



## CONNECTED SOLUTIONS FOR DUST COLLECTORS

# DONALDSON™ iCUE™ CONNECTED FILTRATION SERVICE USER GUIDE



This manual contains specific precautions related to worker safety. The hazard alert image denotes safety related instructions and warnings in this manual. **DO NOT** operate or perform maintenance on this collector until you have read and understood the instruction and warnings contained within this manual.

## **IMPORTANT NOTES**

This guide has been supplied to explain how to navigate the web-based dashboard that is used with Donaldson iCue Connected Filtration Services for dust collectors.

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# 1. GETTING STARTED

## Introduction

Welcome to Donaldson iCue™ connected filtration service for dust collectors. Once installed and set up, this service monitors industrial dust and fume collectors and provides real-time data directly to facility management teams via an online dashboard, email alerts, and weekly status reports. The information is designed to prompt timely maintenance that can help improve production uptime and reduce operating costs.

This user guide provides basic information about some of the more common features of the Donaldson iCue dashboard. It does not cover installation of gateway hardware on dust collector systems. For that information, refer to your hardware documentation.

This user guide is designed primarily for customer administrators. Other users may not have permission to perform some of the tasks described in this guide. More information on user levels is included in Section 2 of this guide.

This section of the User Guide shows you how to get started with the Donaldson iCue dashboard and become familiar with the user interface.

## Starting the Donaldson iCue Dashboard

Donaldson iCue connected filtration service is a web-based service that you access via the Internet. You do not have to install special Donaldson iCue software on your computer.

Donaldson iCue connected filtration service is supported on the following browsers:

- Chrome (Recommended)
- Safari
- Firefox
- Internet Explorer
- Microsoft Edge

You should receive a welcome email with registration information to grant you initial access to the system. You should then log in to the system as described below to confirm access; however, you will not be able to complete the setup until your gateways are installed on the dust collectors you are monitoring.

*Note: The Donaldson iCue dashboard supports single sign-on for corporate accounts as follows:*

- *If you are using a corporate email and your company uses either Microsoft® Azure® or Microsoft® 365®, your password will be the same as your corporate account.*
- *If you are using a Gmail® address, your password will be the same as your Gmail account.*
- *Otherwise you will need to register for a new account and password.*

The following steps describe the process for a user setting up a company account on the Donaldson iCue application for the first time. If your company has already set up the account and you are being added as an additional user, skip to the following section.

To log in and start using the Donaldson iCue dashboard:

1. Fill out the registration form at **DonaldsoniCue.com/registration**. This link was also sent to you in the welcome email. The following fields are required: First Name, Last Name, Phone #, Email Address, Company Name, Facility Name, and Facility Address.

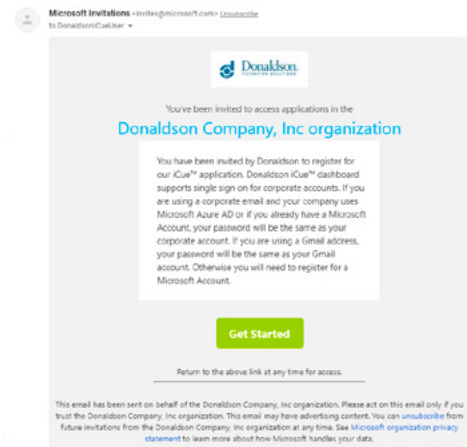
*Note: The Facility Address and Facility Name are for the location where the dust collectors are being monitored.*

2. Once the registration form is submitted, a Donaldson customer success representative (CSR) will set up and approve your account. This may take up to 24 hours to complete.

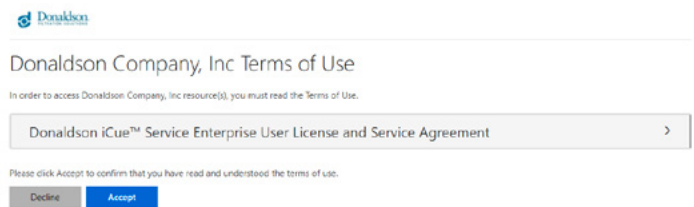
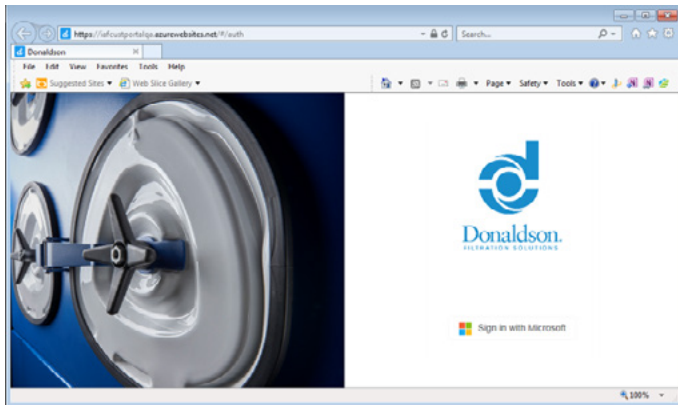
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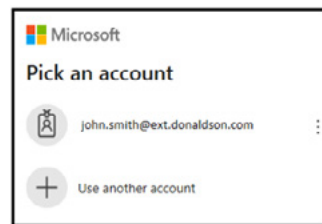
3. Once the account is set up, you will receive an email invitation to access applications in the Donaldson Company, Inc. organization. This email will come from Microsoft and will include a link to set up your user credentials in the Donaldson iCue dashboard. You can also click on the **Follow the Instructions** link in the account set up process to complete the set up of your account.



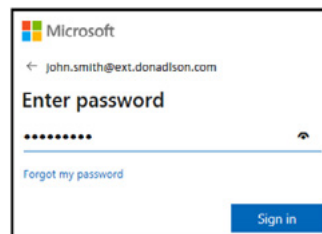
4. After you accept Donaldson's terms and conditions, EULA, and other permissions and respond to the verification email, you will be redirected to the Donaldson iCue dashboard and see the Donaldson iCue home page. The Donaldson iCue dashboard can be found at **DonaldsoniCue.com**. You may want to bookmark this URL for later use.



5. Click **Sign in with Microsoft** to display the accounts available.



6. Click the correct account name you will be using.



7. Type your password in the **Enter Password** box, and click **Sign In**.

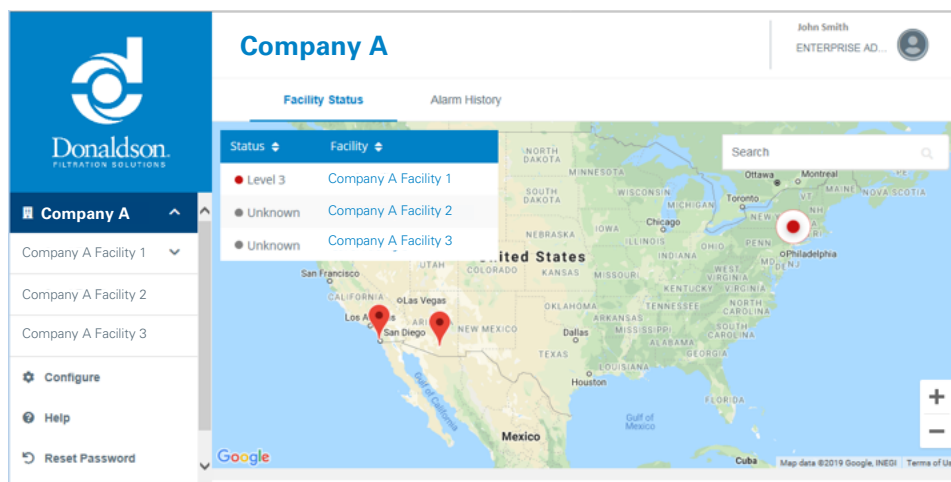
## Signing in as a New User on the Donaldson iCue Home Page

If your company account is already set up and you are being added as a new user, follow the process below to complete your user setup.

1. You will receive an email invitation to access applications in the Donaldson Company, Inc. organization. This email will come from Microsoft. This email will contain a link to set up your user credentials in the dashboard. You can also go directly to **DonaldsoniCue.com/newuser**.
2. Follow the steps for the registration process after going to the URL above.
3. When the previous step is complete, you will be directed to the Donaldson iCue dashboard. To access the dashboard in the future, go to **DonaldsoniCue.com**. You may want to bookmark this URL for access later.

## Getting Familiar with the Donaldson iCue Interface

When you start using the Donaldson iCue dashboard, you'll see the Donaldson iCue home page, which includes a map, information about facilities, and access to various Donaldson iCue dashboard features. Along the left side of the screen is the Navigation pane, which enables you to navigate to other facilities and machines on your account. Subsequent sections of this user guide will provide information about configuring the Donaldson iCue dashboard and monitoring your equipment.



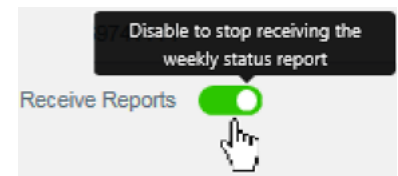
## Getting Help

This user guide is intended to supplement the online help and tool tips embedded in the application.

To view tool tips, hover your cursor over a command to display information about that command.

You can send a help request to the Donaldson customer success team by clicking **Help** on the lower left portion of the Navigation pane. You will then be provided a form where you can enter your question or provide feedback. This is the preferred method to request support. Many changes to your user profile or account can only be made if Donaldson verifies that you are a valid user in the platform and of the corporate account. By submitting a help request through the application, this validates that you are an authorized user.

If you cannot access the platform, you can also submit an email to **iCueSupport@Donaldson.com**.



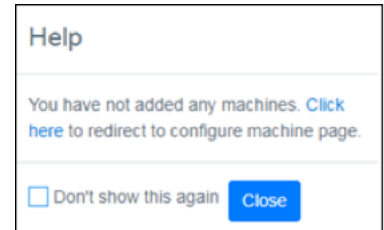


## 2. THE DONALDSON iCUE DASHBOARD

### Overview

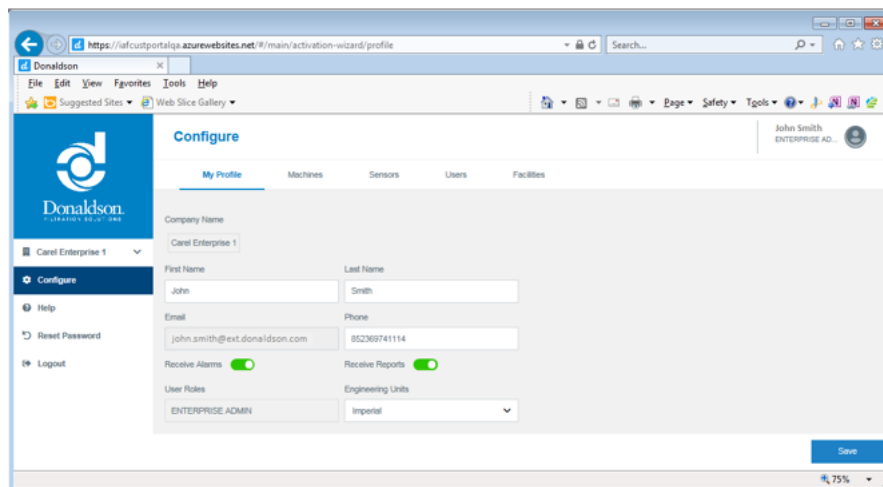
When you have successfully logged into the dashboard for the first time, you should configure the system to match your preferences. You can change these settings later if necessary. If you log in and there are no machines added to the account, you will get a pop-up message asking you to add machines. Click the **Click Here** link to access the Configure Page.

You can also go to the Configuration Page by clicking **Configure** on the Navigation Pane on the left side of the screen.



### Setting Up Your Profile

After you click **Configure**, you will see the Configure Page. From here you can make changes to your profile, add machines and sensors, and configure alarm values. Along the top of the Page are several tabs: My Profile, Machines, Sensors, Users, and Facilities. By default, the My Profile tab is displayed initially.



On the **My Profile** page, verify that all information is entered correctly.

- **Company Name** is auto-populated for your account and cannot be changed by the user. If you wish to change the company name, click **Help** in the Navigation pane and submit a help request.
- Edit **First Name** and **Last Name** as needed.
- Email is auto-populated and is the email address used to login to the account. It is also the email address to which alerts and weekly reports will be sent. If you wish to change the email address, click **Help** in the Navigation Pane and submit a help request.
- If you do not want to receive email alerts or weekly health reports, you can turn those off by clicking the button to the right of each item. (It is recommended that you keep those enabled.)
- **User Roles** are auto-populated. See the Users Tab section of this guide for more information. Click **Help** in the Navigation Pane and submit a help request to change this information.
- Edit your Phone number as needed.
- Select Units to be displayed from the drop-down menu – either metric or imperial units.

## The Machines Tab

When you click **Machines**, you will see the Machines page. From here you can fill in fields for each machine on which you have installed the gateway. In most cases, machines will refer to dust collectors.

Configure							John Smith ENTERPRISE AD...	
Enterprise		Facility					Search Machine	
Carel Enterprise 1		Carel Facility 1						
Image	Machine Name	Application	Dust Collector Information			Gateway ID		
			Manufacturer	Part Number	Serial Number			
	West Fabricator	AGRICULTURE	Donaldson	1258	AB	25147896		
	Test optional sensors	FOOD & BEVERAGE	Donaldson	2587	147AB	87595153		
	Machine BB	FOOD & BEVERAGE	TCS	67854	87612	21052019		
<a href="#">+ Add Machine</a>								

With the exception of the image upload, all fields on this page are required. To edit these fields:

1. Click the pen-and-paper icon at the right end of the row ().
2. Fill in the fields as follows:

**Image:** This is a graphic image you can associate with the machine. To upload an image, click the pencil icon () next to the image, then click **Change Image**. You can then navigate to select an image file from your system and upload it to Donaldson iCue. This is optional.

*Note: When taking pictures from a tablet or phone, it is recommended that you hold the device horizontally when taking the picture. If you are having issues with a picture getting rotated incorrectly, use the following steps to correct:*

- Insert or copy the picture into a PowerPoint slide.
- Rotate the picture as necessary.
- Right-click on the picture and select **Save as Picture**.
- Upload the new picture to the platform



**Machine Name:** This is what you want to call the machine (e.g., “West Fabricator”) and determines how the machine will appear in the dashboard.

**Application:** Click the down arrow beside the application name and select the option from the pull-down menu that best fits your application.

**Manufacturer:** This is the manufacturer of your dust collector. If it is not known, you can type in “Unknown.”

**Part Number:** This is the part or model number of the dust collector. Select Unknown if you do not know or cannot find the part number.

**Serial Number:** This is the serial number of the dust collector. Select Unknown if you do not know or cannot find the serial number.

**Gateway ID:** This is an 8-digit number that will be on the label of the gateway you received when you ordered the product.

3. Click Save when your changes are complete.

*Note: Donaldson uses information on your application and your dust collector to provide the best possible support and analytics on your data. The more accurately these fields are filled in, the more accurate the analytics can be.*

## The Sensors Tab

When you click the gear icon (⚙️) at the right end of the row of each machine, you will see the Sensors page. You can also access this page by clicking the Sensors tab on the Configure page. From here you can fill in fields for each sensor on a particular machine.

Enterprise	Facility	Machine
Carel Enterprise 1	Carel Facility 1	Machine 88

Active	Sensor Type	Sensor Description	L1	L2	H1	H2	Unit
<input checked="" type="checkbox"/>	Ambient Temperature	Ambient Temperature					F
<input checked="" type="checkbox"/>	Compressed Air Pressure	Compressed Air Pressure					psi
<input checked="" type="checkbox"/>	Relative Airflow	Relative Airflow					in/sec
<input checked="" type="checkbox"/>	Differential Pressure	Differential Pressure					in/sec

Input Type	Active	Sensor Type	Sensor Description	L1	L2	H1	H2	Unit
analog1	<input checked="" type="checkbox"/>	Internal Humidity	Internal Humidity					%
analog2	<input checked="" type="checkbox"/>	Internal Temperature	Internal Temperature					F
digital1	<input checked="" type="checkbox"/>	NONE	Point Level					

The Sensors page has two tables. The top table shows Embedded/Standard Sensors that are standard with the product. These will be active by default. The bottom table shows optional sensors purchased from Donaldson and installed on your dust collector.

To edit embedded sensor information:

1. Select the pen-and-paper icon at the end of the row.

2. Edit the sensor information as follows:

- **Sensor Type:** The type of sensor (e.g., Ambient Temperature, Compressed Air Pressure, etc.) This cannot be changed.
- **Sensor Description:** This is how the sensor will be displayed in the dashboard. You can change this or leave the default value if you wish. It is recommended you use the default value.

- **Alarm Levels:** These are the high and low alarm thresholds for the sensor. These are optional and each sensor can have anywhere from 0 to 4 alarm levels. Note that alarm thresholds entered must follow the rule: L3<L2<H2<H3. For more information on alarms, see the Alarm Overview section.
- **Unit:** This is the unit of measurement for each sensor (e.g., psi). Changing the units from imperial to metric can be done in the My Profile page.

3. Click **Save** when your changes are complete.

*Note: Embedded sensors are active by default. It is recommended that you leave them all active.*

To edit optional sensor information:

*Note: Only sensors purchased from Donaldson will work properly in the platform. These steps should be performed AFTER the sensors have been installed.*

1. Select the pen-and-paper icon at the end of the row.

2. Enter the sensor information as follows:

- Choose the **Input Type** that matches the input to which the sensor is wired on the gateway (analog 1-4 or digital 1-2).
- Select the **Active** check box to indicate the sensor is active.
- Select the appropriate sensor from the drop-down list.
- If you wish to change the sensor description, type that in the description box. The sensor description is how the data from that sensor will be labeled in the dashboard.

*Note: If you have multiple sensors of the same type, you must enter a unique sensor description.*

- If you wish to enable alarms on the sensor, enter them in the Alarm menu. See the Alarm Overview section for more information.
- **Unit:** This is the unit of measurement for each sensor (e.g., psi).

3. Click **Save** when your changes are complete.

### The Users Tab

The Donaldson iCue dashboard has various user levels to control who has access to make modifications to the dashboard and alarm levels. Enterprise users can see multiple facilities from the same customer. Facility users can only view a single facility. Administrators can configure a system, enter alarm values, and make other changes to their company's dashboard. Viewers can only view data. A brief summary of user levels is shown in the following table.

Level	Views	Configure Machines	Reset House of Service	Configure Alarms
Enterprise Administrator	Multiple Facilities	Yes	Yes	Yes
Enterprise Viewer	Multiple Facilities	No	No	No
Facility Administrator	Single Facility	Yes	Yes	Yes
Facility Viewer	Single Facility	No	No	No

*Note: Only Donaldson customer success representatives can add/delete users or change a user's level.*

*There are no automated notifications generated when an administrator changes or disables alarms*

When you click the **Users** tab, you will see the Users page, which displays information about the various users who have access to the Donaldson iCue service. The information on this page can only be changed by a Donaldson Customer Success Representative (CSR). To request additional users for your platform click the button and note that you want to request a new user.

First Name	Last Name	User Role	Email	Phone	Active
Company A	Concisso	ENTERPRISE ADMIN	carel.concisso@donaldson.com	12345678	<input checked="" type="checkbox"/>
Test	User	PARTNER ADMIN	test@test.com	1111111111111111	<input checked="" type="checkbox"/>
Test B	User B	ENTERPRISE ADMIN	tcs.test2@ext.donaldson.com	896665599655	<input checked="" type="checkbox"/>

### The Facilities Tab

The **Facilities** page displays information about the various facilities associated with this account. This information is primarily pre-populated and captured upon registration of the account.

Facility Name *	Address *	Partner (Optional)
Company A Facility 1	1234 First Street United States New York New York NY 100	Test
Company A Facility 2	1234 First Street United States Arizona Tucson AZ 857	
Company A Facility 3	1234 First Street United States California San Diego 92110	

### Alarm Overview

The Donaldson iCue service uses alarms and automated email alerts to notify users when a condition on the machine may require attention. The following table summarizes alarm types.

Type	Color	Notes
Level 3	Red	This is the highest priority alarm and occurs when sensor value is above level 3 threshold (for high limits) or below level 3 threshold (for low limits).
Level 2	Orange	Sensor value is either: a) above level 2 threshold, but less than level 3 threshold (for high limits); or b) below level 2 threshold, but greater than level 3 threshold (for low limits).
Level 1	Yellow	This level is reserved for diagnostic alarms for the system. This alarm will occur when no data have been received from a machine for >24 hours.
Unknown	Grey	The machine has never reported data to the application or there is insufficient data available.
Normal	Green	No alarms. Note: If a user has not defined alarms on a specific data point, that data point will always be green.

Donaldson has customized the alarm algorithm for dust collector users. There are two key points to be aware of when using alarms:

1. Alarms do not change state when a dust collector fan is off. Turning a dust collector fan off can cause some alarms to clear prematurely (e.g., a high differential pressure alarm) while also causing other false alarms (e.g., low relative airflow or compressed air pressure). For that reason, alarm levels will not change state when the application detects that the dust collector fan is off.
2. Email alerts are only sent once per day. To minimize the number of emails sent to customers, Donaldson customers are only notified of an alarm on a single data point once per day. If the data point is still at an alarm level 24 hours later, another email alert will be sent, but customers will receive no additional alerts on that data point in between. The only exception is when an alarm increases in severity. For example, if an alarm level increases from level 2 to level 3 in a 24-hour period, an additional alarm notification will be sent.

The following flow chart provides more information about alarms.

Alarm Flow Chart



Notes, user should never receive multiple alarms on the same sensor at the same level in a day  
User may get one alarm at each level per day for a single sensor, max of 2 (Level 2, Level 3)

### 3. MONITORING DATA

#### Overview

You can monitor data at three different levels:

- Enterprise
- Facility
- Machine

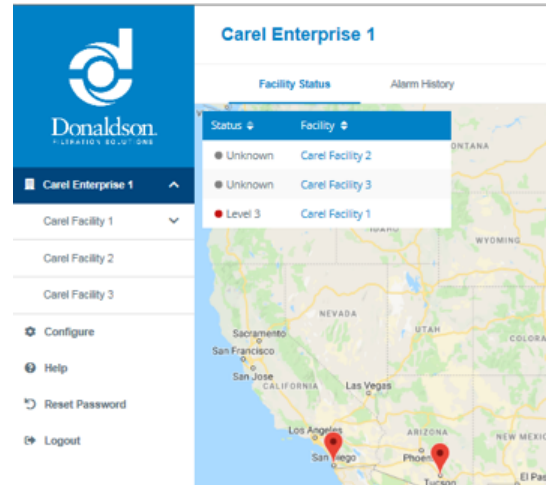
When you start the Donaldson iCue dashboard, you will see either the Enterprise page (if you are an Enterprise user) or the Facility page (if you are a Facility user).

#### Monitoring Data at the Enterprise Level

If you are an Enterprise user, you will see the enterprise associated with your account in the Navigation pane at the left side of the page. Below the enterprise name, the Donaldson iCue dashboard displays a list of facilities for this enterprise. Near the center of the page, a status summary is displayed. The Status column displays the highest level active alarm at that facility.

To view additional data about alarms, click the **Alarm History** tab. The Donaldson iCue dashboard displays a list of facilities for this enterprise, along with information about each alarm.

*Note: Alarm history is stored for 90 days or up to 100 active and inactive alarms.*



Company A						John Smith ENTERPRISE AD...
Facility Status						
Alarm History						
Search						
Date	Facility Name	Alarm Level	Alarm Age	Alarm name	Alarm Status	
09/30/2019 04:56:37 AM	Company A Facility 1	Level 3	0 Mins	Point Level High	Active	
09/30/2019 04:28:18 AM	Company A Facility 2	Level 2	35 Mins	Ambient Temperature High	Inactive	
09/30/2019 04:23:16 AM	Company A Facility 3	Level 2	30 Mins	Ambient Temperature High	Inactive	

On the Alarm History Page, the following parameters define the alarm:

**Date:** The date the alarm originally occurred.

**Facility Name:** Facility at which the alarm occurred.

**Machine:** Machine on which the alarm occurred.

**Alarm Level:** See the Alarm Overview section earlier in this guide for more information.

**Alarm Age:** For active alarms, this is the time since the alarm first went active. For inactive alarms, this is the total time the alarm was active.

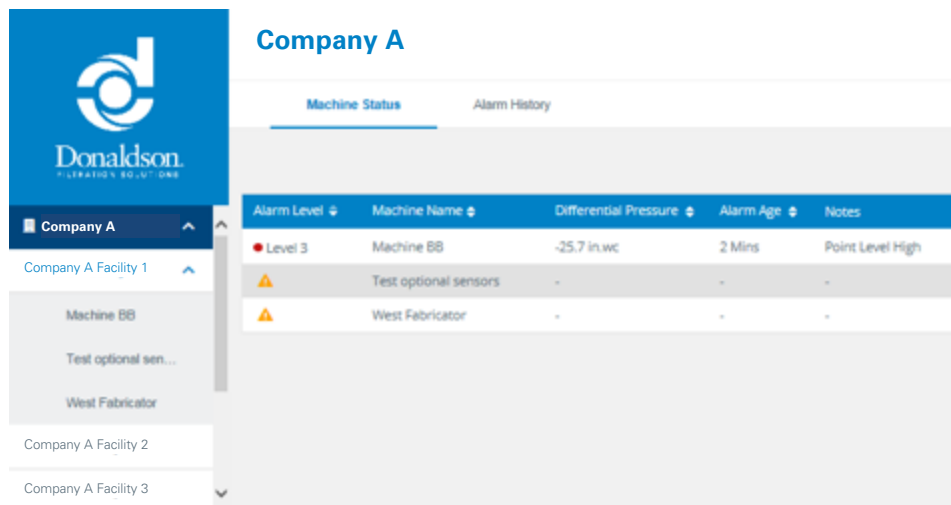
**Alarm Name:** For most alarms this will be the Sensor name, followed by High or Low.

**Alarm Status:**

- Active Alarms: The last data point received was still in the alarm range.
- Inactive Alarms: Since the alarm went active, a data point was reported that was not in alarm range.

**Monitoring Data at the Facility Level**

If you are a Facility user, you will see the Facility page when you start the Donaldson iCue dashboard. To monitor data at the Facility level, click a facility in the Navigation pane. The Donaldson iCue dashboard displays a list of machines for this facility, along with the differential pressure and alarm status for each machine.

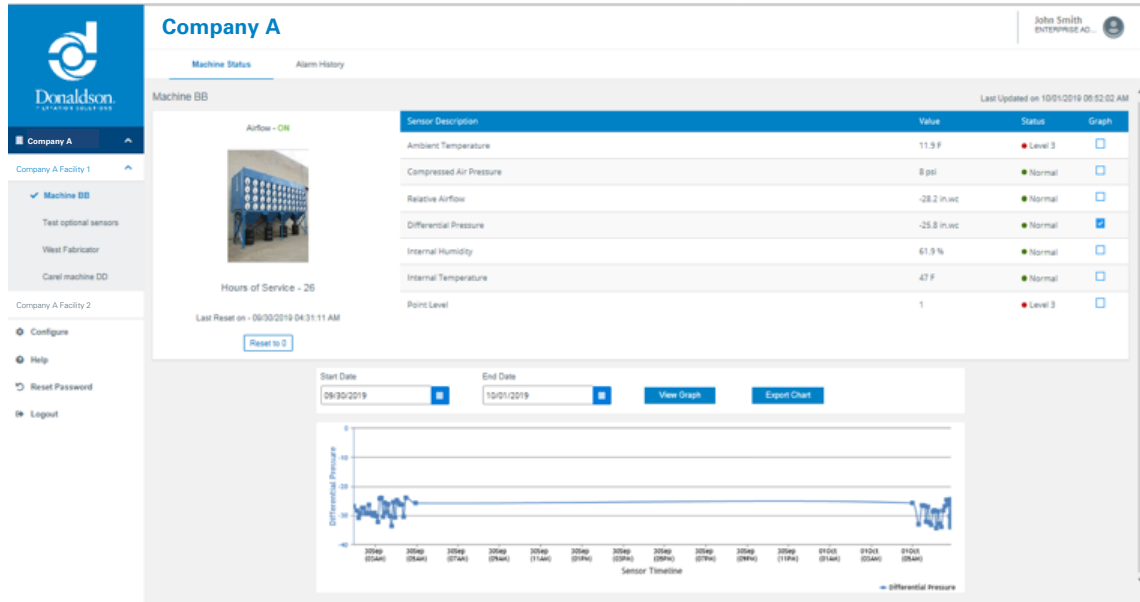


Company A				
Machine Status				
Alarm Level	Machine Name	Differential Pressure	Alarm Age	Notes
Level 3	Machine BB	-25.7 in.wc	2 Mins	Point Level High
	Test optional sensors	-	-	-
	West Fabricator	-	-	-

To view additional data about alarms, click the Alarm History tab. The Donaldson iCue dashboard displays a list of machines for this facility, along with information about each alarm.

## Monitoring Data at the Machine Level

To monitor data at the Machine level, click a machine name in the Navigation pane. The Donaldson iCue dashboard displays various data related to that machine.



The upper portion of the page displays a table of the latest data reported and alarm status for the selected machine. The note at the top right indicates the last time the machine reported data.

In the lower portion of the page, a graph is displayed for any sensor data selected in the table. By default this graph will show a 24-hour history of differential pressure. You can change which sensor data are shown in the graph as follows:

1. Check the Graph box for the selected sensor data you wish to graph. You can select more than one sensor data.
2. In the graph area of the page, adjust the Start Date and End Date to the period you wish to view. You can view up to one year of graph data history.
3. Click View Graph to display a graph of the selected sensor data.
4. If you wish to export the graph for use in other applications, click Export Chart. The Donaldson iCue service will prompt you to open or save the file in a CSV (comma-separated value) format. This format can be viewed in spreadsheet and other applications.

*Note: For graph durations up to one week, the graph and exported spreadsheet include all available data. For durations longer than one week, the graph and exported data are filtered to show only four data points per day. This is done to prevent long delays in loading graph data.*

## Weekly Report

On Friday of each week you will get a weekly report via email for each facility. The weekly report will contain the following information:

- Differential Pressure and Relative Airflow graph for all machines in your facility\*
- Active alarms on any machine in the facility
- Inactive alarms that were triggered in the previous week

\* Enterprise users who monitor multiple facilities will receive multiple reports.



## APPENDIX A: TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
Cannot log in.	Your account is not set up yet or your password is incorrect.	Contact iCueSupport@Donaldson.com.
Can log in, but not able to see Enterprise or Facility.	You have not been properly assigned to your facility.	Contact iCueSupport@Donaldson.com or submit a help request.
No data received for a machine.	Not configured with the correct Gateway ID.	Double-check that the Gateway ID assigned to your machine matches the Gateway ID on the front label of the Gateway.
	No cellular connection.	Verify the cellular antenna is connected and is not damaged. Check to see if the Cellular LED is green.
	No power to Gateway.	Verify the gateway Power LED is on.
Differential Pressure reading is not correct.	Air lines not connected properly.	Verify that the connections between the compressed air lines are correct.
	Clean air and dirty air lines are swapped.	Verify the clean and dirty air lines are plugged into the correct port.
Compressed Air Pressure reading is not correct.	Air lines not connected properly.	Verify the compressed air line is connected properly to the gateway
Optional Sensors are not reading correctly.	Optional sensor is configured on the wrong input.	Verify that the input (Analog 1-4 or Digital 1-2) the sensors are wired to on the gateway matches the input they are configured on in the sensor screen.
	Optional sensor is not a Donaldson-approved sensor	Only Sensors approved with the Donaldson iCue application and purchased through Donaldson will work correctly in the platform. Contact Donaldson sales to find the correct sensor.



### 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, product specifications, availability and data are subject to change without notice, and may vary by region or country.