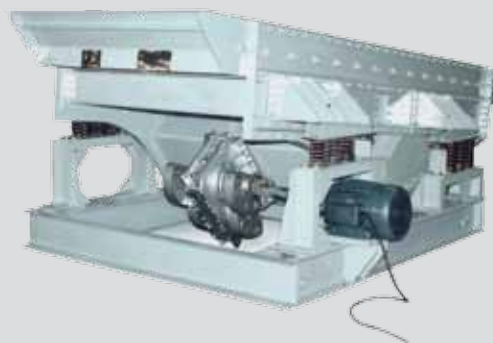




Leadership through  
Technology



# IC FEEDERS, SCREENS AND VIBRATING EQUIPMENT

IC Vibrating Equipment handles all types of bulk solids, from fine grains to large lumps, wet and dry, abrasive such as scrap, flux and sinter, or benign limestone. With sizes ranging up to almost 3,000MTPH capacity, they have proven themselves in all core industries.

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# IC FEEDERS, SCREENS AND VIBRATING EQUIPMENT

## 1 - IC LINEAR MOTION SCREENS, GRIZZLY FEEDERS & HD GRIZZLY SCREENS (SCHENCK DESIGN AND TECHNOLOGY)

These screens and feeders will handle medium to large bulk solid flows, operating with equally great success in all process industries, using the reliable and well proven Directional Force exciters, which are easily adjusted to suit the particular screening duty. Smaller sizes can be offered with unbalanced motor exciters

They are Huck/lock-bolted together, for maximum structural integrity. Drive is by AC motor via cardan shaft. They are horizontal/low inclination screens with operating speeds between 750-1,000RPM, with adjustable angle of throw and amplitude. Great emphasis is placed on ruggedness and stability, with simple maintenance and servicing - including replacement of screen media.

The linear motion screens are available as single or double deck type, with sizes to 4m wide and 9m long and capacity up to 3000MTPH depending upon the cut point and material characteristics. The grizzly feeders and screens are sized up to 3500mm wide and 8500mm long with capacities up to and in excess of 2,500MTPH, they can handle rocks up to 2.5m in size, and be installed directly within dump hoppers.

Applications for the screens include primary and secondary classification, sizing, washing/dewatering/desliming, knock-out screens in foundry, screening of hot material and many others, whilst grizzly screens and feeders may be used for primary crusher relief, scalping of large sizes, and removal of waste. All types of screen media may be used, and additional wear-resistant liners employed, when necessary.



### ISOLATION FRAME

In larger versions, high vibrating forces are met and, to avoid transmitting these into support structures, isolation frames can be offered to reduce dynamic loads by approximately 90-95%. These isolation frames are mounted on springs and hydraulic shock absorbers.

### TROLLEY

Vibrating screens mounted on trolleys are offered, suitable for transverse or longitudinal movement. Trolley movement can be either manual or motorised. Special jack pads and wedge block mounting ensure that load is off the wheels when the screen is in operation.



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## 2 - IC UNIVERSAL CIRCULAR MOTION VIBRATING SCREENS (SCHENCK DESIGN & TECHNOLOGY)

A new generation of vibratory screening machines characterised by a low profile, efficient isolation of support structure from vibrating masses and virtually noiseless operation. The various versions of this screen enable use for wet and dry screening, coarse and fine separations, and they are widely used in steel mills, mineral beneficiation plants, chemical, mining, food and fertilizer industries, coal preparation plants and many others. The box shaped screen body can be fitted with almost any type of screen media - woven wire, rubber or pu, with provision for modular panels, side or longitudinal tensioning. The steep angle of throw prevents blinding, enabling maximum screening efficiency. The operating speed range is normally between 1000-1500 rpm.



The screen is driven directly through a cardan shaft. The vibrating element is a through shaft, mounted in the sideframes, and fitted with removable, unbalanced counterweights. All clamping parts and screen mats are easily changed.

The design features high acceleration on the deck surface which permits handling of difficult-to-screen materials. The centrifugal force exciter unit is mounted on special vibration duty bearings that are grease lubricated and require minimum maintenance. Available in single and double deck versions, the size range includes machines up to 2500mm wide x 6500m long. Capacity range up to 800 tons per hour depending upon separation size and material characteristics.

## 3 - IC ELECTROMAGNETIC & MECHANICAL VIBRATING FEEDERS



The comprehensive range includes Electromagnetic and Mechanical Vibrating Feeders and Conveyors to cater to almost every industry. Suitable for controlled feeding and dosing of bulk materials - coarse and fine, lumpy, sticky, hot or cold, moist or dry, abrasive, corrosive – we can offer complete solutions through careful planning, design, construction and installation. A wide variety of control systems, and accessories are available - all of which add up to deliver a total solution.



### ELECTROMAGNETIC FEEDERS

These feeders operate on the micro-throw principle, with amplitude being infinitely variable from zero to maximum. Operation is in the subcritical range, resulting in low amounts of trickle-feed after cut-off, making them well suited to accurate feeding duties. Application and design parameters are individually checked and verified using computer aided techniques. They are available with base or suspension mounts. The range is sized from 200mm - 1600mm wide, 1000mm - 4000mm long and with capacities to 500MTPH of up to 300mm material.

With high reliability, multiple stop/start capability, various control options may be used. Installation is simplified by low dynamic forces and maintenance easy, with no complex procedures and replaceable wear liners in a range of materials to suit every duty.



# IC FEEDERS, SCREENS AND VIBRATING EQUIPMENT

## MECHANICAL VIBRATING FEEDERS

These feeders incorporate the most modern technology in terms of design, material specifications, manufacture and testing, and are characterized by high availability, low operating costs, low energy consumption and protection of the environment.



A strong technological knowledge has enabled IC to successfully manufacture and supply vibrating feeders to capacities in excess of 3000MTPH, handling sizes up to 2000mm, withstanding high impact and high bunker loads and for equipment to operate under the most difficult environmental and operating conditions, with complete reliability. With sizes from 200mm-3000mm wide and 1000mm – 6000mm long (25000mm for vibrating conveyors), they can handle all duties. Replaceable liners are offered in wear resistant steel, rubber, plastic or ceramic. IC vibrating feeders are offered with either Direct Force Exciters or unbalanced motor exciters, depending upon the type and duty requirements.

## 4 - IC DIRECT FORCE EXCITERS (SCHENCK DESIGN AND TECHNOLOGY)

Direct Force Exciters are predominantly used to drive vibrating conveyors, feeders and screens. They are mainly used for very heavy duty applications and fitted with special vibration duty bearings with exceptionally long service life. They consist of two shafts fitted with unbalanced masses, which rotate by integrated gears, in opposed directions at the same speed to generate a linear motion.



The directional force exciter is driven from an external standard electric motor via a universal joint shaft. With a frequency inverter, the speed can be infinitely varied during operation. Anti friction bearings and gearing are accommodated in a housing and oil immersion lubrication. Maintenance is limited to an occasional check of the oil level, or oil change at prescribed intervals.

## 5 - IC UNBALANCED MOTOR EXCITERS

Unbalanced motor vibrators are AC synchronous motors with two shaft extensions, equipped with unbalanced discs. At standstill, the centrifugal force can be infinitely varied from zero to maximum by adjusting the unbalance accordingly. Two unbalanced motors rotating in opposed direction synchronize with one another to generate a directional force with linear vibration movements.



In addition to driving vibrating conveyors, feeders and screens, unbalanced motors are used for bin vibration, shake-out of moulding boxes in foundries, and for similar vibrating duties. Rated for S4 duty with class "F" insulation and with IP65 protection, these exciters give excellent service life with little or no maintenance.