Bimech

VCS VACUUM TRANSPORT

The function of the “VCS” vacuum transport is to bring the product from the floor level to a height sufficient to load a tank or a process machine.

In fact, the advantage of using the VCS is to overcome the problem related to the elevation of product loading / unloading, entering the tank.

The Bimech VCS can be disassembled into parts without tools and can be cleaned quickly.

The design is free of gaps and has no inaccessible spaces where the product could remain.
The VCS transports the powder in a fluid flow and is vacuum sucked through stainless steel and polyurethane pipes, without electrical parts.

The pneumatic vacuum pump generates the vacuum in the suction line up to the supply point. The bulk material is sucked in and then transported in this fluid stream.

The fluid leaving the vacuum pump must be channeled and managed in the factory suction circuits. It could be compressed air or Nitrogen depending by the characteristic of the product.

Inside the tank an AISI 316 L stainless steel filter separates the fluid from the product.
The filter mesh size varies according to the particle size of the transported dust, but the standard is 5 µm.
A blow of compressed fluid, in counter-current, cleans the filter at the end of each product suction phase.
When the vacuum pump shuts down, internal pressure balancing occurs inside the body.
The dust is thus discharged through an actuated DN 150/200 butterfly valve.

The suction performance of the VCS is influenced by the flowability characteristics of the powder and therefore is not predictable.

The VCS conveyor system consists of 4 main blocks:

- power head
- stainless steel filter
- vessel
- discharge valve

Main construction features:

- disassembly of machine parts without tools for washing parts in contact with the product
- venturi-type pneumatic vacuum pump with variable geometry to optimize performance based on the available compressed air flow
- cycle control via PLC and push-button panel for cycle start / stop and emergency
- AISI 316 stainless steel dust separation filter with overlapping meshes with Standard 5 µm mesh
- vide versatility and possibility of customization according to the needs of the process

Materials and finishes:

- all the steel parts in contact with the product are made of AISI 316
- all gaskets and plastic materials in contact with the product are in FDA approved materials and chemically compatible with the treated substances
- the finish of the surfaces in contact with the product is mirror polished, while those not in contact have a fine satin finish
- the covers of the pump and actuator parts of the drain valve are in white lexan.

Options available:

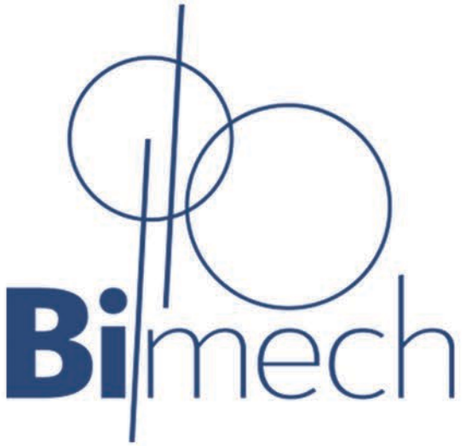
- capacitive sensors on the body of the storage tank for cycle management at levels instead of time
- DN 50 pneumatic product inlet valve
- inductive sensors for detecting the status of pneumatic product loading / unloading valves
- fully pneumatic control panel
- CIP of the parts in contact with the product (stainless steel filter excluded)
- inertization with Nitrogen
- ATEX and PED certification
- materials different from the standard
- customizable product discharge connections

CONTACTS

Production Plant

Bimech S.r.l.
Nucleo industriale PRT, C.da Saletti,
66020 Paglieta (CH) - Italy.

info@bimech.it



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