



# EMIDE

WE UNDERSTAND BULK!



Vacuum Cleaning System



## Vacuum cleaning instead of sweeping

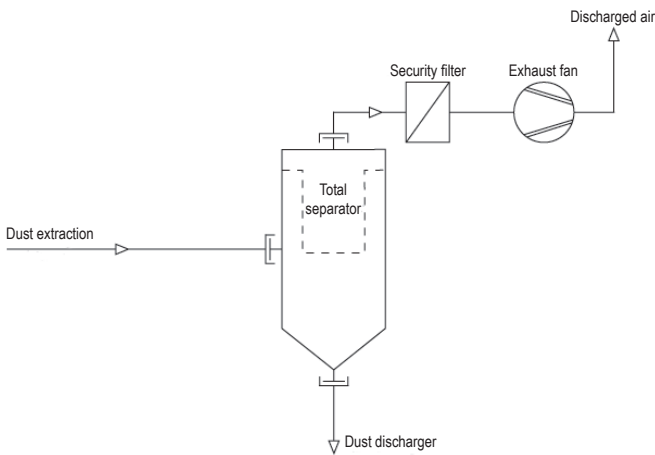
Dust gatherings in industrial facilities constitute a considerable threat with regard to occupational medicine and health care, hygiene and fire protection. There's no doubt that only clean surroundings can ensure safe working conditions and the compliance with greatest demands on quality. Machine suction and filter systems, however, do not prevent general dust pollution when extensive numbers of dusty products are handled and thus result in the pollution of commercial buildings and manufacturing facilities. Reasons for regular cleaning are obvious.

- Reduction of accident hazards
- Improvement of working conditions
- Prevention of fire and dust explosion hazards
- Service life extension of machines and appliances
- Assurance of quality standards and hygiene requirements

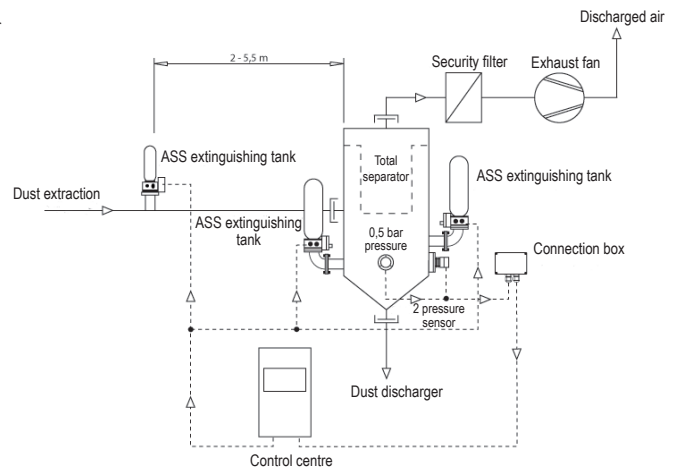
Fixed vacuum cleaning networks connected to low pressure generators and filter systems, also suitable for dust ex zones, facilitate cleaning significantly. Typical applications are:

- Brown and hard coal-fired power stations
- Mill operations
- Refuse incineration plants
- Cement plants
- Lumber industry
- Food industry
- Chemical industry

## Layout for non-explosive dust



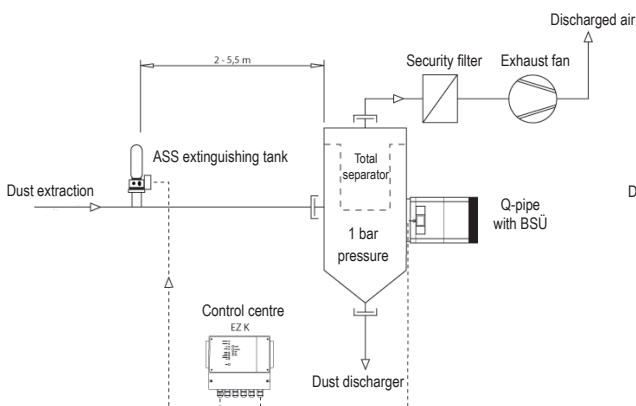
## Layout with dust explosion suppression



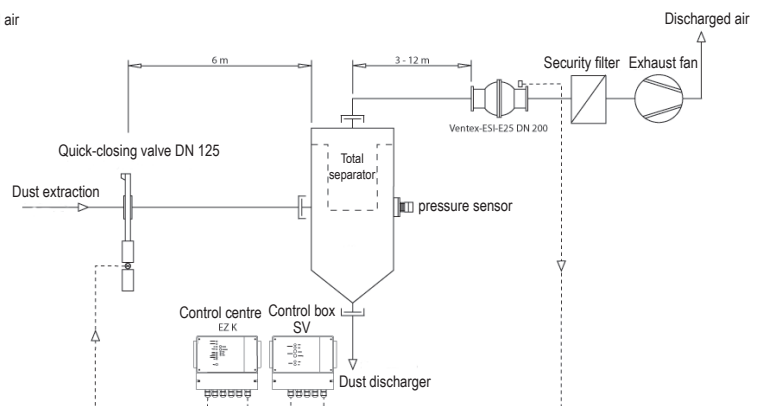
## Explosive but safe

At the stage of designing a vacuum cleaning system, the explosion hazards of each kind of dust are analysed. In the event of explosion hazards, the dust filter is equipped with a suitable dust explosion relief or suppressing appliances or offered with antisurge protection to prevent dust explosions in the pipework or in the downstream dust filter.

## Layout with dust explosion relief



## Layout with antisurge protection resisting 10 bar excess pressure





*Stationary vacuum cleaning system*

## Stationary vacuum cleaning systems

Stationary vacuum cleaning systems are integrated into industrial facilities with a permanently high proportion of dust. The pipework is connected to a firmly installed filter. The complete system is closed, including dust disposal, recirculation or moistening.

- Highest equipment availability
- Minimal staff costs
- Closed dust disposal or recirculation system
- Reduction of filter strain through pre-cleaner
- Total pressure difference 300 to 800 mbar
- Suction height up to 400 m
- Throughput 500 to 2,500 Nm<sup>3</sup>/h



*Vacuum cleaning system in power station*



*Dust attachment with water*



*Filter separator with discharge sluices*



Antisurge protection system with pre-cleaner and filter separator

## Mobile vacuum cleaning systems

Mobile vacuum cleaning systems ensure an operation using multiple vacuum cleaning networks. One system enables vast industrial premises to be cleaned in succession. Being self-propelled, the filter system can be moved very quickly from one operating part to the other directly by the cleaning staff. A cost-saving option is to use trailer carriages for mounting and traction engines for moving.

- Cost-saving option to be used with several pipeworks
- External dust disposal
- Network-independent operation enabled by electric generator and compressor
- Cost-saving filter system positioning outside the building



Mobile vacuum cleaning system in operation; antisurge protection resisting 10 bar excess pressure



Mobile vacuum cleaning system for vacuum and pressure operation



*Vacuum cleaning in brown coal power station*

## Economical network design

Operating a vacuum cleaning system efficiently is essentially dependent on an optimal pipeline layout. Experienced consultants plan the complete system for you. Vacuum cleaning sets are connected to a network via easy to handle valves with spring-loaded hinged covers.

- Optimal network design and pipework system
- Low-pressure and dustproof quick coupling
- Pipe bends with wear protection
- Vacuum cleaning sets with highly flexible tubes
- Vacuum generator with side channel compressor or rotary blower



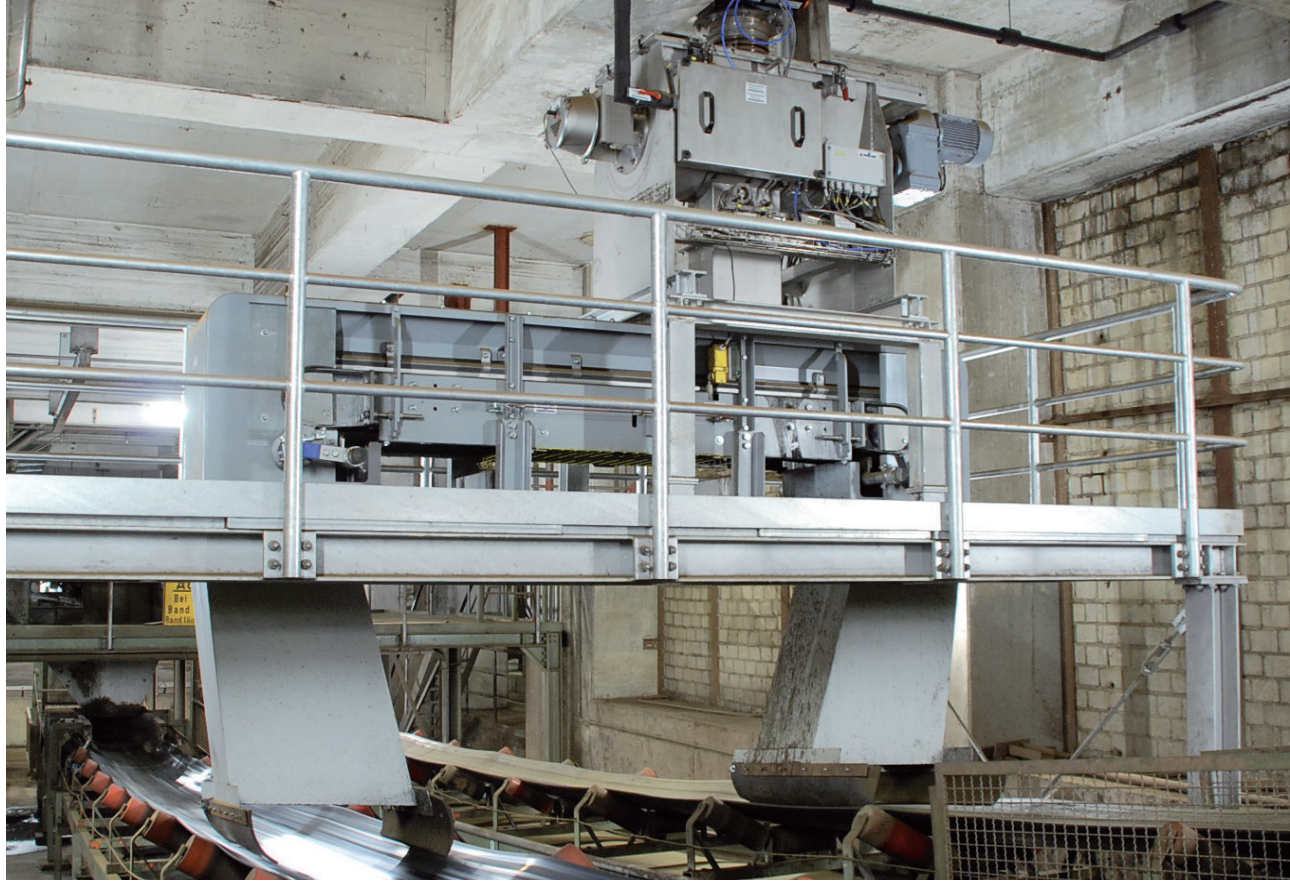
*Plug Valve*



*Flexible hose connection with pipe net*



*Optimal and ergonomic pipe net installation*



*Brown coal dust humidification and discharge onto coal-handling belts*

## Dust conditioning and recirculation

A regeneration and recirculation in measured doses into the material flow can often avoid or reduce the disposal costs for accumulated dust. Adding dust binders to the filter system after dust conditioning enables a dustless handling of the filter dust.

- Filter dust conditioning in batch mixer, continuous mixer or paddle mixer screws
- Reduction of disposal costs
- Avoidance of dust formation and further dust explosion hazards



*Dust discharge at moistening station*



*Moistening station with ribbon blender*



Mobile Test plant

## Service and maintenance worldwide

Robust systems engineering ensures reliable and steady operation. Regular maintenance by our service and maintenance technicians assures the systems' highest availability. A mobile test system allows trial runs and performance to be conducted on request.

- Mobile test system in container construction
- Fast service worldwide
- Advice on systems planning and calculation of vacuum generators and the overall system

