which embarked on designing and manufacturing of magnetic and material handling equipment since 1992. Having engaged efficiently over two decades in designing and manufacturing of magnetic and vibrating equipment, FMS has been in close cooperation with various mines and industries nationwide.
Considering experiences of Fakoor San'at Tehran Co. (FST), and enjoying specialized and qualified groups in design, quality control, planning, manufacturing, R&D, and extensive after-sales services, FMS has acted successfully in providing beneficiation facilities as well as iron ore concentrate essential equipment.
Considering the mission of FMS in designing and supplying suitable equipment for industry and mining fields, this company has been involved in optimization of designing and manufacturing structures of material handling lines since 2016 and has achieved a great success in optimizing the design and production methods by creating innovations. Nowadays, by developing complete engineering, machining, fabrication, and manufacturing departments to design and manufacture customized conveyor project, we have been the Iranian leading manufacturer of high-strength conveyor belts to meet demanding conditions of use.

Vibratory Screen

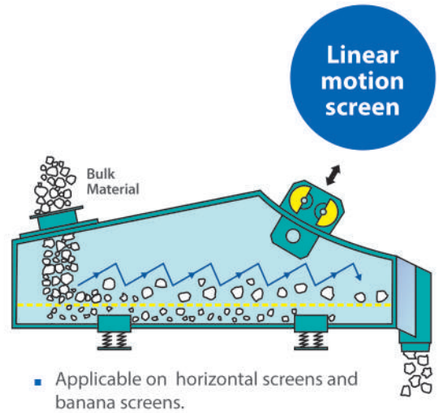
FMS presents a wide range of vibrating screen types to cover most of sizing/scalping applications in mining industry. Protection of wear protected critical parts beside engineered reliable and efficient design makes an optimal screen design.

Professional design techniques, vibration tests and analysis methods are acquired in order to ensures quality of equipment. FMS products meet the highest quality test. FMS screens use bolted connections to eliminate stress points and improve structural rigidity.

Principle of operation



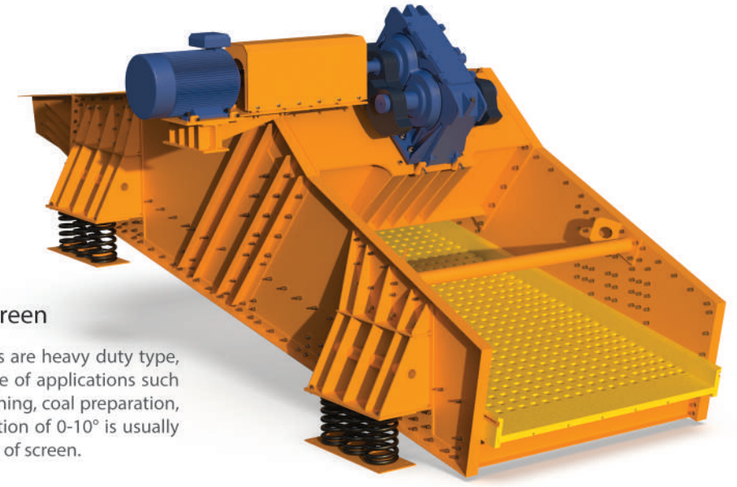
- Inclined: Since, the circular force should be superposed on gravity forces, therefore such screens usually have 15-25° inclination and also known as inclined screens.
- Economical and high efficiency.
- Applicable for scalping and dry/wet sizing.



- Applicable on horizontal screens and banana screens.
- Higher efficiency and wide range of application.
- Applicable for scalping, grizzly scalping, sizing, dewatering and SAG discharge screening.

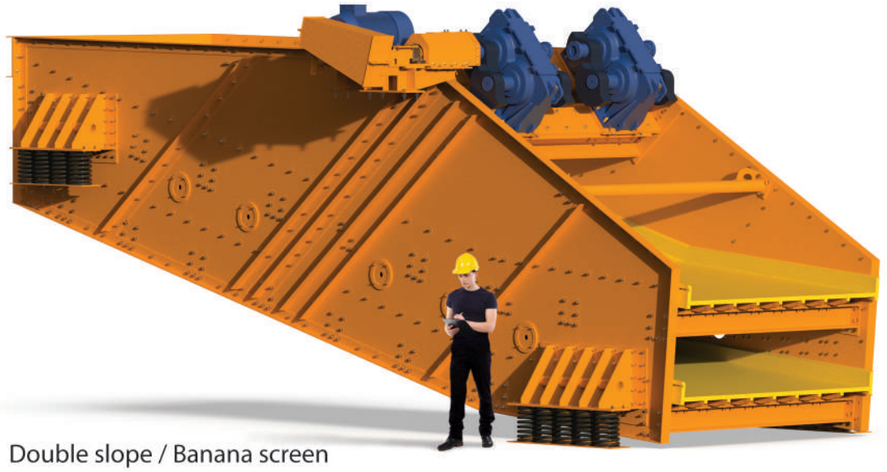
Type of Equipment

Vibrating screen with perforated surface is generally used for material sizing. The optimal particle size is from 500 micron up to 350 mm. Based on the screen operation which may be circular, linear, or elliptical, the driving system can be selected to be an oscillator, an unbalanced motor or an exciter system.
In FMS the largest localized screens with the capacity of 1440 tph for the linear motion and 2000 tph for the circular motion were designed and manufactured. In addition, the engineering team designed and manufactured screens for separating particles up to 350 mm. Linear motion types are available up to 2.5x9.5 m for screen area, while circular motion types are suggested up to 2.4x7.2 m.



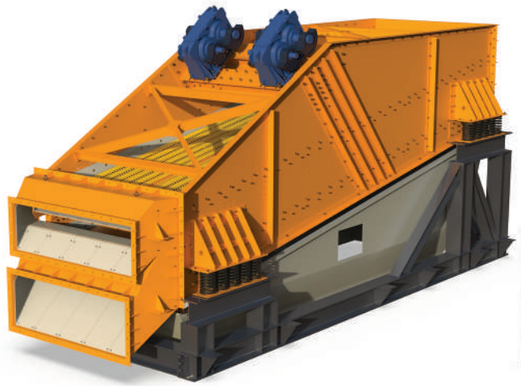
1 Horizontal Screen

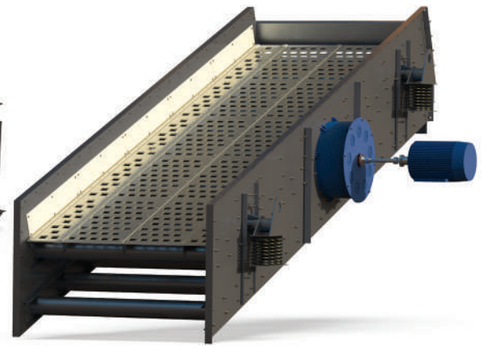
FMS Horizontal screens are heavy duty type, utilized in a wide range of applications such as mill discharge screening, coal preparation, and wet sizing. Inclination of 0-10° is usually suggested for this type of screen.



2 Double slope / Banana screen

This type of screen has been manufactured up to the capacity of 1440 tph with 2.5 x 8.5m screen area. Single, double or triple deck design can be provided for such high efficiency screens.





3 Pellet de-dusting screen

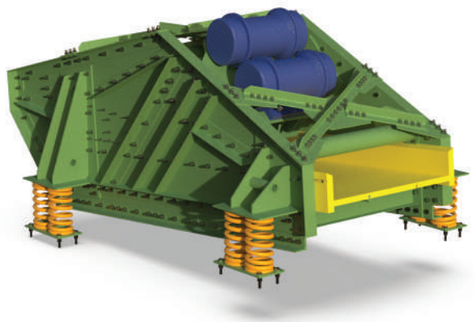
Proper material motion, large screen area, shape of media opening and wear resistance material for media are the main characteristic of pellet de-dusting screens. Screen area up to 2.5x9 m with 400 tph has been designed and worked successfully.

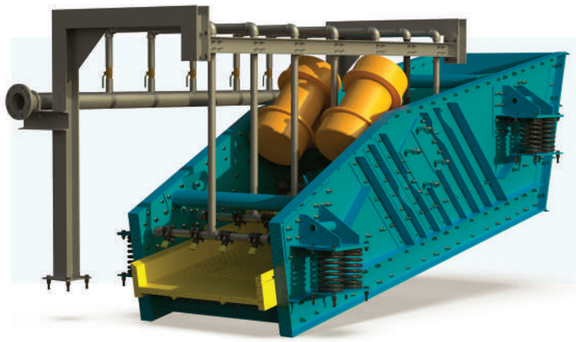
4 Scalping Screen

Inclined screen usually suggested for scalping applications due to the lower manufacturing cost comparing linear motion screens. Screens up to 2.4x7.2 m dimension, 2000 tph capacity and 8% material humidity has been manufactured. The vibrating double raw self-aligning bearing type and no contact grease sealing system is utilized to maximize the bearing life time.

5 Dewatering screen

For application with 90% water content in feed and desired discharge with below 15% moisture, dewatering screen is suggested. This screen has negative slope, 1500 rpm vibration frequency and capacity up to 50tph.



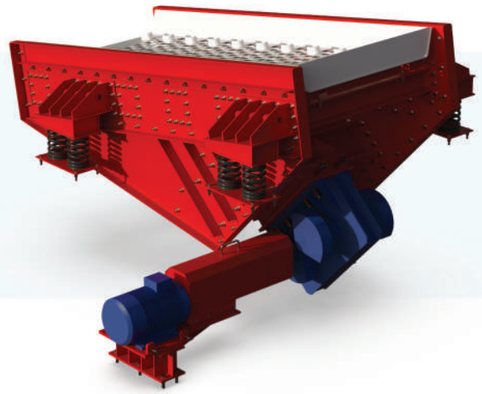


6 Washing screen

High screening efficiency with minimum of maintenance cost are the main options considered in FMS washing screens. In addition, special water nozzle are used for higher washing performance.

7 Grizzly Screen

Linear-motion screens manufactured for heavy-duty pre-screening of fine materials before primary crushing. Grizzly screens have the robust design to bear feed stones up to 1 mm size.



8 High temp screen

High temp screens are designed to bear feed materials, like sizing traveling grate discharge, with max 850° C temperature. Special wear resistant media, cooling system for exciter and heat protection of electrical motor is considered in design.

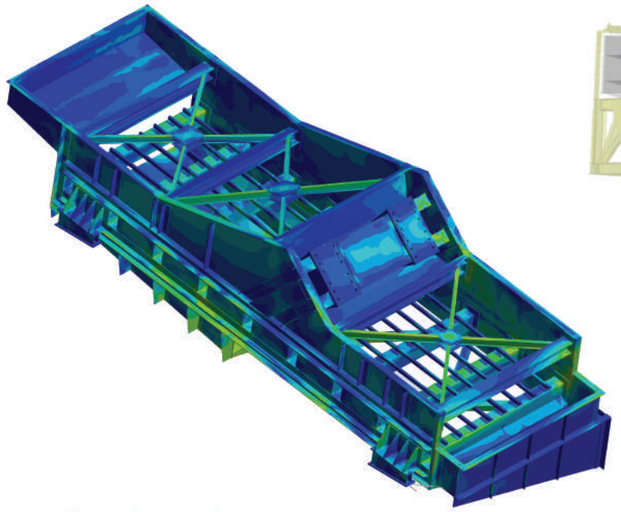
Manufacturing Quality

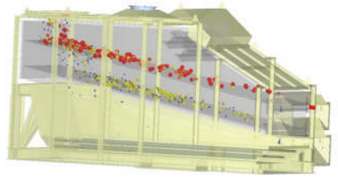
Analysis and simulation come to reality whether high manufacturing quality standards are passed.

Screen body and parts are cut and marked via CNC laser machine; moreover, accurate assembling procedure results in a balanced screen structure.

Professional Design Procedure

FMS simulate and analyzes mechanical behavior and material classification process under vibration. Screens are engineered by integrating finite element analysis (FEA) method into the design procedure to ensure the proper design. FEA provides information such as dynamic stress analysis, natural frequencies and harmonic responses in modal analysis. The final purpose of this analysis is the optimization of vibrating screen's components in order to guarantee stress and strain levels that avoid early fatigue failure. Drive and suspension systems are designing by means of FMS design software. Simulation of material behavior is performed by professional DEM software.



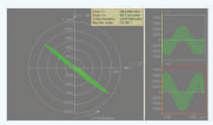


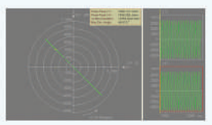
Professional Test

Each machine is tested using a vibration analyzer to find any dynamic irregulates in a vibrating screen. This information makes it possible to monitor the orbit diagrams, amplitude and frequency of vibration and FFT analysis. The integrated FFT analysis separates and analyzes frequency patterns that indicate possible mechanical problems.

Two types of vibration tests are performed:
Regular tests: control the performance of screen and feeder via analyzing the dynamic behavior of machine and material distribution. All vibrating screens are tested before shipment.

Troubleshooting: locating and eliminating unwanted vibration sources that a has detrimental effect on the machinery process.





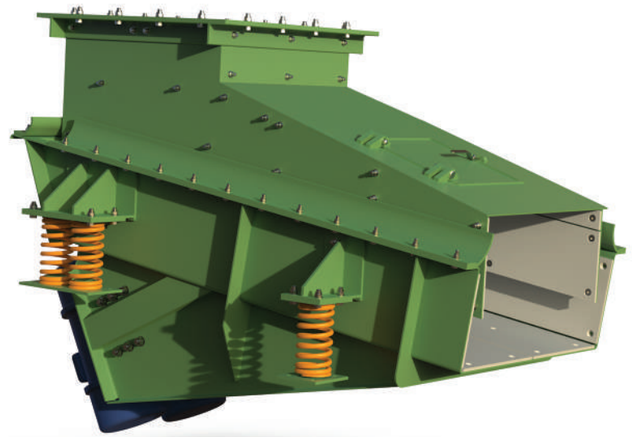
Vibratory Feeder

FMS has actually designed, manufactured, supplied and serviced a wide range of feeders in mining industry. We have many experiences with standard and special types of feeders; which have been used for feeding fine particles up to 400 mm large stones. Our products has long life, low maintenance and minimum operation cost.

Type of Equipment

1 Unbalance motor drive

Feeders with unbalance motors are the right answer for a perfect, economical and low cost maintenance feeders.
Upon client project condition it may required to design special feeders . As an example, due to lack of space a 2750x2750 mm feeder is designed in order to distribute material uniformly on a magnetic drum separator.



2 Elctromagnetic drive

Feeders with magnetic vibrators are usually being used for feeding and dosing. Magnetic drives enable the continuous adjustment of the throughput during operation. They also can reach full power right after being switched on. For accurate dosing, while switch-off occurs, in a fraction of a second, feeder stops the material flow immediately.