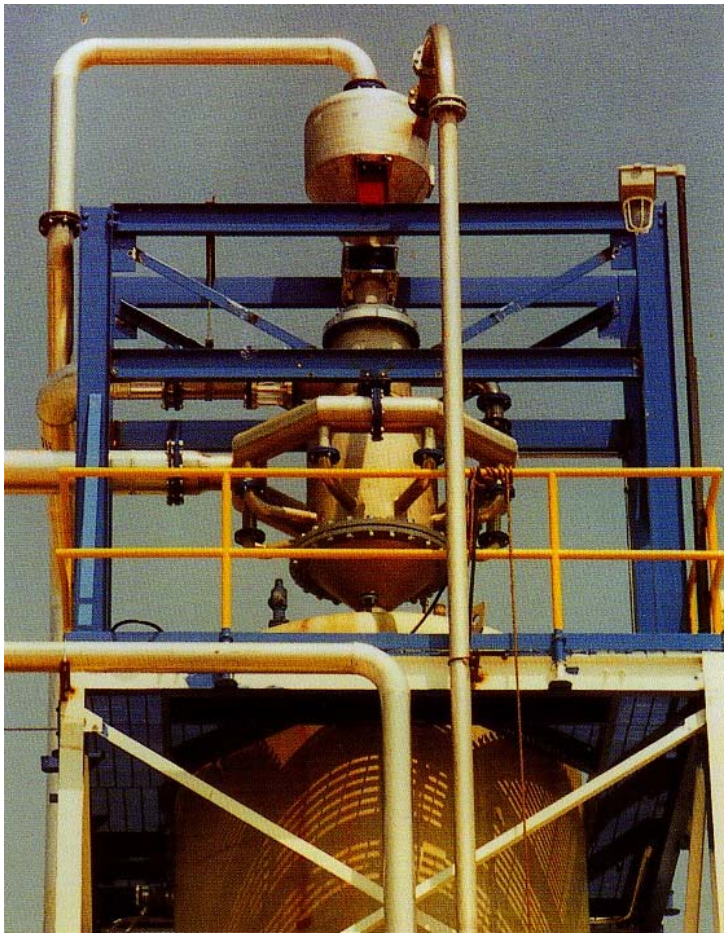
MAB COUNTERFLOW DEDUSTER

MAB DEDUSTERS have been designed for separating dust and streamers from plastic pellets for quality processing further downstream.



RECOMMENDED FOR:

- Nylon spinning plants
- Polyester spinning plants
- Production of Polyester pre-forms for bottles
- Polyethylene pellets
- Polypropylene pellets

◀ *Deduster in closed loop of Nitrogen for pellets of Nylon 6.*
Flow-rate : 15 t/hr

DESIGN FEATURES:

- Pellets flow-rates from 1 t/hr to 50 t/hr
- High efficiency with a residual dust content of 20 PPM
- Pellets-feed by gravity, as well as by pneumatic conveying
- Cleaning gas circulation system under pressure or vacuum – with open loop or closed loop
- Tailored solutions for all cases

M A B

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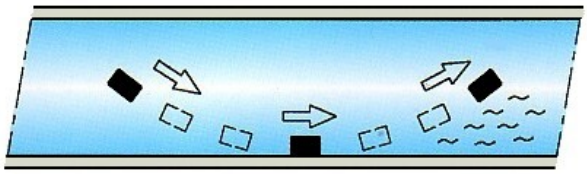
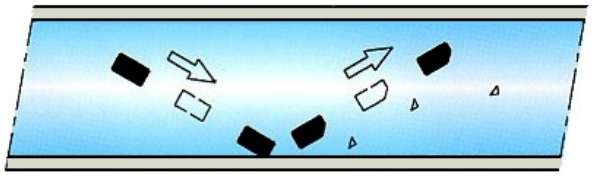
MAB COUNTERFLOW DEDUSTER

GENERATION OF DUST AND STREAMERS

The fabrication of the plastic pellets of all kind, follows many steps with several intermediate pneumatic conveying systems, which are often in dilute-phase and have high speed.



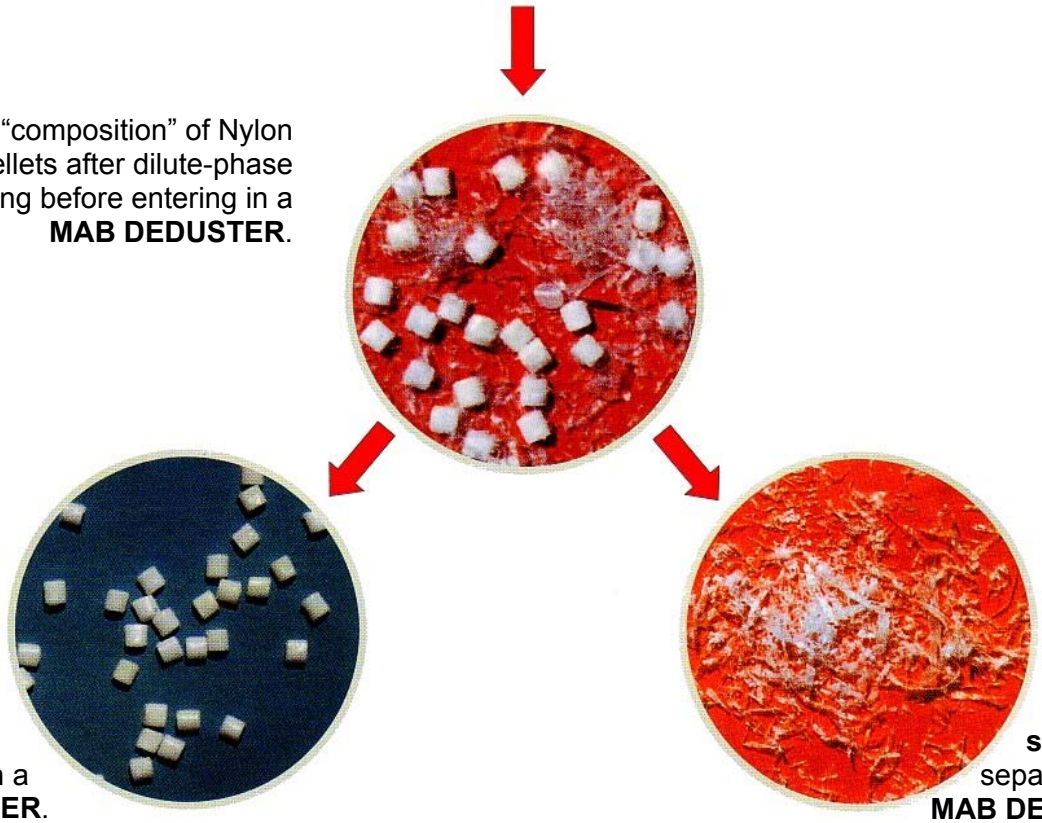
▲ Dilute-phase generates **streamers** when the plastic pellets slip on the wall of the pipe.



▲ Dilute-phase generates **dust** when the plastic pellets collide on the wall of the pipe.

The contact between each single pellet and the inside wall of the conveying pipes causes a local temperature increase. As a consequence the pellets leave a small film-layer on the pipe, which grows in time by action of other small subsequent impingements.
Because of further abrasion of other pellets this layer is, after a certain time, removed in the form of streamers.
If the impingements between one pellet and the wall of the pipes happens in a rough or sharp area (weldings, flanges, etc.) a particle of the so-called “dust” is generated.
A large quantity of dust is generated, too, in the batch thumble-dryers.

Typical “composition” of Nylon pellets after dilute-phase conveying before entering in a **MAB DEDUSTER**.



Clean pellets after passing in a **MAB DEDUSTER**.

Dust and **streamers** separated in a **MAB DEDUSTER**

MAB COUNTERFLOW DEDUSTER

PRINCIPLE OF OPERATION

MAB DEDUSTER has a special unique design, which has been successfully tested with many different kind of pellets, in various situations. The “dirty” pellets are fed from the top (N1) by gravity or by pneumatic conveying. The cleaning gas (air, Nitrogen) is fed inside (N3) and, thanks to the special design of the internals, a pure counterflow of pellets and cleaning gas is obtained. The cleaning gas conveys the dust and the streamers through the connection (N4) to a cyclone and to a filter for the final disposal.

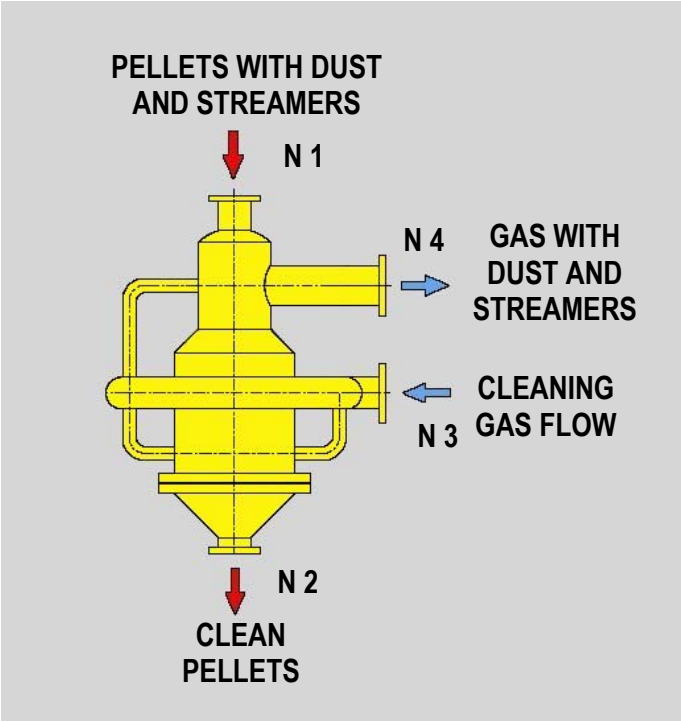
MAB COUNTERFLOW DEDUSTER

N1 - Pellets feed (by gravity or pneumatic conveying)

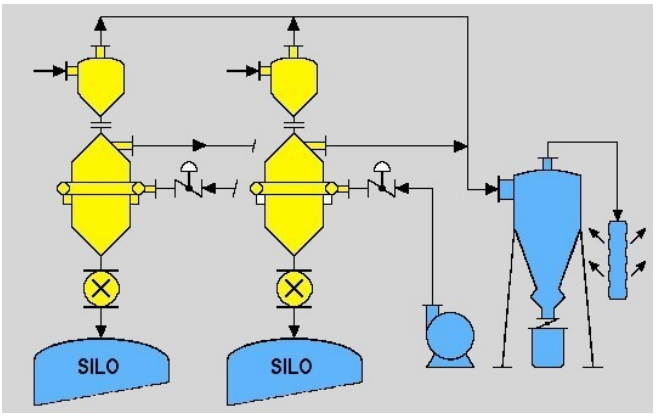
N2 - Clean pellets outlet

N3 - Cleaning gas inlet (air, Nitrogen)

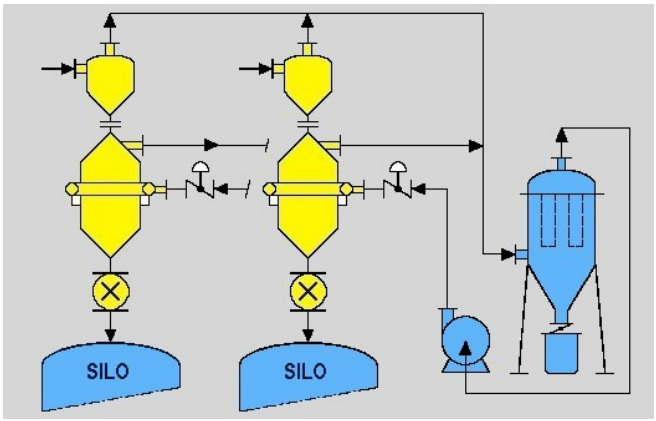
N4 - Gas outlet with dust and streamers



EXAMPLE OF APPLICATIONS



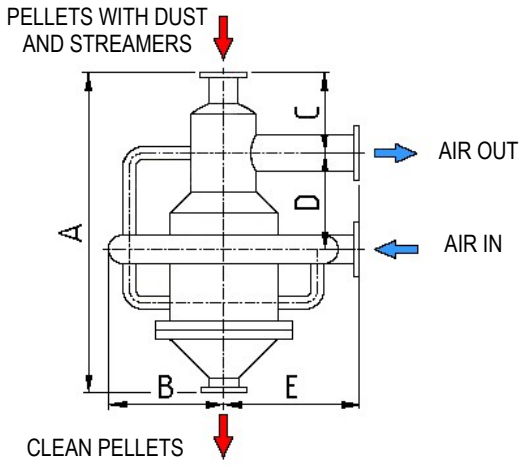
▲ Dedusting with air in open loop



▲ Dedusting with Nitrogen in closed loop

MAB COUNTERFLOW DEDUSTER

DIMENSIONS (mm)

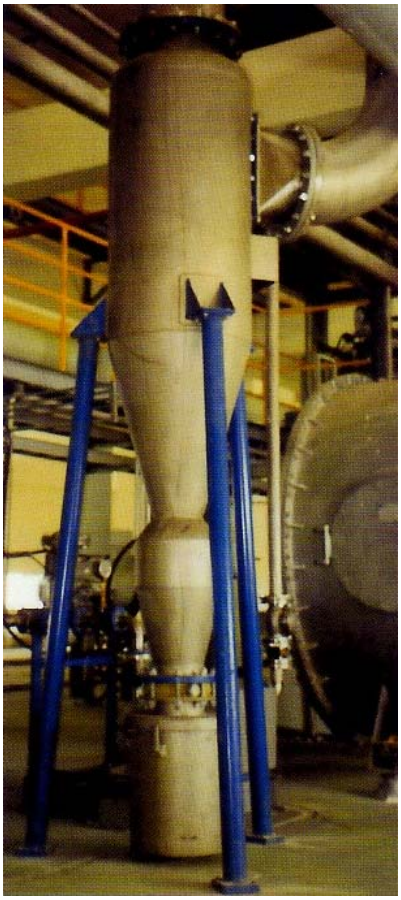


MODEL	A	B	C	D	E
DP-400	1220	435	320	370	600
DP-600	1950	560	670	450	700
DP-800	2400	875	670	670	1200
DP-1000	2700	1025	700	850	1350
DP-1200	3000	1200	700	1050	1450

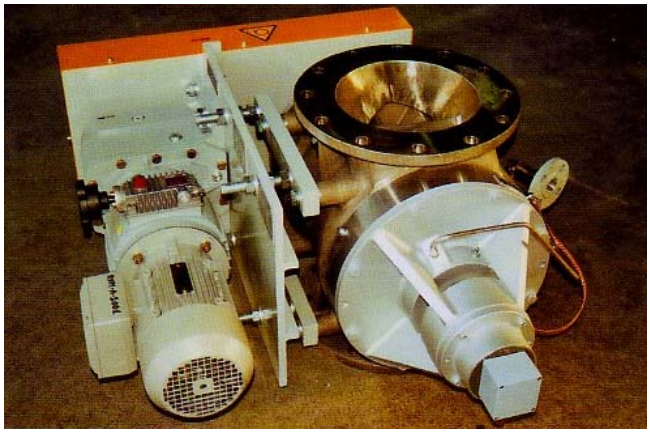
AUXILIARY COMPONENTS FOR DEDUSTING SYSTEMS

MAB delivers complete dedusting systems including all needed components.

Nitrogen blower for a dedusting system in closed loop



Cyclone for collecting dust and streamers



Clean pellets discharge rotary valve

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