



**ELECTRO
ZAVOD**
A Hi-Tech Company



Electro Zavod

Industry-leading bulk material handling solution experts

Electro Zavod is a prominent manufacturer of specialised machinery for the bulk material handling industry for nearly 50 years. Our state-of-art 40,000 sq. ft manufacturing facility is equipped with the latest machinery and modern technology, earning a reputation for exceptional quality, durability, and performance. We are an approved supplier of bulk material handling equipment for major power generation and distribution authorities, cement plants, steel plants, fertilizer plants, defence sector and more.

Electro Zavod is now a part of Hi-Tech Systems and Services Ltd, a trusted provider of specialised equipment and engineering services to India's power and process industries since 1989.



Our Solutions Portfolio

Engineered for productivity, efficiency, and safety

At Electro Zavod, we specialise in bulk material handling equipment developed through technology transfers with global manufacturing experts.

Cable and Hose Reeling Drums

We offer a comprehensive range of motorised cable and hose reeling drums used for safe & efficient transmission of power, data, and fluids from stationary to mobile equipment.

Key categories

- **Cable Reeling Drum with stall torque motor drive:** is the most dependable in its category producing the necessary consistent torque with the rotor in a locked condition and zero overheating. It is available in both squirrel cage and slip-ring construction.
- **Cable Reeling Drum with spring drive** is the most convenient and cost-effective method for providing power to mobile machinery. The available torque, however, limits the size and length of the cable to be wound.
- **Cable Reeling Drum with counterweight drive** is the most effective method of handling cables without motors or control panels with the counterweight acting as the driving force.
- **Cable Reeling Drum with VVF-controlled special squirrel cage motor drive** is quite versatile with the ability to handle almost any cable size or length while delivering variable torque.

The **Hose Reeling Drum** is driven by springs and stall torque motor with a rotatory valve in place of the slip rings, making it suitable for air, water, hydraulic oil, and pressures up to 200-bar. The spring-operated hose reeling drums are suitable for use in workshops and industrial units.



Technology partner

Bischoff & Hensel, Germany

Types of drums

Semi-parallel drums:

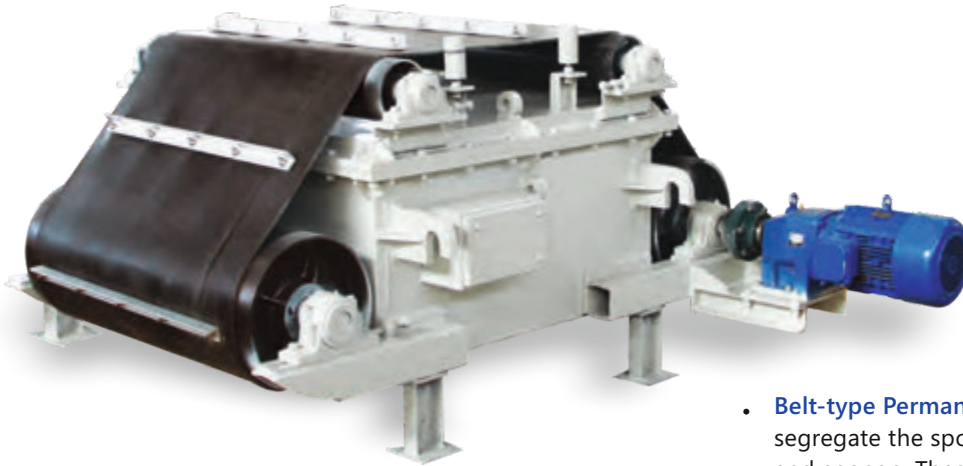
Used for short cable lengths and for voltage up to 415 V; winding cable not guided

Monospiral drums:

Used for any cable length and voltage up to 11 KV; unlimited number of layers though the overall diameter restricted by available clearance

Parallel or barrel-type drums:

Used for any cable length and voltage up to 35 KV; winding cable uniformly guided



Magnetic Separators

Electro Zavod has been providing magnetic separators to segregate the magnetic materials from non-metal fractions for a variety of applications – protection of expensive equipment in downstream processes, purification of conveyed materials, reclaiming and salvaging valuable ferrous scraps, among others. Broadly, the separators can be categorised as: **Electromagnetic separators** that use wire coils and direct current to provide a magnetic field for metal separations, and **Permanent magnetic separators** requiring no electric power to work on a *relatively thin layer of materials on conveyor belts*.

Available options

- **Suspended Electromagnetic Separators** are lightweight, compact, and easy to operate. Designed to be suspended over the conveyor belt using a travel trolley, these are suitable for the removal of ferrous particles from raw materials containing relatively little metal.
- **Overband Magnetic Separators** with deep penetrating magnetic fields are robust, self-cleaning, and suitable for removal of heavy metal contamination. These are available in following variants:
 - **Inline magnetic separators** placed at an angle over the conveyor head or the discharge point of a vibratory feeder
 - **Cross-belt separators** that move in the perpendicular direction to the main process conveyor with a speed greater than the main burden speed
- **Boosting-type Separators** are designed to work effectively with an industrial metal detector at varying voltages to efficiently separate smaller and larger particles as identified by the metal detector.

- **Belt-type Permanent Magnetic Separators** segregate the sponge iron from the mixture of char and sponge. These have individual shaft-mounted geared motors for the top and bottom conveyors and are available in belt widths ranging from 650 mm to 2000 mm.
- **Permanent Magnetic Drums** are highly effective in the removal of both large and small pieces of iron contaminants from material processing lines. These magnetic drums come in both low- and high-intensity versions and can be used to remove or add to the magnetic content of dry minerals.
- **Magnetic Pulleys** are the optimal solution for recovery of scrap, or prevention of contamination of food, pharmaceuticals & chemicals, machinery damage, and others in limited installation space. These can be installed at the terminal head of main conveyors for the continuous extraction of iron contamination from the conveyor load and are available in a variety of sizes (400 mm – 1000 mm diameters).

Applications: Mining industries, Food processing, Textile industries, Pharmaceutical and Chemical industries, Waste recycling and others

Technology partner

Älmhults El-Mek AB, Sweden

Salient Features

Types: Electro-magnet or permanent magnet

Variants:

Electromagnetic separators: Suspended, overband (inline or cross-belt), boosting type
Permanent separators: Belt type, magnetic pulley, magnetic drum

Cooling options: Oil cooled or air cooled

Advantages: Easy to install and maintain, durable and weather-proof, long life of the equipment

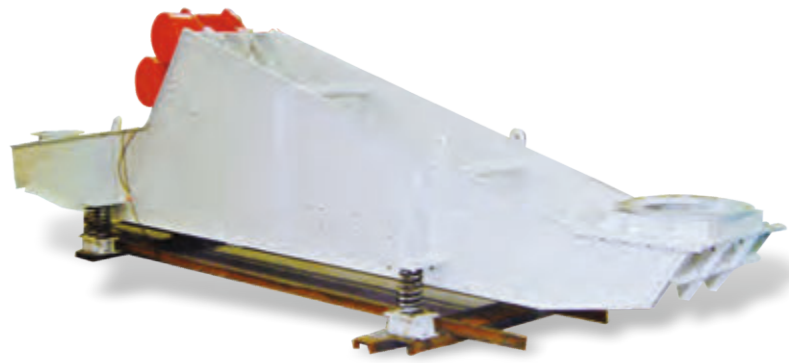
Vibrating Feeders

The precision-engineered Electro Zavod Vibrating Feeders use controlled mechanical vibrations to feed a variety of bulk materials (solids, powder, or granules) to a specific process or machine. These can include feeding crushers, mixers, furnaces & scales, loading & sorting plants, and discharging materials from hoppers among many others.

Key categories

- **Vibrating Feeder with Unbalanced Motor** is designed with an electro-mechanical drive and produces linear vibrations. These are completely enclosed, dirt and dust-proof, IP-65 protected, and require minimal maintenance. Unbalanced motor feeders are suitable for batch or continuous material transfer in small to medium quantities.
- **Vibrating Feeders with dual force exciters** consist of two counter-rotating shafts with centrifugal weights that create linear vibrations. These are suitable for medium to large-sized feeders.
- **Vibrating Feeders with direct force exciters** consist of dual shafts counter rotating via a toothed gear. These are suitable for heavy material handling in massive quantities.

Applications: Steel Plants, Cement Plants, Power Plants, Mines & Quarries, Chemical & Fertilizer Plants, Pharmaceutical Plants, Food Industries, and Glass Factory



Technology partner

Erka OY, Finland

Salient Features

- Rugged design for adverse working conditions
- Custom-made to suit customer requirements
- Adjustable vibrating frequency to changing discharge rates
- Heavy duty bearings for long and trouble-free operations

Dimensions:

Length: up to 9000 mm

Width: up to 3000 mm

Capacity: 2000tph (max)

Torque (max):

Unbalanced Motors: 2 x 2724 kg-cm

Dual Force exciters: 2 x 11020 Kg-cm

Direct Force exciters: 24800 Kg-cm

Advantages:

Guaranteed operational reliability, efficient flow rates, low power consumption, low noise levels (less than 80 DBA), long equipment life



Vibrating Screens

Electro Zavod Vibrating Screens are economical, customisable for specific applications and designed for maximum screening efficiency with the smallest possible screening area. Special attention is given to various factors during screen design to ensure maximum performance: G-forces, vertical acceleration, single particle ballistic and stratification of the product.

Technology partner

JOEST, Germany

Salient Features

- Custom-made to suit any application
- Weight-optimised and load-minimised design
- Thin bed screening for maximum efficiency
- Huck bolted construction for equipment longevity
- Suitable for adverse working conditions
- FEA (Finite Elements Analysis) based mechanical design

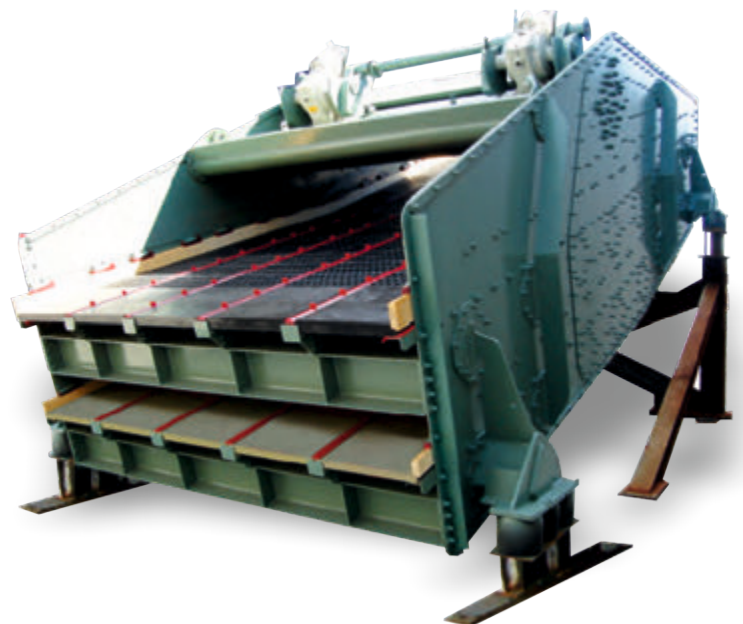
Advantages: Low noise, minimal maintenance

Key categories

- **Vibrating grizzly screens** are used for extracting small, coarse materials from storage hoppers. These are tailor-made for specific applications with the capability of handling a wide range of materials from 2500tph iron ore to 200tph of quarry stone. The key features include:
 - Robust construction with wear-resistant liners (steel/rubber) and swage-type bolt connections
 - Operates with large stroke & 'G' force
 - Designed for isolation mounts and direct coupled drive
 - Suitable for operations in most arduous operating conditions
- **Circular motion screens** are highly effective at handling high volumes of difficult-to-detect products such as angular, fibrous, and wedge-shaped shredded parts. These are operated either by a centrifugal force exciter for circular motion or by a single unbalance motor mounted overhead of screen body creating an elliptical rotation in the conveying direction. These screens can function effectively at a slope angle between 15° and 25° and with the machine G-force would be lower than 5g

- **Linear motion screens** provide maximum performance and capacity using 'thin bed' screening technology. Operated either by two unbalance motors or by a mechanical exciter, these screens work best at low inclination with slope angles between 0° and 15°.
- **Multi-slope vibrating screens** are designed for fine particle separation requiring high level of precision. With varying deck slopes, the screens achieve greater screening efficiencies at higher capacities than conventional horizontal-type screens. Additionally, the uniform bed of material from feed to the discharge end of the screen helps in stratification of fines at the bottom of the bed ensuring effective separation.
- **Dewatering screens** are suitable for separating solids from liquids in the wet ore and mineral processing industry. The screens are positioned at a slight incline (upward slope of 3°) to maximise effectiveness while the high frequency of vibration increases the efficiency of sizing and dewatering. The adjustable discharge plate allows for fine-tuning.

Applications: Mines and Quarries, Cement and Steel industries, Fertilizer plants, Chemical and Pharmaceuticals plants, Food industries, Glass factories and others.





Slip Ring Assemblies

Electro Zavod Slip Ring Assemblies are designed for power and data transmissions from stationary to rotating or oscillating equipment such as cable reeling drums, excavators, and rotary cranes. It enables continuous conductivity without cable twists or fatigue.

Instrument quality sliprings or brush holders are attached to the equipment's stationary or rotating parts, ensuring high-quality signals. Our strong cast slip ring assemblies feature varying amperage rings that are designed for continuous conductivity even at high rotational speeds. Our robust cast slip ring assemblies have varying rings of amperages, designed for continuous conductivity even at a high rotational speed.

Applications: Earth Moving Equipment, Rotary Cranes, Jib Cranes, Excavators, Reclaimers / Stackers, Circular Blenders, Cable Reeling Drums, and Clarifoculators

Technology partner

Bischoff & Hensel, Germany

Salient Features

Material:

Cast Brass or Copper for slip ring
Copper carbon brushes
Epoxy resin for insulation

Current ratings:

220V, 415V, 3300V, 6600V and 11000V
Permanent separators: Belt type, magnetic pulley, magnetic drum

Advantages:

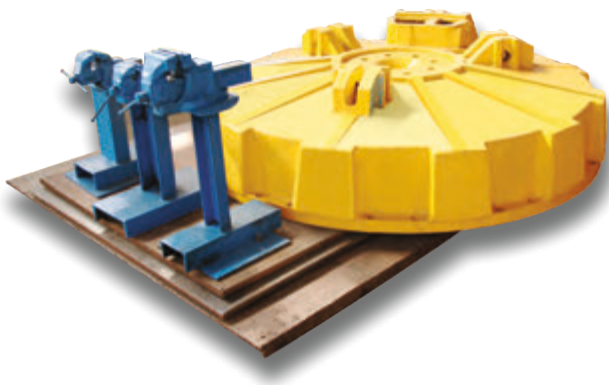
Compact, easy to install, weather-proof, vermin-proof, and long equipment life

Lifting Magnets

Electro Zavod provides low dead weight circular Lifting Magnets for handling a variety of bulk materials such as heavy melting scrap, broken scrap, steeling turnings, cast iron boring, and others. Designed for rugged dependability, these magnets can pick up large weights faster and more conveniently than mechanical devices.

With over 15 years of expertise in this field, Electro Zavod also provides design and consultancy services to various industries. We can develop custom solutions based on our analysis of the electromagnet lifting requirements for specific applications.

Applications: Steel plants, Scrap processing yards, Foundries, Material handling like steel plates, coils billets, shredding, etc.



Technology partner

M/s Rotary Engg, UK

Salient Features

Material:

Stainless steel base plate

Capability:

Wide range of sizes available for handling slabs up to 70 tonnes

Types:

Standard, heavy-duty or heavy-duty deep field

Advantages:

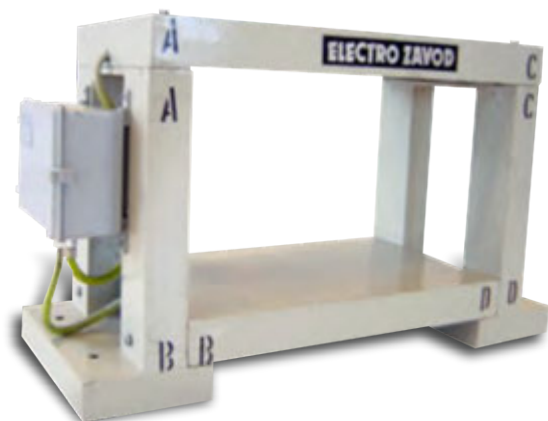
Massive lifting capacity, low power consumption, weather-proof design, easy to maintain, and low cost of ownership

Industrial Metal Detectors

Electro Zavod Pulse Metal Detectors can easily identify and reject magnetic as well as non-magnetic metal contaminations from production lines. This helps manufacturers achieve quality compliance, avoid any machinery hazards, and save production downtime.

Our industrial metal detectors have a 30-year record of high detection sensitivity and reliability under tough conditions.

Applications: Coal Handling Plants, Cement Plants, Mining (Coal, Lignite, Ores), Thermal Power Plants, Chemical Plants, Glass Manufacturing Units, Plastics, Paper Mills, Plywood Manufacturing Units, and Rubber Processing Units.



Salient Features

- Operates on Eddy-current induced detection system
- Can take supply voltage variation of 1-15%
- Suitable for high temperature (up to 55°C) and humidity (up to 100%)
- Automatic sensitivity adjustments to detect temperature variation and metal movement
- Audio-visual alarm for operator alert

Advantages:

Easy installation, easily adjustable sensitivity, low power consumption, and trouble-free operations

Preferred partner in core sector projects across India

Steel and Metallurgical Industry	Fertilizer, Food, Paper and Chemical industries
Cement Industry	Mineral Ore Handling Plants
Power Plants	Ceramic Industry
Mines	Ports and Docks

Key certifications and approvals



ISO 9001: 2015 company, certified by TUV-SUD South Asia.



CIMFR certification for flameproof / explosion-proof cable reel / slipping assembly



Bureau of Indian Standard certification for cable reel / slipping assembly



CE approvals for vibratory feeders, magnetic separators and cable reeling drums



ATEX certification for manufacturing installation & use of equipment in explosive atmosphere



**ELECTRO
ZAVOD**
A Hi-Tech Company

Electro Zavod (India) Pvt. Ltd.

Sankrail Industrial Park, Dhulagarh, Howrah 711 302, India

+91 9051 700070 (WhatsApp only)

+91 33 22290045

info@electrozavod.com

www.electrozavod.com

Kolkata | Mumbai | Chennai | New Delhi | Bhubaneswar |
Hyderabad | Raipur | Jamshedpur | Singrauli | Vadodara

Key clients

STEEL	CEMENT
 सेल SAIL	 ACC LIMITED
 TATA STEEL	 ADITYA BIRLA GROUP
 DANIELI	 JAYPEE GROUP
 JINDAL STEEL & POWER	 FLSMIDTH
 JSW	 KHD HUMBOLDT WEDAG
	 GEBR. PFEIFFER
POWER	METALS & MINING
 एनटीपीसी NTPC	 HINDALCO
 बी एच ई एल BHEL	 Epiroc
 TATA POWER	 REL REVATHI EQUIPMENT LIMITED
EPCs	INFRA & OTHERS
 TATA PROJECTS	 ITC Limited
 ISGEC	 Shapoorji Pallonji
 THERMAX	
 thyssenkrupp	

**This is a representative list of our clients only. A comprehensive list can be made available on request.