



CYCLONES

Our wide range of cyclones can be used as dust pre-separators, spark arrestors or to aid flue gas treatment. They can reduce dust by up to 95% (by weight) and are an effective solution for several industries including the cement, lime, biomass and waste-to-energy sectors. When used as a pre-separator, our cyclones lower the dust load on higher efficiency air filtration systems, ensuring them a longer service life.

WHY CHOOSE OUR CYCLONES?

Superior particulate removal

Even when used in the worst conditions, our cyclones offer higher efficiency than other such devices.

Cost-effective

Our cyclones offer particulate removal at a lower cost than other air filtration solutions.

Multiple options

We offer sizes ranging from 500 mm to 5 m (1' 7" to 16' 5") in diameter.

Durable

Our cyclones are designed to last a long time and built to resist abrasion and corrosion.

Maintenance-free

Unlike many air filtration devices, our cyclones do not contain any moving or replaceable parts.

Easy installation

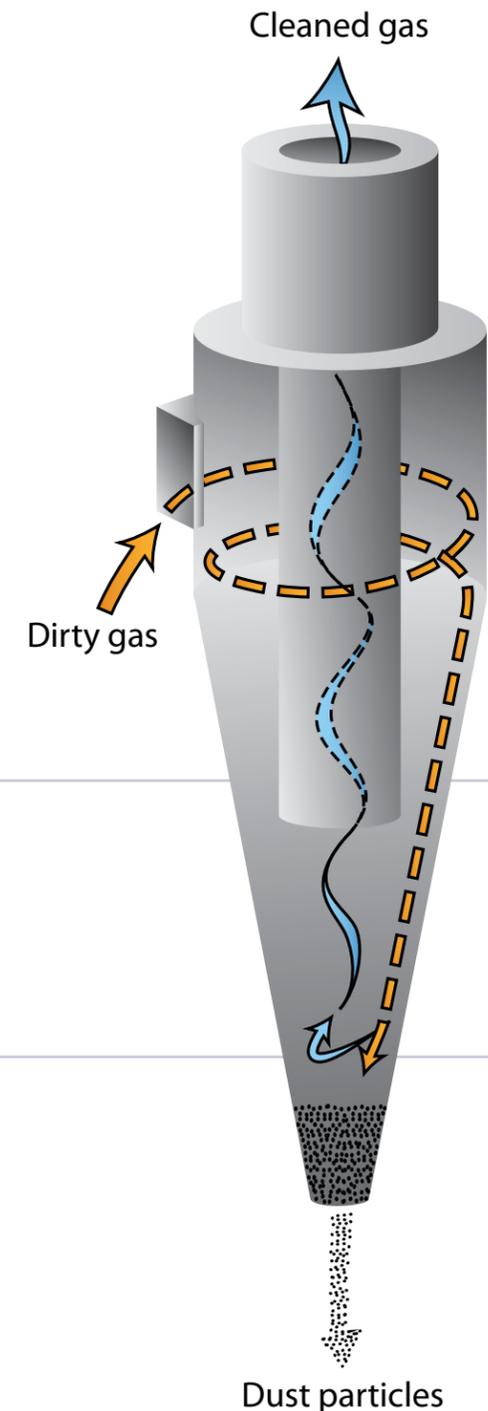
Even as an addition to existing systems.



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OUR CYCLONES: DESIGN, FEATURES AND MODELS

Our cyclones function on a basic premise: air is drawn up into the cyclone and spins at high velocity, drawing dust particles down by centrifugal action. The dust particles then fall into a hopper below. It is our design and engineering that differentiate our cyclones from the rest.



OUR CYCLONE DESIGN

Over the years, we have perfected our cyclone design in order to minimize the pressure drop, while still providing high performance. Our cyclones offer higher capacity than other such systems and we have re-designed the cyclone inlet and cylindrical sections to minimize turbulence and wear. In case of very abrasive dust, we insert an internal liner to protect the shell from damage.

We can design cyclones for applications such as in the cement industry in which there are high particulate levels, around 100 g/Nm³ (0,0437gr/dscf), and we can also engineer cyclones for lighter applications such as for incinerators or in the biomass sector, where the ash concentration is on average 5 g/Nm³ (0,00219gr/dscf).

MAINTENANCE-FREE CONSTRUCTION

Unlike many air filtration devices, our cyclones do not contain any moving or replaceable parts, meaning they are essentially maintenance-free. We have also studied and designed our cyclones to last, while resisting abrasion and corrosion.

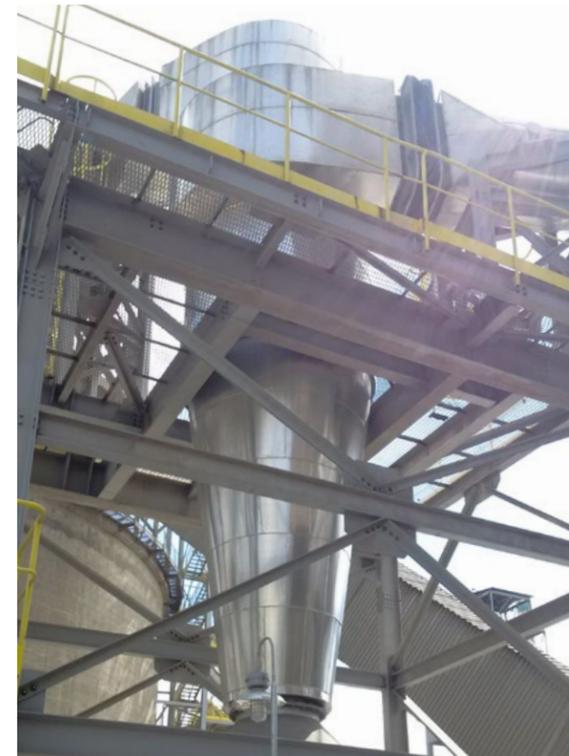
We offer a wide range of cyclones - all durable, nearly maintenance free and **cost-effective**.

OUR MODELS

We offer two cyclone technologies: standard and high performance. Our standard model offers up to 80% efficiency, which is sufficient in several circumstances. Our high performance model offers up to 95% efficiency. It has the capability and capacity of several standard cyclones and produces finer and sharper particle separations. Our high performance cyclones can also be used as spark arrestors.

APPLICATION: OUR CYCLONE AS A DUST PRE-SEPARATOR

When your existing bag filter no longer meets targets yet budget is tight, the addition of a cyclone can help reduce the load on your existing bag filter, by acting as a dust pre-separator. Installed upstream of the bag filter, a cyclone will increase your system's efficiency at a low added CAPEX and operating cost.



Our cyclones can increase your system's efficiency at a low CAPEX.



APPLICATION: OUR CYCLONE AS A SPARK ARRESTOR

Our high performance cyclone can be used as a fire safety product – as a spark arrester – often required in the biomass and pulp and paper industries. We normally install a cyclone upstream of a bag filter (baghouse) in order to avoid any incandescent particles from reaching the bag cloth so as to reduce the chance of damage caused by fire or explosion. The cyclone's centrifugal acceleration forces high energy particles to hit its walls, extinguishing them before they cause damage to the other air filtration equipment. The discarded particles are then collected in the hopper, ready to be easily evacuated.

Our high performance model offers up to 95% efficiency.

APPLICATION: OUR CYCLONES TO AID FLUE GAS TREATMENT

In waste-to-energy and biomass applications, it is very common to also find a flue gas treatment (FGT) process to reduce pollutants such as HCL and SO_x. However, the dust present in the flue gas can affect the de-acidification reaction. Our cyclones offer a very useful dust pre-separation that optimizes the FGT's efficiency, while maintaining lower operating costs.

	DUST PRE-SEPARATOR	SPARK ARRESTOR	AID FLUE GAS TREATMENT
Cement & Lime	•		•
Metals & Mining	•		•
Coal & Oil Power	•		•
Waste-to-Energy & Biomass Power	•	•	•
Biomass & Pulp and Paper	•	•	•
Oil & Gas	•	•	•

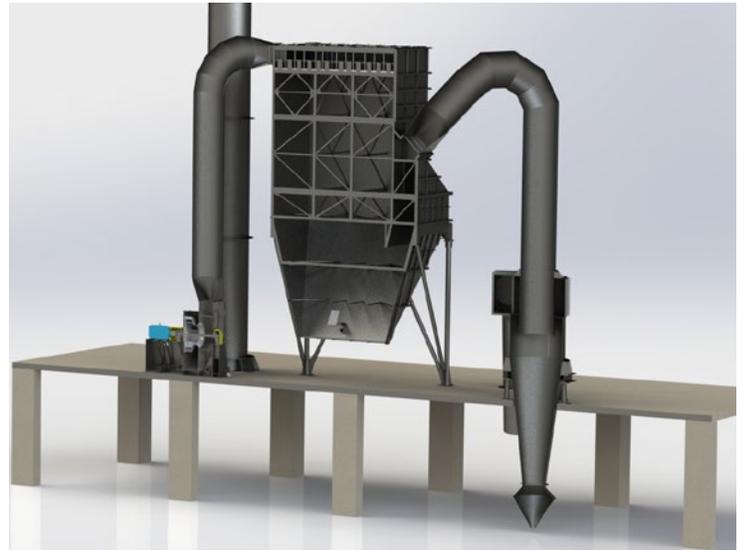
DESIGN & MODELLING

DESIGN PARAMETERS

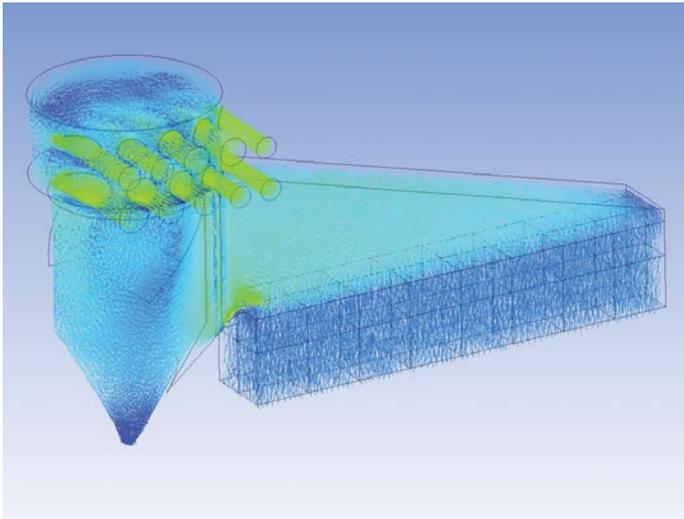
Our engineering team has 30+ years of experience in surveying the output and needs of various plants and will study your plant to find an appropriate solution to reach your desired emissions reductions.

Your process parameters are key in selecting an appropriate design for the cyclone system, whether using it for general dedusting, as a pre-separator, as a spark arrestor, or to aid flue gas treatment. The key to a highly effective cyclone design is the ratio between the length and diameter of the system, as well as the granulometry of the particles.

We are experts at customizing our cyclones using your process parameters to ensure you obtain the highest efficiency possible.



We tailor our cyclones to suit your needs...
including your **budget**.



MODELLING

We use Ansys's Fluent software to accurately design and study every solution. This allows us to engineer and analyze each system's broad physical capabilities, optimize the fluid dynamics and study the efficiency of pollutants removal. When a computerized simulation is not sufficient, we undertake a physical simulation on a 1:7 scale in our Milan workshop.



Redecam offers a comprehensive portfolio of air filtration, flue gas treatment (FGT), gas conditioning and transportation, handling & storage products. Please contact us to see how we can take care of all your air pollution control needs.



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Visit our website to learn more at
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