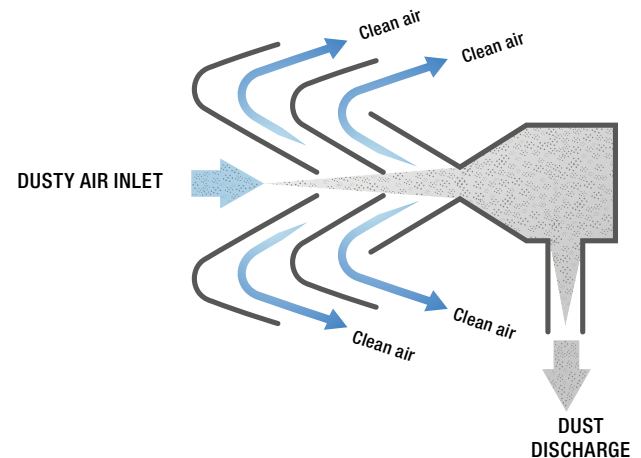


## INERTIAL FILTERS

*Inertial separation is an excellent pre-filtration system, particularly indicated in applications with high dust levels such as steel mills, cement factories or desert areas with risk of dust storms.*

This filtration system is based on the kinetic energy conservation principle, for the dust particles transported by the upstream flow; with a series of quick direction changes, the fluid flows are directed towards the area where clean air is needed, whereas the particulate, through inertia, continues to flow towards an area of the filter that exhausts the separated dusts thanks to the pressure drop.

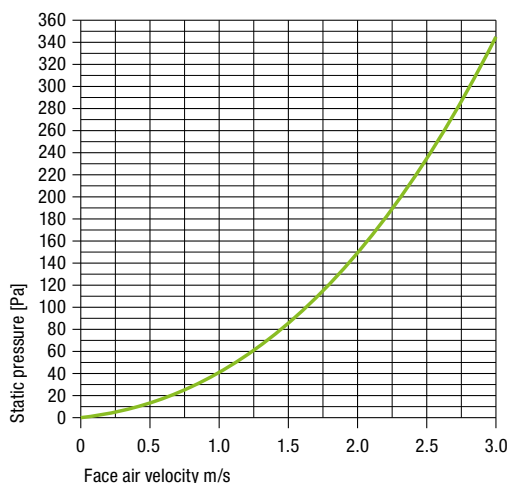
Evidently the higher the mass of the particles and the speed through which they are transported, the higher the efficiency of an inertial filter. An inertial filter needs, except for sporadic exceptions, an auxiliary fan for the extraction of separate dusts; this fan, must be suitable for the transportation of abrasive dusts. Our product range includes four types of inertial filters.



### Sand trap grids

## STL

### CHARACTERISTIC CURVE

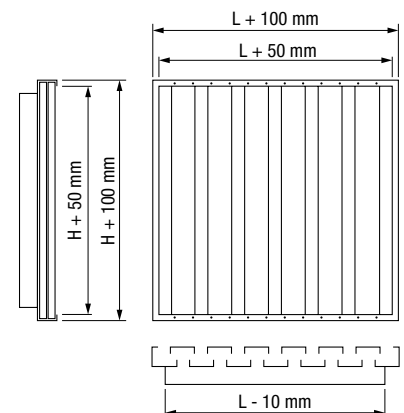


This is the most economic and simple system to separate coarse particles.

It is made of aluminium, galvanized or stainless steel, and it is particularly appreciated for the extremely limited thickness.

It is a shaped labyrinth that creates quiet zones where the particles, having discharged their kinetic energy through the impact against the metallic surface, can precipitate to the bottom without being captured by the air flow.

The average gravimetric efficiency is 55% on particles bigger than 60/80 micron.



# INER ST

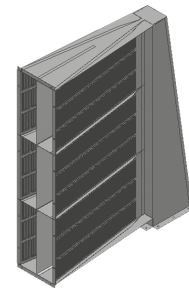
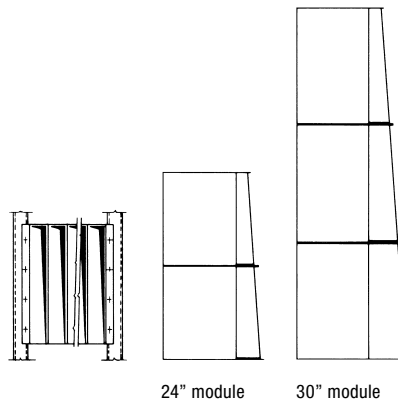
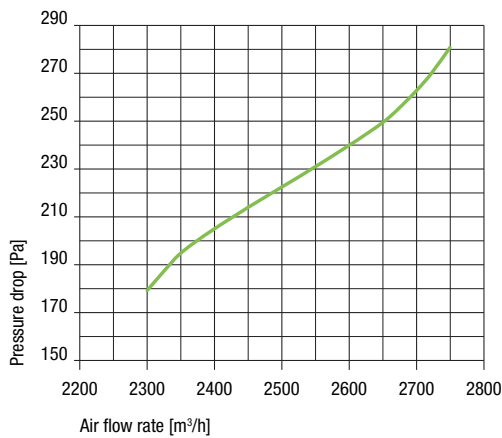


The air flows inside a diehedral made of two walls with a series of slots. The bottom of the diehedral is connected to the dust extraction fan; air deviates its linear flow to pass through the slots, whereas the dust particles continue until they are captured and exhausted. The INER ST filter works correctly with a pressure drop of 250 Pa and a gravimetric efficiency of 75/78% with Arizona Dust Fine. Thanks to its economic convenience it is particularly used on AHUs. It can be made of COR-TEN steel or stainless steel. COR-TEN steel is a weathering steel with higher resistance to atmospheric corrosion, compared to unalloyed steels.

Efficiency on standard assessment against the testing dust

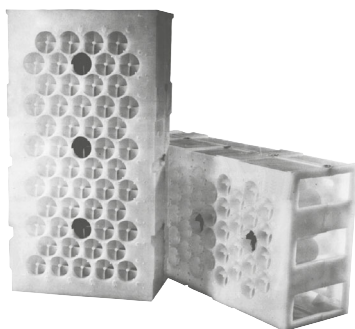
Dust	Efficiency at: 250 Pa
ISO 12103.1 A2 FINE	82,2%
ISO 12103.1 A4 COARSE	95,0%

## CHARACTERISTIC CURVE



## Multi-cyclone panel filters

# MCS SPIN FILTER



This is the most versatile inertial separator. It is based on the principle of centrifugal separation and it can operate in a speed range, hence pressure drop range, wider than the previous models. The MCS filter panel we offer is made of polypropylene and holds 64 mini-cyclones. Its wide modularity makes it suitable for applications with variable volumes and for applications with a high concentration of aggressive and abrasive dusts. 90% gravimetric efficiency on particles bigger than 5 micron with 250 Pa pressure drop.