



DEDUSTING SYSTEM





Application

The main purpose of using dedusting system is to improve the health and safety conditions of the operating personnel. It also has a positive effect on the lifetime of the equipment by reducing the effects of damage and wear resulting from working in a dusty environment. It is especially recommended in places where we deal with the transport of bulk materials with its own composition of dust fraction. It also works well in installations equipped with devices working in positive pressure conditions, from which the dust fraction escapes to the outside. Dedusting system has high reliability. The number of maintenance work is reduced to a minimum. Purified air meets all purity standards.

Design and principle of operation

A standard dedusting system consists of suction connections designed to suck in the dust, contaminated air pipes, dedusting filter, extraction fan (integrated with the filter or free-standing), purified air pipes and rotary valve. Depending on the place of dust extraction, conveyors or dust discharge pipelines are installed. Each filter is equipped with a compressed air collector with nozzles and solenoid valves for filter bags cleaning. The controller is responsible for the dust extraction process in the filter.

A series of types of dust collectors is offered in a modular version with filtration surfaces. The number of modules depends on the filtration area. There is a possibility to deliver various types of filter cartridges, such as those with explosion protection and made of stainless steel, adapted to special customer requirements. The filters offered by us are characterized by an extremely compact design and high efficiency. They can be installed both indoors and outdoors.

The polluted air sucked in by the extraction fan is distributed through the deflector plate and perforated steel separator, so that the dust is evenly distributed over the entire surface of the filter. The air is filtered through the filter bags and the dust settles on the outer surface of the filter material, which increases the resistance of the filtered air flow through the material of the bag. The process of cleaning the filter bags starts automatically when the preset pressure difference is reached or after a programmed time has elapsed.

The filter bags are cleaned with short impulses of compressed air supported by Venturi nozzles at the top of the filter. Dust falls into the chute hopper, which can be equipped with a discharge conveyor depending on the version of the device. At the dust outlet from the filter, the rotary valve is installed, whose task is to maintain adequate pressure in the filter.

Dedusting system characteristics

THE SURFACE OF FILTRATION	m ²	15 – 500
NUMBER OF MODULES	–	4 – 8
AIR FLOW	m ³ /godz	1 700 – 10 000
THE DIAMETERS OF INLET AND OUTLET	mm	160 – 560
MATERIAL TRANSPORTED	–	dust, smoke
WORKING TEMPERATURE	°C	-20 – 70
CLEANING METHOD	–	impulse of compressed air
FILTRATION MATERIAL	–	Poliester