



Pneumatic Conveyors
Industrial Vacuum Cleaners
Mixers and Feeders
Centralized Vacuum Systems

Pneumatic Conveyors

Vacuum technology that increases
productivity while protecting humans



Pneumatic Conveyors

The power of the vacuum combined with the most advanced digital control

Pneumatic conveyors are the most efficient, effective and safe solution for transporting powders and granules from one point to another.

Pneumatic conveying is the alternative to mechanical transport carried out with augers or conveyor belts, it can operate in environments at risk of explosion thanks to the ATEX certification of the components.



Dilute-Phase Pneumatic Conveyors

Safe and efficient transport of granules and powders

Dilute-phase pneumatic conveying is suitable for handling powders and granules through suction or pressurization of pipes; in some cases both technologies are used.

This type of pneumatic conveying is generally used to transfer non-abrasive and poorly degradable powders or granules, however, of low specific gravity, loose and light.

Dilute-phase pneumatic conveying is also called “flying,” as the material being transported is actually suspended along the tube due to air speed.



Semi-dense phase pneumatic conveyors

Safe and efficient transport of abrasive or friable materials

Semi-dense phase pneumatic conveyors are the solution for medium-speed transfer of abrasive or friable material, such as cement or ash.

During transport, air velocity allows only the lightest particles of the product to be transported in suspension as in dilute phase transport, while heavier particles are transported in “blocks.”

The system uses pressure vessels with fluidizing bottoms. This makes it possible to handle semi-abrasive powders and powders that require prior aeration to be discharged into the conveying line.



Dense-Phase Pneumatic Conveyors

Efficient transport of
fragile, viscous, mixed or
abrasive materials

Dense-phase pneumatic conveyors are suitable for transporting materials at low speed this to maintain their integrity.

Materials can be rice, coffee or seeds or viscous materials such as pet food or even rubbery materials or mixtures that must maintain the original proportions of their individual components, avoiding the so-called “de-mixing” process.

Even abrasive materials, since this type of transport allows the integrity of the tubes to be preserved.



Technologies

Pneumatic Conveyor Lifter

The lifter allows vertical and horizontal movement with extreme precision:

- eliminates risk
- physical fatigue
- speeds up cleaning operations
- speeds up maintenance operations



Technologies

Functional Modularity

Modularity as an advantage for customer:

- easy opening/disassembly of components
- easy cleaning
- no maintenance difficulties
- elimination of plant downtime



Technologies 4.0 and Data Collection

The operation of the pneumatic conveyors is monitored in real time by digital systems:

- Industry 4.0 compatible
- visual control of operation
- remote control of operation
- collection of operating data for statistical analysis

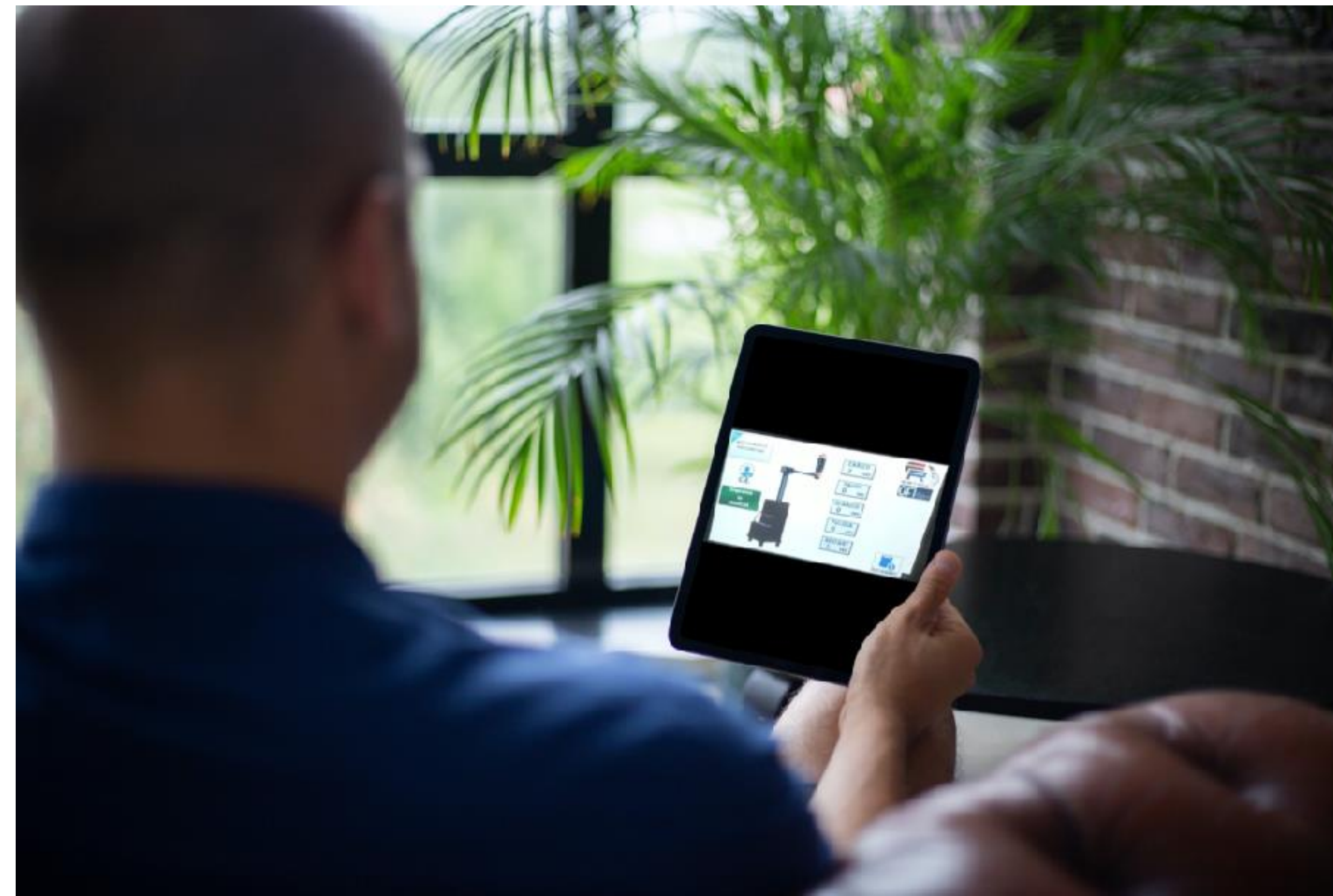


Touch display



Pneumatic Conveyors system monitoring

Remote control



Technologies

Air-powered control panel

The functions of FR Sistemi's pneumatic air conveyors can be controlled or:

- by an electrical panel (PLC)
- by an air-powered panel



No Limit on Applications

Vacuum systems that offer precision and real-time monitoring like never before

Pneumatic conveying systems give you unprecedented precision in moving dust and granules.

The technologies used allow you to modulate suction power ensuring an energy consumption limited to only what is needed.

The real-time digital monitoring system allows you to control the conveying process, the data collected can be accessed in real time via a digital interface and it's archived for later analysis.

Food



Pharmaceutical



Metal



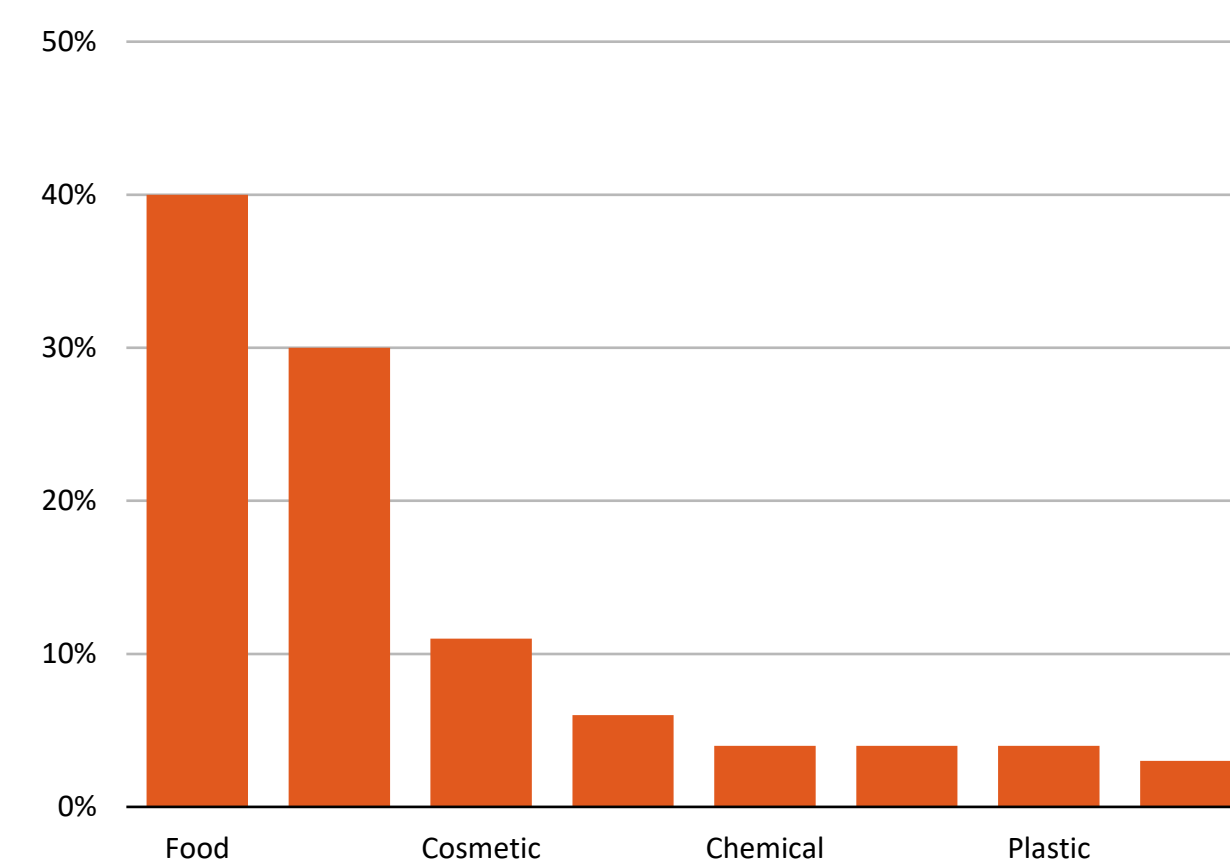
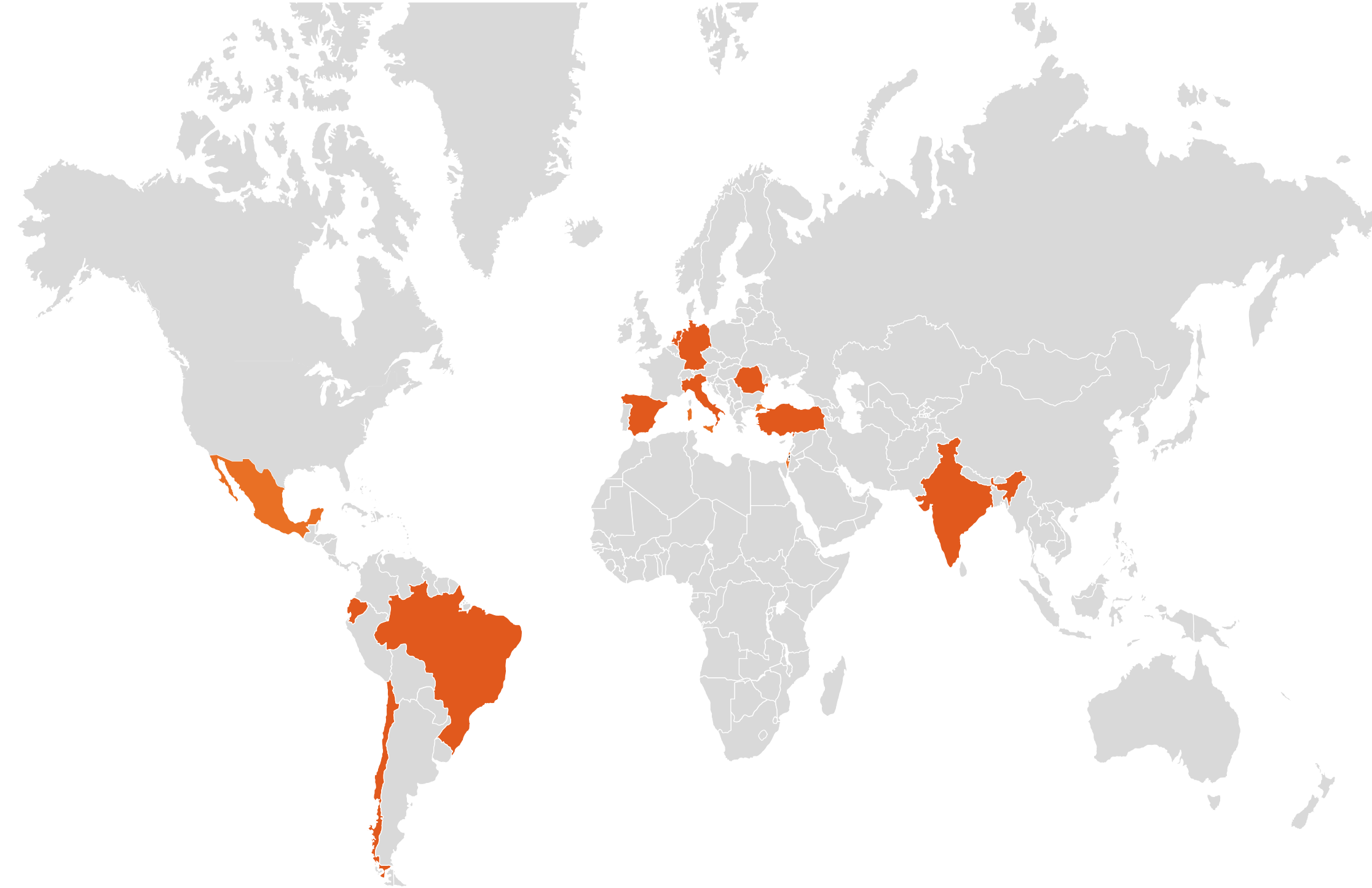
About FR Sistemi

Technology partners with a passion for collaboration

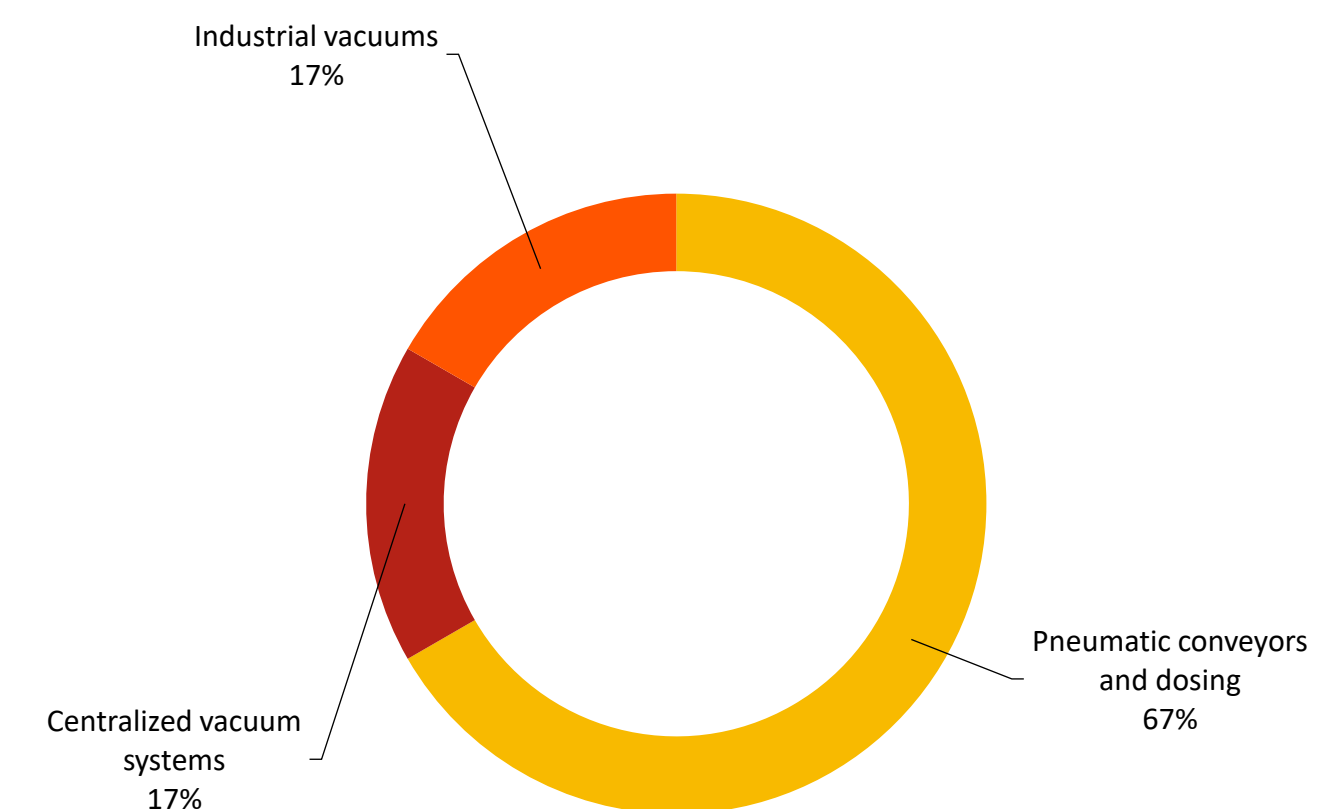
FR Sistemi is the Italian company specialized in the design of high-tech and digital vacuum systems: pneumatic conveyors, industrial vacuums and centralized vacuum systems.

We first provide you with an in-depth consultation explaining the results you will get, our goal is to exceed your expectations
You will get products totally adapted to your system and, if necessary, totally customized.

We have been on the market since 1990 and today we are technology partners of 700 companies worldwide.



Food & Pharma are the 70% of the turnover



A single source partner

Maximizing efficiency

Simplify business management and reduce costs: rely on a single source for the supply, installation and maintenance of all vacuum systems; a single supplier enables significant economies of scale

Automate processes: access a range of integrated solutions that communicate seamlessly with each other and with the systems in your company

Customized solutions: access a consulting service and co-creation of fully customized solutions compatible with your company's production flows and efficiency goals.



FR Sistemi products range

Through vacuuming
we improve the world

Pneumatic Conveyors

They transport powders and granules from a container to a machine in the required time, quantity and manner.
Electric or air-powered



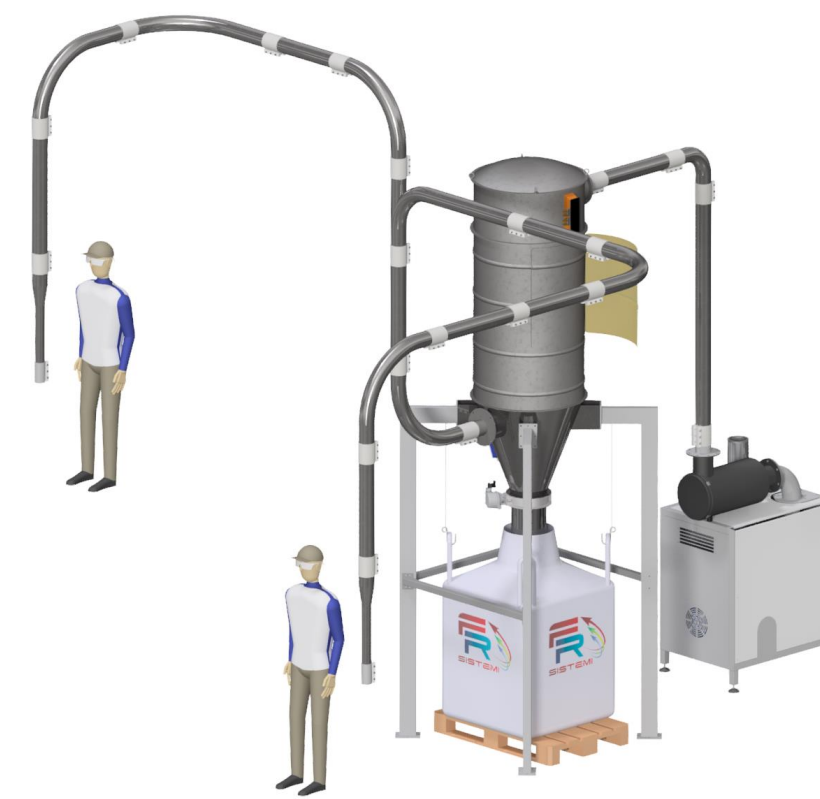
Mixers and Feeders

Mixers use different technologies to make the mixture of different products homogeneous. Feeders independently and repetitively release a set amount of mixture according to specifications.



Centralized Vacuum Systems

They are composed by a suction unit, filter unit and exhaust and a series of pipes that run through the entire building and can be used to vacuum "fixed" on the lines or manually where needed.



Mobile Industrial Vacuums

A wide range of mobile industrial vacuum cleaners of various powers used to vacuum solids and liquids of all types.
Mobile industrial vacuum cleaners can also be customised as needed.



A complete ecosystem of solutions

