



# McNALLY SAYAJI ENGINEERING LIMITED

(A Member of the Williamson Magor Group)



# **Linear Motion Screen**

At MSEL we believe in constantly reinventing ourselves. And in line with this we are always on the lookout for new avenues and opportunities.

McNally Sayaji Engineering Limited (MSEL), with factories in Kumardhubi, Asansol, Bangalore and Baroda, is one of the country's leading manufacturer of Crushing, Screening, Milling, Material Handling and mineral processing and other heavy equipment, serving the core sectors of the economy. These sectors include Coal, Mining, Power, Steel, Ports, Cement, Aluminium and Non-Ferrous Metals.

All manufacturing units of MSEL are ISO 9001-2008 certified with well established quality assurance department supported by modern testing facilities and

managed by a team of highly experienced professionals.

MSEL has branch offices at Kolkata, Bangalore, Chennai, Delhi, Mumbai, Hyderabad, Nagpur, Vishakhapatnam, Kochi, Vijaywada, Coimbatore. This makes MSEL capable to render comprehensive customer support.

MSEL has inducted technology over the years through strategic alliances and developed focused R&D and Design & Development teams, who offer optimum and cost effective solutions to meet customer needs.

#### **A**PPLICATION

Linear or Elliptical motion screen are high performance sieving machine in terms of capacity and efficiency. It is widely used for sizing, dewatering, desliming or deslurrying and similar application for minerals, coal and ores.

#### **O**PERATING PRINCIPLE

The screen frame or basket is subjected to linear or elliptical oscillating motion imparted by twin mass vibratory unit or unbalanced motors mounted on the basket. It produces an angle of throw ranging from 40° to 60° to the particles lying on the screen deck and forcing it to move forward. While oversize particles move over the screen deck towards discharge end, the undersize particles escape through the opening below. Water spraying arrangement may be provided to enhance finer screening efficiency.

## **C**ONSTRUCTIONAL FEATURES

It is consisting of a fabricated frame or basket resting on a stationary base frame being supported through 4 sets of helical springs or rubber springs which allow it to move freely. The screen basket is consisting of two side plates connected by a number of flanged cross beams through high tensile bolts. Circular or rectangular cross members are welded to the flanges at the both ends and stress relieved to withstand high "G" force application. In this type of screen, twin mass vibrator unit or un-balanced motor units are mounted on a suitably designed. torsionally rigid fabricated beam. Longitudinal rails or beams are bolted to cross beams to form the screen deck or bucker-up frame for supporting the screening sieves which may be wire cloth, perforated plate, stainless steel wedge wire or poly-urethane panel. Suitable clamping arrangement with side or longitudinal tensioning device for tight sitting of the screen cloth is provided.

The Vibrator unit or Exciter unit is consisting of two shafts supported on bearings and mounted with equal eccentric masses are connected through counter rotating gears in mesh, both rotating at a synchronized rotational speed. The relative angular position of the masses is so synchronized that in one direction the centrifugal forces generated by them are added and at its right angular plane they either cancel each other completely, producing linear motion or leave a resultant force, producing an elliptical motion. The drive motor is connected to the Vibrator through v-belt and cardan shaft or sometimes directly through cardan shaft only. For wider and larger screen, number of vibrators can be used.

It is available in single and double deck configuration. It is floor mounted and can be suspended type also.

Dust cover with suction hood is provided as required.

# **S**ALIENT FEATURES

- High workmanship with quality material of MSEL screen provides long service life with minimum maintenance.
- Low head room.
- All bolted construction, either with HT bolts or with HUCK bolts.
- Stress relieving wherever required.

#### **A**VAILABLE SIZES

TYPE OF SCREEN	NO. OF DECK	MIN. SIZE	MAX. SIZE
LINEAR MOTION	ONE	1.2 m x 2.5 m	3.4 m x 6.5 m
	TWO	1.2 m x 4.0 m	3.4 m x 6.5 m

NOTE: As improvements are made from time to time, specifications and other details are subject to change without notice.



## McNally Sayaji Engineering Limited

Corporate Office: Ecospace Business Park, Campus-2B,11F/12, New Town, Rajarhat, Kolkata 700 156, India. P +91-33-3014 2345/6628 2345; F +91-33-3014 2393.

Factories: Kumardhubi P +91-6540-273010/11, +91-6540-272 235/197; F +91-6540-273024 | Baroda P +91-2667-263000/2661-2793650; F +91-2667-263051 | Bangalore P: +91-08151399964/67/58 | Asansol M +91-8016090116, +91-8016090128.

Crusher | Screen | Grinding Mill | Feeder | Conveyor | Wagon Tippler | Pulley & Idler | Port Crane | Stacker Reclaimer | Mobile/Skid Mounted Crushing & Screeing Plant | Slurry Pump | Thickener | Floatation Cell | Pressure Vessel | Equipment for Iron Ore, Steel, Cement, Power, Coal & Other Non-Ferrous Metal Processing Plants