



Connected Solutions

Four Factory Priorities a Smart Dust Collector Can Tackle



Industrial equipment owners and operators are facing a barrage of information about smart technology (industrial IoT). Introductions of “Smart Solution A” and “Connected Device B” seem to come out every day, promising to revolutionize factory operations. While the movement is bringing positive changes, it’s often difficult for operators to distinguish worthwhile investments from technology for technology’s sake.

To assess whether an IoT application is worthwhile for your facility, don’t try to solve too many things at once. Identify your key problems—the issues that cause disruption or waste—and look for solutions that address them. IoT capabilities should have real value for your business and support a return on investment. Here are four important business benefits to applying IoT to your dust collection system:

1. Assist with Reducing Downtime

Earlier maintenance action can avert hours of unplanned shutdown. One facility had a plugged collector hopper twice a month, with each incident requiring two to three hours to fix. With no way to detect that a plug had developed, the dust collector was filled with particulate by the time personnel took action, and the equipment required two to three hours to clean. Early alerts with Donaldson’s technology enabled them to address the problem early and reduced corrective action to 15 minutes. The benefits add up to real dollars. On average, one hour of unplanned downtime due to a dust collector issue costs plants \$3,300, according to a recent Donaldson survey*.

2. Aid in Equipment and Component Longevity

Dust collectors are durable machines. The average equipment age is 11 years old, with 10% in service more than two decades, according to the Donaldson dust collection survey. The collector may be able to operate despite a malfunctioning valve, for example, but hidden issues can nevertheless degrade its condition over time. Sensors can detect hidden issues and trigger timely service.

Components such as filters may also last longer with proper monitoring. In the initial connected solutions pilots, a facility seeing short filter life could not identify a cause. Using data from the connected monitoring device, the Donaldson support team quickly viewed the data from the dashboard and helped the customer diagnose the cause and restore normal filter life.

3. Help Optimize Workforce

As long-time tenured employees retire and labor gaps grow, manufacturers are looking to gain new efficiencies from existing personnel. A dust collector that “monitors itself” frees up maintenance staff to focus on revenue-generating equipment. With Donaldson’s connected monitoring device, configurable alerts are pushed directly to the critical people who need to act on them, and only when attention is needed. Responsible staff do not need to be local to the machine. Using the system’s dashboard, the manager of a larger enterprise can monitor many dust collectors across multiple sites of operation.

4. Support Regulatory Compliance

Many operations need to monitor and report specific parameters for emissions or indoor air quality. This can be a time-consuming challenge, normally requiring compliance officers or other to walk around the facility and manually enter information. A connected dust collector automates data collection, for example differential pressure, ensuring it is up to date at the time of the audit, and reduces the errors often associated with manual entry. With real-time monitoring, personnel can take action when their configured parameters are breached. In the meantime, they are free to focus on production-critical functions.

Conclusion: Identify Disruption or Waste

Operators generally want to know: Am I using the right dust collection solution and is it running well? How do I optimize it? How do I minimize disruption with preventive maintenance and avoid unplanned downtime? These needs all relate to operational efficiency—producing more output with lower overall costs. These questions are what Donaldson’s connected monitoring technology is designed to help you address.

Donaldson’s new connected monitoring technology for dust collectors is available for existing or new industrial dust and fume equipment.

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

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Europe
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
United States & Canada: 833-310-0017

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