COMPARING BAGHOUSE DUST COLLECTORS AND CARTRIDGE DUST COLLECTORS

WHICH SYSTEM IS RIGHT FOR YOU?

Baghouse dust collectors and cartridge dust collectors are two common types of industrial air cleaning systems. But how do you know which one is appropriate for your needs?

As with most things, this isn't a one-size-fits-all answer. Typically, the type of dust collection system you need depends on your application.

First, a little clarification. What's the difference between the two?

Typically, baghouse dust collectors use long, cylindrical bags (or tubes) made of fabric to filter dust and particles. In many cases, the dirty air enters the baghouse through hoppers, which are funnels used for drop out and discharge of collected particulate. From there, the process air is drawn through the bags where the particulate is collected on the outside of the filter and clean air passes through the filter. A pressure differential switch will monitor filter conditions and activate a cleaning system as needed.

On the other hand, cartridge dust collectors use a pleated cartridge filter instead of bags. Because the filters are pleated, they have a larger total filtering surface area per cubic feet per minute (CFM), which reduces the air-to-media ratio and size of the dust collector. Cartridge dust collectors are cleaned by a pulse-jet method similar to baghouse dust collectors.

A.C.T. DUST COLLECTORS

WHEN A BAGHOUSE IS BEST

Choosing between a baghouse system and a cartridge system is primarily application based. There are many factors that play into this. Baghouse systems have instances where they are the most effective choice.

High temperature
Baghouse dust collectors can withstand higher temperatures than cartridge dust collectors. If your application requires temperatures above 250 degrees Fahrenheit, it's often best to opt for a baghouse system.

Sticky materials
Sticky or adhesive particulates are better collected in a baghouse dust collection system. A bag filter is better suited for the release of the sticky particulate than a cartridge filter. Therefore, a baghouse dust collection system is better for adhesive applications than a cartridge dust collection system.

Heavy dust load
The more dust you're collecting, the more likely you are to need a baghouse dust collector. Although not as efficient as a cartridge, baghouse dust collectors are great for particulate in the five micron plus range and they are great with heavy dust load.

Durability
Some of the most challenging and heavy loading applications benefit from the use of baghouse dust collectors. The bag filters are durable, flexible and typically have a longer service life, reducing the frequency of filter replacements.

THE CASE FOR CARTRIDGE

With many types and configurations available, cartridge dust collectors have become the go-to for general filtration needs. And with all else considered and proper installation, there are some factors that make them a better choice than baghouse dust collectors.

Efficiency

Cartridge filters have near HEPA efficiency. While baghouses do well with heavy loading and larger particulate, cartridge collectors do extremely well with lighter loading and very fine particulate. With efficiencies reaching 99.97% at .3 microns, cartridge collectors are generally the choice for fine dust.

Size

Cartridge dust collectors' most popular advantage is their quality filtration in a compact size, making them ideal for indoor or small-space operations. In terms of the filters themselves, cartridges are pleated and offer more filter area per unit.

Both baghouse and cartridge dust collectors have a place in today's industrial applications. Improper application can lead to high maintenance cost or inefficient filtration and dust bypass. For best results and efficient, effective dust collection, contact an expert at A.C.T. Dust Collectors to discuss your specific project.