



# Reduce Costly Line Shutdowns with a Connected Dust Collector

Connected Solutions



**FACILITY TEAMS CAN DETECT COLLECTOR ISSUES EARLY WITH A MONITORING SERVICE FOR LESS THAN \$2,000 PER YEAR**

Manufacturing facility teams generally focus their engineering and maintenance efforts on production equipment priorities to meet market demands. At the same time, support equipment like dust collectors must be closely monitored and maintained to keep everything on track.

Production staff rely on regularly serviced dust collectors to do their jobs. Without properly maintained dust collectors, built-up dust can cause machine or product contamination, process slowdowns, line shutdowns, and a dirty work environment. In short, dust collectors are critical contributors to efficient and successful operations, and clean workplaces.

To keep up, maintenance teams must balance their efforts across their facilities. Most are looking for more effective ways to monitor dust collector performance and manage unexpected shutdowns.

## Early Detection of Dust Collector Performance Changes

Dust collector problems can start out minor and go unnoticed by facility teams. It's unfortunate when this happens since early detection of an issue can reduce the time required to address it. The key is finding an efficient method of discovery without taxing overburdened workers.

In a Donaldson survey of engineers and maintenance technicians, more than half reported that a dust collector failure would cause a production line shutdown or an entire plant shutdown. A significant percentage reported they rely on manual monitoring and do not receive automatic alerts when there is a performance issue with their dust collectors. Other respondents noted they do not receive all of the critical information that they need to address performance issues. This increases the importance of getting real-time data and early alerts when there are potential maintenance issues.

The survey also found that differential pressure is the most commonly captured data point by those with a connected dust collector, and in many cases that's the only data they collect. While differential pressure information is certainly valuable, gathering additional insights about compressed air pressure, filter performance, fan or motor energy, and bin dust levels, will provide significant benefits and help maintenance teams keep a closer eye on performance fluctuations.



**Real-time alerts can help reduce unplanned collector downtime.**

## Managing Downtime with a Connected Dust Collector

In a separate survey conducted by *Plant Engineering* on behalf of Donaldson, the findings showed the average downtime cost for a dust collector was \$3,371 per hour. This amount does not include soft costs associated with missing production commitments to customers. Out-of-pocket expenses can add up quickly when your dust collector is down. With ongoing supply-chain issues, no manufacturer wants to add to the problem by slowing production due to unplanned downtime.

To avoid these situations and unexpected costs, it is essential that facility maintenance teams are able to identify performance issues, determine severity, chart a corrective course, and act upon it. Because access to detailed, current information offers invaluable time to make informed decisions, many facility teams are turning to connected dust collectors to receive operational insights on their computers and smart devices.



Donaldson's iCue™ connected filtration service was created for that purpose – to help facility teams effectively identify and address dust collector maintenance issues. With the iCue service, facility teams can respond in real time to maintenance notifications and keep a historical record for actionable intelligence and reporting requirements. The iCue gateway can be installed on both Donaldson and non-Donaldson dust collectors.

Going beyond differential pressure measurements, the iCue service can show the status of multiple aspects of a filtration system, including airflow, emissions, compressed air levels, and other key performance indicators.

The iCue service is available in the US, Canada, Europe, and Asia Pacific. To learn more about the Donaldson iCue connected filtration service, or to request a demo, contact us at:

**North America:** [connectedsolutions@donaldson.com](mailto:connectedsolutions@donaldson.com)

**Europe:** [connectedsolutions-europe@donaldson.com](mailto:connectedsolutions-europe@donaldson.com)

**Asia Pacific:** [connectedsolutions.apac@donaldson.com](mailto:connectedsolutions.apac@donaldson.com)



Dust collector downtime can cost more than **\$3,000/hour.**

Thanks to sensor-integrated gateways and cloud-based software, dust collector performance information can be accessed from connected devices, anywhere. The data and analytics can also be securely shared with external partners such as service companies or original equipment manufacturers (OEMs) who can assist with addressing problems and optimizing operations.

Real-time alerts can trigger teams to address problems before they become severe. By monitoring performance and dust collector status from a single, online dashboard rather than hard-copy files, troubleshooting any concerns can happen quickly. This reduces repair time and may help shorten or even eliminate downtime. In the longer term, alarm history and actionable analytics can help identify trends and repeat issues, enabling users to optimize their operations and improve production output.

In one instance, by adding Donaldson's iCue service, a global medical device company received an alarm indicating the rotary valve on one of their large collectors was not turning properly. Upon inspection, they discovered that the drive chain for the rotary had broken. If this condition had not been detected early, the baghouse would have filled with particulate, blocked airflow, damaged filters, and required extensive hours of clean-up. Prompt detection with the iCue service allowed this customer to make a quick fix and keep their production lines running on schedule.

## Using Dust Collector Performance Insights as a Force Multiplier

When it comes to dust collector maintenance, tamping down on equipment issues early can help prevent a negative impact on process demands. Using dust collection data and analytics can also help save time and overhead expenses in your facility.

Furthermore, a connected dust collector can be a force multiplier for busy maintenance and engineering teams. As many plant managers have discovered, the annual subscription cost of the iCue service per dust collector can be just a fraction of the cost of one hour of downtime.

**Important Notice:** Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



Donaldson Company, Inc.,  
Minneapolis, MN  
[donaldson.com/icue-collector-monitoring](http://donaldson.com/icue-collector-monitoring)

F119529 (10/22) ENG Technical Article: Reduce Costly Line Shutdowns. ©2022 Donaldson Co., Inc. All Rights Reserved. Donaldson, iCue and the color blue are marks of Donaldson Company, Inc. All other marks belong to their respective owners.

**Europe**  
[connectedsolutions-europe@donaldson.com](mailto:connectedsolutions-europe@donaldson.com)  
Italy: 800-142-858  
Germany: 0800-1825848  
Belgium: 0800-70-613  
Spain: 900-494-733  
UK: 0800-014-8116  
France: 0-800-90-45-56

**North America**  
[connectedsolutions@donaldson.com](mailto:connectedsolutions@donaldson.com)  
United States & Canada: 833-310-0017

**Asia Pacific**  
[connectedsolutions.apac@donaldson.com](mailto:connectedsolutions.apac@donaldson.com)  
China: +86-400-820-1038  
India: +91-124-4807-400 | +18001035018  
Japan: +81-42-540-4112  
Thailand: +65-6311-7373