

Utilizing Small Dust Collectors in Automated Packaging and Processing Equipment

In the last few years the demand and use of small dust collectors and filter systems that can be integrated into automated industrial processing equipment has been growing rapidly. While most of the demand is originating from pharmaceutical manufacturing and food processing, their use is growing in industries such as rapid prototyping, hearing aid manufacturing, laser ablation and engraving, pneumatic sanding, and in research laboratories.

Most industrial dust collectors categorized as small are still too large to be integrated into automated packaging equipment, or at individual workstations. In addition, these small industrial dust collectors are typically high volume air movers, 150 cfm or greater, with low static pressure motors which require larger hoses. Also, the type of dust being collected must be taken into account as fine dust will block the air flow through the filters cutting down the suction at the collection point.

Small, high suction dust collectors employ high-speed turbine motors capable of generating up to 90 inches of static pressure and can be as small as 10" x 12" x 14" including filtration,. This compact size allows the equipment manufacturer the ability to place these dust collectors in or near their equipment and use small pick-up hoses to be positioned to capture any type of dust and debris at the source to protect delicate components. In addition, small cyclone pre-filters can be used in conjunction with these small dust collectors or integrated into an on-board suction system to protect the blowers from being contaminated with dust and debris. They also provide a means to capture, and reclaim, precious metal or expensive coatings and lubricants.