



SELF CLEANING INERTIAL SPIN FILTERS

The ultimate solution for dust control in MCC Rooms, Control Rooms, Transformer Rooms.

High Efficiency
98% of 15 micron & larger

Capacities from 1500Nm³/hr
No upper limit on
Engineered Systems

Four Standard Units for Simple installation



RTS INERTIAL SPIN FILTER MODEL SPIN0002V
SEE PAGE 2 FOR SPECIFICATIONS

Vertical (Wall Mounted)
Spin Filter Assemblies
for simple installation
on

VSD Rooms, 'E' Houses,
Control Rooms etc.

Four Standard Sizes
From 1500Nm³/hr to 9000Nm³/hr

Horizontal
(Surface Mounted)
Spin Filter Assemblies
For all other applications.

Engineered to suit
site requirements
and constraints.

NO UPPER LIMIT ON CAPACITY



RTS INERTIAL SPIN FILTERS MODEL SPIN0016H(0)00



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RTS INERTIAL SPIN FILTERS What they can do for you

RTS Inertial Spin Filters provide an effective maintenance free solution to dust problems in MCC Rooms, Transformer Rooms, Control Rooms, 'E' Houses, VSD Rooms, Compressor Rooms, etc. The filtration principle is based on highly efficient cyclone technology and dust arrestance is 98% of 15µm and larger particles. (By particle count). At 5µm the modules will remove 80% of dust by particle count. (Note: 10µm is 1/6 of the average diameter of a human hair). Even under heavy dust loads this represents overall removal efficiency of >98% of dust loading by mass. For applications requiring even finer dust arrestance, (Compressor intakes for instance), secondary filtration is required. (99% of 2µm). In this situation simple secondary pocket filters are cost effective and, due to the fact that they are only capturing very fine particles, they require very little attention, even in high dust load applications.

When using RTS Inertial Spin Filters to clean air for MCC rooms, variable speed drives, control rooms, etc. no secondary filtration is required. This eliminates the need for expensive, complex, high maintenance bag houses. RTS Inertial Spin Filters can be purpose designed for specific applications. There is no theoretical limit to the volume of air/dust that Spin Filter installations can be designed for.

Due to the constant pressure drop and absence of secondary process air or other energy absorbing equipment the Spin Filter installation is also energy efficient.

The Spin Modules are made from high density polypropylene and are highly resistant to wear. Modules supplied by RTS have been in service for over 20 years. Because the system is self-purging there is no filter element that can become blocked from dust overload.

Sizing of units is based on the principle that the room/space should be pressurised. (About 50 - 100Pa is normal). This ensures that all air flow is outwards – thus preventing dust entering through gaps in cladding, under doors etc. Sizing of the units is based on an analysis of the equipment in the room space. For well-sealed rooms with little heat generation – as few as 10 air changes/hr can be sufficient. However, if there is heat generating equipment installed in the space, a higher number of air changes is recommended. RTS engineering department will advise on the correct solution for your particular dust problem.

RTS INERTIAL SPIN FILTERS – DUST BELOW 5µm.

As per specification RTS Inertial Spin Filters remove 98% of dust particles 15µm and over. At 5µm removal is 80%. Particles smaller than 3µm are not arrested.

Coal dust is an example and can present a problem. Coal dust is defined as having a particle distribution of 1µm to 100µm.

The particle distribution indicates that some 25% of dust by particle count will pass the Spin Wall. However, this translates into only 2 -3% by mass.

While most ambient airborne dust consists of particles that are above 10 µm in size there are applications where dust particles can be smaller – often generated by ball mills, crushers, etc.

Secondary filtration consequently deals effectively with this loading and requires minimal attention.

RTS inertial Spin Filters can be used effectively for coal dust without secondary filters in space cleaning applications. However, due to the fact the coal dust is black, the very fine particles, (sub 5µm) are visible on surfaces within the space. While this level of dust mass should not present a problem, we recommend that secondary filtration be installed when using Spin Filters on coal plant. This is particularly relevant if the air intakes are close to a crushing plant that can create higher than normal percentages of sub 3µm dust. The secondary filters are specified to remove black powder and pollen and scrub the fine visible particulate from the air stream.

The Spin Units are compact and easy to install. Refer to RTS Spin Filters User's Notes or contact RTS Engineering Department. RTS offers full service from conceptual design to on-going support as required.

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