

INFASTAUB



Breathe The Difference: Pure Air

INFA-POWTRON Loading system



INFA-POWTRON, BKF loading system for any kind of bulk solids

The loading system INFA-POWTRON BKF loads loose, powdery or grainy bulk material fast and dust-free into road tankers, open vehicles, railway wagons or containers. A special feature of the INFA-POWTRON - series is the integrated filter system for cleaning of dust-laden air of the filling process. This system saves costs, because exhaust air ducts to further filters or other periphery aren't necessary and the separated dust is returned directly to the product flow again. The BKF is extremely robust and also runs under extreme conditions (e.g. outside temperatures down to -40 °C) failure-free.

The INFA-POWTRON is individually adapted to every application. Besides, various parameters are considered: the conveyed product, the specified loading capacity, the loading height as well as special customer demands.

For loading of potentially explosive products specially secured electric equipment (cable winch, sensors, switches, controls etc.), which is approved for the defined ATEX zones, is used as well as electrically conductive bellow material and a complete grounding of the system.

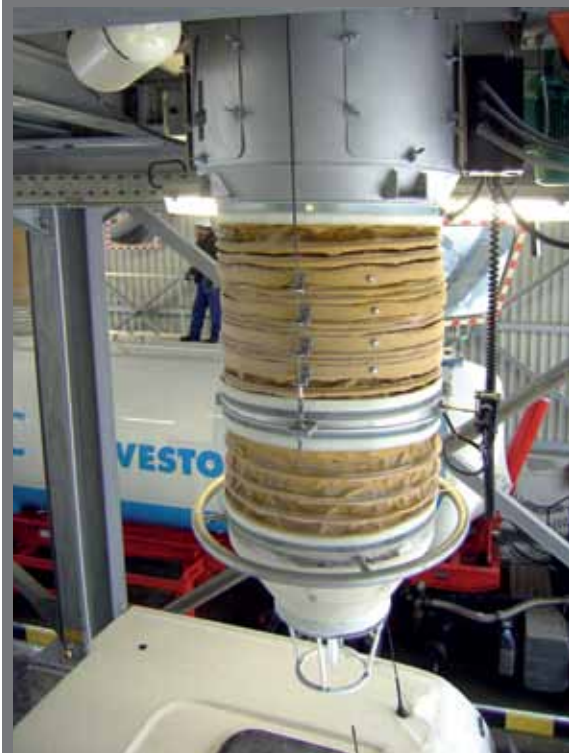
Functionality

The bulk material flows from the storage container (e.g. silo) into the top of the BKF. The long infeed tube achieves a stable flow direction. In the vertically adjustable part of the BKF the bulk material is guided by an inner bellow or conical sections into the transport vehicle. The displaced air is sucked off upwards through a ring gap between product supply and outer bellow by a fan and is cleaned in the loading head by integrated filter cartridges.

The separated dust is returned to the product flow again. Feeding or disposal systems for dust are not necessary. The filter media is continuously cleaned during the loading process by compressed air. The differential pressure drop is thereby kept low and the suction capacity of the system is sustained completely till the end of the loading process.

The guiding ropes for lifting and lowering of the loading bellow are arranged outside the material flow. As a result the wear is minimised and maintenance reduced. Distance holders between inner and outer bellow stabilise the loading hose. By using slack rope switches lowering of the loading bellow stops when the filling cone touches the filling dome of the transport vehicle. If the vehicle sinks in the course of filling, the filling cone is lowered automatically. As soon as the filling level in the vehicle reaches the level switch at the bottom of BKF closing cone, the control receives the signal to stop the loading process.

For dust-free loading of bulk solids from silos or conveying systems into road tankers, open vehicles, railway wagons or containers



Standard design features

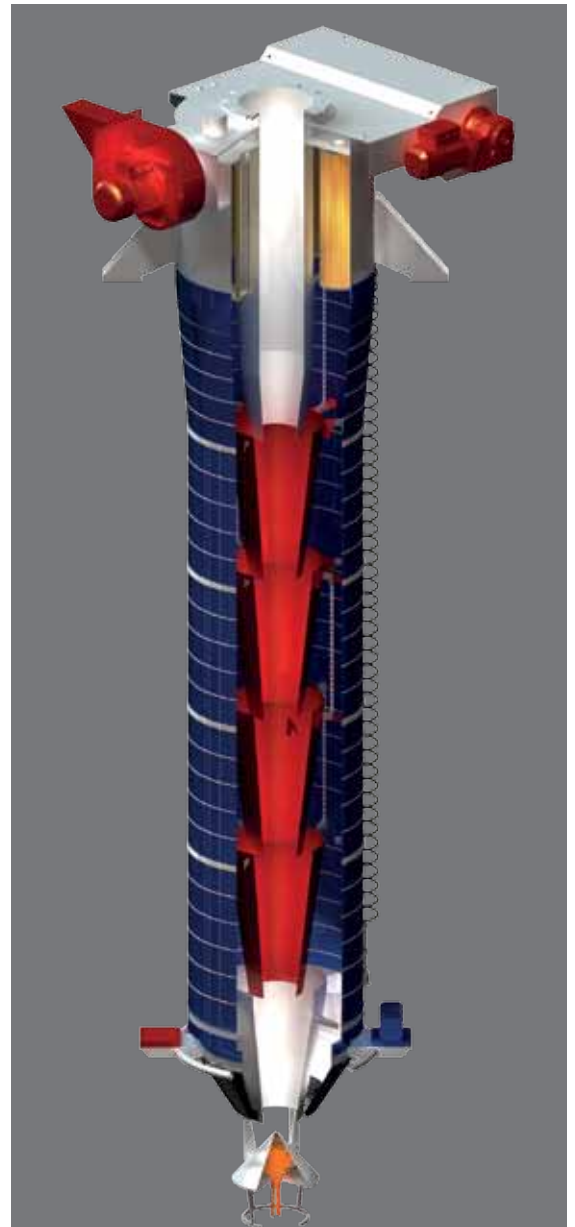
- ❑ Loading system made of mild steel for dust, powder, grain and granulate, with exhaust fan and concentrically arranged filter cartridges including pneumatic cleaning unit
- ❑ Loading capacity up to 400 t/h, depending on the product
- ❑ Exhaust performance of the fan up to 1,500 m³/h
- ❑ Electric cable winch with gear motor and limit switch in two-rope design
- ❑ Slack rope switches for indicating the touchdown of the filling cone on the filling connection of the customer
- ❑ Product supply via a long infeed tube for a stable flow
- ❑ Height-flexible loading section with inner loading bellow or wear resistant conical sections for the product. Additional outer bellow for suction of dust-laden exhaust air and conduct to the filter cartridges in the BKF top
- ❑ Rigid lower part with guiding ring, spacer pipe for guiding the product, filling cone with rubber gasket, closing cone and level switch
- ❑ Easy change of filter cartridges by lowering the upper part of the loading bellow

Options

- ❑ Electronic control system (PLC) with manual switch control bulb for operating/signal processing of pneumatic cleaning, cable winch, fan, level indicator, vibration motor and on-site shut-off / conveyor units
- ❑ All housing parts and internal parts or components in contact with the product made of stainless steel
- ❑ Flexible loading bellow made of neoprene, antistatically equipped PVC or robust aramid
- ❑ Filter unit with fan in a separate housing attached at the side to save installation height
- ❑ Various accessories, e.g. vibration motor at the filling cone, slide valve (manually, motorized, pneumatically actuated), rotary paddle level switch
- ❑ Explosion protected design according to directive 94/9/EG (ATEX)
- ❑ Control system and motors for special voltages, e.g. 500 V
- ❑ Extended temperature range from -40°C to +120°C
- ❑ Filter media available in different qualities (e.g. suitable for food according to regulation EU 1935/2005 and EU 10/2011)

Range of applications (examples)

- ❑ Agriculture (grain, biogenic recycling materials, biomass power plants)
- ❑ Metal industry (foundry sands, raw materials, aggregates)
- ❑ Cement industry
- ❑ Plastic production and handling (neutral coloured granulate loading)
- ❑ Waste recycling (incineration ashes)
- ❑ Power plants (coal and ash loading)



Advantages

- ❑ Integrated filter cartridges cleaned by compressed air with large filter surface take care of constant good suction performance during the loading process
- ❑ False air flap at the filter limits the suction pressure in the loading bellow and prevents a contracting of the bellow
- ❑ Automatic lowering of the filling cone when the transport vehicle sinks during loading
- ❑ Automatic lifting of the loading bellow during open loading according to the increasing material cone during filling
- ❑ Manual switch control bulb for user friendly control of the loading process
- ❑ Optional external vibrator prevents crustification at the inner bellow

Service and maintenance

Infastaub offers professional service - from supply of spare and wear parts to commissioning and maintenance up to modernisation of your filter unit.

In order to maintain operating of your processes and quality of your required de-dusting, correct commissioning of the filter unit is of great importance, especially if it's a matter of safety-relevant or explosive endangered processes.

Commissioning covers an extensive function testing as well as a detailed training of your operating staff.

In order to keep your filter unit in long-term operation, we offer the Infastaub maintenance service with periodic inspections and services for your filter unit.



Commissioning



Maintenance, repair, servicing



Spare parts



Filter media



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