

# **& Installations Vibrating Machinery**



Vibrating feeders  
(Extractor hoppers)

Vibrating conveyors

Pre-selectors  
scalpers-grizzlies

Screening machines and sieves

Vibrating drainers

Pneumatic vibrators and hammers to  
flush out hoppers

Electrical vibrators

Optical separators

## **Quarries aggregates, mining & cement plants**











**Vibrotech Engineering S.L.** is a Spanish company whose main activity is the design and manufacture of vibrating machines and installations of different types for use in the transport and selection of solid material.

The company's professional team has ample experience in the design and manufacture of vibrating machinery and is at the disposal of its customers to meet their needs and adapt to their production demands.

More than 50 years experience of our parent company, **Alju S.L.**, always in contact with the needs of industry, and our commitment to research and development of new solutions, enables us to undertake projects in many industrial sectors.

The **Alju Group** consists of four industrial companies. **Vibrotech Engineering S.L.** and **Alju S.L.**, located in the North of Spain, in the province of Biscay. The group also owns a company in Mexico DF, named **Alju American S.A. of C.V.**, and **AMB**, a Brazilian company located in Joinville, in the South of Brazil, in the State of Santa Catarina. All of these companies are 100% Spanish owned.

Via these two Latin-American companies, we can offer our services in the North and South American continents.

**Vibrotech Engineering S.L.**, has delegations in San Sebastian, Bilbao, Madrid, Barcelona, Seville and the Canary Islands, with an extensive commercial network, in order to satisfy the needs of our customers on both a commercial and a technical level.

Our Technical Office is firmly committed to our **R&D&i** efforts, constantly seeking new and improved solutions.

**Vibrotech Engineering, S.L.** is fully committed to expansion into international markets and to continuous improvement in all departments.



# Vibrating conveyors

## Overview

Vibrating feeders or extractor hoppers are machines that are used to extract different products from hoppers or silos, at a constant flow.

These types of machines can be manufactured with electrical or electromagnetic drives.

## Optional

- Different types of coating: anti-wear, stainless, non-stick, etc...
- Hopper spout included
- Leaning or suspended

## Feeders driven by motor vibrators

The flow is adjusted by handling the unbalanced motor of the electro-mechanical vibrating machines, changing the tilt angle or adjusting the opening of the gate. Another form of adjustment is by connecting the vibrating machines to a frequency variator.



*Electromechanical extractor hopper*



*Electromechanical extractor hopper*

## Vibrating feeders with electromagnetic drive

These machines are driven by an electromagnetic vibrator and adjusted through an electric control box; these machines are normally used for precise weighing and dosing operations.

They are connected by an electronic control card that regulates the speed via a 4-20 mA analogue signal.



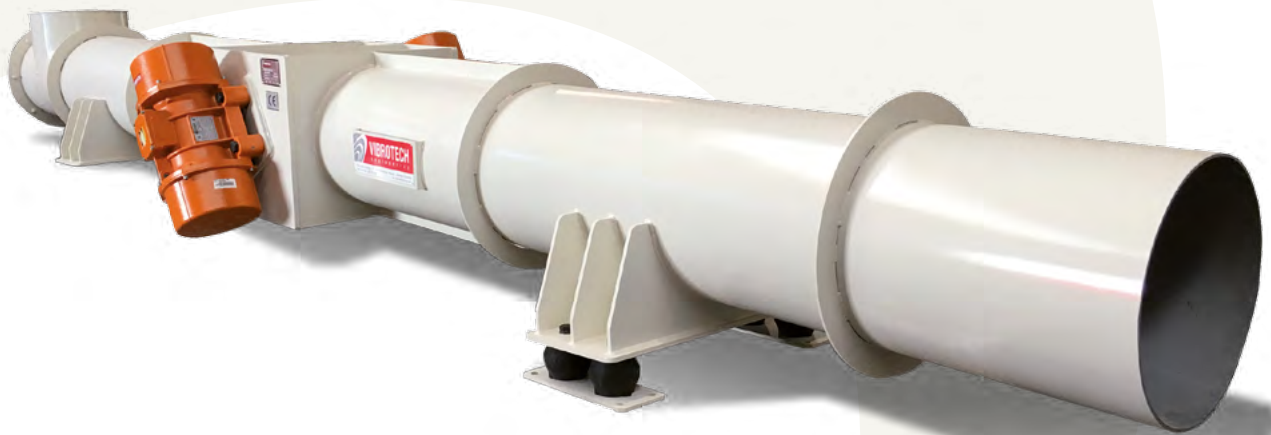
*Electromagnetic extractor hopper*

## Tubular vibrating conveyors

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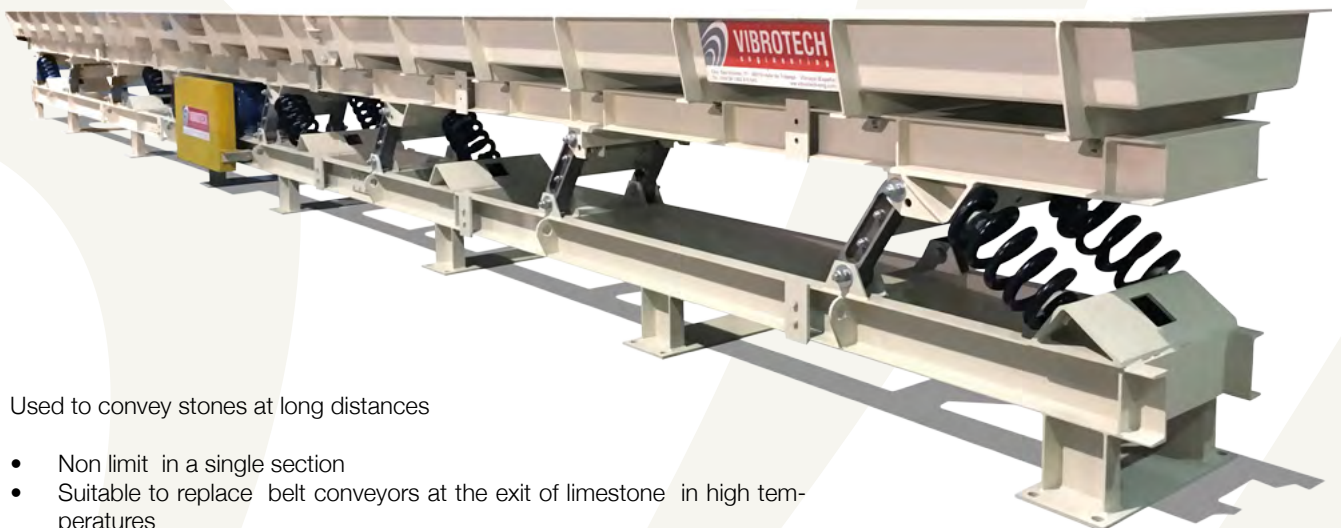
These are used to transport a variety of products by vibration over a smooth surface, thereby preventing heaping and ensuring a constant flow.

These usually replace worm screw conveyors due to their maintenance problems. Depending on the products to be transported, they can be manufactured completely closed with a rectangular or circular section and also include manhole covers.



## Natural frequency vibrating conveyors (long distances)

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Used to convey stones at long distances

- Non limit in a single section
- Suitable to replace belt conveyors at the exit of limestone in high temperatures
- Whether opened or closed ( with screwed covers or hermetic modules : rectangular, circular .. etc )
- Powered by an electric motor
- Heavy construction
- Low power consumption and minimum maintenance





# Screening machinery

Vibrotech Engineering, S.L. designs and manufactures a wide range of VIBRATING SCREENS:

Screens with circular and linear movement.  
Probabilistic screens.  
Dust separation sieves.

Statistical screens  
Screens driven by vibratory motors.  
Elastic mesh screens.

## Circular and linear movement screens



*Circular movement screen*



*Linear movement screens*

### Screens with circular and linear movement.

Driven by a mechanical vibrator or exciter (gear box), these can be used with all types of meshes (stainless steel or polyurethane mesh). They can be made with one, two, three or four layers of mesh. Designed for large flows and large granulometric sizes

The useful working surface can exceed 18 m<sup>2</sup> when screening all types of aggregates.

Their manufacturing design allows coupling an irrigation system to the screen to wash the product or a dust-proof canvas to prevent dust emission to the atmosphere.

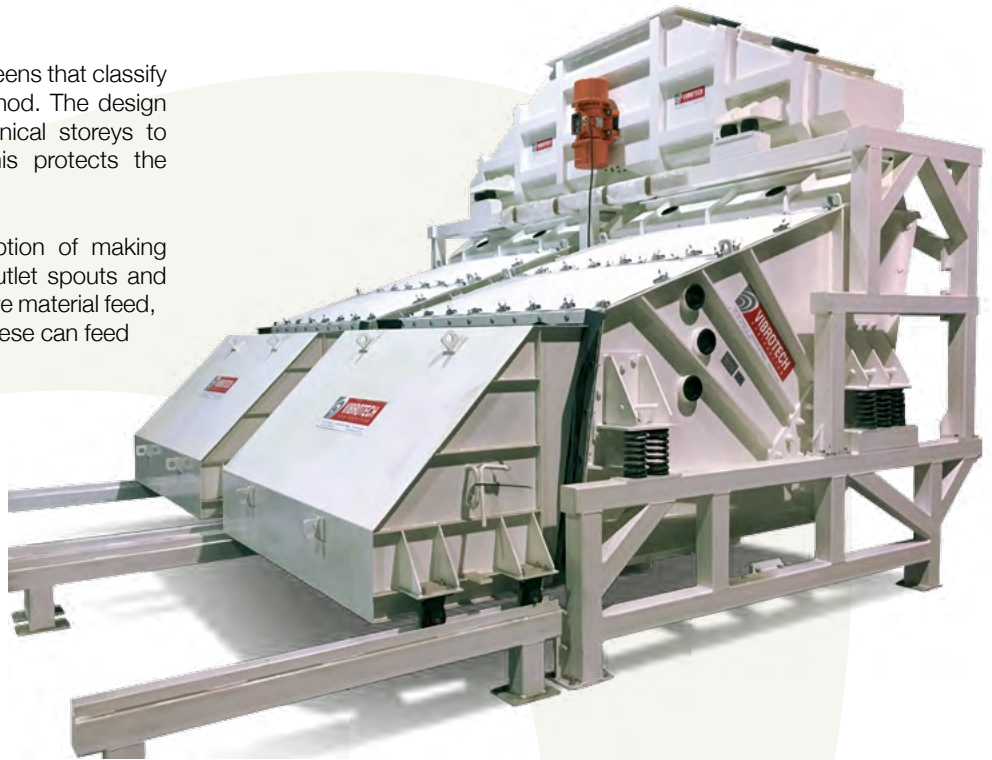
An irrigation system can be coupled to the machine to wash the aggregate before it leaves the machine.



# Statistical screens

These are multi-sieve (3 to 6) screens that classify products by a probabilistic method. The design allows the use of several technical storeys to improve screening efficacy. This protects the thinner fabric from impacts.

Statistical screens have the option of making operation dust-proof, circular outlet spouts and additional components to improve material feed, such as vibrating distributors. These can feed 1 or 2 screens placed in parallel.



These types of screens are manufactured with standard mesh sizes of 0.5 m, 1 m, 1.5 m, 2 m and 2.5 m. A normal SS series is available, as well as an SLS series with a mesh that is 1 meter longer for larger flows on a smaller surface.

The final result is a relatively lightweight compact machine that can be used with simpler and lighter support structures than those used for traditional screening machines.



## Screens-sieves driven by vibrators

These types of screens have been designed for medium and small flows and are appropriate to separate different granulometric sizes in 1, 2 or 3 storeys. Adequate for applications such as fines separation in lime production plants or others, such as the separation of all types of aggregate.

These can be optionally manufactured with complete fairings to prevent dust emissions to the atmosphere.

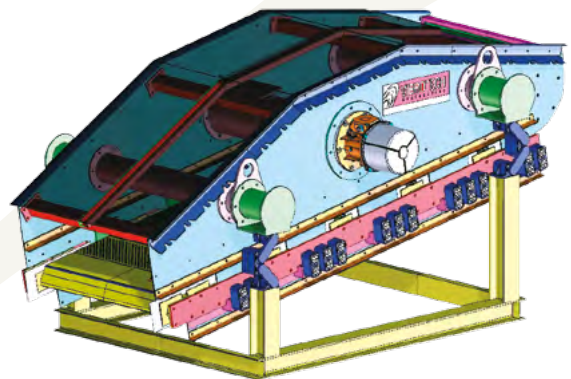
Springs can be tensed lengthwise and the meshes can be tensed from the rear of the screen by simply tightening three screws or the traditional transverse tensing system.



## Elastic mesh screens

These screens are appropriate for products with a high degree of humidity, which makes screening very complicated.

They are manufactured to obtain high rates of acceleration so the mesh does not get obstructed.



## Vibrating drainers

The vibrating drainers are used to dry a large variety of products, especially wet sands.

These eliminate the water and reduce humidity for subsequent material processing.

The option of manufacturing this equipment with a negative slope improves the humidity-reduction process.

The design of these machines allows them to be used with different types of meshes: (stainless steel grilles, rubber and/or special material meshes)





# Pre-selectors grizzlies-scalpers



These are generally used for production relief in crushing mills and primary jaw crushers, eliminating the fine materials before they enter.

Equipped with 2 or 3 screening grilles, this equipment eliminates the grinding or crushing process since the sizes can be used directly.

This extends the useful life of the crushing machine since it operates with less load and more regularly, eliminating the fines before they enter.

The grilles are placed in cascade so pre-screening is more efficient.

The pre-screener are equipped with a 400 HB anti-wear plate screwed to the base and sides of the machine.

*Pre-screener*



These machines can be driven by a gearbox, driven through a conventional motor or by electric vibrators.

The machines are designed to be highly resistant because of the demanding work they are subjected to.

## Pneumatic vibrators & hammers

These pneumatic vibrators and knockers are appropriate to prevent product jamming in hoppers and silos.



## Air cannons

These are used to flush out silos, especially in the cement and aggregate industries.



## Optical separators

Used to improve the quality of minerals, such as gold, gems, calcite/dolomite, quartz, talc, nickel, magnesite, etc.



## Electric vibrators

These are used to flush out silos, especially in the cement and aggregate industries.











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#### **Means of production.**

Our parent company, Alju, S.L., has a 10,000 m<sup>2</sup> plant, 5,000 m<sup>2</sup> of which is indoors with all of the means of production, where our machines are manufactured and subjected to the most demanding quality tests.