

VACUUM LOADING SYSTEM



DEFINITION AND WORKING PRINCIPLE

Pneumatic vacuum transfer is a pneumatic conveying system of powders and granules batch operating at short distances. The vacuum is generally created by a vacuum pump and the product transferred from point to point by suction.

Compact, dust-free and maintenance-free, this system is very economical and can ensure a flowrate until 4 t / h and reach a distance of 50 m.

At the beginning of the cycle the drain valve is closed and the vacuum increases in the tank and in the suction pipe. When the negative pressure (vacuum) reaches a certain value the product is sucked into the receiving vessel.

The filter located in the tank filter the air and protect the pump and atmosphere of dust.

At the end of the transfer whose time is programmed the pump stops and the drain valve opens.

The product is then discharged by gravity and the filter cleaned by the compressed air accumulated in the filter cleaning tank during the suction phase.

COMPOSITION AND MAIN CHARACTERISTICS

- Sautelma's PR model Vacuum Loader is made entirely of stainless steel 304L or 316L
- The vacuum loader is equipped with a filter cleaned by counter flow of compressed air,
- Depending of the material characteristics, SAUTELMA's Vacuum loader can be equipped by butterfly drain valve for powders or by flap valve for granules,
- Our vacuum loader are available in 3 versions :
- Version with Venturi vacuum generator for conveying the materials on short distance (up to 4 to 5 m,
- Single phase version with integrated motor, power up to **0,95 kW**,
- Three-phases version, the loader is then proposed with a vacuum pump whose power is adapted to the application, supply 230-400 Vac 50 Hz motor for an operating temperature between - 20 and 40°C.
- The cleaning of the parts in contact with the material may be achieved by removing the top cover,
- Food industry type seals.
- Available accessories : Flexible or stainless steel tubing and suction pipe

ADVANTAGES

- Minimal maintenance
- Low energy consumption
- Automatic filter cleaning system
- Easy to install
- Easy to clean
- ATEX Approval

APPLICATIONS & USE

SAUTELMA's Vacuum loaders are used to feed Sautelma's loss-in-weight feeders and other storage bins in many applications (areas):

In human nutrition, for handling products as varied as sweeteners, flavours, powdered milk, sugar, salt, dehydrated vegetables (tomatoes, spinach ...), semolina, flour (corn, rice, wheat ...), powdered eggs, vitamins, dried fruits (hazelnuts, peanuts ...), inclusions (pieces of cake ...), spices.

In Chemical and Petrochemical industry, to allow the transport of products such as calcium carbonate, resin granules, talc ...

In Pet food production,

In plastics, for PVC transport powders and granules, recycled PET (crushed bottles), dyes, minerals, fillers.

In the packaging,

And many other industries: The construction, pharmaceuticals, cosmetics, detergents etc...

Combined with Sautelma's dosing equipment, they permit the realisation independent handling and dosing units



Typical vacuum loading and dosing station



Vacuum loader with Loss-in-weight feeder

We can supply a **Control command cubicle** including :

- The time delay relays ,
- The pneumatic controller ,
- Solenoid valve,
- Pressure switches,
- The pressure sensor ,
- The signal relay ,
- The terminal block ,
- The input breaker etc.



Pôle d'Activité d'Eguilles – 13510 EGUILLES-France
Tél. + 33 (0)4 42 95 44 00 – Fax. + 33 (0)4 42 20 76 27
e-mail : contacts@sautelma-rotolok.fr – Web. www.sautelma-rotolok.fr