CONVEYING SYSTEMS

# VACUUM CONVEYING



## DESCRIPTION

**Pneumatic vacuum conveying** (negative-pressure) is a modern method of conveying dry bulk materials – powders and granules. Products are conveyed through a pipe network from the loading point to the destination by a conveying medium (usually air) under vacuum. Most systems operate automatically – based on a set time, volume or weight. When the cycle ends or the programmed quantity is reached, the discharge valve opens and the material is precisely transferred to the next production stage.

**Hygiene and service.** The key system components are the loading and receiving units, designed for maximum hygiene, functionality and ease of operation. The modular design allows quick dismantling, while special seals and convenient clamps make cleaning exceptionally easy. Stripping a complete unit down to its basic components and accessing the interior takes just a few minutes.

## SPECIFICATION

- SEW extraction fan 1.1 kW, 3 × 400 / 3 × 500 V AC
- Cartridge filters with 8 $m^2$ filter area
- Automatic filter cleaning – built-in controller and compressed air at 6 bar
- Convenient bag shelf and inlet grid for safe discharge
- Access flap with gas springs and position sensor that starts the fan or sequential filter cleaning

## DESIGN

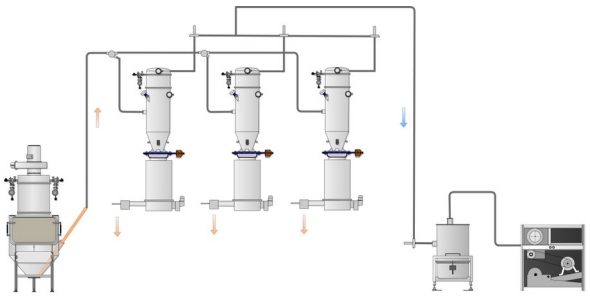
- Powder-coated carbon steel
- 1.4301 (AISI 304) stainless steel – glass-bead blasted or electropolished
- 1.4404 (AISI 316L) acid-resistant stainless steel – glass-bead blasted or electropolished

## SYSTEM ADVANTAGES

- Modular unit design – easy installation, dismantling and servicing
- Installations with multiple loading and receiving points possible
- Quick and easy cleaning thanks to hygienic design
- Hygienic design with easily removable components and surfaces ground to Ra < 0.8 µm
- Safe operation in hazardous (Ex) areas – no dust cloud forms even if the system loses its seal

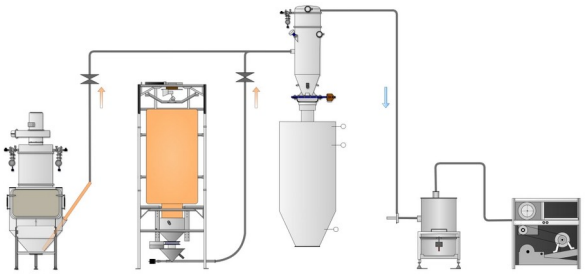
## SOLUTIONS

INTERPROCESS vacuum conveying systems are easily adapted to various process scenarios.



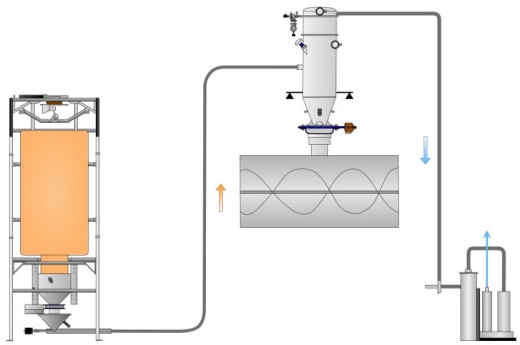
### ONE LOADING POINT → MULTIPLE RECEIVING POINTS

The system distributes bulk material from one loading point to multiple independent receiving points. Diverter valves direct the material exactly where it is needed at any given time.



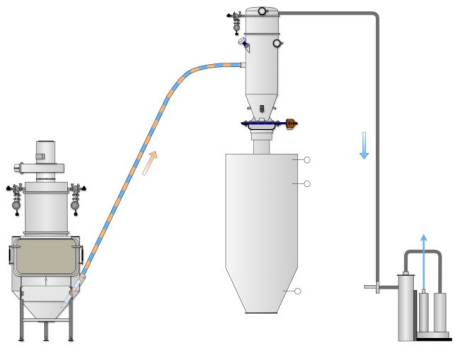
### MULTIPLE LOADING POINTS → ONE RECEIVING POINT

The system draws material simultaneously from multiple loading points and conveys it to a common receiver. Ideal for combining different raw material sources – e.g. bag dump stations and BIG-BAG stations – at a single process point.



### LOADING AND DOSING STATION WITH SCALE

A system integrated with a scale. It allows precise weighing of material before it is passed to the next process stage. A solution for applications requiring high accuracy.



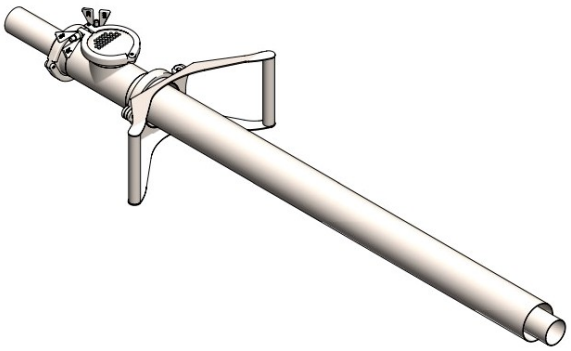
### DENSE PHASE VACUUM CONVEYING

Bulk material is conveyed with minimal air. The product moves slowly in plugs, which significantly reduces degradation and segregation – a precise and gentle solution.

## KEY COMPONENTS

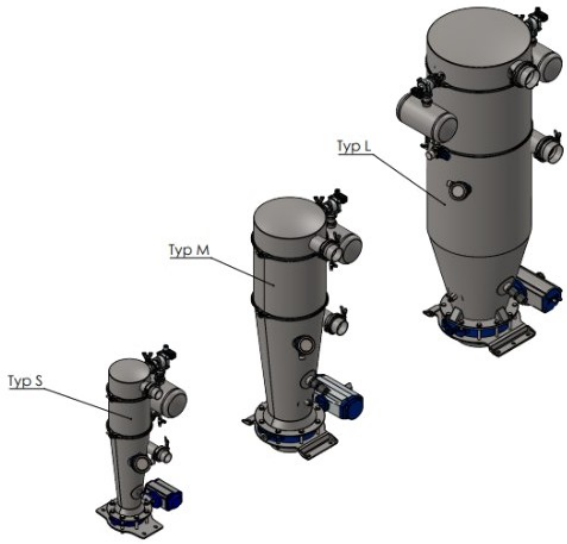
Our systems consist of modular components that can easily be adapted to new or existing production processes.

### MATERIAL LOADING



For loading, we use suction lances – ideal for manually emptying bags, drums or containers. Alternatively, bottom suction units are mounted below hoppers or bag dump and BIG-BAG discharge stations. They ensure fast, dust-free material loading.

### VACUUM RECEIVERS




The receiver collects the material during conveying and separates it from the conveying gas. It contains a filter system that can be cleaned automatically by reverse pulses of compressed air. In combination with a weighing system, the receiver can also act as a feeder.

### CONVEYING LINE

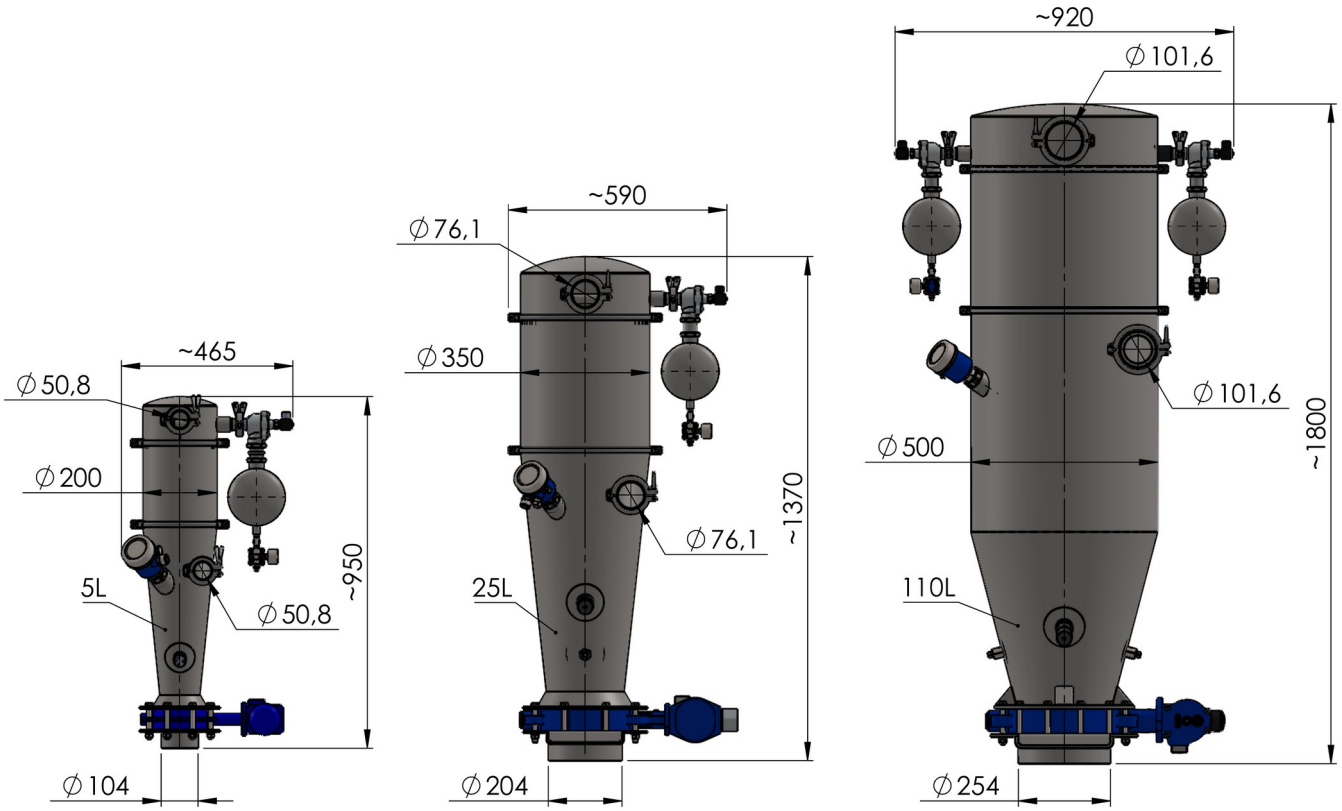
Connects the loading point to the receiver. It can be simple or extensive. Pipework is available in steel or wear-resistant plastic.

- diverter valves
- relief valves
- magnetic separators and detectors
- rotary or vibrating screens

### CONTROL AND LINE-CLEARING VALVES

The valves control the cycle: material conveying and discharge. For difficult materials, we also use line-clearing valves that prevent blockages.

## DIMENSIONS




Dimensions are approximate. Certified installation drawings are available on request.

## RECEIVERS – MAIN DIMENSIONS

| Receiver | Width [mm] | Height [mm] | Body Ø [mm] | Connection Ø [mm] | Outlet Ø [mm] |
|---|---|---|---|---|---|
| **5 l** | ~465 | ~950 | 200 | 50,8 | 104 |
| **25 l** | ~590 | ~1370 | 350 | 76,1 | 204 |
| **110 l** | ~920 | ~1800 | 500 | 101,6 | 254 |