



# International Combustion (India) Limited



## FLIP-FLOP SCREENING MACHINE

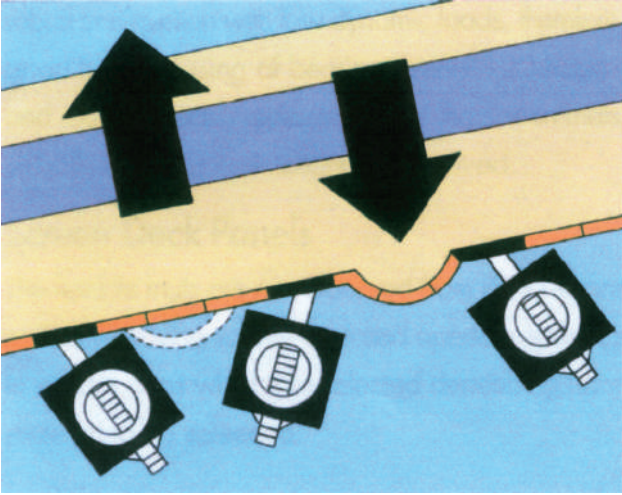
The equipment operates on the well known principle of Flip-Flop Screening Machines and is designed specially for materials which are difficult-to-screen and tend to adhere to clog conventional screening machines on account of high feed moisture or material characteristics. The Flipomat screening machine offer a totally new drive solution and achieve excellent screening efficiency in smaller aperture applications where conventional screens suffer from blinding and pegging . The unquedrive movement ensures :-

- Efficient screening with no blinding
- High screening efficiency even “near-mesh” particles



## Operating Principles

The Flipomat Screening Machine is characterized by a rugged and relatively simple movement which includes a low speed drive shaft rotating between



400-800 rpm and generates, through a mechanism an eccentricity between 6-12mm. Through a system of dual control, a high acceleration is transmitted to the panels of the Screen Mats of the order of around 40-50 g, or more depending upon the prestressing of the Screen Mats. The extent of prestressing can be chosen within certain limits. The eccentric rotor mechanism generates a continuous and flexible movement of the Screen Mats, with the panels alternately stretched and relaxed. Alternate motion of the deck panels causes a slight increase in the aperture openings towards tension which is defined as "BREATHING" of the aperture openings. This, combined with the forces of high acceleration, prevents any adhesion and clogging of the material particles.

The high acceleration completely loosens up the damp sticky material mass, resulting in rapid stratification of the feed material. Thus high percentage of fines quickly move down to the surface of the Screen Deck and are screened out. Such stratification would be virtually impossible to achieve with any conventional screening machine.

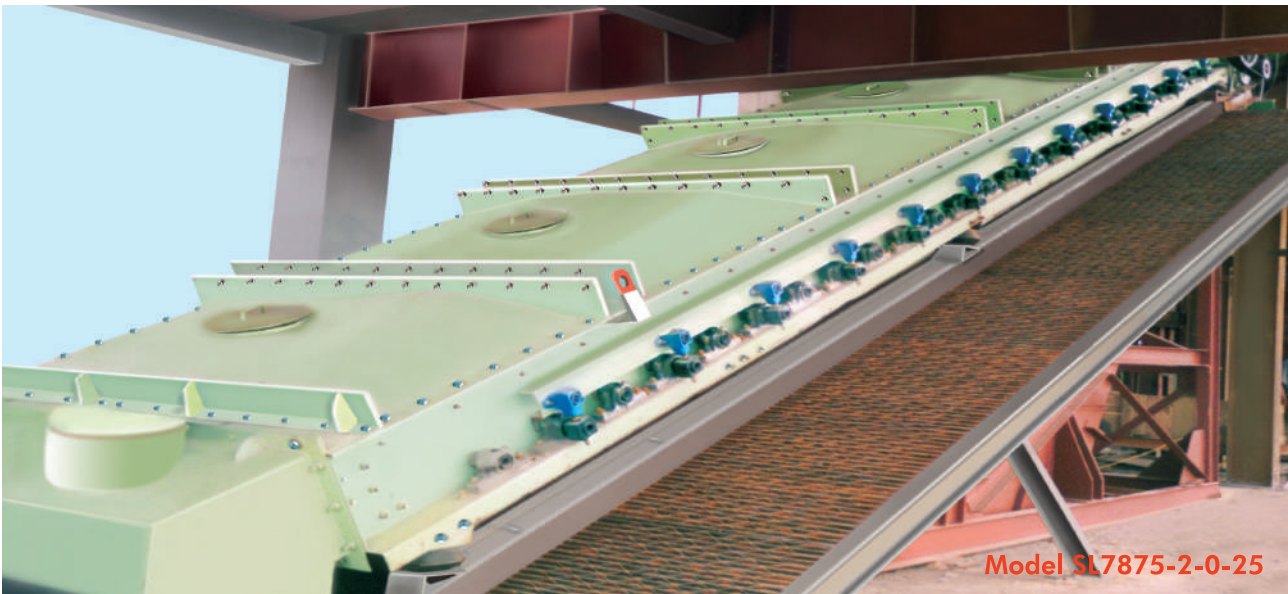
## Drive Mechanism

The opposite polarity of the eccentric rotor mechanism provide alternate and opposite movement, relative to each other, of the two longitudinal bars that run through the machine. To these, are hooked special polymer Torque Elements that, fitted on the body of the machine, generate under controlled tension, alternate movements of drawing nearer and away. To these Torque Elements transverse bars are fixed on which the flexible Screen mats are attached, which correspondingly have alternative stretched and relaxed movements.

Soft rubber mounting blocks isolate the majority of the dynamic loads of the oscillating mechanism. Thus only low dynamic forces are transmitted to the support structure. Normally the natural frequency of



the support structure can be approximately 30% above or below the operating frequency range of 8.3-11.6 Hz. The conveying velocity of the material mass is controlled through the machine inclination and usually ranges between 10°-25°.

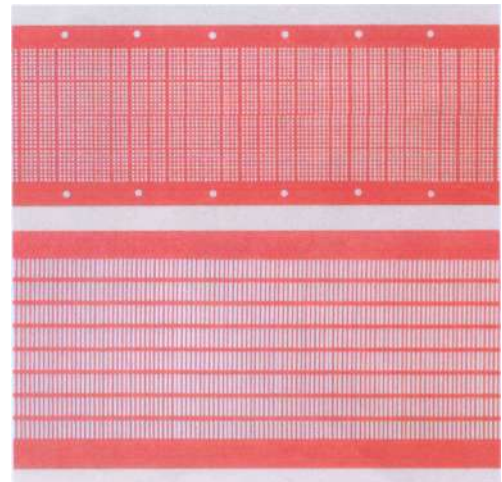


## Maintenance

All Flipomat screening machines feature simple and robust construction with low dynamic loads, therefore, apart from greasing of bearing and routine checks/replacements of the screen mats, virtually no other maintenance is required.

## Screen Deck Panels

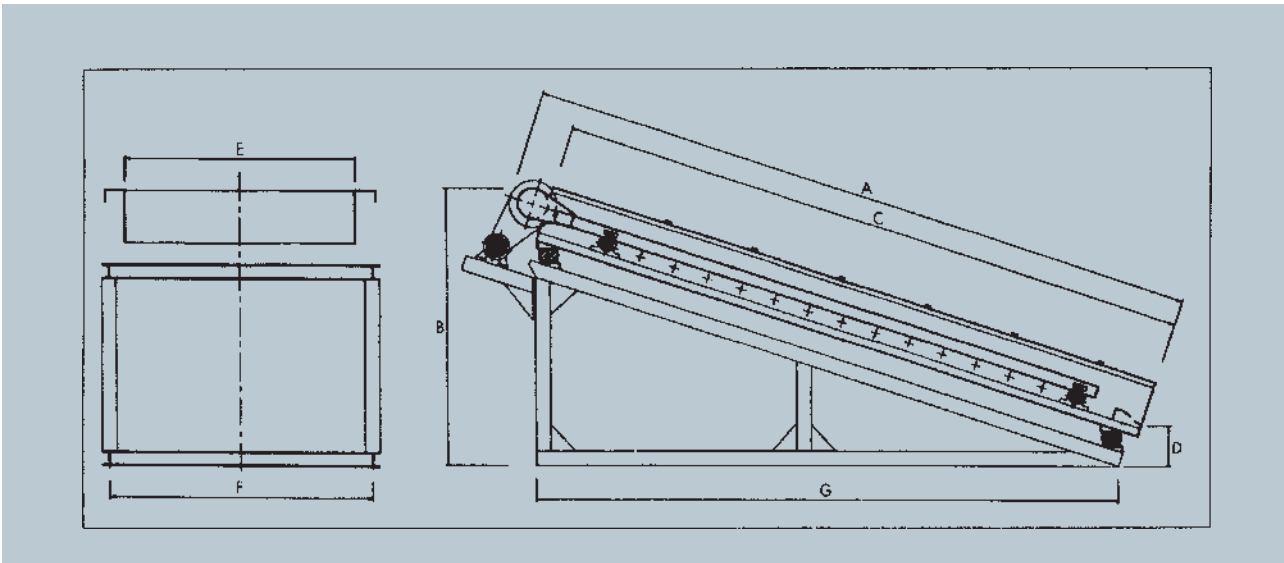
The flexible mats are manufactured from Polyurethane or Rubber having square or slotted aperture openings in various sizes which are selected depending upon materials to be screened.



## Typical Application Data

<ul style="list-style-type: none"> <li> <b>Screening of Natural Sand at 4mm cut point</b>            Feed size : 0-70mm            Specific feed rate : 17-19 t/m<sup>2</sup>h            Feed moisture : 8-10%            Fines, below 4mm : 80-90%         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Screening of Coke at 12 mm cut point</b>            Feed size : 0-150 mm            Specific feed rate : 50-55 t/m<sup>2</sup>h            Feed moisture : 7-8%            Fines, below 4mm : 60%         </li> </ul>
<ul style="list-style-type: none"> <li> <b>Screening of Crushed Sand at 2mm cut point</b>            Feed size : 0-8 mm            Specific feed rate : 12-15 t/m<sup>2</sup>h            Feed moisture : 2%            Fines, below 4mm : 50%         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Screening of Waste Compound at 5mm cut point</b>            Feed size : 0-20mm            Specific feed rate : 2-3 t/m<sup>2</sup>h            Feed moisture : 40-45%            Fines, below 4mm : 55-60%         </li> </ul>
<ul style="list-style-type: none"> <li> <b>Screening of Coal at 3mm cut point</b>            Feed size : 0-10mm            Specific feed rate : 2-3 t/m<sup>2</sup>h            Feed moisture : 14-20%            Fines, below 4mm : 60%         </li> </ul>	<ul style="list-style-type: none"> <li> <b>Screening of Limestone at 8mm cut point</b>            Feed size : 0-30 mm            Specific feed rate : 30-35 t/m<sup>2</sup>h            Feed moisture : 2-5%            Fines, below 4mm : 50%         </li> </ul>
Specific Feed Rate – Tonnes per hour of feed handled per m <sup>2</sup> of screen deck	

**Some Applications :** The Flipomat screens are totally suited for the screening of ■ Coal/Lignite ■ Coke Fines ■ Sand and Gravel ■ Limestone and other minerals ■ Compost ■ Slag ■ Shredded material ■ Wood chips



MODEL NO.	A	B	C	D	E	F	G	DRIVE MOTOR (KW)
FL3780-1. 0-11	4740	2060	4310	345	1060	1200	3940	7.5
FL5040-1. 0-16	6000	2450	5570	345	1060	1200	5135	11.0
FL3780-1. 5-11	4740	2060	4310	345	1560	1700	3940	11.0
FL5040-1. 5-16	6000	2450	5570	345	1560	1700	5135	15.0
FL6615-1. 5-21	7575	2935	7145	345	1560	1700	6635	18.5
SL7875-2.0-25	8960	4590	8405	345	2060	2200	7610	22.0
SL7875-2.5-25	8960	4590	8405	345	2560	2700	7610	30.0

Note : All dimension in mm. we reserve the right to discontinue or change specifications or designs at anytime without notice or obligation.



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