



**PNEUMATIC CONVEYING
DEDUSTING
VENTILATION**

RAYMAN spol. s r. o.

www.rayman.cz

**EQUIPMENT FOR DISPLACING DUSTING
FROM FILTER OR PRECIPITATOR HOPPERS**

For displacing dusting from filters and precipitators is possible to take use of equipment that combines a DUSTING TRAP and a FLOW FEEDER.

Under a canal hopper of filters or precipitators is installed a dusting trap, on its drain is connected a material closure, a gravity chamber and a flow feeder. As a conveying air source is used a rotary blower.

This equipment is also suitable for highly abrasive dusts. Solution of the dusting trap is copyrighted by utility design (U) CZ 17 961 U1, some parts of the flow feeder are copyrighted by utility designs (U) CZ 15 209 U1 and (U) CZ 15 107 U1.



Unique construction design of the dusting trap and none movable parts ensure high conveying capacity, operating reliability, wear resistance and very long lifetime.

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Main advantage by using equipment for displacing dusting is absence of any movable parts in contact with conveyed material thereby in effect zero service costs and repair (bearing lubrication, abrasion). Another advantage is very simple wiring system (only one electromotor – blower). Profitable is also possibility of discontinuous operating in case of low occurrence of dusting and thereby power saving by conveying.

By bigger amount of dusting equipment works continuously. Dusting flows over trap and gravity chamber to flow feeder that conveys dust continuously to silo. By lower occurrence of dusting and shorter conveying distance is possible to operate discontinuously. After collecting enough amount of dusting in a filter hopper is initiated a blower and opened material closure. Dusting is conveyed from hopper to silo and after emptying hopper is equipment put out of operation.

For aerating dusting trap and pneumatic conveying subserve sources of conveying air with overpressure min. 30 kPa (preferably blowers) or exceptionally compressed-air network. Conveying medium could be used also another, e.g. nitrogen or other inert gas.

Temperature of conveyed material can be to + 150 °C, or to + 200 °C, according to wish also higher. Ambient air temperature is not restricted.

Main build proportion

Size of dusting trap determines designer according to size of outlet collar of hopper. Size of flow feeder, diameter of conveying pipeline, necessary length of gravity chamber and conveying air consumption (size and power requirement of blower) determines designer according to required conveying capacity and height from outlet collar of hopper to floor or ground.

Basic technical data

Conveying capacity	0,1 – 5 t/h, in specific cases more
Max. operational temperature of conveyed material	150 °C or 200 °C
Conveying air consumption	according to conditions determines designer
Max. operational overpressure of conveying air	0,03 - 0,1 MPa