iCue™ Connected Filtration Technology FAQ

1. What is Donaldson iCue™ connected filtration Technology?

Donaldson's iCue™ Connected Filtration Technology tracks dust collectors using industrial IoT technology. The service tracks dust collector status, stores historical data, and alerts you when a configured alarm is generated. The solution helps users better maintain and manage their dust collection system and automates data capture for compliance reporting.

2. How does the technology work?

Four key components comprise the iCue™ technology for dust collectors:

- Sensor-integrated gateway: Captures sensor data from the collector and sends it to Donaldson's secure cloud, where our predictive analytics turn the data into actionable insights.
- Online dashboard: Shows equipment status in near real-time and historical trend data for each connected collector.
- Alarms and notifications: Configured during set-up to alert you when maintenance actions may be required based on deviations from pre-set thresholds.
- Customized reports: Provides condition summaries of all connected dust collection systems across your operation.

3. Why is it free?

iCue™ Connected Technology helps customers better manage their dust collectors by providing historical operational data and real-time monitoring of conditions with alarms. In addition, iCue™ helps Donaldson better service our customers by allowing them to see the collector's performance data. This helps us better answer questions and support the ongoing function of your collector over its useful life. We feel that providing better services and support will lead to a longer business relationship together. That is why we are willing to offer it for free. In short, it helps us serve our customers better.

4. Does the iCue™ technology control the dust collector?

No, the technology is "read-only" and does not control any functions on your collector. It operates independently of your local control network (SCADA or DCS), so it does not compromise the security of control systems or internal data.

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5. Does iCue™ technology work on non-Donaldson Equipment?

Yes, the iCue™ technology is not limited to Donaldson collectors. In fact, over 25% of our connected customers are on non-Donaldson Collectors. We are happy to support all makes and models.

6. Is customer data secure?

Yes, the iCue™ technology encrypts data down to the hardware level and protects customer data while in transit or storage. A robust and individualized authentication process further secures the system.

The iCue™ system was developed using the best-in-class technologies and partners, including Microsoft.

7. Can the service be customized for the customer's operation?

Yes, the gateway has four embedded sensors and ports to connect up to six additional sensors – four analog

and two digital. Using the web-based dashboard, you can set alarm thresholds based on the needs of your specific application or reporting compliance requirements.

8. What functions in a dust collection system does the iCue™ technology track?

Here are the standard sensors that are part of every installation:

• Airflow: Tracks relative airflow, air velocity, and air volume changes through the collector and alerts you if airflow deviates too high or too low from the collector's designed flow.

• Differential pressure (DP): Enables you to track the life of filters and optimize filter change intervals. Sudden increases or decreases in differential pressure can also alert you to conditions such as filter tears or failure of the cleaning system. This data is also stored and available for compliance reporting.

• Compressed air: Displays whether compressed air is at the right level for self-cleaning. The system alerts you if pressure is too low (indicating the need to clean the filters) or too high (which can cause filter damage) or inadvertently remain off when the collector is started back up.

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• Hours of service: The iCue™ technology tracks the collector's hours of service and enables users to track how many hours the collector has run since the last filter change or maintenance.

• Pulse Valve Health: Monitors pulse valve functionality and pulsing frequency on collectors with up to three manifolds to help detect compressed air problems or failed pulse valves which can affect filter life. If an issue arises with the pulse valves, the service sends an alert.

9. Are there any optional sensors, as well?

Yes. For more information on the sensors and challenges they address, see our iCue Service Sensor Overview brochure.

10. How is the gateway powered?

The gateway runs on 24VDC, but the kit includes a 120VAC to 24VDC adapter for running on regular line power. For more information, please review the gateway manual.

11. How is the sensor-integrated gateway mounted on the collector?

Donaldson's new collectors may include the iCue™ gateway pre-installed. For retrofit applications, the gateway contains magnet mounts that enable it to easily attach to the dust collector wherever placement is most convenient. There are also mounting feet on the box if you prefer to hard mount it.

12. How many users can have a login to the iCue™ Dashboard?

There is no limit to the number of administrators and viewers who can log in to your dashboard at your facility.

13. Can the alarms be received as an email or text message?

Email is the alert method available for all users. Text alerts are not part of the iCue™ technology right now.

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14. What if I don't want to get alarms?

No problem. The iCue™ can simply run in the background, tracking operational data for the day when you do need support. We can always access it to help troubleshoot your problems and offer service and parts when needed.

15. Can a 3rd party service provider be granted access to see my data?

Yes, if the end-user grants access to the 3rd party service provider like an authorized Donaldson Dealer, they will have access to maintenance and service requests.