Environmental Monitoring Systems (EMS) B.V. DCS Portal

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Introduction

The DCS portal is a web based application developed by Environmental Monitoring Systems (EMS) B.V. as addition to the DCS hardware. A complete DCS setup exists of some key parts:

- DCS Gas Analyzer (DCS GA)
- DCS Measurement boxes
- EMS IO Box

There is a separate installation manual available. Make sure your system is properly connected to internet.

Figure 1, a 3D render of the DCS system

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Getting started

The correct working of the DCS portal is completely based on the correct installation and maintenance of the DCS setup. To ensure the correct working of the system please check if a 'C' is displayed on the top of the small LCD screen of the DCS-GA or IO-BOX.

The portal can be reached by navigating to http://dcs.macview.eu. When you first visit this site you will be prompted for credentials. You've received these credentials in your mail box, based on the email address you've provided.

If you are the first user for a specific company to log into the portal you'll be showed a first time use configuration wizard. Please step through this wizard and correct information where needed.
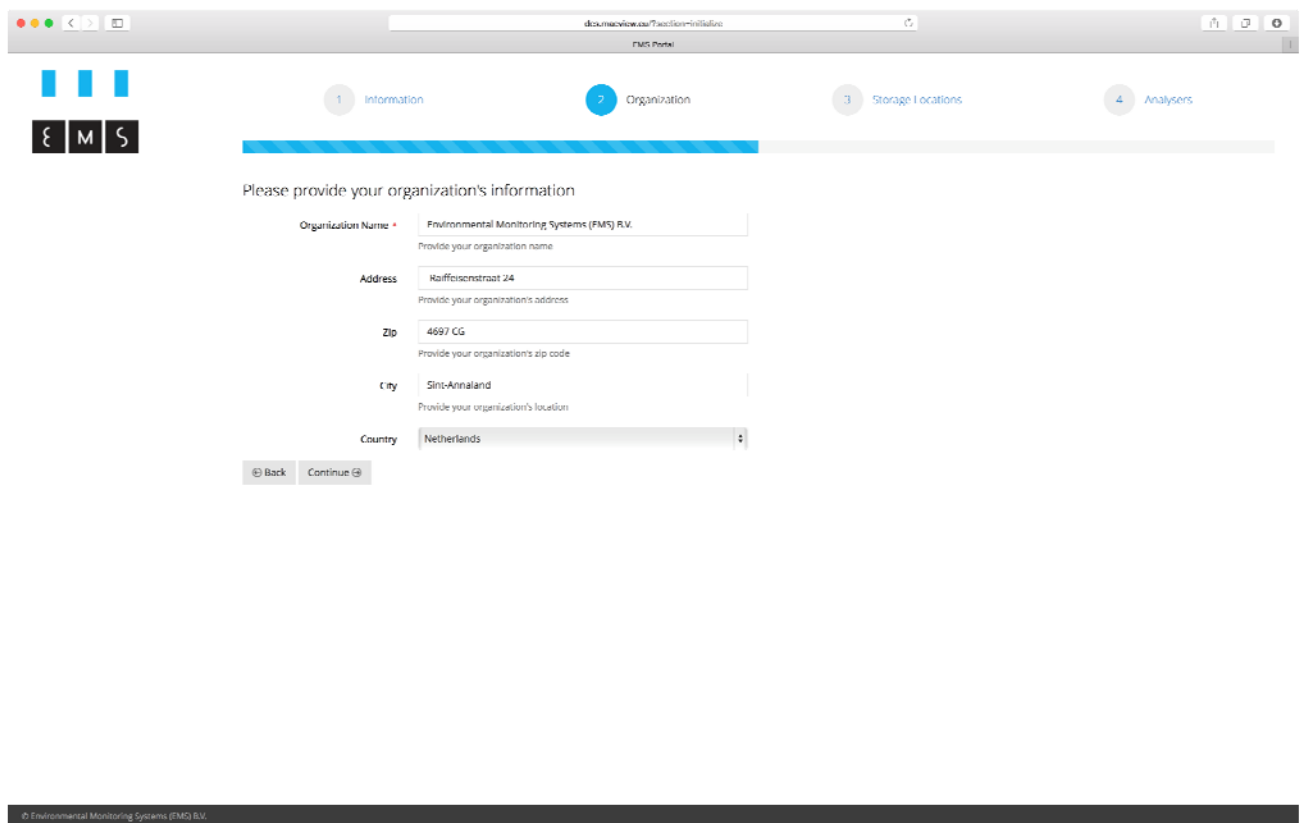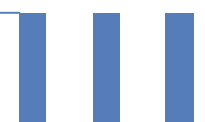

Figure 2, the initial wizard for the DCS portal

Once this initial wizard is completed you are presented the dashboard. At the current stage this is the place where you see whether your device is connected and functioning correctly. If a device is showing as offline (red color) or the last active time is about 36 hours in the past please check the connectivity of your device as explained in the FAQ. If a device reset (disconnect from

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power and reconnecting it after roughly 20 seconds) isn't helping please contact EMS for technical support.

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Summary

Login

Before you can use the DCS portal you are required to enter your credentials. In case you lost your credentials you can also reset your password from here.
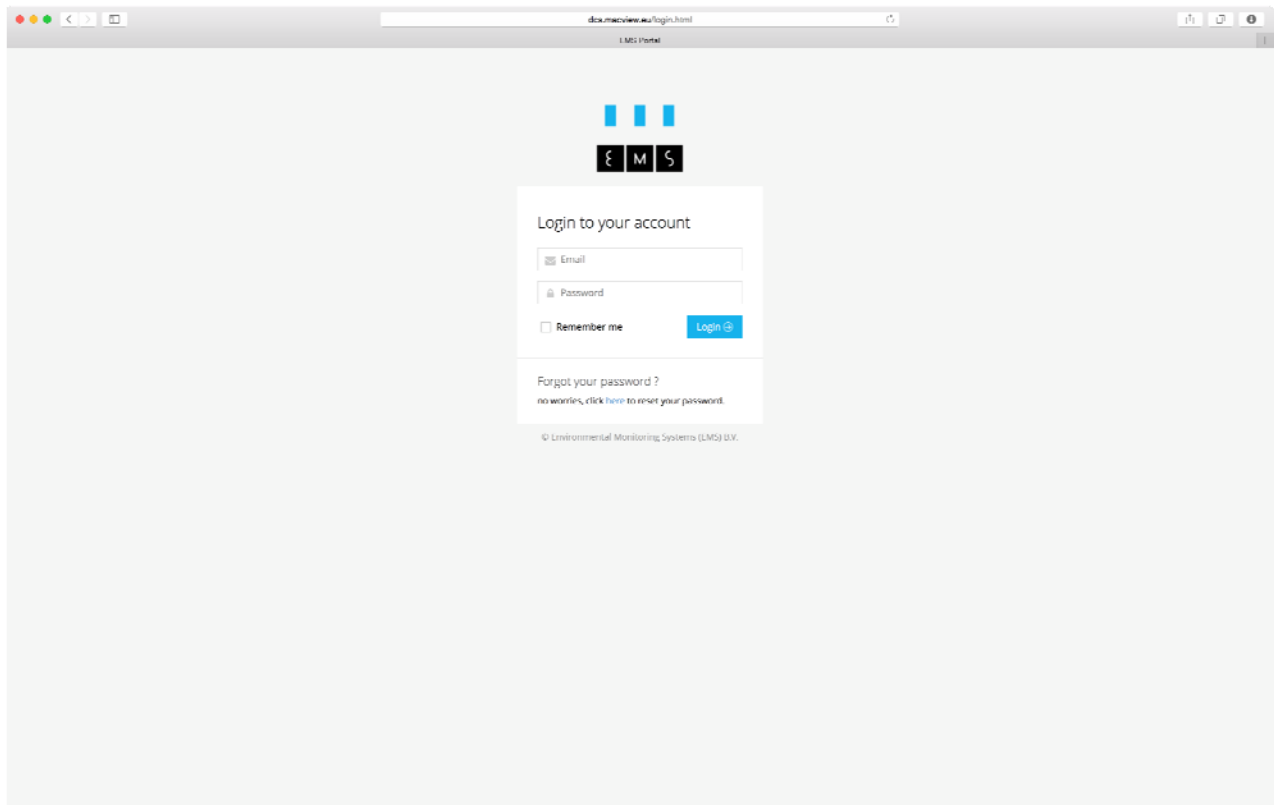

Figure 3, the login screen

Dashboard

The dashboard is the place where you go after you've been logged in. In the table displayed here you can see the connectivity status of your devices. If a device is showing as offline (red color) or the last active time is about 36 hours in the past please check the connectivity of your device as explained in the FAQ. If a device reset (disconnect from power and reconnecting it after roughly 20 seconds) isn't helping please contact EMS for technical support.

Figure 4, the dashboard

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Sidebar

The sidebar is the place where all main navigation actions happens. Most of the functionality in the portal software can be accessed from here.
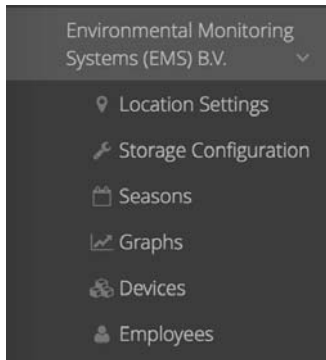

Figure 5, the sidebar

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Location Settings

In this screen you can manage the 'locations'. A location represents a single address or just a location. Locations are mainly used to categorize the storage configurations.

Figure 6, locations settings

Storage Configuration

A storage configuration is needed for the DCS portal to know what IO box (and indirectly DCS GA) is connected with which location. Without this configuration it isn't possible for the DCS portal to correctly attach the measurement data to the storage.

Schedules

For each storage configuration it is possible to configure one or more report schedules. A report schedule is an appointment for a date and time a report will be sent to you with data related to the specific storage configuration. At this time it is only possible to select DCS specific data as your report's source.

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Create Schedule

Report Type *   -- Select one --

Next Delivery *

Specify the next delivery time of the report.

Interval *   Hour(s)

Specify the time between report deliveries.

Period *   Day(s)

Specify the amount of data to be sent with
the report.

Recipients *

Enter all recipients for this schedule. Multiple email addresses can be
separated with a semicolon (;) or a comma (,).

Cancel   Create Schedule

Figure 7, creating a new schedule

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While configuring a report schedule you can insert several values. Each value has a specific function:

Report Type: The report to send for specific storage configuration. Only 'DCS Report' is available right now.

Next Delivery:The next moment to send the report. This value isn't allowed to be a point in the history. After the report is sent at this timestamp the time will be increased with the value specified in the interval field.

Interval: The interval to send a specific report. The interval is the amount of time between the moments a report is sent.

Period: The period for the report data. Based on this value the amount of data to send with the report is chosen.

Recipients: The recipients for the report. If this field is being left empty the email address for the current user is chosen. If you wish to send this report to multiple recipients you have to separate all these addresses with either a semicolon (';') or a comma (',').

The result of the configuration above is that all recipients will receive a mail containing a graph with the latest measurement values. (See example)
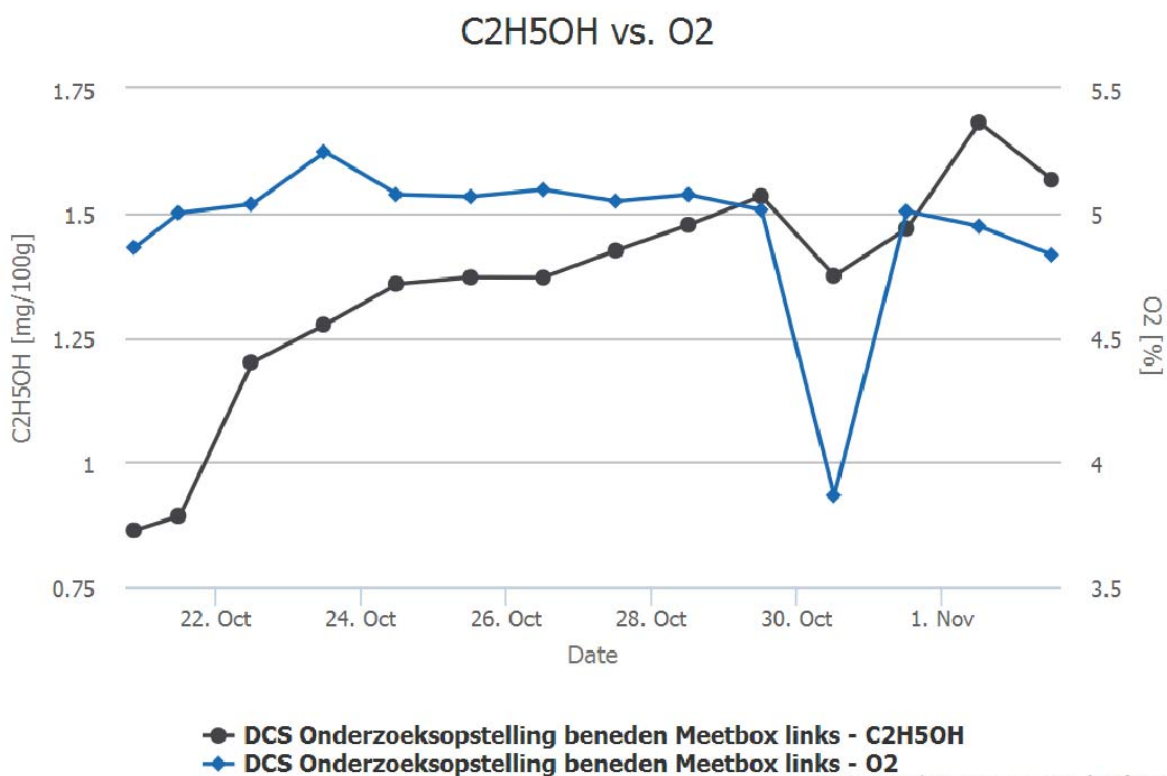

Figure 8, an example of the graph sent with a report

Seasons

Within the seasons page you can configure everything related to the storage sequence of the soft fruit. Correct configuration of the season information helps you to stay in control of the storage cells and avoid unneeded damage to your product.

When no season is configured it is not possible for the system to automatically set the O2 setpoint based on the storage protocol to be filled in.

Figure 9, the list with seasons

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General

When creating a season there are several fields to configure on the first tab:

Location: Indicates the location to apply the current season to. Requires a subselection for the storage configuration to use.

Storage: Indicates the storage configuration to apply the current season to. Contents of this select box are dependent on the selection in the select box above (locations).

Start of season: The start date of the season. Generally this is the date when the storage cells are closed.

End of season: The expected end of season. This is an approximation to the date that the storage cell will be opened again.

Smartfresh usage: Tick this checkbox whenever smartfresh is applied to the storage cell.

Responsible: Select a responsible person from the dropdown box. Please note that only persons from the company to which the season belongs can be selected. Communication about the status of the season will be communicated to this person.

Memo: A field which can be used to add information which can be useful to know for people evaluating the season.

Figure 10, general configuration for a season

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Fruit Samples

Next there are the fruit samples to configure. Careful selection and registration of these fruit samples is important for the correctness of the measurement data. Please note that the weight of a fruit sample within the measurement box is summed up with all other fruit samples for this season.

The fields which can be filled in:

Region: The region in which the fruit was grown.

Fruit Variety: A variety specific for the region selected above.

Harvest Date: The date the fruit was harvested.

Origin: The origin of the fruit. (Please name it yourself)

Contents of measurement box: The amount of fruit within the measurement box (in kilograms)

Contents of storage room: The amount of fruit within the storage room (in tonnes)

Memo: A field where you can enter additional information about the sample which might be important for this season.

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Fruit Sample

Region	Choose...
Fruit Variety	Choose...
Harvest Date	01/01/1900
Origin	Origin

Enter the origin where this fruit sample is harvested

Contents of measurement box	0	kilograms

Enter the weight of this sample in the measurement box (in kilograms)

Contents of storage room	0	tonnes

Enter the weight of this sample in the storage room (in tonnes)

Memo	

Provide additional information relevant for this sample

Save   Cancel

Figure 11, creating a new fruit sample

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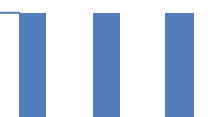
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Storage Protocol

On the next tab it is possible to define the storage protocol. Because this protocol is being used to configure the DCSGA and verify the measurement data it's important this protocol is entered correctly.

Figure 12, protocol creation screen for a season

Protocol rules and stepping through

It's worth to note that the protocol rules describe a specific period in time to which various configuration parameters apply. Some of these configuration parameters are:

- Setpoint O2
- Setpoint CO2
- Maximum allowed ethanol level

These rules apply to a specific amount of time which can be entered be setting the 'Step time' field. This field represents the amount of days after the previous step is completed.

The responsible user will receive an email when the step expires in the next two hours notifying him or her of the deadline. The user can confirm that the rule is completed directly from the email. When this mail is ignored the system will continue to send reminders every 24 hours.

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Protocol cloning

Once one season's protocol is defined it is possible to clone that protocol information into a new season configuration. After the protocol is cloned it is possible to alter the protocol to fit the requirements for the new configuration.

Please note that it is only possible to clone an existing protocol if there's only one protocol rule. (Default when creating a new season)
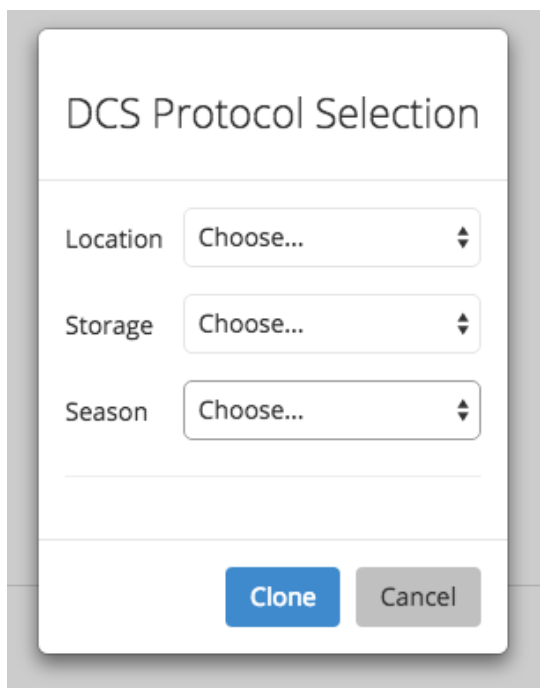

Figure 13, selection screen for cloning an existing protocol

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Overview

Within the overview screen which is accessed from the page which lists all available seasons it is possible to see the measurement data combined with the data extracted from the configured season and its protocol.

Using this graph you can easily see the difference between actual readings and the protocol which has been set.

Figure 14, season overview screen combining measurement data and protocol configuration

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Logbook

Within the logbook you have to enter manual O2, CO2 and temperature readings. To verify the correct working of all systems it is required that you enter a reading once a week. If no recent entries are available, the responsible user will receive an email reminding him or her about the manual readings which will need to be taken.

#	Date	Value	Type	Source	Memo	New
30	10/28/2015	4 %	O2	Manually	Automatic pull down test.	Update Delete

Figure 15, the logbook

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Graphs

Within the graph screen you can see the measurement data regardless of season. This screen gives you the ability to match measurements from different storages and compare the values.
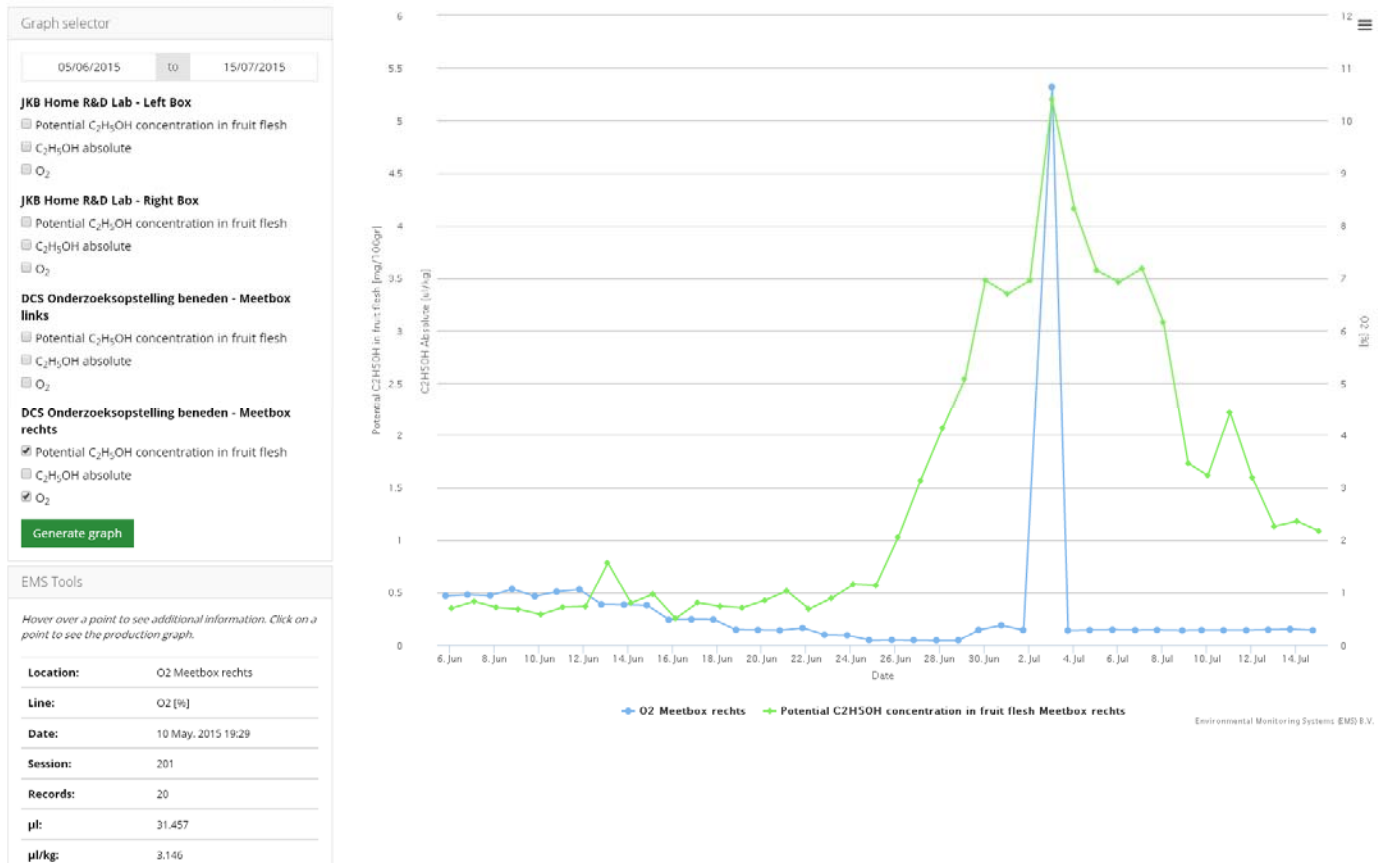
Figure 16, the graphing tool for comparing data

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Devices

The devices page lists all devices which have been connected to your company.

Devices Environmental Monitoring Systems (EMS) B.V.

Serial Number	Device Type	Hardware Version	Software Version
0639100050	IO Box	3	
0639100068	IO Box	3	IOBOX-2.04x
0639100101	IO Box		
0649100024	DCS Gas Analyser	2	DCSGA-2.04x
0649100031	DCS Gas Analyser		
0649100038	DCS Gas Analyser	2	DCSGA-2.06x

Figure 17, the devices list

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Employees

Within the employees screen you can manage all user accounts for your company.

Please note that when you create a new user an email will be sent to the email address you specified. An email address has to be unique amongst the users within the DCS portal.

Figure 18, the employee list

In case you want to compare your data with the data of another customer you can request access to this data. Consent from both parties is required for this to be granted. Access will usually be bidirectional. This means that 'Customer1' has access to 'Customer2' his data while 'Customer2' has access to 'Customer1' his data.