



CYCLONE | Dust and particles separation

Dust separator for solid or liquid particles

What is a cyclonic dust separator?

Cyclonic separators are used to separate solid or liquid particles from the gaseous stream introduced into it. This is done by exploiting the centrifugal force developed by the swirling motion imposed to the gaseous flow by the cyclone's constructive geometry.

Cyclone: how does it work?

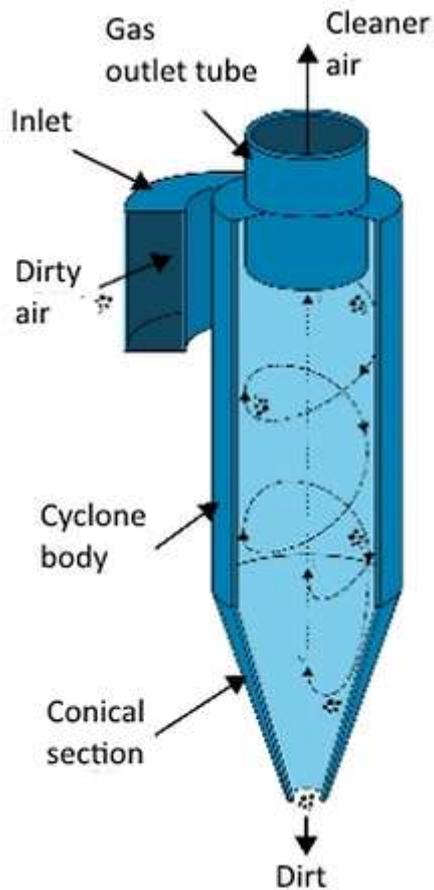
Gallery

As exemplified in the drawing to the side, the flow of air to be treated is introduced tangentially into the cyclone where the particles present in it are accelerated and pushed to describe a circular trajectory. They, due to the centrifugal force, separate themselves from the gaseous stream heading towards the wall of the cyclone. Then solid particles are dragged by the gravity force at the bottom of the filter where they are removed. In this way, the air treated comes out from the top of the filter.

The separation efficiency of the system depends on:

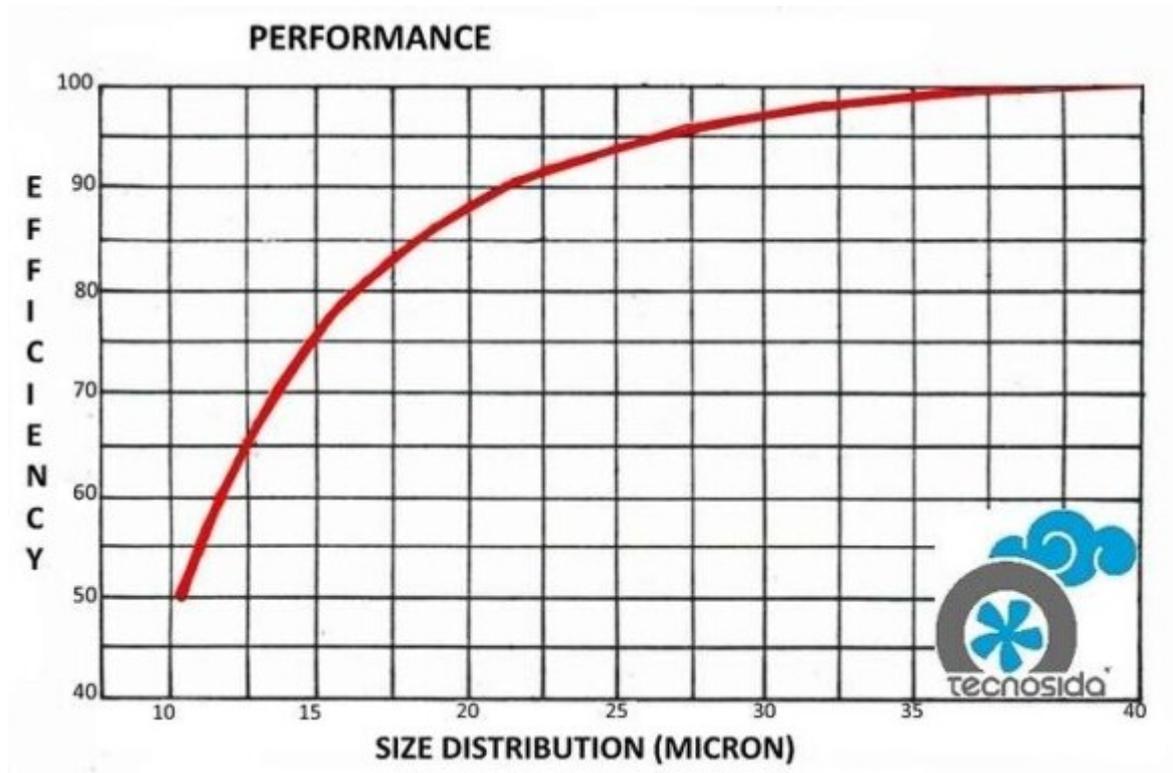
- the size of the particles (granulometric distribution);
- the specific weight of the particles;
- the speed of the airflow;
- the geometric dimensions of the cyclone.

Due to the peculiarity of the operating system, is very important during the design phase to define the scope and the flow rate and the specific temperature of use.



These two variables are very important for defining the working range and for creating the right balance between energy efficiency and pressure drop, thus ensuring maximum efficiency. As said before, the granulometric distribution is among the variables that strongly influence the performance of Cyclone. As shown in the chart, it is more suitable for the treatment of coarse particulate. Tecnosida[®], thanks to its long experience in the field (over 35 years), is able to design cyclones with this perfect balance: contact us!

Strengths of the cyclonic separator



A cyclonic separator:

- Is very economic;
- Is characterized by a high robustness;
- Is easy to install and to use;
- Requires minimal maintenance;
- Can be used in different contexts (considering different volumetric flow rates, temperatures, kinds of dusts and kinds of productive processes);
- It can be equipped with dedicated exhaust systems including star valves and cochlea

Cyclone: maintenance service

Tecnosida® is a perfect partner for planning and execution of ordinary and extraordinary maintenance services required to:

- Verify cyclone's proper functioning
- Keep high filtration efficiency
- Reduce economic and energetic wastes
- Comply with safety and environmental rules and regulations

Contact us for more information