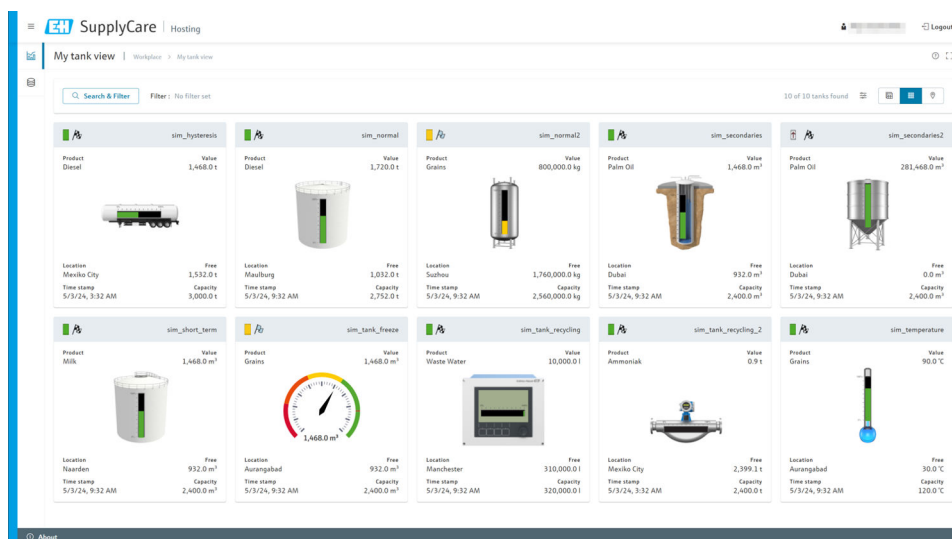


Operating Instructions SupplyCare Hosting SCH30

System products

Software for the coordination of material and
information flow along the supply chain



Change history

BA00050S/21.18

- Valid for software version: 3.3.xx
- Changes/comments: Automatic updating of GPS coordinates implemented.

BA00050S/22.19

- Valid for software version: 3.4.xx
- Changes/comments: SSL/TLS encryption for email data exchange implemented. FTP data transfer options expanded.

BA00050S/23.21

- Valid for software version: 3.4.xx
- Changes/comments: Linearization function extended. Silo template type added.

BA00050S/24.22-00

- Valid for software version: 3.6.xx
- Changes/comments: Users with the master data role can assign measuring devices.

BA00050S/25.23-00

- Valid for software version: 3.6.xx
- Changes/comments: Inventory portal introduced.

BA00050S/26.24-00

- Valid for software version: 4.0.xx
- Changes/comments: New user interface for display on standard desktops and large screens. Special web application for smartphones and tablets. New REST/JSON API for measurement data transfer and master data synchronization.

BA00050S/27.25-00

- Valid for software version: 4.0.xx
- Changes/comments: Tank type, tank group, location, company, product, linearization and unit configuration menus integrated with new user interface.

BA00050S/28.25-00

- Valid for software version: 4.0.xx
- Changes/comments: Aggregated tank and report configuration menus integrated with new user interface. Predictive planning added.

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1 About this document

1.1 Document function

These Operating Instructions provide information about how to configure and operate SupplyCare Hosting.

1.2 Target group

Apart from basic knowledge of PC operation, no special training is required to carry out the administrative functions of the Supply Chain Management software. Nevertheless it is recommended to receive training from Endress+Hauser on this system.

1.3 Symbols

1.3.1 Safety symbols

DANGER

This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

WARNING

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

CAUTION

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.

NOTICE

This symbol contains information on procedures and other facts which do not result in personal injury.

1.3.2 Symbols for certain types of information

Tip

Indicates additional information



Reference to documentation



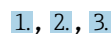
Reference to page



Reference to graphic



Notice or individual step to be observed



Series of steps



Result of a step

1.3.3 Symbols in graphics

1, 2, 3, ...

Item numbers

A, B, C, ...
Views

1.3.4 Conventions used in this manual

To make the content of this manual clear and to highlight important information, typographic highlights and symbols are used.

Text highlights

The following text highlights are used:

Bold

Meaning: Keyboard input, button, tab, menu item, elements in graphics

Examples:

- Select the **Event details** tab.
- Click the **Event** menu item.

1.3.5 Figures

The screen views contained in this manual are sample representations and may differ from personal screen views. The screen views depend on personal browser settings, the device used, and the application.

1.4 Documentation

Typically, certain document types are created as the standard for Endress+Hauser products. The documents are available in the Downloads area of the Endress+Hauser website (www.endress.com/downloads):

Document type	Purpose and content of the document
Technical Information (TI)	Planning aid This document contains all the technical data on the product and provides an overview of everything that can be ordered with the product.
Brief Operating Instructions (KA)	Guide that takes you quickly to the 1st measured value The Operating Instructions contain all the essential information about the product from incoming acceptance to initial commissioning.
Operating Instructions (BA)	Reference The Operating Instructions contain the information that is required in the various phases of the life cycle of the product: From product identification, incoming acceptance and storage, to mounting, connection, operation and commissioning through to troubleshooting, maintenance and disposal.
Description of device parameters (GP)	Reference for parameters The document contains detailed explanations of readable or configurable parameters in the product. The description is aimed at those who work with the product over its entire life cycle and perform specific configurations.
Safety instructions (XA)	Safety Instructions for electrical equipment in hazardous areas are supplied with the product depending on the approval. These are an integral part of the Operating Instructions.  The nameplate indicates the Safety Instructions (XA) that are relevant to the product.
Product-dependent additional documentation (SD/FY)	Always comply strictly with the instructions in the relevant supplementary documentation. The supplementary documentation is an integral part of the product documentation.

1.5 Registered trademarks

The following trademarks are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries:

Microsoft®, Windows®, Windows Server®

The following trademarks are either registered trademarks or trademarks of Google LLC: Google™, Google Chrome™, Google Maps™

The following trademarks are either registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries: IOS®

Safari®, iPhone® and iPad® are trademarks of Apple® Inc., registered in the United States and certain other countries.

1.5.1 Legal notice concerning trademarks

All company and/or product names and/or all company logos may be trade names, trademarks and/or registered trademarks of Endress+Hauser, its affiliates or of their respective owners with which they are associated.

2 Basic safety instructions

2.1 Requirements for the personnel

The personnel for installation, commissioning, diagnostics and maintenance must fulfill the following requirements:

- ▶ Trained, qualified specialists must have a relevant qualification for this specific function and task.
- ▶ Are authorized by the plant owner/operator.
- ▶ Are familiar with federal/national regulations.
- ▶ Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).
- ▶ Follow instructions and comply with basic conditions.

The operating personnel must fulfill the following requirements:

- ▶ Are instructed and authorized according to the requirements of the task by the facility's owner-operator.
- ▶ Follow the instructions in this manual.

2.2 Intended use

SupplyCare Hosting is a web-based software for the coordination of material and information flow along the supply chain. SupplyCare Hosting provides complete transparency over inventory levels in tanks, silos and containers at any time and from any location – even at remote sites.

Based on the measuring and transmission technology installed onsite, the current inventory data are collected and sent to SupplyCare. Using SupplyCare, users always have an overview of all current inventory levels. Critical inventory levels are clearly identified, and users actively receives alerts about them if desired. Calculated forecasts provide additional reliability for replenishment planning.

The software has been developed for supply chain optimization purposes. The application has not been developed for use in critical process steps for the safety of systems or personnel, and therefore must not be used for this purpose.

2.3 IT security

The manufacturer warranty is valid only if the product is installed and used as described in the Operating Instructions. The product is equipped with security mechanisms to protect it against any inadvertent changes to the settings.

IT security measures, which provide additional protection for the product and associated data transfer, must be implemented by the operators themselves in line with their security standards.

2.4 Technical improvements

Endress+Hauser reserves the right to make technical improvements to the hardware and software without prior notification. Where such improvements have no impact on the software's operating functions, they are not documented. If the improvements have a noticeable impact on operation, a new version of the Operating Instructions is issued. See the revision history in this manual for details.

3 Product description

3.1 Inventory Control with SupplyCare

SupplyCare Hosting comprises software components and information relating to inventory control.

SupplyCare records and visualizes inventory, availability, consumption and needs of the tanks and silos online. This allows business and logistic processes to be rationalized and inventory and stockout to be reduced. From on-site measurement and global remote data transmission and decentral visualization to integration in ERP systems, SupplyCare offers a universal, standards-based solution. An additional benefit is that SupplyCare is modular in design.

3.2 SupplyCare Hosting

SupplyCare Hosting is a web-based software program for indicating and monitoring levels of e.g tanks, silos or containers all over the world.

3.3 Display of inventory data

In SupplyCare, the inventory levels in tanks and silos are recorded at regular intervals. The current and historical inventory data can be shown at any time.

See the "Monitoring tanks", "Showing a personalized tank overview" and "Displaying tank locations in the map" sections.

3.4 Managing master data

With SupplyCare, you can create and manage master data for locations, companies, tanks, products and users.

See the "Managing master data" section.

3.5 Automatic updating of GPS coordinates

Using a GPS hand-held transmitter (GPS Tracker) mounted on a tank and transmitting the GPS coordinates using a gateway, the current tank location can be determined and displayed in SupplyCare at any time. The GPS coordinates are automatically updated in SupplyCare along with other measured data. The automatic updating of GPS coordinates is particularly useful for mobile tanks.

 The GPS coordinates of the address of a location that a tank is assigned to are separate properties of the location. These are not changed if the GPS data transmitted by the GPS tracker is optionally used as the location for the tank.

3.6 Reports and connection to ERP systems

With SupplyCare, you can create on-demand or regular reports with measured data and master data.

See the "Managing reports" section.

3.7 Event management

An event management system is integrated into SupplyCare. Events, such as when levels drop below the safety stock level or plan points, are indicated by the software. In addition, notification emails can be sent to predefined users.

See the "Handling events" and "Setting up notifications (messaging)" sections.

3.8 Alarm notifications

If technical problems occur, such as connection issues, alarm notifications are generated and alarm emails are sent to the system administrator.

3.9 Recording measured values

The inventory levels in the tanks and silos are recorded by on-site measuring instruments. The measured values are sent to the hosting environment of Endress+Hauser via gateways, so that they are available for use in the SupplyCare application. Other possible sources include software interfaces or IoT sensors (such as Micropilot FWR30).

3.10 Desktop and mobile version

SupplyCare Hosting can be used with different devices and browsers. The functions and display characteristics of the user interface depend on the respective screen resolution.

- Desktop version for category: Screen, desktop/PC and laptop
- Mobile version (≤ 768 pixels) for category: Tablet and smartphone

The minimum supported resolution is 375×667 pixels.

 The display characteristics of the SupplyCare user interface are ultimately determined by the selected resolution for the browser, and are not the maximum possible resolution for the end device. For example, by significantly zooming in on a browser on a screen with a resolution of 4096×3072 pixels, the user interface can instead be displayed in the mobile version if the zooming action results in the resolution being below the required resolution for the desktop version.

 The software's range of functions is reduced on mobile devices to allow intuitive and easy operation on smaller screens.

3.11 System requirements

Browser for desktop:

- Microsoft® Edge 128 (or higher)
- Mozilla Firefox 130 (or higher)
- Google Chrome™ 128 (or higher)

Browser for mobile devices:

- Google Chrome™ 128 (or higher)
- Safari® on iOS 18 (or higher)

Browser configuration:

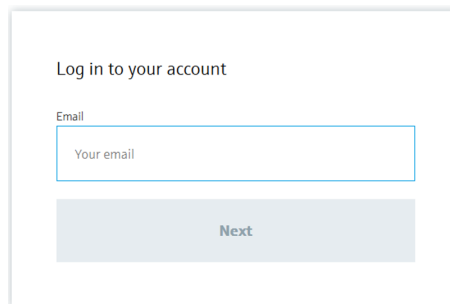
- Active Scripting enabled
- JavaScript enabled
- Allow cookies

These are the officially supported browsers that we recommend for the SupplyCare Hosting application. Using a different browser version or technology may lead to limited functionality and display issues.

4 User interface

4.1 How to start

1. Start the web browser.
2. Enter the URL or IP address for SupplyCare. The URL is as follows:
<https://inventory.endress.com>
↳ The logon window appears:



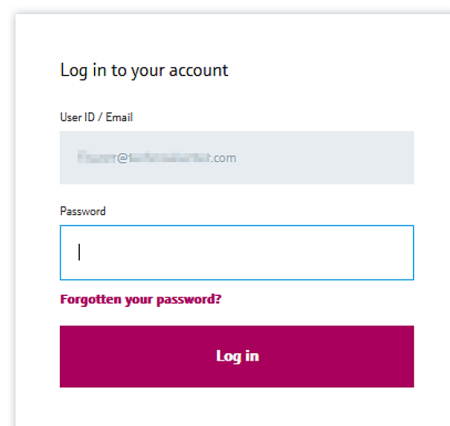
Log in to your account

Email

Next

3. Enter the **email** address.
4. Click the **Next** button.

↳



Log in to your account

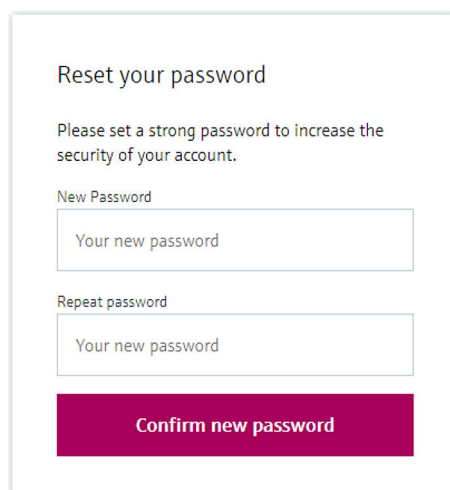
User ID / Email

Password

Forgotten your password?

Log in

5. Enter the **password**.
 6. Click the **Log on** button.
- ↳ The password must be reset when logging in for the first time.



Reset your password

Please set a strong password to increase the security of your account.

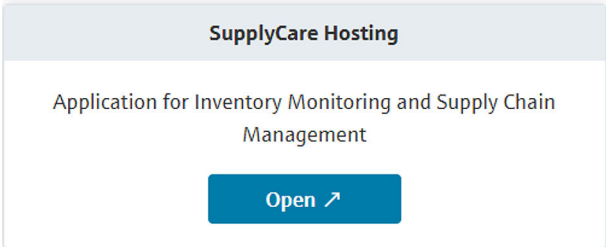
New Password

Repeat password

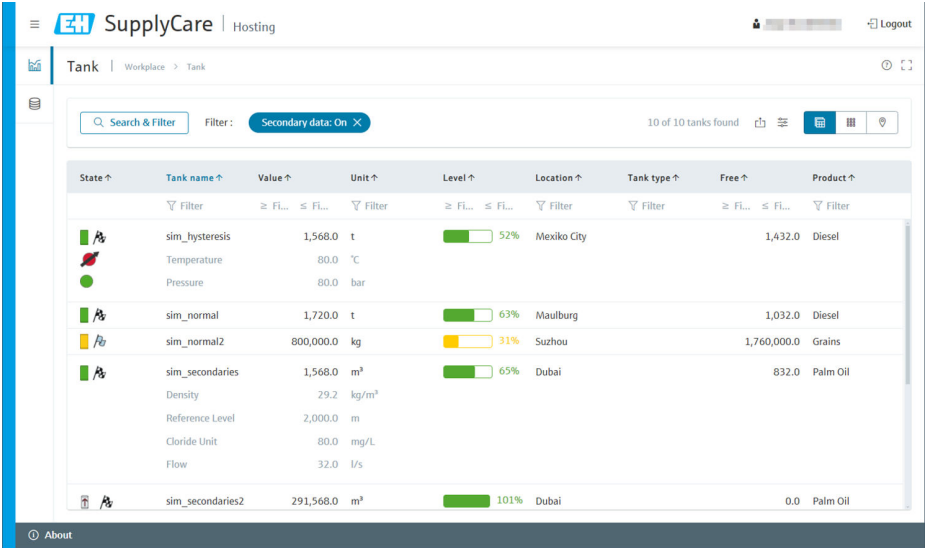
Confirm new password

7. Enter a new password in the **New password** and **Repeat password** fields.
8. Click the **Confirm new password** button to save the password.

➤ If only the SupplyCare Hosting application is available in the inventory portal, the user will be redirected directly to this application.
If the user has other applications in the inventory portal, select **SupplyCare Hosting** and click the **Open** button.

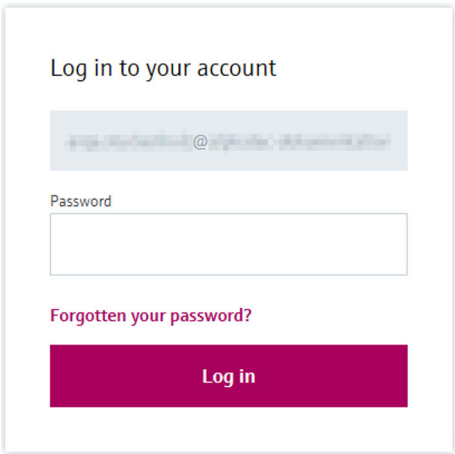


The application window is displayed. The view depends on the user role assigned.



4.1.1 **Resetting the password**

The password can be reset, e.g. if a user has forgotten their password.



1. Click the **Forgotten your password?** link.



Reset your password

To continue, please verify your account.

A code was sent to the following email address:

gert.hauser@sch30.com

Verification code

Verification code

Verify

No email received?

1. Check your spam folder.
2. Check your email address.
3. Wait 5 minutes - it may take a few minutes to receive the code.
4. Get in touch with us

2. Follow the instructions.

4.2 Page structure of desktop version

4.2.1 Application window



The menus and the menu items vary depending on the user role and thus also changes the application window.

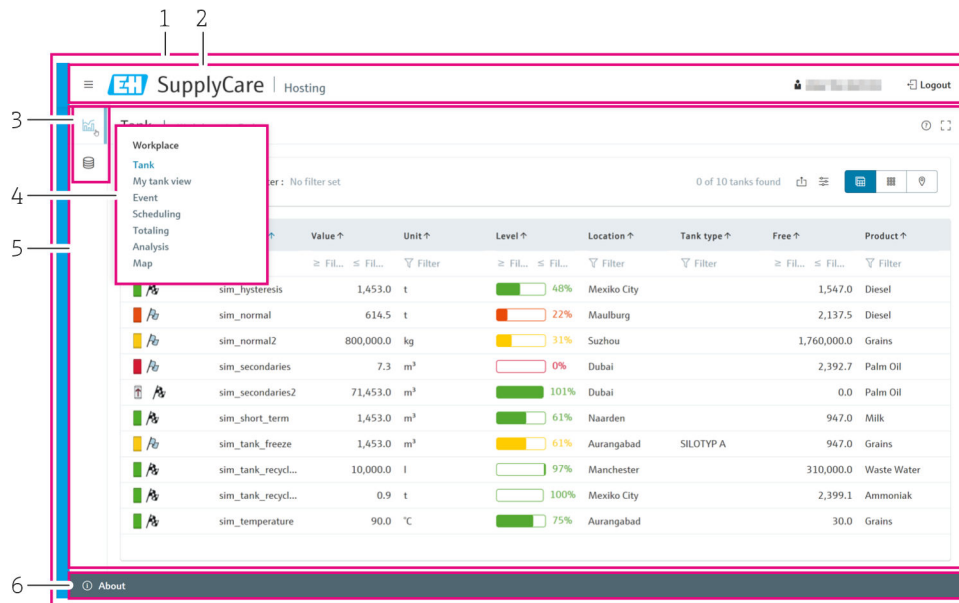


Depending on the configuration, instead of **Tanks**, **Objects** or **Silos** may be displayed.



The software is modular in design. The menu items differ for this reason. Furthermore, the contents of the working area and dialog boxes can vary.

The figure below shows the arrangement of the functional areas in the application window on the desktop version.



- 1 Application window
- 2 System header
- 3 Menu bar
- 4 Menu items
- 5 Working area
- 6 Footer

4.2.2 System header

The system header displays the following:

- Button , for changing the menu view in the menu bar
- Name of the application selected in the inventory portal
- Button , for displaying the user profile
-  **Log Off** button, for exiting the application

4.2.3 Menu bar

Clicking on a menu icon in the menu bar expands or collapses the menu. The active menu item is highlighted in blue.

Menus

Different menus are available depending on the user role.

-  Multiple user roles can be assigned to a user at the same time. The menu structure will be made up of the menus for the user roles in question.

Menu items

Depending on the user role, a menu consists of various menu items. The menu items are listed below depending on the user roles.

-  The menu items in the **Workplace**, **Configuration** and **Profile** menu differ as a result of the software's modular design. The **Profile** menu is opened by clicking on the username.

Read-only user role**■ Workplace menu:**

- Tank ¹⁾
- Tank overview
- Event ²⁾
- Totaling
- Map
- Reconciliation ³⁾

■ Profile menu:

- User profile
- User preferences
- Favorites

Operator user role**■ Workplace menu:**

- Tank ¹⁾
- Tank overview
- Event ²⁾
- Totaling
- Analysis
- Map
- Reconciliation ³⁾

■ Profile menu:

- User profile
- User preferences
- Favorites

Scheduler user role**■ Workplace menu:**

- Tank ¹⁾
- Tank overview
- Event ²⁾
- Planning
- Totaling
- Analysis
- Map
- Reconciliation ³⁾

■ Profile menu:

- User profile
- User preferences
- Favorites

Product-Tank-Configurator user role**■ Configuration menu:**

- Tank
- Product

■ Profile menu:

- User profile

1) Only users with the Operator user role can change the service status of a tank.

2) Only users with the Scheduler or Operator user role can change the status of an event.

3) Only available if needed and after prior activation.

Master data user role

- Configuration menu:
 - User
 - Tank
 - Tank type
 - Tank group
 - Location
 - Company
 - Product
 - Linearization
 - Unit
 - Aggregated tank
 - Report
- Profile menu:
 - User profile

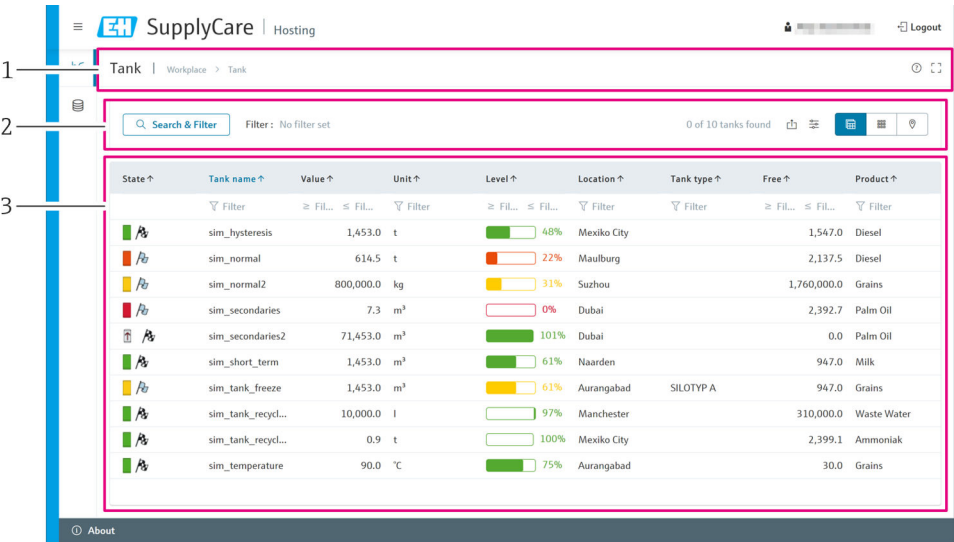
4.2.4 Working area

The content of the working area varies depending on the menu item selected. The active menu item is highlighted in blue in the menu bar and displayed in the extended system header.

 As a result of the modular design of SupplyCare, the contents of the "Overview" as well as the contents of the dialog windows may differ.

The working area generally contains the following functional areas:

- Extended header
- Filters and display options
- Overview



- 1 Extended header
- 2 Filters and display options
- 3 Overview

Extended header

- The extended system header displays the following:
- Current application (menu item and path)
 - ⓘ button, for downloading the Operating Instructions
 - [] button, for switching to full-screen mode
 - Alternatively: ⌵ button, for exiting full-screen mode

Filters and display options

The filters and display options area displays the following:

-  **Search & Filter** button, for displaying the available filter functions
- Currently set filters
- Number of tanks or events found
- Other functional buttons

Functional buttons:

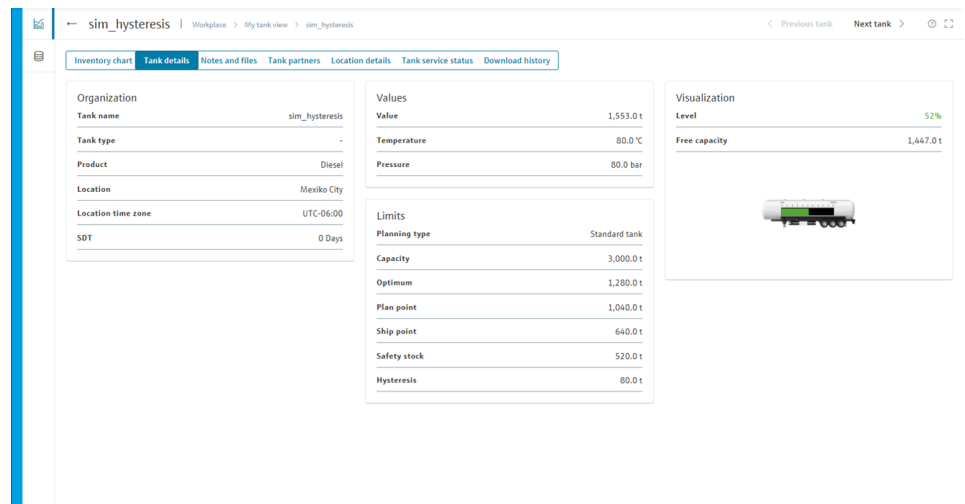
	Export list (not available in mobile version)
	Select data (not available in mobile version)
	Quick select: Tank workplace
	Quick select: Tank overview workplace
	Quick select: Map workplace

The button of the active workplace is highlighted in blue.

Overview

In the overview, the selected information is listed in tabular form or displayed as a graphic view (widgets, overview map).

Clicking a tank in the list or figure provides direct access to the detailed views with additional information in the selected workplace. Where necessary, the information in the detailed view is further divided by tabs.



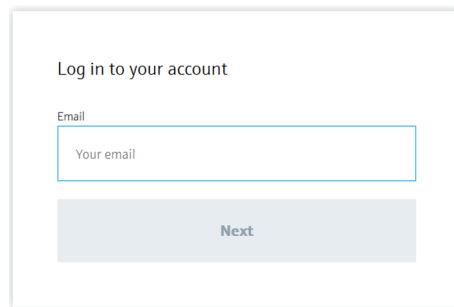
4.2.5 Footer

The  **About** button provides access to company information and product information, e.g. software version and product.

4.2.6 Logout

The logout link is located in the system header, on the right-hand side.

- Click the  **Logout** button.
 - ↳ The application stops and the login window appears.

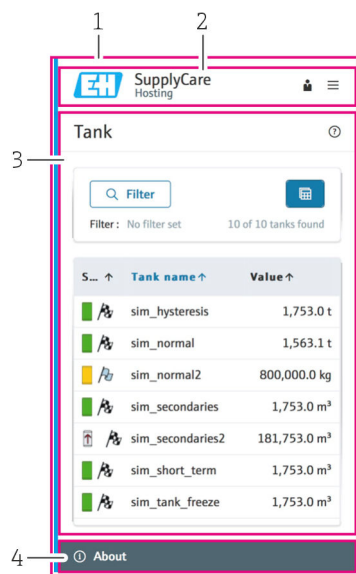


4.3 Page structure of mobile version

4.3.1 Application window

-  The menus and the menu items vary depending on the user role and thus also changes the application window.
-  Depending on the configuration, instead of **Tanks**, **Objects** or **Silos** may be displayed.
-  The software is modular in design. The menu items differ for this reason. Furthermore, the contents of the working area and dialog boxes can vary.

The figure below shows the arrangement of the functional areas in the application window of the mobile version.



- 1 Application window
- 2 System header
- 3 Working area
- 4 Footer

4.3.2 System header

The system header displays the following:

- Name of the application selected in the inventory portal
- Button , for displaying the user profile
- Button , for displaying the menu bar

4.3.3 Menu bar

The ☰ button opens the menu bar.

Clicking on a menu icon in the menu bar expands or collapses the menu. The last active menu item is highlighted in blue.

Menus

Different menus are available depending on the user role.



Multiple user roles can be assigned to a user at the same time. The menu structure will be made up of the menus for the user roles in question.

Menu items

Depending on the user role, a menu consists of various menu items. The menu items are listed below depending on the user roles.



The menu items in the **Workplace**, **Configuration** and **Profile** menus differ as a result of the software's modular design. The **Profile** menu is opened by clicking on the username.

Read-only user role

- **Workplace menu:**
 - Tank ⁴⁾
 - Tank overview
 - Event ⁵⁾
 - Map
- **Profile menu:**
 - User profile
 - User preferences
 - Favorites

Operator user role

- **Workplace menu:**
 - Tank ⁴⁾
 - Tank overview
 - Event ⁵⁾
 - Map
- **Profile menu:**
 - User profile
 - User preferences
 - Favorites

Scheduler user role

- **Workplace menu:**
 - Tank ⁴⁾
 - Tank overview
 - Event ⁵⁾
 - Map
- **Profile menu:**
 - User profile
 - User preferences
 - Favorites

Product-Tank-Configurator user role

- **Configuration menu:**
 - Tank
- **Profile menu:**
 - User profile

4) Only users with the Operator user role can change the service status of a tank.

5) Only users with the Scheduler or Operator user role can change the status of an event.

Master data user role■ **Configuration menu:**

Tank

■ **Profile menu:**

User profile

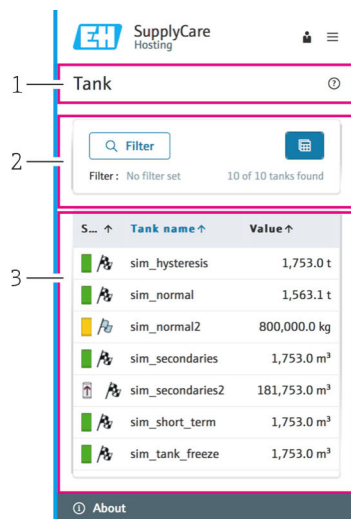
4.3.4 Working area

The content of the working area varies depending on the menu item selected. The active menu item is displayed in the extended system header.

 As a result of the modular design of SupplyCare, the contents of the "Overview" as well as the contents of the dialog windows may differ.

The working area generally contains the following functional areas:

- Extended header
- Filters and display options
- Overview



- 1 Extended header
- 2 Filters and display options
- 3 Overview

Extended header

The extended system header displays the following:

- Current menu item
- ? button, for downloading the Operating Instructions

Filters and display options

The filters and display options area displays the following:

- **Filter** button to display the available filter functions
- Currently set filters
- Number of tanks or events found
- Functional button for quickly selecting the workplace

If a filter is active, the **Reset filters** link appears under the 🔍 **Filter** button. Clicking on the link resets all filters.

Functional buttons:

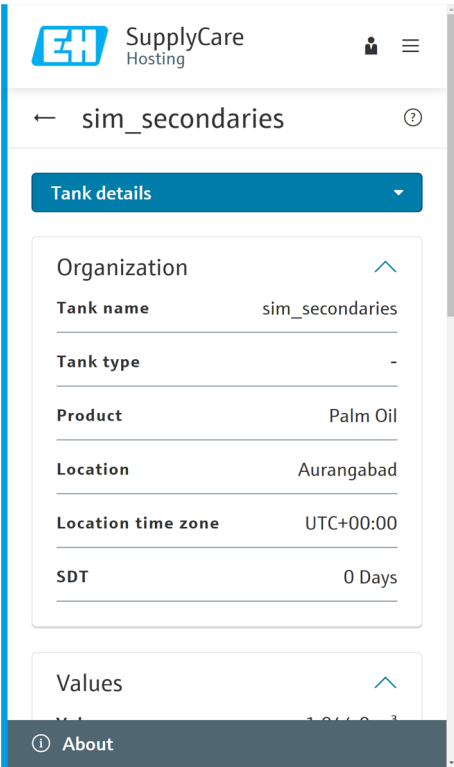
	Quick select: Tank workplace
	Quick select: Tank overview workplace
	Quick select: Map workplace

Clicking the functional button displays all three workplaces to select from. The button of the active workplace is highlighted in blue.

Overview

In the overview, the selected information is listed in tabular form or displayed as a graphic view (widgets, overview map).

Clicking a tank in the list or figure provides direct access to the detailed views with additional information in the selected workplace. Where necessary, the information in the detailed view is further divided by drop-down list boxes.



 Drop-down list boxes are used in the mobile version instead of the tabs in the desktop version.

4.3.5 Tabular views in landscape format

The user interface and the functional scope on the mobile version are optimized to be displayed on smaller screens, regardless of the selected mobile device alignment.

The only differences between the portrait and landscape formats are in the display and function of the tabular views. In landscape format, the tabular views are presented similar to the desktop version.

The following functions are, for example:

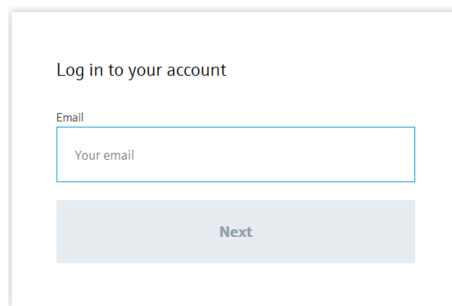
- No limit on number of columns
 - Display of the same selected columns and order as in desktop mode
 - Column filters are available
- When switching between portrait and landscape formats, all column filters are reset.
- Horizontal scrolling only affects the table columns, the rest of the page remains unchanged

4.3.6 Footer

The ⓘ **About** button provides access to company information and product information, e.g. software version and product.

4.3.7 Logout

1. Click the ≡ button.
 - ↳ The menu bar is displayed.
2. Click the ↗ **Logout** button.
 - ↳ The application stops and the login window appears.



4.4 Elements

The following elements are available in the individual views:

Entry fields

One-line entry fields for entering a value (text or digits). Multi-line entry fields for entering longer portions of text.

Output fields

One-line output fields to display a value (text or digits). Multi-line output fields for displaying longer portions of text.

Tables

Multi-column tables in which individual rows can be selected.

Drop-down lists

These allow the user to select from specified values.

Checkboxes

These are used to select or deselect certain selection options.

Change-over switches

These are used to activate or disable certain functions.

4.5 Symbols

4.5.1 Buttons

The following standard buttons are used to edit individual objects:

	Add Creates a new object or new content that can be saved by pressing Save .
	Delete Deletes the contents of an object. A dialog box appears in which the user must confirm the deletion with the Ok button.
	Save Saves modified contents and newly created objects.
	Cancel Cancel the action.
	Discard Undo without saving.
	Duplicate data record Duplicates the master data of a selected object.
	Select a date Button for selecting a time segment (e.g. resubmission date, start and end date for a history).
	Time picker Button for selecting a time (e.g. delivery time).
	Export Button for downloading data, e.g. measured values or system properties, to an Excel spreadsheet or PDF file.
	Print Button for printing charts.
	Show Allows adjustments to be made to the information displayed.
	Search and filter Shows the filter functions available to filter records.
	Finish Saves newly created objects that are created via the setup wizard. Ok Confirm your entry.
	Previous Go back to previous view.
	Next Go to the next view.
	Reset Resets configured settings to default values.
	Reset Resets settings configured via the  "Select data" button to the default values.

4.5.2 Symbols for events

Status display

	Open The event was triggered.
	Acknowledged The event has been acknowledged, but no action has yet been taken.
	In process Measures to replenish material have been initiated.
	Done Recorded by measurement. The replenishment process was completed successfully.

Priority (weight)

	Plan point
	Ship point
	Safety stock
	Freeze event

4.5.3 Symbols for tanks, silos or objects

SupplyCare allows users to choose the user interface from the template types "Tank", "Silo", and "Object". The functionality of these template types is identical. However, depending on the selection, the designations used in the menu, in the overview, and in the detailed view will differ - as will the symbols and tooltips displayed when hovering the mouse over a symbol.

 The following tables list the symbols for tanks, silos, and objects. The designations that differ between types are described in the following section (see "Designations" section).

Note: The template type "Tank" is used in all remaining sections of these Operating Instructions.

Symbols

	Tank/silo
	Aggregated tank/aggregated silo
	Object
	Aggregated object

Status display

		OK (GREEN) Standard tank/silo/object: The current (last measured) inventory level of the corresponding container is above the plan point/observance limit. Recycling tank/silo/object: The current (last measured) inventory level of the corresponding container is below the plan point/observance limit.
		OK (GREEN) Aggregated standard tanks/silos/objects: The current (last measured) inventory level of the corresponding aggregated container is above the plan point/observance limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the corresponding aggregated container is below the plan point/observance limit.
		Plan Point/Observance limit reached (YELLOW) Standard tank/silo/object: The current (last measured) inventory level of the corresponding container is the same as or below the plan point/observance limit. Recycling tank/silo/object: The current (last measured) inventory level of the corresponding container is the same as or above the plan point/observance limit.
		Plan point/observance limit reached (YELLOW) Aggregated standard tanks/silos/objects: The current (last measured) inventory level of the corresponding aggregated container is the same as or below the plan point/observance limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the corresponding container is the same as or above the plan point/observance limit.
		Ship point/point of action reached (ORANGE) Standard tank/silo/object: The current (last measured) inventory level of the corresponding container is the same as or below the ship point/point of action.
		Ship point/point of action reached (ORANGE) Aggregated standard tanks/silos/objects: The current (last measured) inventory level of the corresponding container is the same as or below the ship point/point of action.
		Safety stock/critical limit reached (RED) Standard tank/silo/object: The current (last measured) inventory level of the corresponding container is the same as or below the safety stock/critical limit. Recycling tank/silo/object: The current (last measured) inventory level of the corresponding container is the same as or above the safety stock/critical limit.
		Safety stock/critical limit reached (RED) Aggregated standard tanks/silos/objects: The current (last measured) inventory level of the corresponding container is the same as or below the safety stock/critical limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the corresponding container is the same as or above the safety stock/critical limit.
		Bad measurement - communication error No measured data is available for the tank/silo or the object. The status is also displayed when secondary data is shown, provided the container is not out of service.
		Bad measurement - communication error No measurement data is available for the aggregated tank/silo or aggregated object.
		Out of service The tank/silo or object is not available (e.g. due to overhauling). In the inventory chart, the period during which the container is out of service is shown with a gray background.
		Out of service The aggregated tank/aggregated silo or aggregated object is not available (e.g. due to overhauling). In the inventory chart, the period during which the corresponding container is out of service is shown with a gray background.
		Overfill The measured value is higher than the capacity of the tank/silo or the maximum of the object.
		Overfill The measured value is higher than the capacity of the aggregated tank/silo or the maximum of the aggregated object.
		Faulty measured data The measured value is lower than the zero point of the tank/silo/object.
		Faulty measured data The measured value is lower than the zero point of the aggregated tank/silo/object.

4.5.4 Status display for secondary values

	Upper span limit exceeded (RED) The current (last measured) secondary value is above the set span limits and outside of the tolerance.
	Within the tolerance range (GREEN) The current (last measured) secondary value is within the set span limits and within the tolerance.
	Lower span limit (RED) The current (last measured) secondary value is below the set span limits and outside the tolerance.

4.5.5 Symbols for tanks ("Map" workplace)

		OK (GREEN) No delivery/disposal planned.
		OK (GREEN) Planned delivery/disposal.
		OK (GREEN) Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		OK (GREEN) Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		OK (GREEN) Several tanks/silos/objects present at the location. All containers have the OK status. The containers can each have different scheduling statuses (delivery/disposal planned or not planned).
		Plan point/observance limit reached (YELLOW) No delivery/disposal planned.
		Plan point/observance limit reached (YELLOW) Planned delivery/disposal.
		Plan point/observance limit reached (YELLOW) Aggregated tank/aggregated object: No delivery/disposal planned.
		Plan point/observance limit reached (YELLOW) Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		Ship point/point of action reached (ORANGE) No delivery planned.
		Ship point/point of action reached (ORANGE) Planned delivery.
		Ship point/point of action reached (ORANGE) Aggregated tank/aggregated silo/object: No delivery planned.
		Ship point/point of action reached (ORANGE) Aggregated tank/aggregated silo/object: Planned delivery.
		Safety stock/critical limit reached (RED) No delivery/disposal planned.
		Safety stock/critical limit reached (RED) Planned delivery/disposal.
		Safety stock/critical limit reached (RED) Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		Safety stock/critical limit reached (RED) Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		Faulty measured data No delivery/disposal planned.
		Bad measurement(s) Planned delivery/disposal.

		Bad measurement(s) Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		Bad measurement(s) Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		Out of service No delivery/disposal planned.
		Out of service Planned delivery/disposal.
		Out of service Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		Out of service Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		Various Several tanks/silos/objects with different statuses displayed are present at the location. The containers can each have different scheduling statuses (delivery/disposal planned or not planned).
		Overfill No delivery/disposal planned.
		Overfill Planned delivery/disposal.
		Overfill Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		Overfill Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		Bad measurement(s) No delivery/disposal planned.
		Bad measurement(s) Planned delivery/disposal.
		Bad measurement(s) Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		Bad measurement(s) Aggregated tank/aggregated silo/object: Planned delivery/disposal.

4.5.6 Symbols for scheduling and analysis

		Planned delivery/planned disposal A planned delivery or disposal is indicated in the inventory chart and on the calendar by a delivery van icon.
		Standard tank/silo/object Displays a standard tank/silo/object in the Scheduling and Analysis menu items.
		Aggregated standard tanks/silos/objects Displays aggregated standard containers in the Scheduling and Analysis menu items.
		Recycling tank/silo/object Displays a recycling tank/silo/object in the Scheduling and Analysis menu items.
		Aggregated recycling tanks/silos/objects Displays aggregated recycling containers in the Scheduling and Analysis menu items.

4.5.7 Symbols for delivery and disposal status

	Detected The Detected status is displayed in the following cases: ▪ A delivery or disposal which has been scheduled too early or too late has been detected. This delivery or disposal can be edited in the Details tab using the Confirm button. ▪ The system has detected a missing delivery or disposal. This delivery or disposal can be edited in the Details tab using the Mark as fulfilled button. ▪ Missing measured data was detected. This delivery or disposal can be edited in the Details tab using the Mark as fulfilled button.
	Acknowledged The Acknowledged status is displayed in the following situations: ▪ A delivery or disposal which has been scheduled too early or too late was confirmed when the delivery or disposal was created. ▪ A delivery or disposal which has been scheduled too early or too late has been confirmed in the Details tab.
	Deleted A planned delivery or disposal has been deleted.
	New A new delivery or disposal has been planned.
	Fulfilled A new delivery or disposal has been recorded (fulfilled). If a delivery and disposal is made, this is designated by SupplyCare as a delivery (detected)/disposal (detected) . If a missing delivery/disposal or missing measured data has been detected, this delivery/disposal can be edited in the Details tab using the Mark as fulfilled checkbox. The delivery/disposal is displayed as Delivery fulfilled (confirmed)/Disposal fulfilled (confirmed).
	Edited A planned delivery or disposal has been edited.

4.6 Bad measurement(s)

Depending on whether "Tank", "Silo" or "Object" was selected as the template type, the designations used in the menu, in the overview, and in the detailed view will differ – as will the symbols and tooltips displayed when hovering the mouse over a symbol.

The following are the differences in the designations that involve more than simply replacing the word "Tank" or "Silo" with "Object":

Standard template type

"Tank"/"Silo"	"Object"
Tank name/silo name	Object
Tank details/silo details	Details
Tank partner/silo partner	Partner
Tank service status/silo service status	Service status
PP (plan point)	OL (observance limit)
SP (ship point)	POA (point of action)
SST (safety stock)	CL (critical limit)
DSST (days(s) until reaching safety stock)	DCL (day(s) until reaching critical limit)
Capacity	Maximum
Free capacity	Free space
Inventory chart	Chart
Inventory	Received value
Outflow	Decrease

“Tank”/“Silo”	“Object”
Inflow	Increase
DO (daily outflow)	DD (daily decrease)
ADO (average daily outflow)	ADD (average daily decrease)
DI (daily inflow)	DI (daily increase)
ADI (average daily inflow)	ADI (average daily increase)
Average inventory level	Average level

4.7 General processing functions

4.7.1 Applying filter functions and sorting in tables

Filter functions

Filter function can filter the display of data records for a table. The filter functions are located in the top line of the table.



Tables on the mobile version do not have a filter function.

The screenshot shows a web interface for a 'Tank' table. At the top, there is a 'Search & Filter' bar with the text 'Filter: No filter set' and '4 of 10 tanks found'. Below this is a table with columns: State, Tank name, Value, Unit, Level, Location, Tank type, Free, and Product. Each column has a dropdown arrow and a filter/sort icon. The 'Level' column is highlighted with a red box, showing a filter value of '0%'. The table contains four rows of data:

State	Tank name	Value	Unit	Level	Location	Tank type	Free	Product
	sim_secondaries	7.9	m³	0%	Dubai		2,392.1	Palm Oil
	sim_secondaries2	61,583.0	m³	101%	Dubai		0.0	Palm Oil
	sim_short_term	1,583.0	m³	66%	Naarden		817.0	Milk
	sim_tank_freeze	1,583.0	m³	66%	Aurangabad	SILOTYP A	817.0	Grains

1. In the top line of the table, enter a complete name in the desired field or just the first letters.
↳ Only table entries that match the input will be displayed.
2. Delete entries to show the entire contents of the table again.



Manually set filter values are displayed in blue in the individual fields.

The following filter functions can be used:

	Data format: Character string Example: Tank_ Result: All entries that contain "Tank_", e.g. Tank_Recycling_07 etc. Data format: Integers Example: 1 Result: All entries that contain "1", e.g. TI_Tank_2021_1 etc.
	Data format: Integers Example: 8 Result: All rows with values greater than or equal to 8 Data format: Floating point numbers Example: 8.2 Result: All rows with values greater than or equal to 8.2
	Data format: Integers Example: 8 Result: All rows with values less than or equal to 8 Data format: Floating point numbers Example: 8.2 Result: All rows with values less than or equal to 8.2

Date columns cannot be filtered, only sorted.

Sorting

The data records can be sorted using the buttons in the table header.

Buttons:

- ↑ Sort ascending
- ↓ Sort descending

Tank | Workplace > Tank

Search & Filter

Filter: No filter set

14 of 14 tanks found

State ↑	Tank name ↑	Value ↑	Unit ↑	Level ↓	Location ↑	Tank type ↑	Free ↑	Product ↑
	Filter	≥ Fl... ≤ Fl...	Filter	≥ Fl... ≤ Fl...	Filter	Filter	≥ Fl... ≤ Fl...	Filter
	Aggregierter B...	184,378.0	l	101%	Maulburg		1,882.0	Ethanol
	sim_temperat...	90.0	°C	75%	Aurangabad		30.0	Milk
	sim_hysteresis	1,459.0	m³	61%	Naarden	Tank_type_A45	941.0	Cement
	sim_secondaries	1,459.0	m³	61%	Aurangabad		941.0	Palm Oil
	sim_short_term	1,459.0	m³	61%	Suzhou		941.0	Pellets
	sim_tank_freeze	1,459.0	m³	61%	Dubai		941.0	Diesel
	sim_tank_recy...	941.0	l	61%	Mexiko City		1,459.0	Ammoniak
	sim_tank_recy...	130,941.0	l	59%	Manchester		189,059.0	Waste Water
	Testtank_TI_1	1,455.0	l	1%	Maulburg		98,545.0	

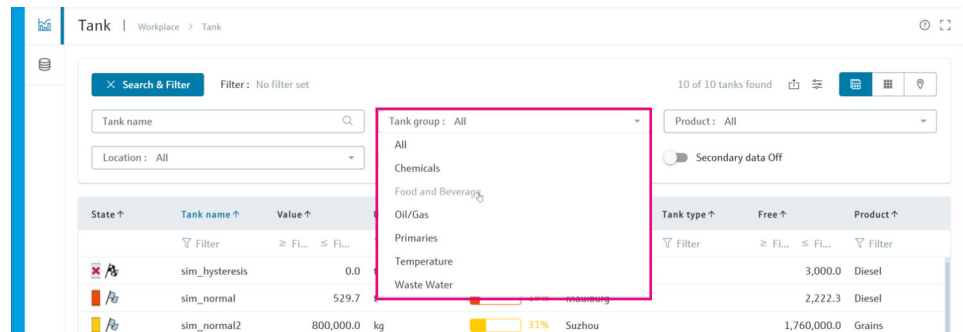
 The column name of the sorting that is currently active is displayed in blue.

4.7.2 Filtering the data records displayed (Search & Filter)

Displayed data records can be narrowed down via drop-down list boxes within the filters and display options area, e.g. by **Tank group**, **Product**, **Favorite** or **Location**.

The matching records will be automatically displayed when a value is selected from the drop-down list box. When you exit the overview, the contents of the drop-down list boxes are reset to the default values.

 The contents are not reset if the **Tank**, **My tank view** or **Map** workplace is opened via the ,  or  buttons in the quick select. Here, the filters are applied and only the filtered tanks, silos or objects are displayed.



Setting filters

1. Click on the  **Search & Filter** button.
 - ↳ The available filters are displayed.
2. Select the data record from a desired drop-down list box.
 - ↳ Only data records that match the filter criteria are displayed. In the filters and display options area, the filter set is also displayed as a field with a blue background.

 The **Favorite** drop-down list box is empty by default. Favorites must first be created before searching for favorites. See "Setting favorites".

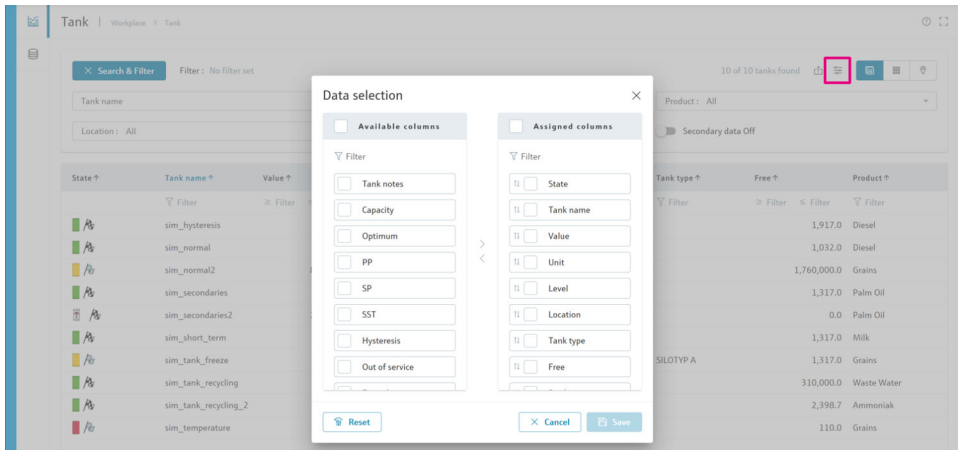
Deleting filters

If you want to display all the records, all the filters must be deleted.

- ▶ Click the  button in the drop-down list box or the blue field on the filter that is displayed to delete the filter.

4.7.3 Changing the displayed information

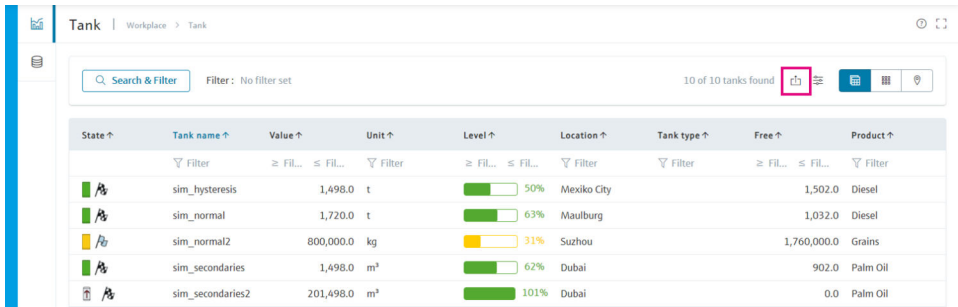
The  button in the filters and display options area opens the **Data selection** window. This window is used to show and hide the columns of the data table or to change the order within the table. The selected settings are saved by the user.



 The  button is not available on the mobile version.

4.7.4 Exporting data records

The displayed data records can be exported as an Excel file by clicking on the  button in the filters and display options area.



State ↑	Tank name ↑	Value ↑	Unit ↑	Level ↑	Location ↑	Tank type ↑	Free ↑	Product ↑
Filter	Filter	≥ Fil... ≤ Fil...	Filter	≥ Fil... ≤ Fil...	Filter	Filter	≥ Fil... ≤ Fil...	Filter
	sim_hysteresis	1,498.0	t	 50%	Mexiko City		1,502.0	Diesel
	sim_normal	1,720.0	t	 63%	Maulburg		1,032.0	Diesel
	sim_normal2	800,000.0	kg	 31%	Suzhou		1,760,000.0	Grains
	sim_secondaries	1,498.0	m³	 62%	Dubai		902.0	Palm Oil
	sim_secondaries2	201,498.0	m³	 101%	Dubai		0.0	Palm Oil

 The exported Excel file contains all the displayed data records and all the displayed table columns. To export additional or different data, the displayed information must be modified (see "Changing the displayed information").

 The  data record export button is not available on the mobile version.

4.7.5 Showing numerical values and master data

In principle, a distinction is made between two types of data in SupplyCare: Numerical values and master data.

The **Data source** column indicates the origin of the data, i.e. if it was measured or entered manually. In contrast to measured values, manual values are displayed in blue and followed by the text **MAN**.

State ↑	Tank name ↑	Value ↑	Unit ↑	Data source ↑	Level ↑	Location ↑	Tank type ↑	Free ↑	Product ↑	Time zone
	Aggregierter Bei...	74,978.0	l	Measured	101%	Maulburg		1,482.0	Ethanol	UTC+01:00
	sim_hysteresis	1,659.0	m³	Measured	69%	Naarden	Tank_type_A45	741.0	Cement	UTC+01:00
	sim_normal	0.0	m³	Measured	0%	Greenwood		320,000.0	Diesel	UTC+01:00
	sim_secondaries	1,659.0	m³	Measured	69%	Aurangabad		741.0	Palm Oil	UTC+01:00
	sim_short_term	1,659.0	m³	Measured	69%	Suzhou		741.0	Pellets	UTC+01:00
	sim_tank_freeze	1,659.0	m³	Measured	69%	Dubai		741.0	Diesel	UTC+01:00
	sim_tank_recycl...	200,000.0 MAN	l	Manual	37%	Manchester		120,000.0	Waste Water	UTC+01:00
	sim_tank_recycl...	741.0	l	Measured	69%	Mexiko City		1,659.0	Ammoniak	UTC+01:00
	sim_temperature	70.0	°C	Measured	58%	Aurangabad		50.0	Milk	UTC+01:00
	Stahltank I	240,741.0	l	Measured	0%	Krefeld-Oil		0.0		UTC+01:00
	Stahltank II	240,741.0	l	Measured	0%			0.0		UTC+01:00

The character the system uses as the thousand separator depends on the language setting selected in the browser, e.g.:

- German (Germany) de-DE: 1.234,78
- German (Switzerland) de-CH: 1'234.78
- English (US) en-US: 1,234.78

No thousand separator is used for numerical values that appear in views, histories or reports that are downloaded, sent or printed out.

Please contact Endress+Hauser to change the number of decimal places for the units.

4.7.6 Changing master data

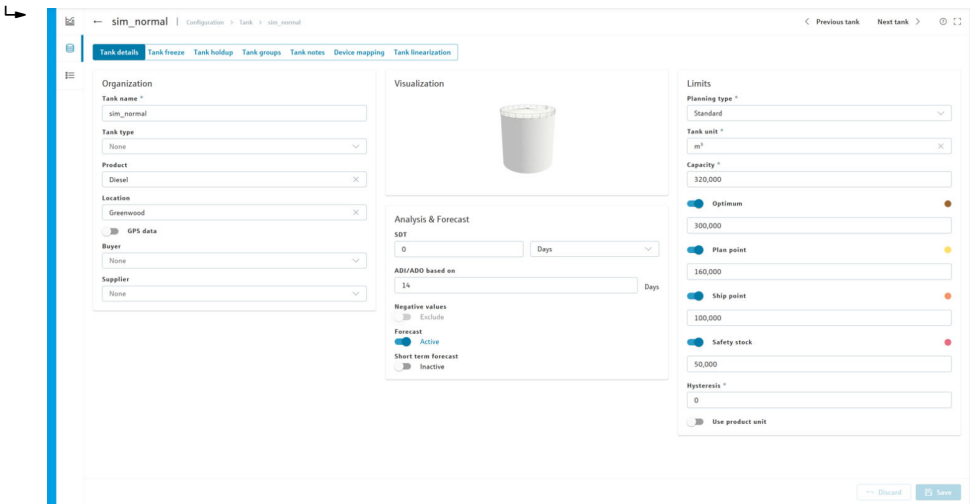
Depending on the particular user role, data records in the master data can be changed. The data for a tank is changed in the following example. Proceed in the same way as for other master data.

1. In the **Configuration** menu, click the **Tank** menu item.
➤ The working area shows the detailed view below:

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
☐ sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
☐ sim_normal		Greenwood	Standard	m³
☐ sim_secondaries		Aurangabad	Standard	m³
☐ sim_secondaries_2		Maulburg	Standard	l
☐ sim_short_term		Suzhou	Standard	m³
☐ sim_tank_freeze		Dubai	Standard	m³
☐ sim_tank_recycling		Manchester	Recycling	l
☐ sim_tank_recycling_2		Mexiko City	Recycling	l
☐ sim_temperature		Aurangabad	Standard	°C
☐ Stahltank I		Krefeld-Oil	Recycling	l
☐ Stahltank II			Recycling	l
☐ Testtank_AS_1		Aurangabad	Standard	l
☐ Testtank_TI_1		Maulburg	Standard	l
☐ Testtank_TI_2		Maulburg	Standard	l
☐ TI_Tank_2021_1			Standard	

2. In the table, click the tank to be changed.

- 3. Select the **Tank details** tab.



- 4. Make any necessary changes.

i **GPS data:** Activate the change-over switch to display the GPS data from a GPS tracker on the tank.

Note that this option cannot be used until the necessary measuring points have been assigned to the tank.

- 5. Click the **Save** button to save the changes.
- 6. Alternatively, click on the **Discard** button to undo the change.

To make changes to additional tabs, proceed in the same way as described for the **Tank details** tab.

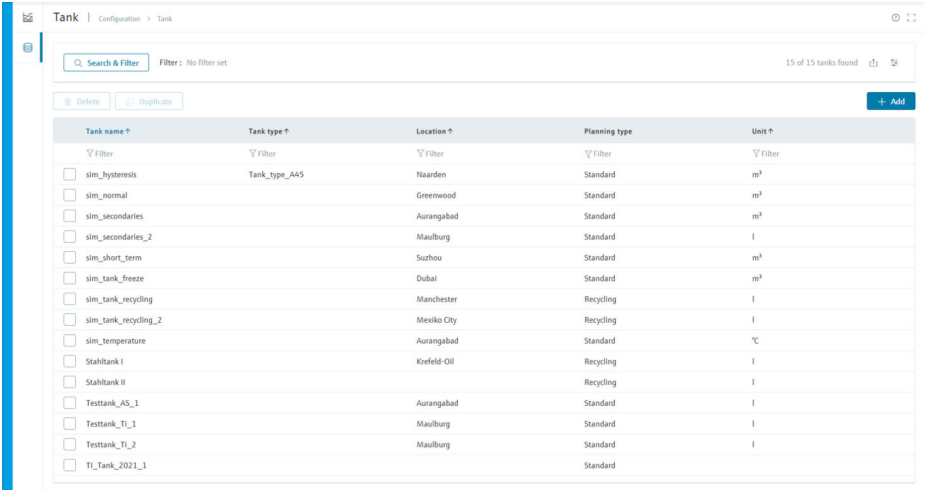
4.7.7 Deleting master data

Depending on the particular user role, data records in the master data can be deleted.

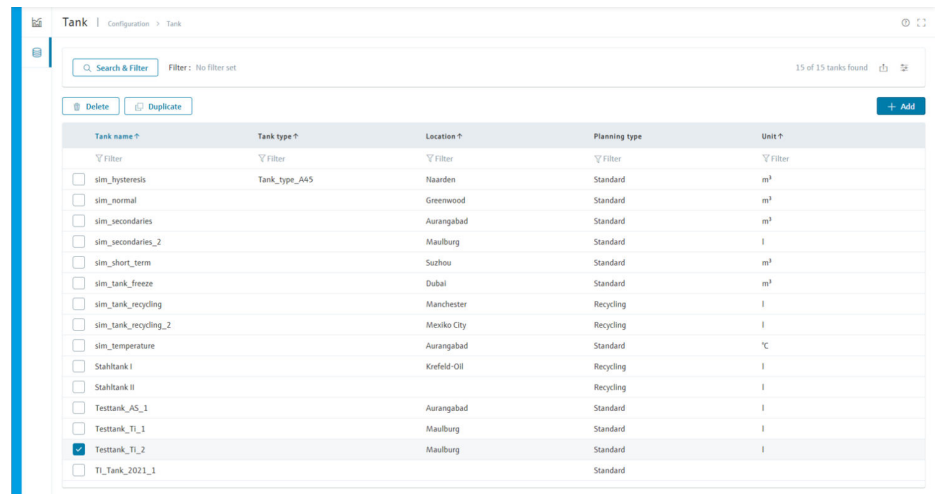
i A data record can only be deleted if the **Delete** button is shown. If this button is not displayed, the data record is linked to other information. These links must be disabled before the data record can be deleted.

The data for a tank is deleted in the following example. Proceed in the same way as for other master data.

- 1. In the **Configuration** menu, click the **Tank** menu item.
- ↳ The working area shows the detailed view below:



2. In the table, select the checkbox of the tank to be deleted.
 ↳ The  **Delete** button is enabled.



The screenshot shows the 'Tank' configuration page with a table of 15 tanks. The 'Testtank_TI_2' row is highlighted, and its checkbox is checked. The 'Delete' button is enabled.

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
☐ sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
☐ sim_normal		Greenwood	Standard	m³
☐ sim_secondaries		Aurangabad	Standard	m³
☐ sim_secondaries_2		Maulburg	Standard	l
☐ sim_short_term		Suzhou	Standard	m³
☐ sim_tank_freeze		Dubai	Standard	m³
☐ sim_tank_recycling		Manchester	Recycling	l
☐ sim_tank_recycling_2		Mexiko City	Recycling	l
☐ sim_temperature		Aurangabad	Standard	°C
☐ Stahltank I		Krefeld-Oil	Recycling	l
☐ Stahltank II			Recycling	l
☐ Testtank_AS_1		Aurangabad	Standard	l
☐ Testtank_TI_1		Maulburg	Standard	l
☒ Testtank_TI_2		Maulburg	Standard	l
☐ TI_Tank_2021_1			Standard	

3. Click the  **Delete** button to delete the tank.
 ↳ The dialog box with the confirmation prompt appears.
4. Click the  **Delete** button to delete the tank. If the tank is not to be deleted, click on the  **Cancel** button to abort the process.

4.7.8 Creating master data

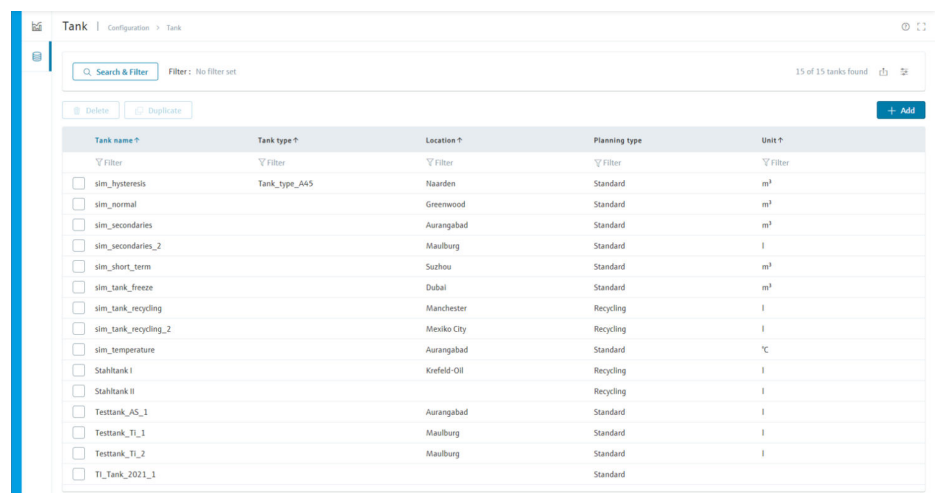
Depending on the particular user role, data records can be created in the master data.

SupplyCare provides different options for creating a data record: Using the setup wizard or by duplicating an existing data record (see "Duplicating master data").

The settings for a new data record can easily be selected by using the setup wizard. The setup wizard guides you step-by-step through the individual configuration pages. The settings can be changed subsequently via the corresponding tabs.

The data record of a tank is created in the following example. Proceed in the same way to create other data records.

1. In the  **Configuration** menu, click the **Tank** menu item.
 ↳ The working area shows the detailed view below:



The screenshot shows the 'Tank' configuration page with a table of 15 tanks. The 'Delete' button is enabled.

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
☐ sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
☐ sim_normal		Greenwood	Standard	m³
☐ sim_secondaries		Aurangabad	Standard	m³
☐ sim_secondaries_2		Maulburg	Standard	l
☐ sim_short_term		Suzhou	Standard	m³
☐ sim_tank_freeze		Dubai	Standard	m³
☐ sim_tank_recycling		Manchester	Recycling	l
☐ sim_tank_recycling_2		Mexiko City	Recycling	l
☐ sim_temperature		Aurangabad	Standard	°C
☐ Stahltank I		Krefeld-Oil	Recycling	l
☐ Stahltank II			Recycling	l
☐ Testtank_AS_1		Aurangabad	Standard	l
☐ Testtank_TI_1		Maulburg	Standard	l
☐ Testtank_TI_2		Maulburg	Standard	l
☐ TI_Tank_2021_1			Standard	

- Click the **+** **Add** button.

↳ The working area shows the 1st step in the setup wizard:

The screenshot shows the 'Add tank' configuration wizard. The breadcrumb trail is 'Configuration > Tank > Add tank'. The wizard has four steps: 1. Tank details (active), 2. Tank groups, 3. Device mapping, and 4. Tank linearization. The 'Organization' section includes fields for Tank name, Tank type, Product, Location, Buyer, and Supplier. The 'Visualization' section shows a warning icon and a message 'No tank picture selected'. The 'Analysis & Forecast' section includes SOT, ADI/ADO based on, and Forecast options. The 'Limits' section includes Planning type, Tank unit, Capacity, and various limit settings like Optimum, Plan point, Ship point, Safety stock, and Hysteresis. At the bottom right, there are buttons for 'Cancel', 'Finish', and 'Next'.

- Enter all mandatory data for the record.

i Mandatory data is marked with an *. All other data is optional and can be added subsequently. If all mandatory data for the data record is present, the **✓ Finish** button will be activated.

- Click the **Next** > button to go to the next step.

↳ The working area displays the next configuration page:

The screenshot shows the 'Add tank' configuration wizard, Step 2: Tank groups. The breadcrumb trail is 'Configuration > Tank > Add tank'. The wizard has four steps: 1. Tank details, 2. Tank groups (active), 3. Device mapping, and 4. Tank linearization. The main area displays a list of tank groups with checkboxes and a 'Filter' button. The groups are: Chemicals, Configtestgroup, Food and Beverage, NRW, Oil/Gas, Primaries, TL_Tanks_2021, and Waste Water. The 'Description' column shows 'Alle Tanks in NRW'. At the bottom left, there is a 'Previous' button. At the bottom right, there are buttons for 'Cancel', 'Finish', and 'Next'.

- Enter the data.

6. If additional configuration steps are available, click the **Next** > button to access the next steps:

The top screenshot shows the 'Add tank' configuration wizard at step 3, 'Device mapping'. It features a breadcrumb trail: 1. Tank details > 2. Tank groups > 3. Device mapping > 4. Tank linearization. A 'Clear all mappings' button is at the top left. The form is divided into four sections for tanks: Primary, Secondary[1], Secondary[2], and Secondary[3]. Each section contains fields for Name, Serial number, Device (a dropdown), Measurepoint (a dropdown), and Unit (for application) (a dropdown). The Primary tank's Unit is set to 'm³'. At the bottom, there are 'Previous', 'Cancel', 'Finish', and 'Next >' buttons. The 'Next >' button is highlighted in blue.

The bottom screenshot shows the same wizard at step 4, 'Tank linearization'. The breadcrumb trail is: 1. Tank details > 2. Tank groups > 3. Device mapping > 4. Tank linearization. The 'Previous' button is at the bottom left. The form has a 'Primary' section with a 'Linearization type' dropdown menu, which is currently set to 'No linearization'. At the bottom right, there are 'Cancel', 'Finish', and 'Next >' buttons. The 'Finish' button is highlighted in blue.

7. If necessary, click on the < **Back** button to return to the previous view.
8. Click the ✓ **Finish** button to confirm and complete the creation of the data record.

↳ The data record is saved and the setup wizard closes.
The working area shows the detailed view with the new data record.

 The setup wizard can be exited at any time with the ✕ **Cancel** button. The data record and the data entered are **not** saved.

4.7.9 Duplicating master data

Depending on the particular user role, data records can be duplicated in the master data. Data (fields) that are specific to the original data record in question will not be duplicated. These fields remain empty in the copied data record.

If the function is available, the  **Duplicate** button will be displayed.

The following example shows how to duplicate the data record for a tank. Proceed in the same way to create other data records.

1.
- 

Configuration menu, click the **Tank** menu item.
- ↳

The working area shows the detailed view below:

Tank | Configuration > Tank

Search & Filter

Filter: No filter set

15 of 15 tanks found

Delete

Duplicate

Add

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
Filter	Filter	Filter	Filter	Filter
☐ sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
☐ sim_normal		Greenwood	Standard	m³
☐ sim_secondaries		Aurangabad	Standard	m³
☐ sim_secondaries_2		Maulburg	Standard	l
☐ sim_short_term		Suzhou	Standard	m³
☐ sim_tank_freeze		Dubai	Standard	m³
☐ sim_tank_recycling		Manchester	Recycling	l
☐ sim_tank_recycling_2		Mexiko City	Recycling	l
☐ sim_temperature		Aurangabad	Standard	°C
☐ Stahltank I		Kiefeld-Oil	Recycling	l
☐ Stahltank II			Recycling	l
☐ Testtank_AS_1		Aurangabad	Standard	l
☐ Testtank_TI_1		Maulburg	Standard	l
☐ Testtank_TI_2		Maulburg	Standard	l
☐ TI_Tank_2021_1			Standard	

2.
- In the table, select the checkbox of the tank to be duplicated.
- ↳

The **Duplicate** button is enabled.

Tank | Configuration > Tank

Search & Filter

Filter: No filter set

15 of 15 tanks found

Delete

Duplicate

Add

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
Filter	Filter	Filter	Filter	Filter
☐ sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
☐ sim_normal		Greenwood	Standard	m³
☐ sim_secondaries		Aurangabad	Standard	m³
☐ sim_secondaries_2		Maulburg	Standard	l
☐ sim_short_term		Suzhou	Standard	m³
☐ sim_tank_freeze		Dubai	Standard	m³
☐ sim_tank_recycling		Manchester	Recycling	l
☐ sim_tank_recycling_2		Mexiko City	Recycling	l
☐ sim_temperature		Aurangabad	Standard	°C
☐ Stahltank I		Kiefeld-Oil	Recycling	l
☐ Stahltank II			Recycling	l
☐ Testtank_AS_1		Aurangabad	Standard	l
☐ Testtank_TI_1		Maulburg	Standard	l
☒ Testtank_TI_2		Maulburg	Standard	l
☐ TI_Tank_2021_1			Standard	

3.
- Click the **Duplicate** button.
- ↳

The setup wizard opens and contains the data of the selected data record.

Duplicate tank | Configuration > Tank > Add tank

1. Tank details

2. Tank groups

3. Device mapping

4. Tank linearization

Organization

Tank name *
sim_hysteresis
The tank name already exists. Please enter another name.

Tank type
Tank_type_A45

Product
Cement

Location
Naarden

Buyer
Another Company_Supplier

Supplier
None

Visualization



Analysis & Forecast

SDT
0 Days

ADI/ADO based on
14 Days

Negative values
☒ Exclude

Forecast
☒ Active

Short term forecast
☐ Inactive

Limits

Planning type *
Standard

Tank unit *
m³

Capacity *
2,400

☐ Optimum

☒ Plan point
1,200

☒ Ship point
1,000

☒ Safety stock
800

Hysteresis *
100

☐ Use product unit

Previous

Cancel

Finish

Next

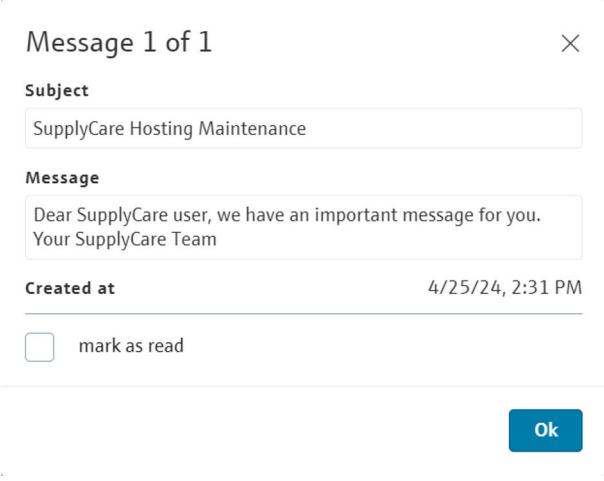
4.
- Enter data for the new data record.

5. Click the ✓ **Finish** button to confirm and complete the creation of the data record.
 - ↳ The data record is saved and the setup wizard closes.
 - The working area shows the detailed view with the new data record.

4.8 Receiving messages (messaging)

 All users can receive a notification message.

A system administrator notification is displayed the next time the user logs on.



You can edit messages using the following elements.

< Previous

This button is displayed if more than one message is present.

- ▶ Click the < **Previous** button to view and edit the previous message.

Next >

This button is displayed if more than one message is present.

- ▶ Click the **Next** > button to display and edit the next message.

Ok

- ▶ Click the **Ok** button to close the dialog box.

Mark as read

1. Select the **Mark as read** checkbox to mark the message as read.
2. Click the **Ok** button to save the change.

 Any message that has been marked as read and confirmed with **Ok** will disappear and no longer be shown the next time the user logs in.

5 Monitoring tanks – "Tank" workplace

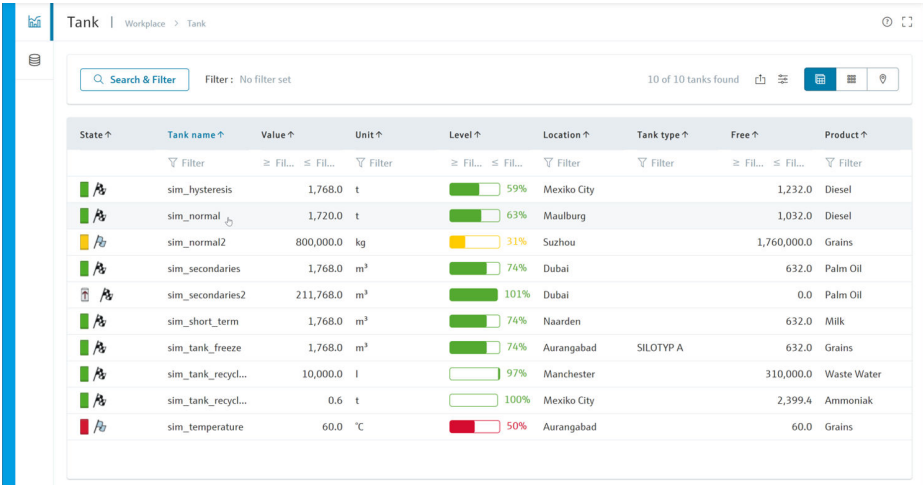
5.1 Showing tanks and associated information

-  The **Tank** menu item is available to people with **Read only**, **Scheduler** or **Operator** configured as their user role.
-  The **Notes and files**, **Tank partners**, **Location details**, **Event details** and **Freeze event details** tabs are displayed only if they contain at least one piece of information.
-  The time zone configured in the user preferences (see "Selecting and changing user preferences" section) is used for the **Tank** menu item. "Location" is used for the factory setting.
-  SupplyCare makes a distinction between standard tanks and recycling tanks. A standard tank is one from which a product is removed. For a recycling tank, the tank is filled with the product.

In the "Workplace – Tank" view, the current level or the available capacity is displayed graphically in the **Level** column. For standard tanks, the colored bar drifts from left to right as the level increases. The percentage corresponds to the current level. For recycling tanks, the colored bar drifts from right to left as the level increases. The percentage corresponds to the currently available capacity.

Displaying information about a tank

1. In the  **Workplace** menu, click the **Tank** menu item.
 - ↳ The working area shows the overview table of the tanks that are assigned to the user:



State	Tank name	Value	Unit	Level	Location	Tank type	Free	Product
	sim_hysteresis	1,768.0	t	 59%	Mexiko City		1,232.0	Diesel
	sim_normal	1,720.0	t	 63%	Maulburg		1,032.0	Diesel
	sim_normal2	800,000.0	kg	 31%	Suzhou		1,760,000.0	Grains
	sim_secondaries	1,768.0	m³	 74%	Dubai		632.0	Palm Oil
	sim_secondaries2	211,768.0	m³	 101%	Dubai		0.0	Palm Oil
	sim_short_term	1,768.0	m³	 74%	Naarden		632.0	Milk
	sim_tank_freeze	1,768.0	m³	 74%	Aurangabad	SILOTYP A	632.0	Grains
	sim_tank_recycl...	10,000.0	l	 97%	Manchester		310,000.0	Waste Water
	sim_tank_recycl...	0.6	t	 100%	Mexiko City		2,399.4	Ammoniak
	sim_temperature	60.0	°C	 50%	Aurangabad		60.0	Grains

2. Click a tank in the table for more details.

↳ Details of the selected tank are displayed in the working area:



3. Select one of the following tabs to display the information you want:

- Inventory chart
- Tank details
- Notes and files
- Tank partners
- Location details
- Tank service status
- Event details
- Download history

Changing between tanks

1. Click the **Next tank** > button in the header to display the details for the next tank from the tank list.
2. Click the < **Previous tank** button to display the details for the previous tank from the list.
3. Click the ← button in the header before the tank name to hide the details again and return to the tank list.

5.1.1 "Tank" overview table

The  button in the filters and display options area opens the **Data selection** dialog box. The data that is displayed in the table columns are selected in the dialog box. The order of the columns can be changed as desired.

The following data is available for the overview table:

Status

The symbol for the current tank status appears on the display. See also the "Symbols for tanks" chapter, "Status display" section.

Location

The location is the name of the tank location. The name is selected when the tank is configured in the **Configuration** menu in the **Tank** menu item, **Location** field. The location is configured in the **Configuration** menu in the **Location** menu item.

Tank name

Displays the tank name. Existing secondary values can also be displayed in the column.

- Primary value: The tank name for the primary value is entered when the tank is configured in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Tank name** field.
- Secondary value: The tank names for secondary values are entered in the **Configuration** menu, **Tank** menu item, **Secondary values** tab, **Name** field.

Tank type

The name of the tank type describes a configured tank type. Tank types are selected when the tank is configured in the **Configuration** menu, **Tank** menu item, **Tank type** field.

Tank types are configured in the **Configuration** menu, **Tank type** menu item.

Level

The current level is indicated as a symbol and a percentage.

Value

Displays the last valid primary value. Existing secondary values can also be displayed in the column.

- The "Value" field displays the last valid measured value.
- For aggregated tanks, the sum of the valid measured values for the associated tanks is displayed. Tanks that have the "Out of service" status are not included. If all associated tanks are "Out of service", "0" will be displayed as the value.
- **Manual values** are displayed in blue and followed by the text **MAN**. This also applies if a manual value is used for a tank that is part of an aggregated tank.

Unit

Displays the unit. Existing secondary values can also be displayed in the column.

- The unit for the primary measured value is selected in the **Configuration** menu, **Tank** menu item, **Tank details** tab. The units for the other measured values (secondary values) are selected in the **Configuration** menu, **Tank** menu item, **Device mapping** tab.
- For **Units of mass**, **Units of volume** and **Units of length**, the preferences in the user profile under the **User preferences** menu item take priority over the setting in the **Configuration** menu under the **Tank** menu item.

Data source

Displays information about the data and whether the data comes from a measured source or has been manually entered.

Free

The free capacity of the tank. The free capacity is calculated as follows: Capacity minus current value.

Product

The product name is selected when the tank is configured in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Product** field.

The product is configured in the **Configuration** menu in the **Product** menu item.

Tank notes

Displays whether tank and/or location notes are available.

Optimum

The optimum inventory of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Optimum** field.

Free to optimum

Displays the amount that is still free until the optimum is reached. The value is calculated from the current inventory. If the current inventory is equal to or greater than the optimum inventory, the value "0" is displayed. For standard tanks for which no optimum has been specified, no value is displayed; the same applies to recycling tanks.

Capacity

The capacity of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Capacity** field.

Plan point (PP)

Plan point of the tank. Existing secondary values can also be displayed in the column. The plan point of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Plan point** field.

The value entered in the **Secondary values** tab is used here for secondary values.

Ship point (SP)

- The ship point of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Ship point** field.
- If the **Recycling** planning type is selected, the ship point will not be displayed.

Safety stock (SST)

Safety stock for the tank. Existing secondary values can also be displayed in the column.

- The safety stock of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Safety stock** field.
- The value entered in the **Secondary values** tab is used here for secondary values.

Hysteresis

The hysteresis serves to prevent constant event messages , e.g. due to a fluctuating level. Existing secondary values can also be displayed in the column.

The hysteresis of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Hysteresis** field.

Out of service

The field is activated (displays an X) if the tank is currently "out of service".

From date

Displays the date as of which a tank was, is or will be "Out of service".

To date

Displays the date until which a tank was, is or will be "Out of service".

Supplier

Displays the responsible supplier. The supplier is created as a company.

Buyer

Displays the buyer. The buyer is created as a company.

Buyer ID

Is equivalent to the **Identifier** field in the **Company details** tab in the **Configuration** menu, **Company** menu item.

SDT (standard delivery time/standard disposal time)

The standard delivery time (standard tank) or standard disposal time (recycling tank) for the tank is specified in the **Configuration** menu in **Tank** menu item, **Tank details** tab, **STD** field.

Time unit

Time unit used for the **SDT** field (standard delivery time/standard disposal time).

Time stamp

Time stamp for the last measured value. The field can also be displayed for existing secondary values.

- The time stamp of the time zone for the last valid measured value is used. Also see the **Time zone** field.
- In the case of aggregated tanks, the time stamp from the associated tank which supplied the most recent measured value is used.

Time zone

Time zone of the time stamp. The field can also be displayed for existing secondary values. The time zone defined in the user preferences is used.

DSST (days(s) until reaching safety stock)

Displays the estimated number of days remaining until the safety stock is reached. The value is calculated with the average amount per day. The average calculated quantity is based on the "ADI/ADO based on" value.

PD (planned delivery/planned disposal)

For standard tanks, the date and time for the next planned delivery are displayed. For recycling tanks, the date and time for the next planned disposal are displayed. If no delivery or disposal has been planned, the field will remain empty.

The time zone defined in the user preferences is used.

PD amount (amount for planned delivery/amount for planned disposal)

Amount for the planned delivery or disposal. The unit corresponds to the unit in the **Unit** column.

Scaled value

Level measured values can be displayed in a scaled format (with units) in the tank overview.

Monetary value

Monetary value of the tank content, calculated on the basis of the specified price in the **Configuration** menu, **Product** menu item, **Product details** tab.

Data 1 (tank) ... Data 3 (tank)

Supplementary information on tanks that the user can edit in the **Tank notes** tab. The **Tank notes** tab with the entry fields can be found in the **Configuration** menu under the **Tank** menu item.

Latitude (GPS)

Geographical coordinates of the tank, silo or object, specified in the degree of **width** (decimal stage, GPS).

The value is only displayed if the **GPS data** change-over switch is activated in the **Configuration** menu, **Tank** menu item, **Tank details** tab.

Longitude (GPS)

Geographical coordinates of the tank, silo or object, specified in the degree of **length** (decimal stage, GPS).

The value is only displayed if the **GPS data** change-over switch is activated in the **Configuration** menu, **Tank** menu item, **Tank details** tab.

5.1.2 Inventory chart

The **Inventory chart** tab displays the inventory chart. The historical and expected pattern for the inventory is displayed in the chart for the period selected. The division is $\frac{2}{3}$ for the history (measured values) and $\frac{1}{3}$ for extrapolation (calculated values).

Planned deliveries (recycling tank: Disposals) that are still in the future are also included in the calculated value (forecast) and displayed.

If the tank is out of service, the inventory chart is displayed with a darker background for the period of tank downtime (see the "Displaying tank downtimes in the inventory chart" section).



The  **Display** button will open the settings for the chart.

Scaling drop-down list box

Choice between min./max. scaling and automatic scaling.

If "Min/Max" is chosen, the inventory will be displayed between "0" and "Capacity".

"Automatic" shows the inventory between the smallest and largest displayable value – including forecast values.

Period selection drop-down list box

Selecting the time period for the inventory chart

Parameters list field

Use this function to select the parameter that is to be displayed in the inventory chart.

Several parameters can be selected at the same time.

The current limit values are specified as horizontal lines in different colors:

	Standard tanks: Range between capacity and the plan point Recycling tanks: Range between the empty state (value 0) and the plan point limit value
	Standard tanks: Range between the plan point and ship point limit values Recycling tanks: Range between the plan point and safety stock limit values
	Standard tanks: Range between the ship point and safety stock limit values Recycling tanks: Not available
	Standard tanks: Range between the limit values for the ship point and empty state (value 0) Recycling tanks: Range between the safety stock and capacity limit values

Buttons for selecting the time period

	The displayed time period is moved forward by the time period (into the past) selected in the period selection.
	The displayed time period is moved forward by 1 day (into the past).
Today	Shows the default view with the current date.
	The time period displayed is moved backward by 1 day (into the future).
	The displayed time period is moved backward by the time period selected in the period selection (into the future).

Printing the inventory chart

The chart displayed can be saved as a graphics file (PNG file).

► Click the  button.

↳ The file "[Tank name]_InventoryChart.png" is downloaded and saved in the "Downloads" folder.

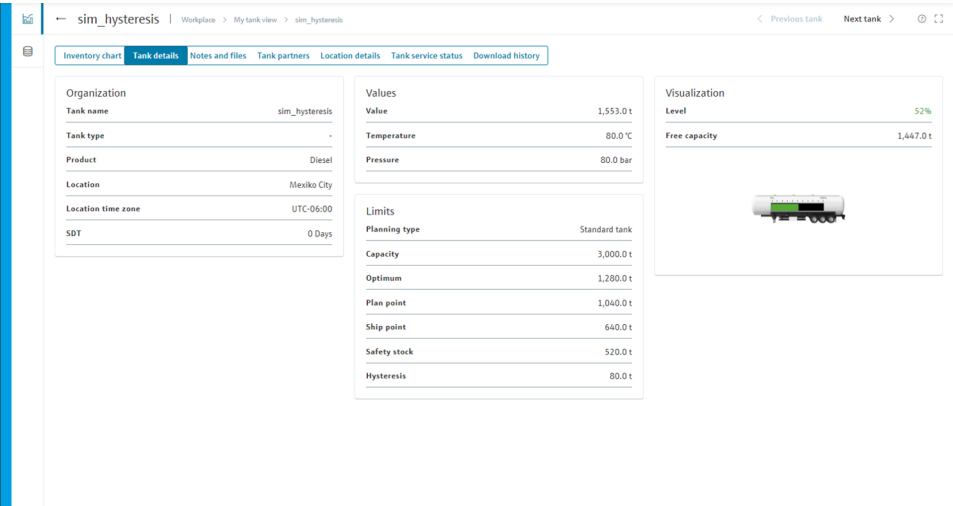
Zoom in the period: See the "Zooming in the inventory chart" section.

5.1.3 Tank details

The **Tank details** tab displays information about:

- Tank
- Values (primary value and secondary values)
- Limit values
- Visualization (level and free capacity)

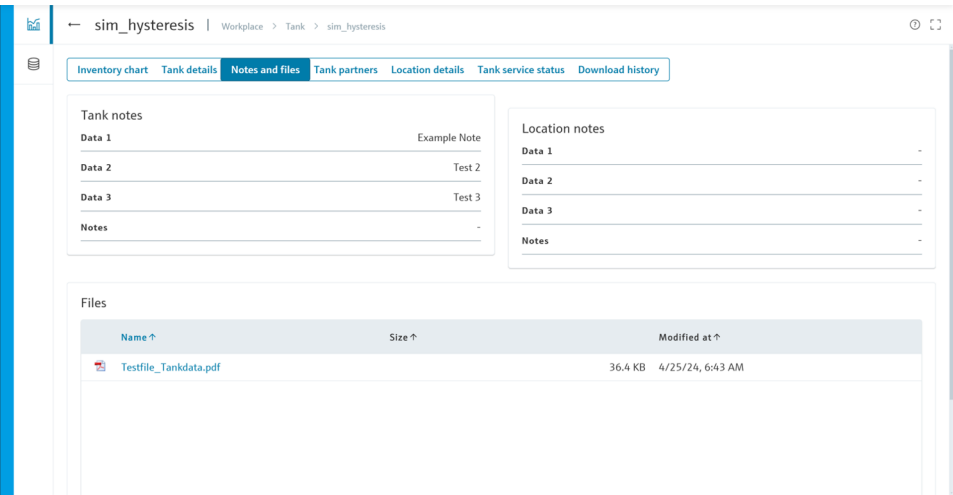
Secondary values are only displayed if secondary values are assigned to the tank.



 The displayed data is described in the "Tank overview table" section.

5.1.4 Notes and files

Notes, data and files pertaining to the tank and location are displayed in the **Notes and Files** tab.



Saving and opening files locally

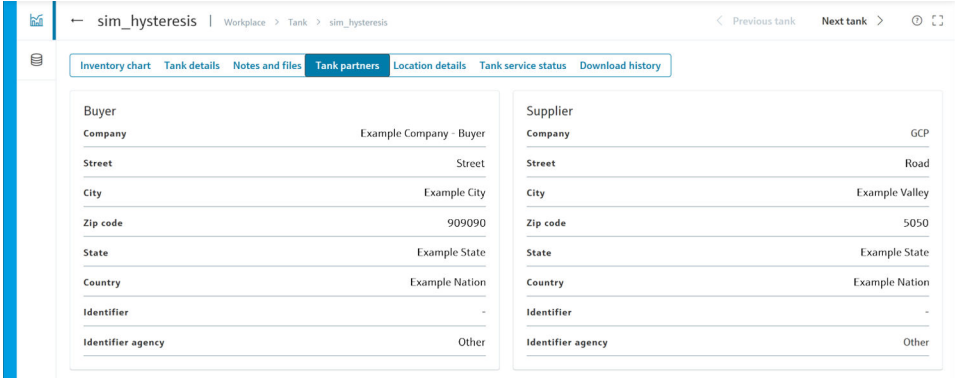
1. Click the relevant file in the table.
 - ➔ The file is downloaded and saved in the "Downloads" folder.
2. Navigate to the "Downloads" folder on the local hard drive and open the file.
3. Alternatively, click on the  "Downloads" button in the browser window to display the current status of the download.

4. Click the  "Show in folder" button to open the "Downloads" folder or click the  "Open" button to display the file directly in the browser.

 The buttons are displayed differently depending on the browser that is used.

5.1.5 Tank partners

The **Tank partner** tab displays information about the buyer and supplier. If no buyer or supplier has been assigned to the currently selected tank, the tab will not be visible.

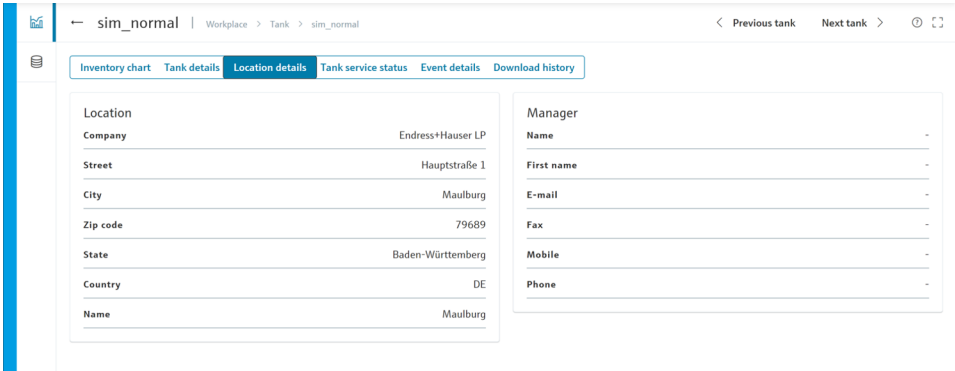


Buyer		Supplier	
Company	Example Company - Buyer	Company	GCP
Street	Street	Street	Road
City	Example City	City	Example Valley
Zip code	909090	Zip code	5050
State	Example State	State	Example State
Country	Example Nation	Country	Example Nation
Identifier	-	Identifier	-
Identifier agency	Other	Identifier agency	Other

 The tank partners, buyer and supplier are assigned to the tank via the **Configuration** menu in the **Tank** menu item, **Tank Details** tab (see the "Creating a tank" section).

5.1.6 Location details

In the **Location details** tab, information about the tank location is displayed.



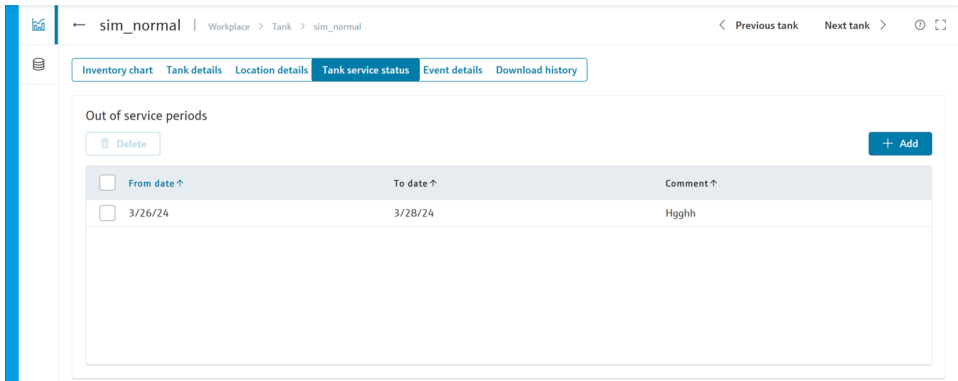
Location		Manager	
Company	Endress+Hauser LP	Name	-
Street	Hauptstraße 1	First name	-
City	Maulburg	E-mail	-
Zip code	79689	Fax	-
State	Baden-Württemberg	Mobile	-
Country	DE	Phone	-
Name	Maulburg		

 The location is assigned to the tank via the **Configuration** menu,, **Tank** menu item, **Tank details** tab (see the "Creating a tank" section).

5.1.7 Tank service status

In the **Tank service status** tab, information on the tank service is displayed.

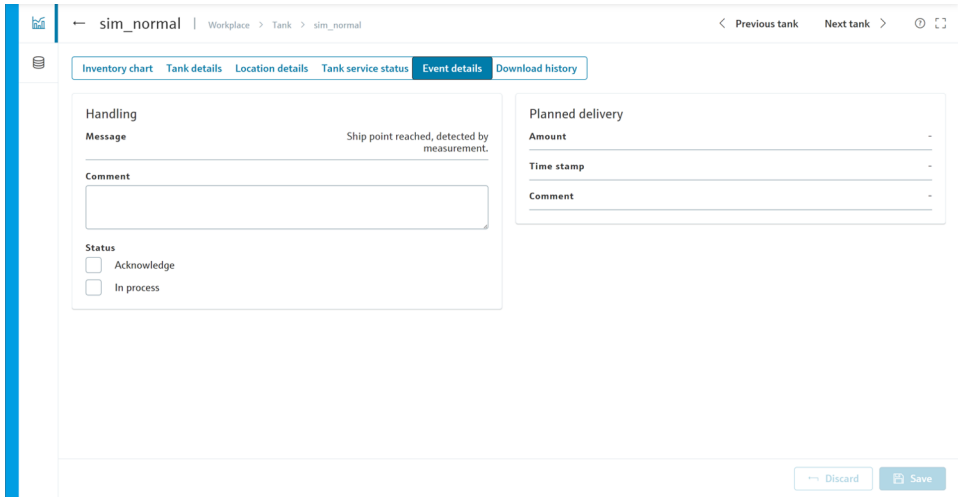
Edit tank service status: See the "Editing the tank service status" section.



5.1.8 Event details

The event details for the currently applicable event, e.g. "Ship point reached", for the selected tank are shown in the **Event details** tab. If no event is applicable for the currently selected tank, the tab will not be visible.

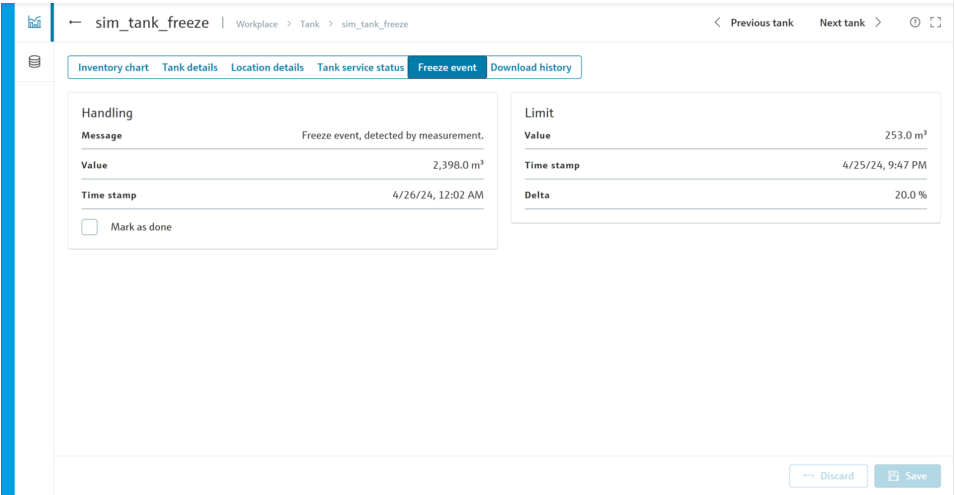
For a description of the **Event details** tab, see the "Event details" chapter.



5.1.9 Freeze event

The event details for the currently applicable freeze event for the selected tank are shown in the **Freeze event** tab. If no freeze event is applicable for the currently selected tank, the tab will not be visible.

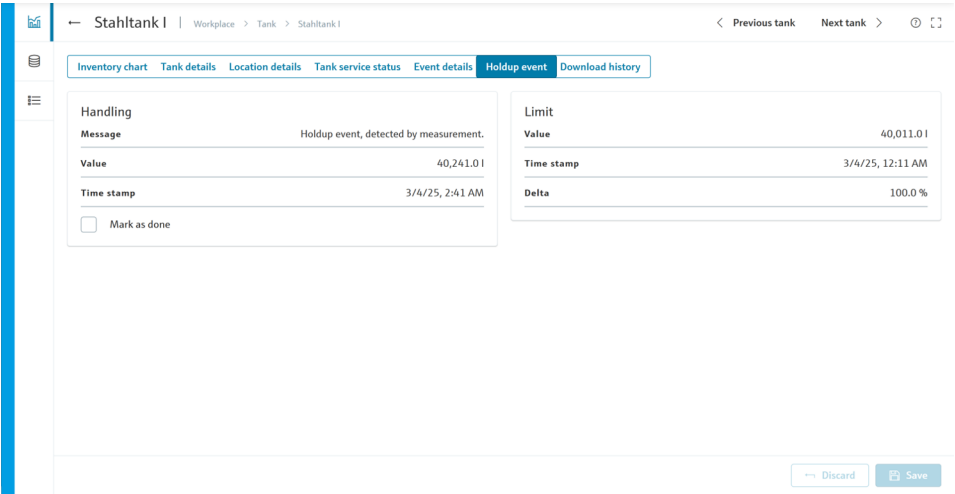
For a description of the **Freeze event** tab, see the "Freeze event" chapter.



5.1.10 Holdup event

The event details for the currently applicable holdup event for the selected tank are shown in the **Holdup event** tab. If no holdup event is pending for the currently selected tank, the tab will not be visible.

For a description of the **Holdup event** tab, see the "Holdup event" section.



5.1.11 Constituent tanks

In the **Constituent tanks** tab, information about all the associated tanks for the selected aggregated tank is displayed. This tab will only be visible if an aggregated tank has been selected.

Aggregierter Beispieltank

Workplace > Tank > Aggregierter Beispieltank

Previous tankNext tank

Inventory chartTank detailsTank partnersLocation detailsTank service statusDownload historyConstituent tanks

myConstituantTank_01

State	Overfill
Value	131,590.0 l
Free capacity	0.0 l

myConstituantTank_02

State	Ok
Value	1,589.0 l
Free capacity	811.0 l

myConstituantTank_03

State	Ok
Value	1,589.0 l
Free capacity	811.0 l

5.2 Editing the tank service status

- i

Only users with the **Operator** user role can specify or change the service status of a tank. All other user roles can only read this tab.
- i

Multiple out of service periods can be entered, but only one out of service period per day. The out of service periods must not overlap. A new tank downtime period can only begin on a date that has not been entered as the To date for a previous period of tank downtime.

If a tank is out of order for a service, this is shown in the tank overview table by means of the  symbol for individual tanks and the  symbol for aggregated tanks. Measured values are no longer updated. Notifications of tank events are no longer created.

Adding tank downtime

1.

In the  **Workplace** menu, click the **Tank** menu item.

The working area displays an overview table of the tanks that are assigned to the user.
2.

Click on the tank in question to edit the tank service status.
3.

Select the **Tank service status** tab.

The working area displays the overview table with the **"Out of service" periods**.

sim_normal

Workplace > Tank > sim_normal

Previous tankNext tank

Inventory chartTank detailsLocation detailsTank service statusEvent detailsDownload history

Out of service periods

Delete

Add

☐	From date ↑	To date ↑	Comment ↑
☐	3/26/24	3/28/24	Hgghh

4. Click the **+** **Add** button.
 - ↳ The dialog box for **"Out of service" period** appears.

Out of service period ×

From date *

4/3/25

To date *

4/3/25

Comment

× Cancel Save

5. Select the period for which the tank is out of service. Either enter the date directly in the **From date** and **To date** fields or use the date dial. Use the format of dd.mm.yy when entering dates directly.
6. Optional: Enter a comment in the **Comment** field.
7. Click the **Save** button to save the tank downtime in the list.
 - ↳ The dialog box is closed and the tank downtime is displayed in the table.

Changing the tank downtime

1. Click on the corresponding downtime period.
 - ↳ The dialog box for **"Out of service" period** appears.
2. Enter the **From date** and **To date**. Make sure that entered tank downtime periods do not overlap with one another.
3. Click the **Save** button to save the change.
 - ↳ The tank downtime is saved and displayed in the table.

sim_normal | Workplace > Tank > sim_normal

Inventory chart Tank details Location details Tank service status Download history

Out of service periods

Delete Add

From date ↑	To date ↑	Comment ↑
3/26/24	3/28/24	Hgghh
4/26/24	4/30/24	Test documentation

If the specified tank downtime period overlaps with another tank downtime period, SupplyCare will display an error message. The change will not be saved.

Error ×

Following errors have occurred:

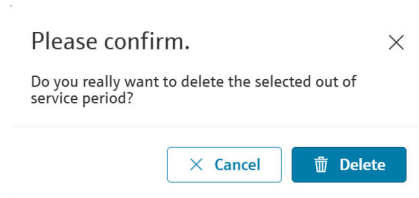
- Out of service period may not overlap any other!

Ok

4. Click **Ok** to confirm the error message. Re-enter the data in the **From date** and/or **To date** fields as described above.

Deleting the tank downtime

1. Tick the check box before the corresponding period of tank downtime.
2. Click the  **Delete** button.
 - ↳ The confirmation prompt appears.

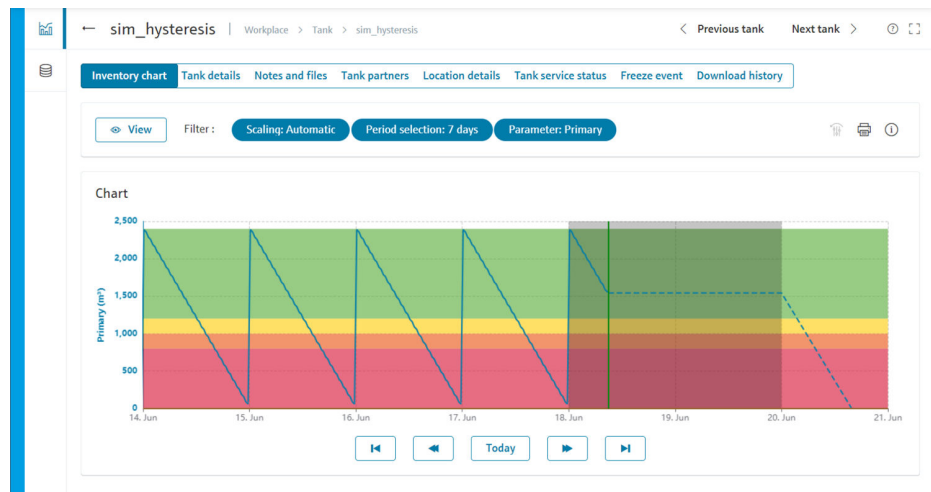


3. Click the  **Delete** button to confirm the deletion.
4. Alternatively, click on the  **Cancel** button to cancel the deletion.

5.2.1 Displaying tank downtime periods in the inventory chart

 Tank downtime periods in the past, the present and the future are displayed in the **Inventory chart** tab under the **Tank** menu item. The forecast value is displayed as a horizontal line during tank downtime periods. The inventory chart is displayed with a darker background for the period of tank downtime.

1. In the  **Workplace** menu, click the **Tank** menu item.
 - ↳ The working area displays an overview table of the tanks that are assigned to the user.
2. Click on the tank in question to display the tank downtime periods in the inventory chart.
3. Select the **Inventory chart** tab.
 - ↳ The working area shows the detailed view below:



The inventory chart displays 1 tank downtime period in the future.

Print inventory chart:  (see the "Inventory chart" section).

5.3 Download history

Via the **Download history** tab, the user has the option to save the measured value history for all tanks displayed in the overview or for a tank selected from the overview as a CSV file.

The CSV file contains the following data: Tank name, time stamp, value, unit, optimum, plan point, ship point, safety stock and measuring point. If a value has been configured manually, it will be marked with the suffix **MAN**.



This function is only available on the desktop version.

1. In the **Workplace** menu, click the **Tank** menu item.
 - ↳ The working area displays an overview table of the tanks that are assigned to the user.
2. Click on the tank in question to save the history as a CSV file.
3. Select the **Download history** tab.
 - ↳ The working area shows various settings for data logging.

The screenshot shows the 'Download history' settings panel for a tank named 'sim_hysteresis'. The panel includes the following settings:

- From date***: 4/26/24
- To date***: 4/26/24
- Format***: MS Excel(CSV - Semicolon ";")
- Readings (max)***: 500
- Number of readings**: 35
- Export selected tank only**: On
- Export in local tank timestamp**: Off
- Include secondary values**: Off
- Secondaries as***: Separate line per data
- Include scaled values**: Off

4. Select the time period in the past for which data will be downloaded. Either enter the date directly in the **From date** and **To date** fields or use the date dial. Use the format of dd.mm.yy when entering dates directly. The "UTC + 00:00" time zone is used for the From date and To date.
5. Select the **format**: **MS Excel (CSV - semicolon ";")**, **MS Excel (CSV - Comma ",")** or **MS Excel (CSV - TAB)**.
6. Enter the maximum number of main measured values (primary values) per tank in the **Entries (max.)** field.
7. The **Export selected tank only** change-over switch is enabled by default to download only the data from the selected tank. Disable the change switch to download the data from all the tanks shown in the table.
8. Optional: Enable further change-over switches.
 - ↳ **Export in local tank timestamp**: Shows the export timestamp in the local time of the tank location. If the local time of the tank location is not available, it will be exported in UTC with the time stamp.
 - Include secondary values**: The secondary values will be downloaded. This information is only relevant when downloading the data for an Excel file. In the drop-down list, choose between the options **Separate line per data** or **Single line full data**.
 - Include scaled values**: The scaled values are downloaded.

9.  **Download history** button for downloading measured values as an Excel spreadsheet.
-  The language used in the header of the CSV file depends on the language setting of the browser.
-  The table is sorted first by tank name, then by time stamp. The "UTC + 00:00" time zone is always used for the time stamp.
-  The date and time are displayed in the factory as follows: yyyy-mm-dd, hh:mm:ss

5.4 Show secondary values

Various measuring devices offer the possibility to record other measured variables (secondary values) in addition to the main measured variable (primary value).

If a tank has also been assigned secondary values, these values can be shown or hidden in multiple views. A maximum of one primary value and 8 secondary values can be assigned to a tank.

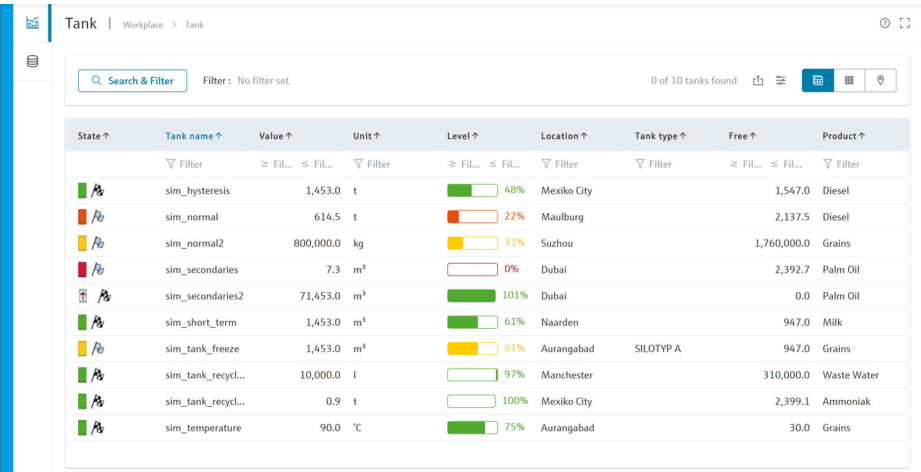
-  The units for secondary values are specified in the Configuration menu → Tank in the **Device mapping** tab in the **Unit (for application)** field.

5.4.1 Viewing secondary values in the overview table in the "Tank" menu item

-  The secondary values are hidden by default. The setting depends on the user's contract.

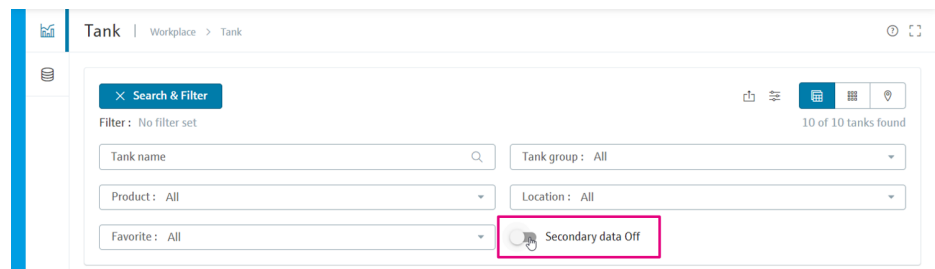
Show secondary values

1. In the  **Workplace** menu, click the **Tank** menu item.
 - ↳ The working area displays the overview table of the tanks that are assigned to the user.



State ↑	Tank name ↑	Value ↑	Unit ↑	Level ↑	Location ↑	Tank type ↑	Free ↑	Product ↑
	sim_hysteresis	1,453.0	t	 48%	Mexiko City		1,547.0	Diesel
	sim_normal	614.5	t	 22%	Maulburg		2,137.5	Diesel
	sim_normal2	800,000.0	kg	 31%	Suzhou		1,760,000.0	Grains
	sim_secondaries	7.3	m³	 0%	Dubai		2,392.7	Palm Oil
	sim_secondaries2	71,453.0	m³	 101%	Dubai		0.0	Palm Oil
	sim_short_term	1,453.0	m³	 61%	Naarden		947.0	Milk
	sim_tank_freeze	1,453.0	m³	 61%	Aurangabad	SILOTYP A	947.0	Grains
	sim_tank_recycl...	10,000.0	l	 97%	Manchester		310,000.0	Waste Water
	sim_tank_recycl...	0.9	t	 100%	Mexiko City		2,399.1	Ammoniak
	sim_temperature	90.0	°C	 75%	Aurangabad		30.0	Grains

2. Click the **Search & Filter** button.
 - ↳ The field expands downward to show the filter selection options.



3. Enable the switch for **secondary data**.
 - ↳ All the associated secondary values are displayed below the relevant tanks. If available, the following data is displayed for the secondary values: Status, tank name, value, unit, hysteresis, limit 1 and limit 2, time stamp and data source.
4. Alternatively: Deactivate the **Secondary data** change-over switch to hide the secondary data.

5.4.2 Showing secondary values in the inventory chart

- i** Users with the **Master data** user role can specify a name for the secondary value (see the "Configuring secondary values" section) via the **Secondary values** tab in the Configuration menu → Tank. The name is used in the overview table for the button and the graph. If no name has been entered, the secondary values are given the default names Secondary[1], Secondary[2], Secondary[3], Secondary[4], Secondary[5], Secondary[6], Secondary[7] and Secondary[8].
- i** The secondary values are hidden by default. The setting depends on the user's contract.

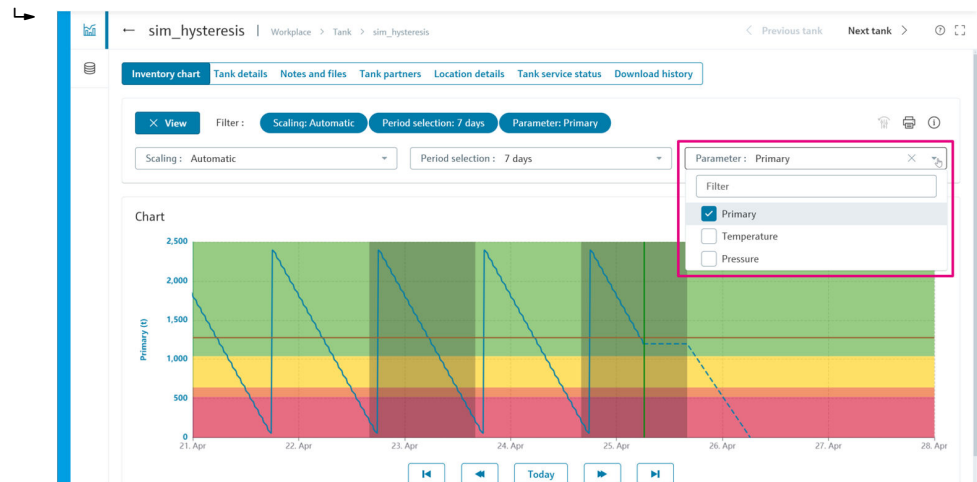
Show secondary values

1. In the **Workplace** menu, click the **Tank** menu item.
2. Click on the tank in question to display the inventory chart.
 - ↳ The working range displays the inventory chart with the graph for the primary value.



3. Click the **Display** button above the chart.
 - ↳ The field expands downward and displays the **Scaling**, **Period selection** and **Parameter** drop-down list boxes.

- Click the **Parameters** list or the ▼ list button to view the primary value and all secondary values that are assigned to the tank.



- Activate the check box for a parameter to display the graph.
 - The selected parameter is displayed in the **Parameters** list and next to the **Filter:** screen.
 - Alternatively, untick the check boxes of a parameter in order to hide the graph.
- i** The number of active check boxes is not restricted. All the activated parameters are displayed in a graph. The Y-axis of secondary values is displayed on the right-hand side of the graph.
 - i** If you move the cursor over the graph, the specific value and time stamp are displayed for the individual point on the graph.
 - i** Once you exit the inventory chart, all set filters will be reset to their default values.

Print inventory chart: (see the "Inventory chart" section).

5.4.3 Show limits or span limits of secondary values

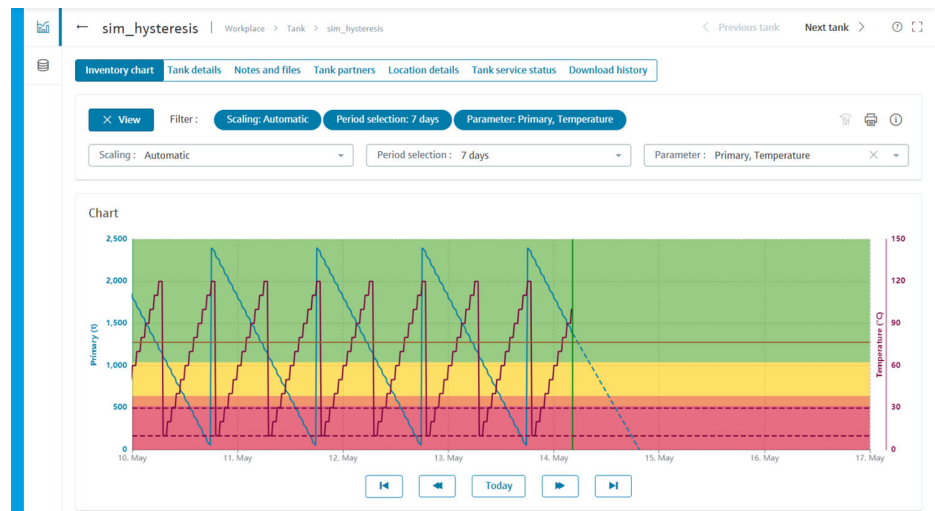
Set limits or span limits of secondary values are displayed in the inventory chart. If a secondary value exceeds set limits or span limits, this will lead to status changes and messages being triggered. This helps the user to monitor the secondary values. See the "Event management" and the "Setting up notifications (messaging)" sections for more information.

- i** Via the **Secondary values** tab in the Configuration menu → Tank, users with the **Master data** user role can set limits or span limits (see the "Configuring secondary values" section).

Show limits or span limits

- In the **Workplace** menu, click the **Tank** menu item.
- Click on the tank in question to display the inventory chart.

3. Select the secondary value (see the "Showing secondary values in the inventory chart" section).
 - In addition to the graph for the primary value, the inventory chart will display the graphs for the secondary value and the span limits.



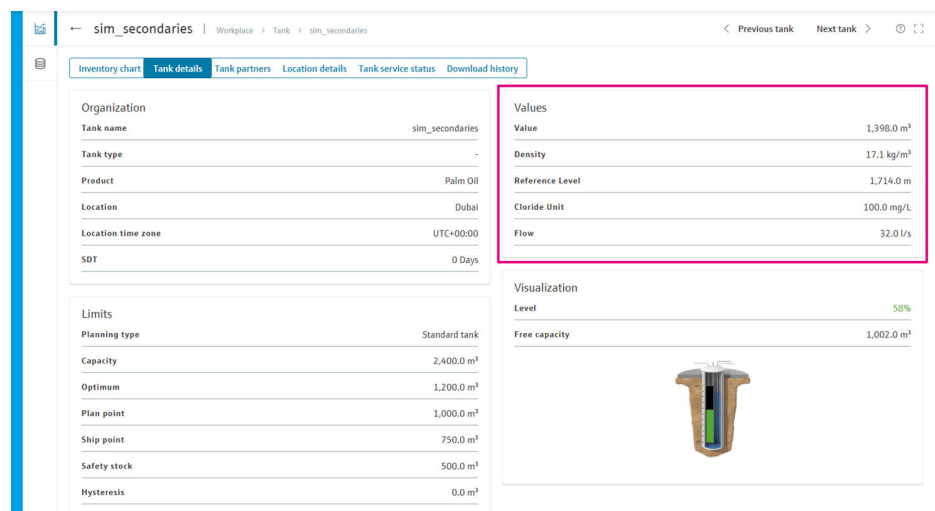
- i** The primary value can also be hidden and only the secondary values are displayed.
- i** If you move the cursor over the graph, the specific value and time stamp are displayed for the individual point on the graph.
- i** Once you exit the inventory chart, all set filters will be reset to their default values.

Print inventory chart: (see the "Inventory chart" section).

5.4.4 Showing secondary values in the "Tank details" tab

Show secondary values

1. In the **Workplace** menu, click the **Tank** menu item.
2. Click the tank in question to display the secondary values.
3. Select the **Tank details** tab.
 - The working area displays the tank details.



The secondary values are displayed in the **Values** field below the **Value** (primary value) line.

Secondary values are not displayed in the following cases:

- No secondary values are assigned to the selected tank.
- The tank has supplied an incorrect measured value.

5.5 Showing historical values and forecast values in the inventory chart

The inventory chart displays the values measured up to the present date with a continuous line and the values calculated from the present date with a dotted line. Forecast values are not available for secondary values.

In the case of standard tanks, the forecast values are calculated from the "Average daily outflow" value. In the case of recycling tanks, the forecast values are calculated from the "Average daily inflow" value.

Several planned deliveries (recycling tank: Disposals) in the future are also included in the calculated value (forecast) and displayed.



The inventory chart offers the following additional functionalities:

Moving over a graph (mouseover)

Additional information is displayed if the cursor is moved over a graph in the inventory chart. If the point in the graph is in the past, the "Inventory" window will appear with information on the measured value and the time stamp. If the point in the graph is in the future, the "Forecast" window will appear with information on the calculated value and the time stamp.



Click on a point on the graph

If you click on a point in the graph with the cursor, a dialog box will appear. For the values measured in the past, the **Previous value** dialog box will appear. For calculated values in the future, the **Forecast value** dialog box will appear. For the last measured value received, the **Current value** dialog box will appear.

Historical value		×
Time stamp	5/12/24, 1:02 AM	
Value	1,653.8 t	
< Previous		Next >

Time stamp

Displays the date and time of the value.

Value

Shows the measured value for the past and the calculated value for the future.

Navigating in the dialog box

- 1. Click the < **Back** button to view older measuring points.
- 2. Click the **Next** > button to view more recent measuring points.

i To view the measuring points that are further back, the number of days specified in the **Period selection** dropdown list box must be changed (see the "Showing secondary values in the inventory chart" section).

5.5.1 Short term forecast

The short term forecast is a second forecast line in the inventory chart, which is calculated based on the last few hours of data. The period can be defined individually between 1 and 12 hours.



i The display of the short term forecast is disabled by default. The short-term forecast and its own time period are activated by Endress+Hauser. In order to display the short-term forecast for a specific tank, the short-term forecast must also be activated in the Configuration menu → Tank in the **Tank details** tab.

i Only users with the **Master data** user role can activate the short-term forecast.

Activating the short term forecast for a tank

1. In the **Configuration** menu, click the **Tank** menu item.
2. Click on the tank in question to activate the short term forecast.
3. Select the **Tank details** tab.
 - ↳ The working area displays the tank details.

4. Enable the switch for **short term forecast**.
5. In the **Short term forecast period** entry field, enter the number of hours that should be used to calculate the short term forecast.
6. Click the **Save** button to save the changes.

The **Discard** button will undo changes if the changes are not saved. Changes that have already been saved cannot be undone.

5.6 Zooming into the inventory chart

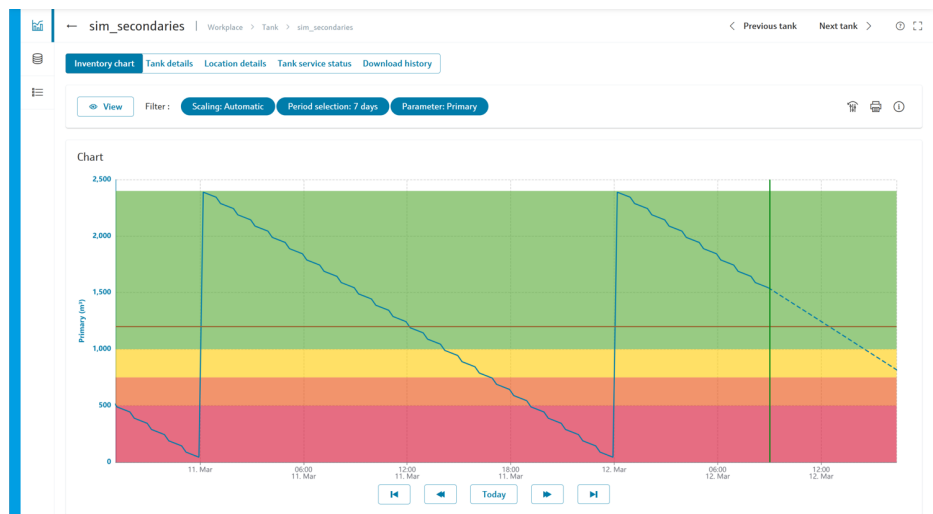
You can zoom to an area within the inventory chart to get a closer look at the data.

Zooming into an area

1. Left-click and hold on the desired starting point.
2. Move the mouse to the left or right to select the area.
 - ↳ The selected area is marked with a light background.



3. If the desired area is marked, release the left mouse button.
 - ↳ The inventory chart with the selected area is loaded.



4. Click the **Today** button to exit the zoom area.
 - ↳ The inventory chart is shown in the standard view.

 The mouse wheel can be used to zoom in or out inside the inventory chart.

 If the mobile version is used on a touchscreen device, you can zoom in and out of the inventory chart using two fingers.

5.7 Planning delivery and disposal via the inventory chart

-  Only users with the **Scheduler** user role can plan deliveries for standard tanks and disposals for recycling tanks.
-  This function is only available on the desktop version.

You can zoom to an area within the inventory chart to get a closer look at the data.

Planning a delivery or disposal

1.

In the  **Workplace** menu, click the **Tank** menu item.
2.

Click the tank in question to plan a delivery or disposal.
3.

Select the **Inventory chart** tab.
4.

Click on the graph at the location in the inventory chart for the required date to plan a delivery or disposal. The planned date must be in the future.

➔ The **Forecast value** dialog box appears.

Forecast value

×

Time stamp

3/12/25, 12:00 PM

Value

1,245.4 m³

< Previous

 Plan delivery

Next >

5.

Click the  **Plan delivery** (standard tanks) or **Plan disposal** (recycling tanks) button.

➔ For standard tanks, the **Plan delivery** dialog box will appear. For recycling tanks, the **Plan disposal** dialog box will appear.

Plan delivery

×

Tank name

sim_secondaries2

Forecast value

127,512.6

Range

13 day(s)

Delivery date and time *

 6/19/24

 10:00

Amount *

in m³

1200

Comment

×

Cancel

 Save

6.

Enter the **Delivery date and time**. Enter the date and time directly or select them via the date selector  and the time selector .
7.

Enter the planned **Amount**.
8.

Optional: Enter a comment or a note in the **Comment** field.
9.

Click the  **Save** button to save your changes.

➔ A delivery van icon  indicates the planned delivery or disposal in the inventory chart.

Tank name
Name of the selected tank.

Forecast value

Forecast level.

Depending on the contract: The calculation of the forecast level for each new planned delivery or disposal also takes into consideration existing, planned deliveries or disposals. If this function is not available and should be activated, please contact Endress+Hauser: www.addresses.endress.com.

Range

Displays the number of days before the safety stock is reached for the amount entered. In the case of standard tanks, the number of days is calculated from the "Average daily outflow" value. In the case of recycling tanks, the number of days is calculated from the "Average daily inflow" value.



If the cursor is moved over the  symbol, information on the planned delivery or planned disposal is displayed with the date and time.

6 Displaying personalized tank overview – "My tank view" workplace

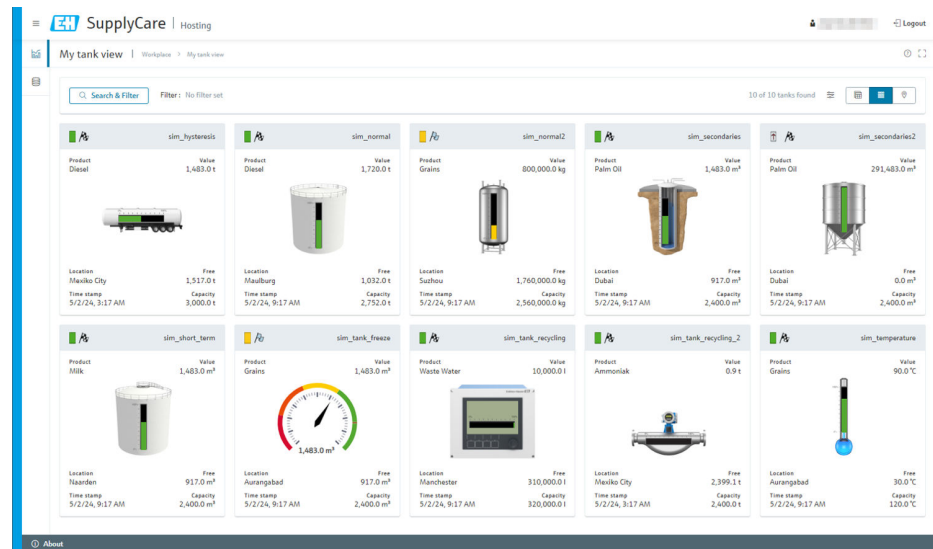
The personalized tank view shows the tanks that have been assigned to the user via the **Tank groups** tab.

Path: Configuration → User → Tank groups

 The **My tank view** menu item is available to people with the **Read only**, **Scheduler** or **Operator** configured as their user role.

Show personalized tank view

1. In the  **Workplace** menu, click the **My tank view** menu item.
 ↳ The working area shows a list of the tanks associated with the user:



In the default setting, the following primary data is displayed for each tank, if present:

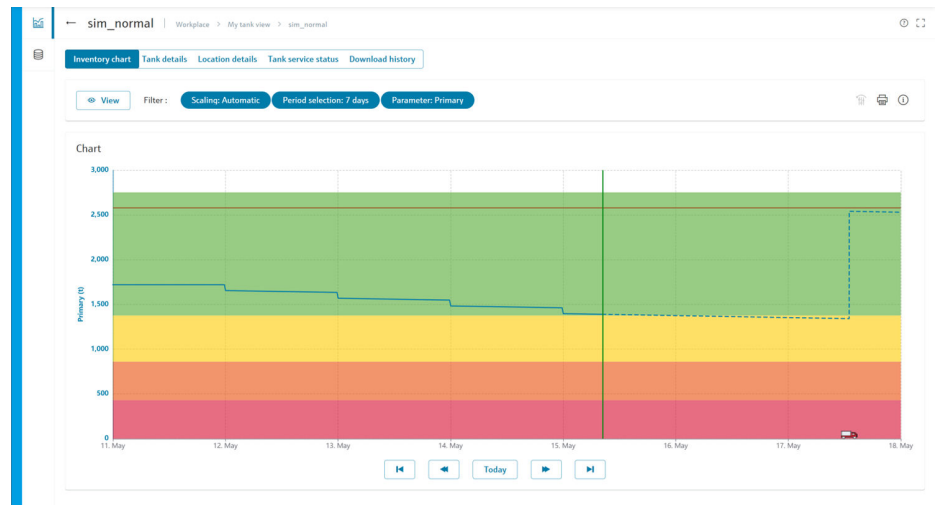
- Tank name
- Product
- Value with unit
- Location
- Time stamp
- Free capacity with unit
- Capacity with unit

The displayed data can be freely configured (see the "Configuring my tank view" section).

 The tank display can be filtered by **Tank name**, **Tank group**, **Product**, **Location** and **Favorite** from the drop-down list box in the filters and display options area. Once a selection has been made, only the tanks associated with this selection are displayed.

The view is updated whenever the page is reloaded. Alternatively, the view can be updated automatically. The preferred automatic update period is set in the user preferences (see the "Setting preferences" section).

2. Click on the tank picture to view more tank details.
 ↳ Details of the selected tank are displayed in the working area:



6.1 Configuring my tank view

i This function is only available on the desktop version. The desktop version settings are applied to mobile devices.

Configuring my tank view

1. Click the  button to configure the additional information in my tank view.
 ↳ The **Data selection** dialog box is displayed.

2. Select the ▼ button from a drop-down list box to see the data that can be selected.
3. Select the desired element. If no data is to be displayed in this field, click the ✕ button.
4. Click the  **Save** button to save the configuration.
 ↳ The configuration of the tank overview is changed for all tanks in "My tank view".
5. Alternatively, click on the ✕ **Cancel** button to cancel the configuration.

The  **Reset** button will reset the configuration to the default settings.

 A maximum of 10 different pieces of master data or values can be displayed in “My tank view”. Any selection can be made. The field location cannot be changed.

6.2 Show secondary values

 If secondary data is available for the tank, it can also be displayed in "My tank view". Up to 8 pieces of secondary data can be displayed.

Show secondary data

1. Click the  button to configure the additional information in my tank view.
 ↳ The **Data selection** dialog box is displayed.

Data selection

Assigned data

Product

Value



Location

Free

Time stamp

Capacity

None

None

None

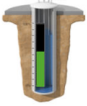
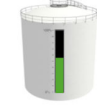
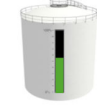
None

 Reset

Cancel

Save

2. From a drop-down list box, select the element Secondary[1], Secondary[2], Secondary[3], Secondary[4], Secondary[5], Secondary[6], Secondary[7] or Secondary[8].
3. Click the  **Save** button to save the configuration.
 ↳ The existing secondary values are displayed in the tank overview with name and value. If no secondary value is available, only the standard name will be displayed; the field for the value will remain empty ("").

My tank view Workplace > My tank view			
sim_secondaries		sim_secondaries2	
Product	Value	Product	Value
Palm Oil	1,368.0 m³	Palm Oil	161,368.0 m³
			
Location	Free	Location	Free
Dubai	1,032.0 m³	Dubai	0.0 m³
Time stamp	Capacity	Time stamp	Capacity
5/15/24, 10:32 AM	2,400.0 m³	5/15/24, 10:32 AM	2,400.0 m³
Density	Cloride Unit	Pressure	Secondary[3]
16.1 kg/m³	100.0 mg/L	161,368.0 kPa	-
Reference Level	Flow	Temperature	Secondary[4]
1,613.7 m	32.0 l/s	161,368.0 °C	-
sim_short_term		sim_short_term	
Product	Value	Product	Value
Milk	1,368.0 m³	Milk	1,368.0 m³
			
Location	Free	Location	Free
Naarden	1,032.0 m³	Naarden	1,032.0 m³
Time stamp	Capacity	Time stamp	Capacity
5/15/24, 10:32 AM	2,400.0 m³	5/15/24, 10:32 AM	2,400.0 m³
Flow	Secondary[3]	Flow	Secondary[3]
161,368.0 l	-	161,368.0 l	-
Secondary[2]	Secondary[4]	Secondary[2]	Secondary[4]
-	-	-	-

7 Handling events – “Event” workplace

7.1 Event management – Status and weighting of events

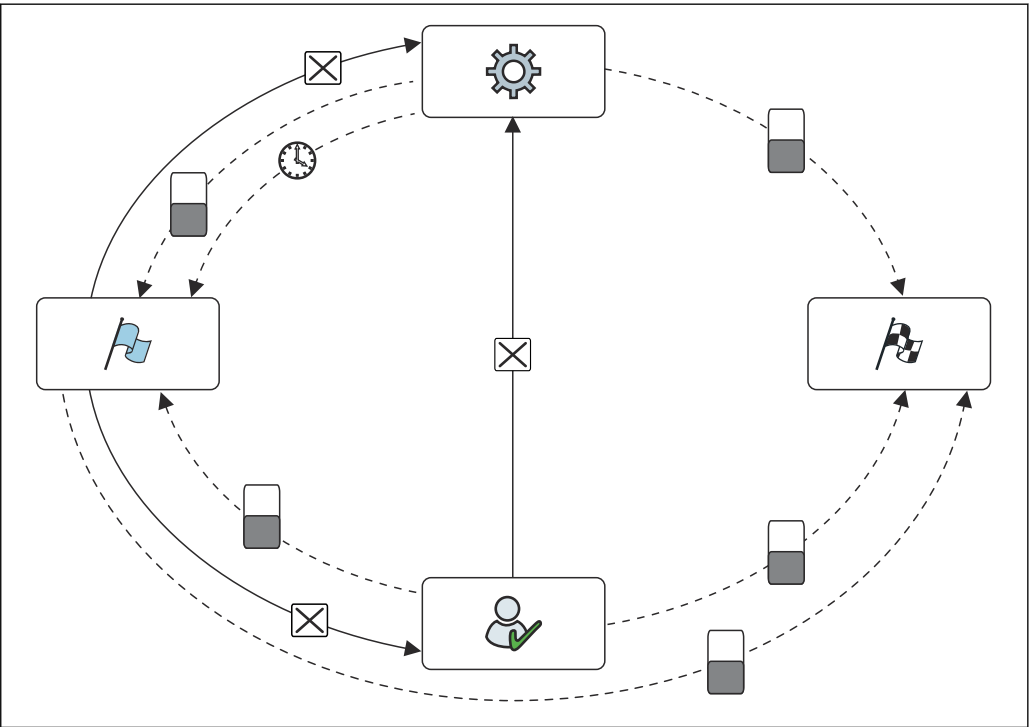
An event is triggered if a limit value is undershot (plan point, ship point, safety stock). The status of the event is then set to **Open**. The weighting (severity) is derived from the limit value, i.e. reaching the plan point is categorized as not critical (low), reaching the safety stock level is regarded as very critical (high).

Once an event has been generated, the user can change the status to **Acknowledged** or **In process**. To ensure later traceability, the change is saved along with the timestamp and user ID.

If an event has the **Acknowledged** or **In process** status and a critical limit value is reached, the event will return to the **Open** status. If standard tanks have an inventory level above the plan point, or recycling tanks have an inventory level below the plan point, the event switches to the status **Done**, and no further activities are required. The event can also change directly from the **Open** status to the **Done** status if a measurement determines that the plan point has been exceeded or undershot.

A point must be noted with the **In process** status. If the tank is not refilled by the set resubmission date, the event status will return to **Open**.

The diagram below shows the status for an event in SupplyCare Hosting.



A0058239

	Open
	Acknowledged
	In process
	Done

	Status change set by user
	Status change by measurement
	Status change due to expiration of time

 If a tank with the status **Open**, **In process** or **Acknowledged** is placed out of service, the event will change to the **Done** status.

 For freeze events and holdup events, the user can only change the **Open** status to **Done**. **In process** and **Acknowledged** are not possible.

If a critical limit value is reached and confirmed by a subsequent measurement, the event will be assigned the status **Open**.

 If a tank is deleted, all the associated events will be deleted.

7.2 Show event messages

 The **Event** menu item is available to users with **Read only**, **Scheduler** or **Operator** configured as their user role.

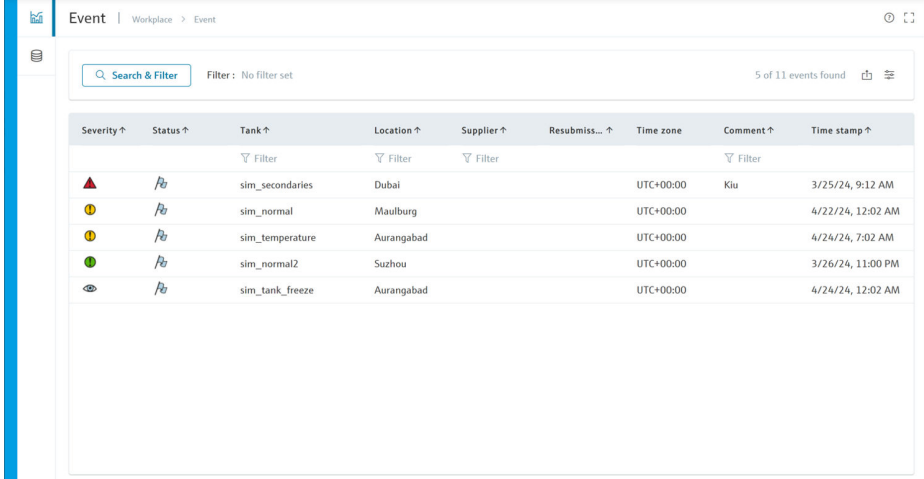
 For the **Event details**, **Freeze event** and **Event history** tabs, the time zone that was set in the **User preferences** menu item is used (see the "Selecting and changing user preferences" section). "Location" is used for the factory setting.

The time zone configured for the location is used for the **Inventory chart** and **Tank details** tabs (see the "Creating a location" section). "UTC + 00:00" is used for the factory setting.

The **Event** menu item provides effective support in a replenishment process which is controlled by means of order limits. For standard tanks, the events are triggered if limit values in the individual tanks are undershot, and in the case of recycling tanks, they are triggered if limit values in the individual tanks are exceeded. In addition to being displayed on the screen, the events can also be sent to people as email notifications.

Show event messages

1. In the  **Workplace** menu, click the **Event** menu item.
 ↳ The working area displays the overview table of all events:



The screenshot shows the 'Event' menu item selected in the Workplace menu. The main area displays a table with 11 events. The table has columns for Severity, Status, Tank, Location, Supplier, Resubmiss..., Time zone, Comment, and Time stamp. The first five rows of data are visible.

Severity ↑	Status ↑	Tank ↑	Location ↑	Supplier ↑	Resubmiss... ↑	Time zone	Comment ↑	Time stamp ↑
		sim_secondaries	Dubai			UTC+00:00	Kiu	3/25/24, 9:12 AM
		sim_normal	Maulburg			UTC+00:00		4/22/24, 12:02 AM
		sim_temperature	Aurangabad			UTC+00:00		4/24/24, 7:02 AM
		sim_normal2	Suzhou			UTC+00:00		3/26/24, 11:00 PM
		sim_tank_freeze	Aurangabad			UTC+00:00		4/24/24, 12:02 AM

2. Optional: Click the  **Search & Filter** button to filter the displayed events.

Type

Filters by event type, e.g. “freeze events”.

Status

Filters by event status, e.g. "open".

Weighting

Filter by the importance of the event, e.g. "high".

Favorite

Filters for favorites. If a favorite is selected, the events that refer to tanks defined for that favorite are displayed.

If the set filters do not overlap each other, i.e. if no events have resulted, the message "No entries found" will be displayed. Delete the last set filter to restore the previous filter setting. Alternatively, delete all the filters in order to return to the overview table.

3. Click an event to view the event details and further information.

The following tabs can be selected in the detailed view:

- Event details
- Freeze event
- Event history
- Inventory chart
- Tank details

7.2.1 Event details

This tab contains information and operating elements for handling the event:

Message

Short description. Describes the type of event.

Comment

Entry field for comments.

Confirm

Checkbox to acknowledge the event.

In process

Checkbox to mark the event as "In process".

In addition, the “Information about the planned delivery or planned disposal” tab contains information about the following:

Amount

Shows the planned delivery amount or disposal amount.

Time stamp

Displays the date and time for the planned delivery or disposal.

Comment

Displays the comment for the planned delivery or disposal.

7.2.2 Freeze event

The screenshot shows a web interface for handling a 'sim_tank_freeze' event. The interface has a top navigation bar with 'sim_tank_freeze' and 'Workplace > Event > sim_tank_freeze'. Below this is a tab bar with 'Freeze event', 'Event history', 'Inventory chart', and 'Tank details'. The 'Freeze event' tab is active, showing a 'Handling' section with a 'Message' field containing 'Freeze event, detected by measurement.', a 'Value' field with '2,398.0 m³', and a 'Time stamp' field with '5/15/24, 12:02 AM'. There is a 'Mark as done' checkbox below these fields. To the right is a 'Limit' section with a 'Value' field showing '253.0 m³', a 'Time stamp' field with '5/14/24, 9:47 PM', and a 'Delta' field with '20.0 %'. At the bottom right are 'Discard' and 'Save' buttons.

This tab contains information and a checkbox for handling:

Message

Short description. Describes the type of event.

Value

Displays the value and unit of the received measurement.

Time stamp

Displays the time of the measurement in the respective time zone.

Mark as done

Checkbox to acknowledge the event.

In addition, the tab contains information on the limit:

Value

Displays the "frozen" measurement in the corresponding unit.

Time stamp

Displays the time of the "frozen" measurement in the corresponding time zone.

Delta

Displays the numeric value and the unit for the set event delta.

Acknowledge event

1. Mark the **As done** checkbox to acknowledge the event.
2. Click the **Save** button to save the change.
 - ↳ The event is closed.



A freeze event will only be generated once during a check period. The status of the event is **Open** until it is marked as done. If a new freeze event occurs in the next check period, the previously created event will be transferred to the event history.

7.2.3 Holdup event

sim_short_term | Workplace > Event > sim_short_term

< Previous event Next event >

Holdup event Event history Inventory chart Tank details

Handling

Message Holdup event, detected by measurement.

Value 1,644.0 m³

Time stamp 12/5/23, 7:56 AM

☐ Mark as done

Limit

Value 1,644.0 m³

Time stamp 12/1/23, 7:56 AM

Delta 3.0 m³

Discard Save

This tab contains information and a checkbox for handling:

Message

Short description. Describes the type of event.

Value

Displays the value and unit of the first measured level after the set monitoring time.

Time stamp

Displays the time of the first measurement after the set monitoring time, in the corresponding time zone.

Mark as done

Checkbox to acknowledge the event.

In addition, the tab contains information on the limit:

Value

Displays the value and unit of the last measured level prior to the set monitoring time.

Time stamp

Displays the time of the last measurement before the set monitoring time, in the corresponding time zone.

Delta

Displays the numeric value and the unit for the set event delta.

Acknowledge event

1. Mark the **As done** checkbox to acknowledge the event.
2. Click the **Save** button to save the change.
 - ➔ The event is closed.

A holdup event will only ever be generated once during a check period. The status of the event is **Open** until it is marked as done. If a new holdup event occurs in the next check period, the previously created event is transferred to the event history.

7.2.4 Event history

This function is only available on the desktop version.

The tab displays the history of the selected event.

sim_tank_freeze

Workplace > Event > sim_tank_freeze

< Previous event

Next event >

Event details

Freeze event

Event history

Inventory chart

Tank details

Time stamp	Severity	Status	Message	Comment	User
			Filter	Filter	Filter
5/16/24, 9:02 AM		Done	Plan point reached, detected by measure...		CheckTanks
5/16/24, 12:02 AM		Done	Done		CheckTanks
5/15/24, 7:02 PM		Safety stock reached, detected by measu...			CheckTanks
5/15/24, 2:02 PM		Ship point reached, detected by measure...			CheckTanks
5/15/24, 9:02 AM		Plan point reached, detected by measure...			CheckTanks
5/15/24, 12:02 AM		Done	Done		CheckTanks
5/14/24, 7:02 PM		Safety stock reached, detected by measu...			CheckTanks
5/14/24, 2:02 PM		Ship point reached, detected by measure...			CheckTanks
5/14/24, 9:02 AM		Plan point reached, detected by measure...			CheckTanks
5/14/24, 12:02 AM		Done	Done		CheckTanks
5/13/24, 7:02 PM		Safety stock reached, detected by measu...			CheckTanks

The following data will be displayed:

- Time stamp
- Weighting
- Status
- Message
- Comment
- User

7.2.5 Inventory chart

The tab displays the inventory chart of the associated tank for the selected event. For a description of the **Inventory chart** tab, see the "Inventory chart" section in the "Monitoring tanks" section.

7.2.6 Tank details

The tab displays the tank details of the associated tank for the selected event. For a description of the **Tank details** tab, see the "Inventory chart" section in the "Monitoring tanks" section.

7.3 Processing event messages

 Only users with the **Scheduler** or **Operator** user role can comment on events and assign a status.

Processing event messages

1. In the  **Workplace** menu, click the **Event** menu item.
 - ↳ The working area displays the overview table of all events.
2. Click the event in question to display additional information about the event.

3. Select the **Event details** tab.

4. Tick the **Acknowledge** checkbox to acknowledge the event. If replenishment measures have already been initiated, activate the **In process** checkbox and change the resubmission date if necessary.
5. Optional: Enter comments for this event in the **Comment** field.
6. Click the **Save** button to save the change.
7. Alternatively, click on the **Discard** button to undo the change.

If the status of the event is set to **In process**, the system will monitor whether the tank is replenished by the **Resubmission date**. If this is not the case, the status of the event will be reset to **Open** and the appropriate notification messages will be triggered. As standard, the **Resubmission date** is calculated from the standard delivery time. However, the standard delivery time can also be set individually for each event.

7.4 Setting the resubmission date

- Only users whose user role is configured as **Scheduler** or **Operator** can set a resubmission date for events.
- A resubmission date can only be set for the **In process** option.

Setting the resubmission date

1. In the **Workplace** menu, click the **Event** menu item.
 - ↳ The working area displays the overview table of all events.
2. Click the event in question to display additional information about the event.
3. Select the **Event details** tab.

4. Tick the **In process** checkbox.

The screenshot shows the 'sim_tank_freeze' event details page. The 'Handling' section has a message 'Plan point reached, detected by measurement.' and a comment field. The 'Status' section has checkboxes for 'Acknowledge' and 'In process', with 'In process' checked. The 'Resubmission date' is set to 5/16/24 and the 'Resubmission time' is 10:13. The 'SDT' field shows 0 Days. The 'Planned delivery' section is empty. At the bottom right, there are 'Discard' and 'Save' buttons.

5. Enter the **Resubmission date**. Enter the date directly or select from the date selector .
6. Enter the **Resubmission time**. Enter the time directly or select it via the time picker .
7. Click the **Save** button to save the change.
8. Alternatively, click on the **Discard** button to undo the change.

- If a standard tank is refilled and the inventory is again above the plan point, the status of the event will automatically change to **Done**. If a recycling tank is drained and the inventory is once again below the plan point, the status of the event will automatically change to **Done**.
- SDT**: The "Standard delivery time" is displayed for standard tanks, and the "Standard disposal time" is displayed for recycling tanks.

8 Managing deliveries and disposals – “Scheduling” workplace



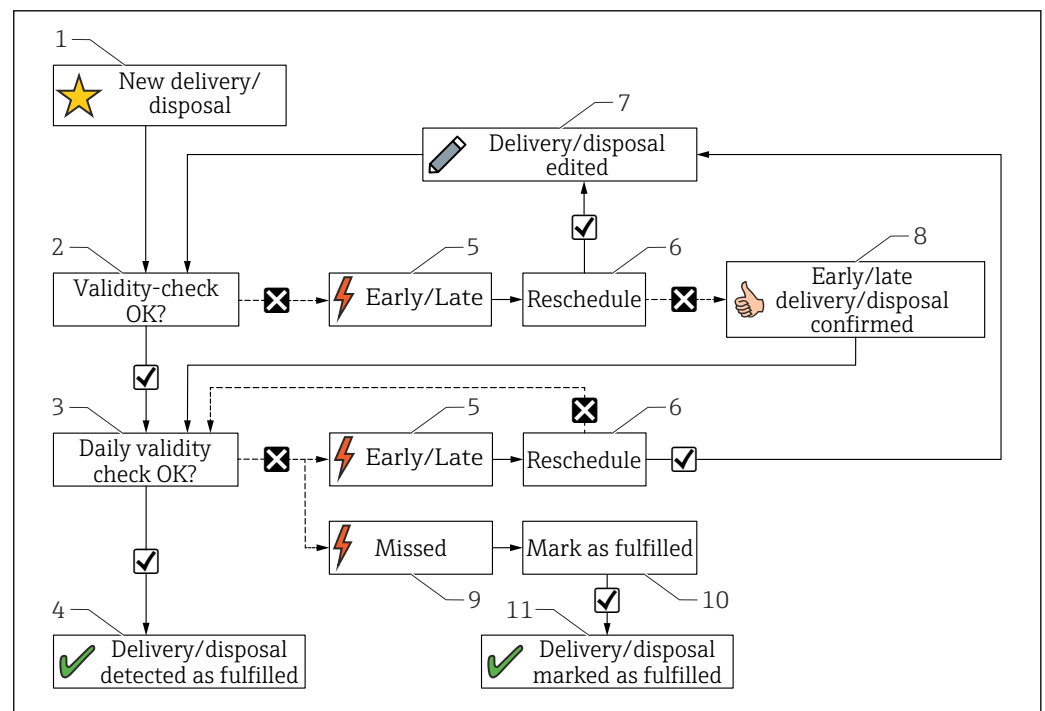
The **Scheduling** menu item is only available on the desktop version.

8.1 Status management – Delivery and disposal

Whenever a delivery or disposal is created or edited, the system checks whether the delivery or disposal is planned too early or too late. For this check, the forecast values determined by SupplyCare are used. The user can either reschedule the delivery or disposal which is too late/early or confirm this as an early or late delivery or disposal.

Deliveries and disposals are monitored daily by SupplyCare. If an early or late delivery/disposal is detected, it can be confirmed. If a missing delivery or disposal is detected, it can be marked as "fulfilled". For the "missing delivery" event, the hysteresis values apply that were entered in the **Configuration** menu, **Tank** menu item, **Tank details** tab. For further information on this, see the "Creating a tank" and "Hysteresis" sections.

The diagram below shows the status management for disposals and deliveries in SupplyCare Hosting:



- 1 New delivery/disposal
- 2 Plausibility check OK?
- 3 Daily check OK?
- 4 Delivery/disposal recognized as fulfilled
- 5 Early/late
- 6 Reschedule
- 7 Edited delivery/disposal
- 8 Early/late delivery/disposal confirmed
- 9 Missing
- 10 Mark as fulfilled
- 11 Delivery/disposal confirmed as fulfilled

A0058290

8.2 Status display and notification of planned deliveries and disposals

- 

Only users with the **Scheduler** user role receive notification of planned deliveries and disposals and can process such notification messages.
- 

For a user to receive notification, the PDL and/or PDE checkboxes must be enabled in the **Tank groups** tab in the Configuration menu → User (see the "Assigning tank groups to a user and setting up notifications for tank events" section).
1.

In the **Workplace** menu , click the **Planning** menu item.
2.

Select the **Overview** tab.

↳

The working range displays an overview of all the statuses for all the deliveries and disposals:

Scheduling | Workplace > Scheduling > Overview

Overview

Planning

Search & Filter

Filter: No filter set

8 of 8 transfers found

State ↑	ID ↑	Message ↑	Location ↑	Tank name ↑	PD ↓	Time zone	PD Amount ↑	Unit ↑	State changed ..
							≥ Fl... ≤ Fl...	Fl...	
	e25b1...	Early disposa...	Manchester	sim_tank_recy...	5/21/24, 10:0...	UTC+00:00	10,000.0	l	5/7/24, 3:19 A
	39a4f...	New planned...	Maulburg	sim_normal	5/17/24, 1:00...	UTC+00:00	1,200.0	t	5/15/24, 6:48 /
	939ec...	Deleted deliv...	Suzhou	sim_normal2	4/30/24, 11:1...	UTC+00:00	1,600,000.0	kg	4/30/24, 7:17 /
	b07a5...	Missed deliv...	Suzhou	sim_normal2	4/30/24, 11:1...	UTC+00:00	1,600,000.0	kg	5/1/24, 3:20 A
	c7046...	Missed deliv...	Suzhou	sim_normal2	4/30/24, 10:1...	UTC+00:00	1,600,000.0	kg	5/1/24, 3:20 A
	59e02...	Missed deliv...	Suzhou	sim_normal2	4/30/24, 8:15...	UTC+00:00	1,600,000.0	kg	5/1/24, 3:20 A
	7c826...	Delivery fulfil...	Mexiko City	sim_hysteresis	4/18/24, 12:0...	UTC-06:00	2.0	t	4/19/24, 9:18 f
	404d4...	Delivery fulfil...	Aurangabad	sim_tank_freeze	4/18/24, 12:2...	UTC+00:00	2,000.0	m³	4/19/24, 7:54 /

3.

In the overview table, click a delivery or disposal to display the details or the history.

↳

The working area shows details on the planned delivery or disposal:

← 39a4fd29 | Workplace > Scheduling > Overview > 39a4fd29

Details

History

Planned delivery

Message

New planned delivery

Tank name

sim_normal

Transfer ID

39a4fd29-3660-4778-92de-259dfc4e0039

Amount

1,200.0 t

Time stamp

5/17/24, 1:00 PM

Comment

-

Discard

Save

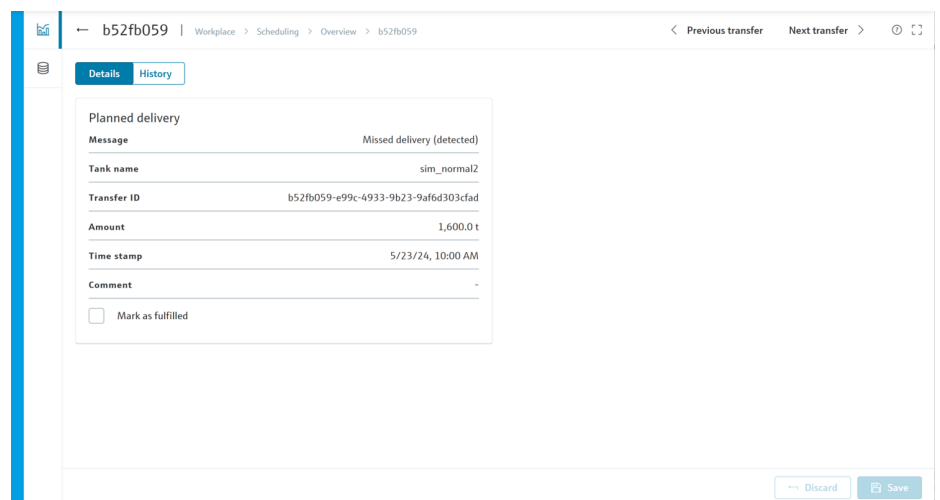
8.2.1 Editing the status

The following status information can be displayed:

	Detected The Detected status is displayed in the following cases: - A delivery or disposal which has been scheduled too early or too late has been detected. This delivery or disposal can be edited in the Details tab using the Confirm button. - The system has detected a missing delivery or disposal. This delivery or disposal can be edited in the Details tab using the Mark as fulfilled button. - Missing measured data was detected. This delivery or disposal can be edited in the Details tab using the Mark as fulfilled button.
	Acknowledged The Acknowledged status is displayed in the following situations: - A delivery or disposal which has been scheduled too early or too late was confirmed when the delivery or disposal was created. - A delivery or disposal which has been scheduled too early or too late has been confirmed in the Details tab.
	Deleted A planned delivery or disposal has been deleted.
	New A new delivery or disposal has been planned.
	Fulfilled A new delivery or disposal has been recorded (fulfilled). If a delivery and disposal is made, this is designated by SupplyCare as a delivery (detected)/disposal (detected) . If a missing delivery/disposal or missing measured data has been detected, this delivery/disposal can be edited in the Details tab using the Mark as fulfilled checkbox. The delivery/disposal is displayed as Delivery fulfilled (confirmed)/Disposal fulfilled (confirmed).
	Edited A planned delivery or disposal has been edited.

Editing the status

1. In the **Workplace** menu , click the **Planning** menu item.
2. In the overview table, click on the relevant delivery or disposal to edit the status.
3. Select the **Details** tab.
 - ↳ The working area shows details on the planned delivery or disposal:



← b52fb059 | Workplace > Scheduling > Overview > b52fb059

< Previous transfer Next transfer > ⌕

Details History

Planned delivery

Message Missed delivery (detected)

Tank name sim_normal2

Transfer ID b52fb059-e99c-4933-9b23-9af6d303cfad

Amount 1,600.0 t

Time stamp 5/23/24, 10:00 AM

Comment -

☐ Mark as fulfilled

Discard Save

4. Click the **Mark as fulfilled** checkbox to edit the following status:

- Missed delivery or disposal (detected)
- Missed delivery or disposal (no measurement)

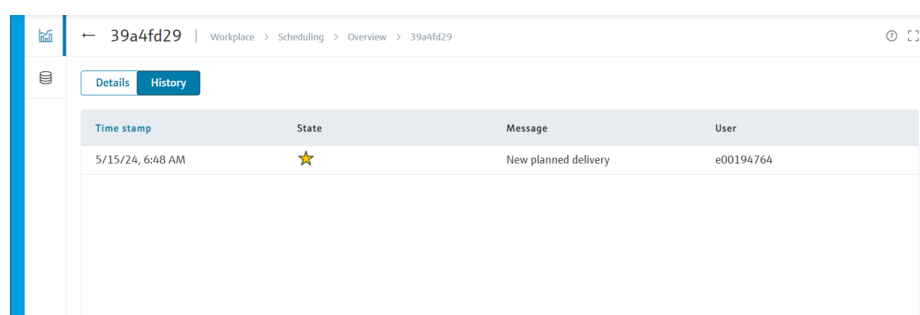
5. Alternatively, click the **Acknowledge** check box to edit the following status:

- Early delivery or disposal (detected)
- Late delivery or disposal (detected)

8.2.2 Viewing the status history

Display the history

1. In the **Workplace** menu , click the **Planning** menu item.
2. In the overview table, click on the relevant delivery or disposal to display the planning history.
3. Select the **History** tab.
 - ↳ The working area shows the planning history for the selected delivery or disposal:



Time stamp	State	Message	User
5/15/24, 6:48 AM	★	New planned delivery	e00194764

8.3 Managing deliveries and disposals

 Only users with the **Scheduler** user role can plan deliveries for standard tanks, and disposals, for recycling tanks.

Multiple deliveries can be planned for each standard tank; a maximum of 3 deliveries per day. Several disposals can be planned for each recycling tank; a maximum of 3 disposals per day. There must be at least 30 minutes between each delivery or disposal.

The time zone selected by the user in the user preferences is used as the time zone. The unit of the tank is used as the unit. In the case of mass units and volume units, priority is given to the settings for the **Mass unit** or **Volume unit** fields in the **User preferences** menu item.

If the tank is out of service, the status in the calendar is displayed by a bar and the  symbol. No deliveries or disposals can be planned for this period.

Planned deliveries and disposals are indicated by a delivery van  in the calendar and in the **Inventory chart** tab.

1. In the **Workplace** menu , click the **Planning** menu item.

2. Select the **Scheduling** tab.
- ↳ The working area displays an overview:

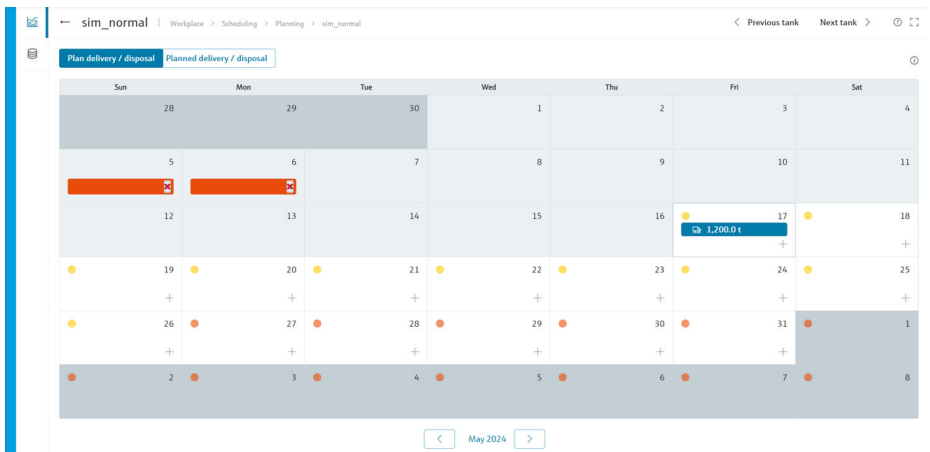
Scheduling | Workplace > Scheduling > Planning

Overview | Planning

Search & Filter Filter: No filter set 14 of 14 tanks found

State	Tank name	Value	Unit	Level	Location	Tank type	Free	Product
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
	Aggregierter Beispi...	124,633.0	l	101%	Maulburg			1,712.0 Ethanol
	sim_hysteresis	1,544.0	m³	64%	Naarden	Tank_type_AA5		856.0 Cement
	sim_normal	0.0	m³	0%	Greenwood			320,000.0 Diesel
	sim_secondaries	1,544.0	m³	64%	Aurangabad			856.0 Palm Oil
	sim_short_term	1,544.0	m³	64%	Suzhou			856.0 Pellets
	sim_tank_freeze	1,544.0	m³	64%	Dubai			856.0 Diesel
	sim_tank_recycling	190,856.0	l	40%	Manchester			129,144.0 Waste Water
	sim_tank_recycling...	856.0	l	64%	Mexiko City			1,544.0 Ammoniak
	sim_temperature	80.0	°C	67%	Aurangabad			40.0 Milk
	Stahlitank I	190,856.0	l	0%	Krefeld-Oil			0.0
	Stahlitank II	190,856.0	l	0%				0.0

3. In the overview table, click the tank in question to plan a delivery or disposal.
- ↳ The working area displays the calendar:



The current month is displayed in the calendar. The current day, outlined in dark borders, and all days in the future, have a white background and are marked with a color dot. The color of the dot indicates the forecast value for that particular date for the tank status. Days in the past have a light gray background. Days of other months have a dark gray background.

	OK – Green Standard tanks: The forecast value is greater than the plan point. Recycling tanks: The forecast value is greater than the plan point.
	Plan point – Yellow Standard tanks: The forecast value is between the plan point and the ship point. Recycling tanks: The forecast value is between the plan point and the safety stock.
	Ship point – Orange Standard tanks: The forecast value is between the ship point and the safety stock. Recycling tanks: Not applicable.

	Safety stock – Red Standard tanks: The forecast value is below the safety stock level. Recycling tanks: The forecast value is above the safety stock.
	Out of service

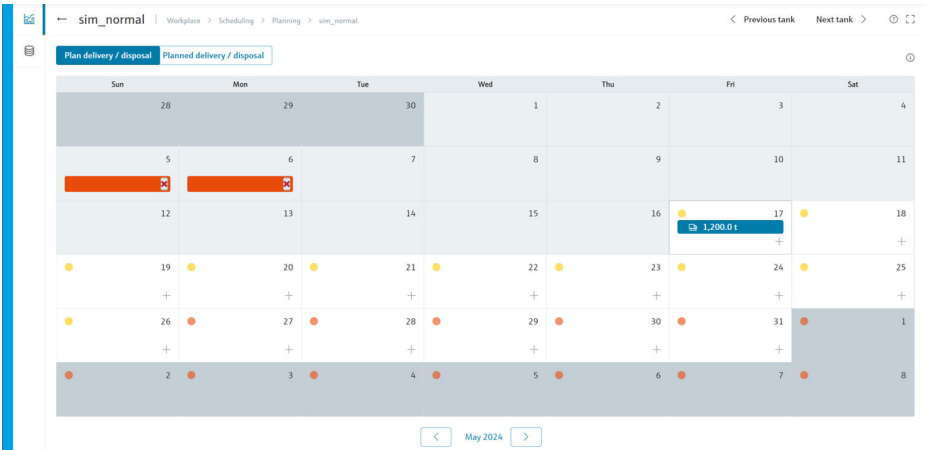
The ? button to the right above the calendar displays the legend.

 The time that is used to set the color or tank status for that particular day is 00:00 (midnight). If, for example, the "Ship point" is reached at 04:00 on May 15 and the "Safety Stock" is reached at 20:30 on May 15, the background color will change to red for the "Safety stock".

8.3.1 Planning a delivery or disposal

Planning a delivery or disposal

- 1. In the **Workplace** menu , click the **Planning** menu item.
- 2. Select the **Scheduling** tab.
- 3. In the overview table, click the tank in question to plan a delivery or disposal.
↳ The working area displays the **Plan delivery/disposal** tab:



- 4. Optional: Select the month for which a delivery or disposal is planned via the < and > buttons.

5. A gray "+" indicates the days on which a delivery or disposal is possible. Click on the gray "+" to plan a delivery or disposal for the day in question.
 - ↳ For standard tanks, the **Plan delivery** dialog box will appear. For recycling tanks, the **Plan disposal** dialog box will appear.

Plan delivery
×

Tank name
sim_secondaries2

Forecast value
127,512.6

Range
13 day(s)

Delivery date and time *

📅
6/19/24

🕒
10:00

Amount *
in m³

1200

Comment

× Cancel

💾 Save

6. Enter the **Delivery date and time** or use the proposed data. Enter the date and time directly or select them via the date picker and the time picker .
7. Enter the planned **Amount** or use the proposed amount.
8. Optional: Enter a comment or a note in the **Comment** field.
9. Click the **Save** button to save your changes.
 - ↳ The planned delivery or disposal is displayed in the calendar with a delivery van icon and the planned amount. If the cursor is moved over the field, the amount will be displayed.

A plausibility check is carried out when the data is entered. If the entered values are implausible, an error message will appear, or a notification about this will be displayed directly under the entry field in question. See the "Plausibility check" section.

Tank name

Name of the selected tank.

Forecast value

Forecast level.

Depending on the contract: The calculation of the forecast level for each new planned delivery or disposal also takes into consideration existing, planned deliveries or disposals. If this function is not available and should be activated, please contact Endress+Hauser: www.addresses.endress.com.

Range

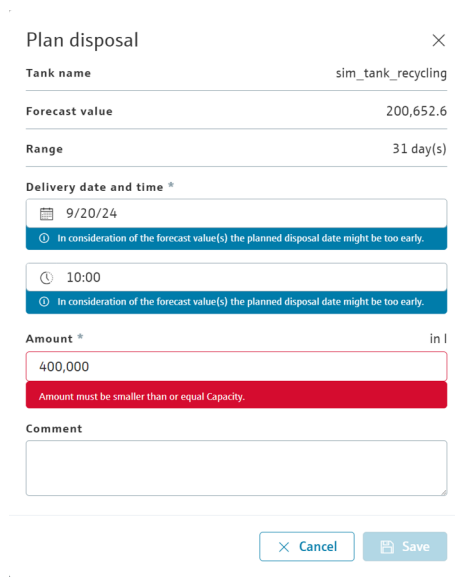
Displays the number of days before the safety stock is reached for the amount entered. In the case of standard tanks, the number of days is calculated from the "Average daily outflow" value. In the case of recycling tanks, the number of days is calculated from the "Average daily inflow" value.

8.3.2 Plausibility check

 The plausibility check only checks the latest or the next planned delivery or disposal.

 A plausibility check is only performed if a safety stock (SST) and a plan point (PP) have been saved for the tank.

When the data is entered for a planned delivery or a planned disposal, a plausibility check is carried out. The planned amount, date and time are checked. The planned date and planned time are checked using the calculated values for the safety stock (SST) and the plan point (PP). If the planned date is before the calculated date on which the plan point is reached, the information "Taking into consideration the forecast values, the planned delivery/disposal may be too early" will appear. If the planned date is after the date on which the safety stock is reached, the information "While taking into consideration the forecast values, the planned delivery/disposal may be too late" will appear. If the planned amount is e.g. over the capacity of the tank, the following error message will be shown: "Amount must be smaller than the capacity".



The screenshot shows the 'Plan disposal' form for tank 'sim_tank_recycling'. The forecast value is 200,652.6 and the range is 31 day(s). The delivery date is set to 9/20/24 at 10:00. A red error message is displayed: 'Amount must be smaller than or equal Capacity.' because the entered amount of 400,000 exceeds the capacity. The form also includes a comment field and 'Cancel' and 'Save' buttons at the bottom.

It is not possible to save the planned delivery or a planned disposal while an error message (red) is displayed. Otherwise, the scheduling can be saved, even if information messages (blue) are displayed.

8.3.3 Deleting a delivery or disposal

1. In the **Workplace** menu , click the **Planning** menu item.
2. Select the **Scheduling** tab.
3. In the overview table, click the tank in question to delete a delivery or disposal.
 - ↳ The working area displays the **Plan delivery/disposal** tab.

4. To delete the entry, click on the relevant entry in the calendar.
 - ↳ For standard tanks, the **Plan delivery** dialog box will appear. For recycling tanks, the **Plan disposal** dialog box will appear.

Plan delivery

Tank name sim_secondaries2

Delivery date and time *

6/27/24 10:00

Amount * in m³

1200

Comment

Cancel Delete Save

5. Click the **Delete** button to delete the delivery or disposal.
 - ↳ The dialog box appears with the confirmation prompt "Do you really want to delete?".
6. Click **OK** to delete the entry.
7. Alternatively, click on the **Cancel** button to cancel the process.

8.3.4 Editing a delivery or disposal

Deliveries or disposals with one of the following statuses can be edited:

- New planned
- Early
- Early confirmed
- Late
- Late confirmed

A planned delivery or disposal in the past can only be edited if the delivery date or delivery time has been changed to a date or time in the future.

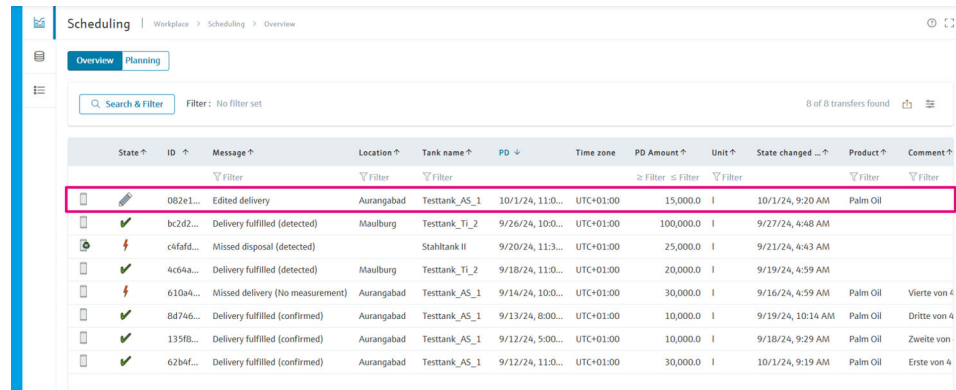
Deliveries or disposals with the status "Missing" or "Fulfilled" cannot be edited.

Editing a delivery or disposal

1. In the **Workplace** menu , click the **Planning** menu item.
2. Select the **Scheduling** tab.
3. In the overview table, click the tank in question to edit a delivery or disposal.
 - ↳ The working area displays the **Plan delivery/disposal** tab.
4. Click on the relevant entry in the calendar to edit it.
 - ↳ For standard tanks, the **Plan delivery** dialog box will appear. For recycling tanks, the **Plan disposal** dialog box will appear.
5. Edit the desired data, e.g. enter a different amount in the **Amount** field.
 - ↳ The dialog box appears with the confirmation prompt "Do you really want to delete?".

6. Click the  **Save** button to save your changes.
 - The planned delivery or disposal is displayed in the calendar with a delivery van icon  and the planned amount. If the cursor is moved over the field, the amount will be displayed.
7. Alternatively, click on the **×** **Cancel** button to cancel the process.

In the overview table, the status of the edited delivery or disposal is changed to "Edited" and displayed with the symbol .

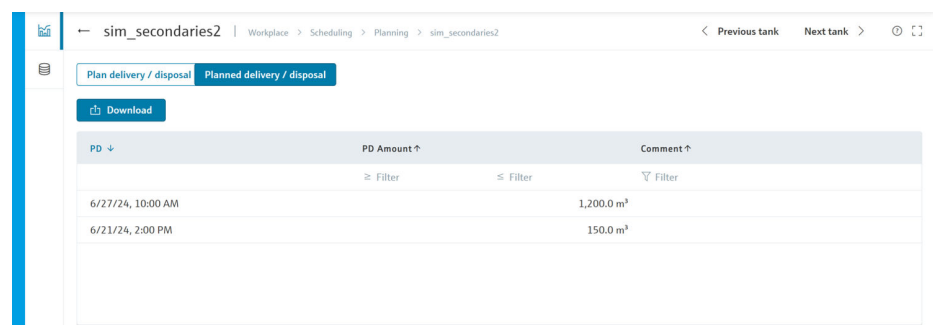


The screenshot shows the 'Scheduling' workplace with the 'Overview' tab selected. A table lists various transfers. The first row is highlighted with a red border and contains an edit icon (pencil) in the first column.

State	ID	Message	Location	Tank name	PD	Time zone	PD Amount	Unit	State changed ...	Product	Comment
	082e1...	Edited delivery	Aurangabad	Testtank_AS_1	10/1/24, 11:0...	UTC+01:00	15,000.0	l	10/1/24, 9:20 AM	Palm Oil	
	bc2d2...	Delivery fulfilled (detected)	Maulburg	Testtank_TI_2	9/26/24, 10:0...	UTC+01:00	100,000.0	l	9/27/24, 4:48 AM		
	c4fafd...	Missed disposal (detected)	Stahlwerk II	Stahlwerk II	9/20/24, 11:3...	UTC+01:00	25,000.0	l	9/21/24, 4:43 AM		
	4c64a...	Delivery fulfilled (detected)	Maulburg	Testtank_TI_2	9/18/24, 11:0...	UTC+01:00	20,000.0	l	9/19/24, 4:59 AM		
	610a4...	Missed delivery (No measurement)	Aurangabad	Testtank_AS_1	9/14/24, 10:0...	UTC+01:00	30,000.0	l	9/16/24, 4:59 AM	Palm Oil	Vierte von 4
	8d746...	Delivery fulfilled (confirmed)	Aurangabad	Testtank_AS_1	9/13/24, 8:00...	UTC+01:00	10,000.0	l	9/19/24, 10:14 AM	Palm Oil	Dritte von 4
	135f8...	Delivery fulfilled (confirmed)	Aurangabad	Testtank_AS_1	9/12/24, 5:00...	UTC+01:00	10,000.0	l	9/18/24, 9:29 AM	Palm Oil	Zweite von 4
	62b4f...	Delivery fulfilled (confirmed)	Aurangabad	Testtank_AS_1	9/12/24, 11:0...	UTC+01:00	30,000.0	l	10/1/24, 9:19 AM	Palm Oil	Erste von 4

8.4 Viewing a planned delivery or disposal and saving as an Excel spreadsheet

1. In the **Workplace** menu , click the **Planning** menu item.
2. Select the **Scheduling** tab.
3. In the overview table, click the tank in question to display a delivery or disposal.
4. Select the **Planned delivery/disposal** tab.
 - The working area displays an overview table:



The screenshot shows the 'Planned delivery / disposal' tab in the 'sim_secondaries2' workplace. A table lists planned deliveries or disposals for a specific tank.

PD	PD Amount	Comment
6/27/24, 10:00 AM	1,200.0 m³	
6/21/24, 2:00 PM	150.0 m³	

The table lists all disposals or deliveries with date (**PD** column), amount (**PD Amount** column) and **comments** for the selected tank.

5. Click the  **Download** button to export the table as an Excel spreadsheet.
 - A file named "Planned_transfer_[TankName].xlsx" is downloaded.

8.5 Predictive planning

 Only users with the **Scheduler** user role can create **predictive planning**.

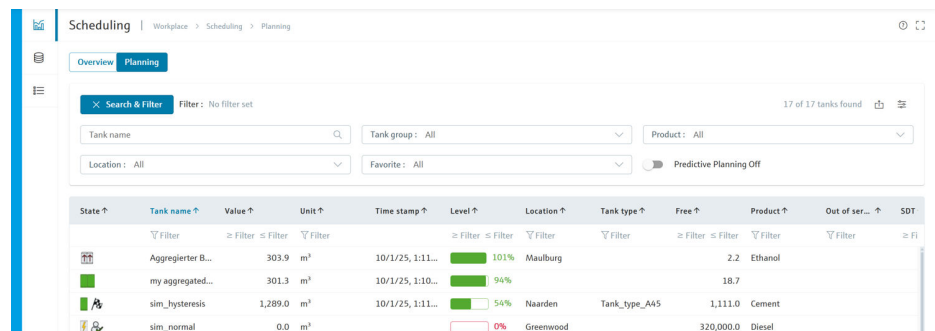
Forecast values for tanks can be displayed in the overview table to efficiently plan deliveries or disposals. Exporting the forecast values as an Excel spreadsheet gives a better overview of this data, particularly in the case of large inventories.

Forecast values for tanks are only displayed in the table if the following conditions are met:

- **Forecast** is enabled (Configuration menu → Tank)
- The tank is connected to a primary measured value, manual values are not taken into consideration
- Aggregated tanks: At least one constituent tank must be assigned

Using predictive planning

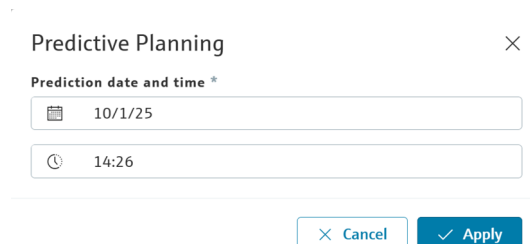
1. In the **Workplace** menu , click the **Planning** menu item.
2. Select the **Scheduling** tab.
3. Click the **Search & Filter** button.
 - ↳ The available filters are displayed.



The screenshot shows the 'Scheduling' workplace with the 'Planning' tab selected. A 'Search & Filter' button is visible, and a table of 17 tanks is displayed. The table has columns for State, Tank name, Value, Unit, Time stamp, Level, Location, Tank type, Free, Product, Out of service, and SDT. The 'Predictive Planning' switch is currently turned off.

State	Tank name	Value	Unit	Time stamp	Level	Location	Tank type	Free	Product	Out of ser...	SDT
	Aggregierter B...	303.9	m³	10/1/25, 1:11...	 101%	Maulburg			2.2	Ethanol	
	my aggregated...	301.3	m³	10/1/25, 1:10...	 94%				18.7		
	sim_hysteresis	1,289.0	m³	10/1/25, 1:11...	 54%	Naarden	Tank_type_A45		1,111.0	Cement	
	sim_normal	0.0	m³		 0%	Greenwood			320,000.0	Diesel	

4. Enable the **Predictive planning** change-over switch.
 - ↳ The **Predictive planning** dialog box is displayed.

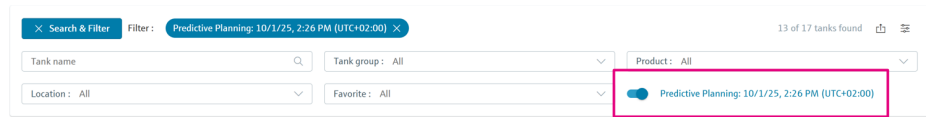


The 'Predictive Planning' dialog box is shown. It contains fields for 'Prediction date and time *' with a date of 10/1/25 and a time of 14:26. At the bottom, there are 'Cancel' and 'Apply' buttons.

5. Select the date and time for which the forecast value should be calculated.

 The date and time must be in the future. By default, the current date and time are displayed + 1 hour.

6. Click the ✓ **Apply** button to calculate the forecast value.
 - ↳ The change-over switch is activated and displays the selected time in the form "Date, Time (time zone)". The time zone displayed is the time zone selected in the user preferences.



The table updates the values and status information for the selected date and time.

The **Time stamp** is displayed in blue, followed by the suffix **FOR**.

State	Tank name	Value	Unit	Time stamp	Level	Location	Tank type	Free	Product	Out of ser...	SDT
Filter	Aggregierter B...	303.2	m³	10/1/25, 2:26 PM FOR	101%	Maulburg			0.0	Ethanol	
	my aggregated...	300.9	m³	10/1/25, 2:26 PM FOR	94%				19.1		
	sim_hysteresis	1,176.1	m³	10/1/25, 2:26 PM FOR	49%	Naarden	Tank_type_A45		1,223.9	Cement	
	sim_secondaries	1,176.1	m³	10/1/25, 2:26 PM FOR	49%	Aurangabad			1,223.9	Palm Oil	
	sim_short_term	1,176.1	m³	10/1/25, 2:26 PM FOR	49%	Suzhou			1,223.9	Pellets	
	sim_tank_freeze	1,176.1	m³	10/1/25, 2:26 PM FOR	49%	Dubai			1,223.9	Diesel	
	sim_tank_recy...	11.5	m³	10/1/25, 2:26 PM FOR	4%	Manchester			308.5	Waste Water	
	sim_tank_recy...	1.2	m³	10/1/25, 2:26 PM FOR	51%	Mexiko City			1.2	Ammoniak	
	sim_temperat...	110.0	°C	10/1/25, 2:26 PM FOR	92%	Aurangabad			10.0	Milk	
	Stahltank I	11.5	m³	10/1/25, 2:26 PM FOR	38%	Krefeld-Oil			18.5		

The following values are updated:

- **Status**
- **Value**
- **Level**
- **Free**
- **Free to optimum**
- **DSST**
- **Scaled value**
- **Monetary value**
- **Out of service** (including start date and end date)

i The table shows only those tanks that meet the conditions for calculating the forecast value.

The table is not updated automatically as long as **Predictive planning** is enabled.

Editing predictive planning

Predictive planning can be adjusted if forecast values are to be calculated for a different date or time.

1. In addition to the **Predictive planning** change-over switch, click on the time displayed.
 - ↳ The **Predictive planning** dialog box is displayed.
2. Select the date and time for which the forecast value should be calculated.
3. Click the ✓ **Apply** button to calculate the new forecast value.
 - ↳ The table displays the updated values.

Disabling predictive planning

1. Deactivate the **Predictive planning** change-over switch.
 - ↳ This overview table shows all the tanks that are assigned to the user. The table is updated automatically again.
2. Alternatively, delete the displayed filter.



When exiting the **Scheduling** tab, the **Predictive planning** change-over switch will be automatically deactivated.

Exporting predictive planning

1. Enable **predictive planning**.
2. Click the  button to export the table as an Excel spreadsheet.
 - ↳ A file named "Workplace_Scheduling_Forecast.xlsx" is downloaded.

The Excel spreadsheet contains all the tanks that are displayed in the overview table and meet the conditions for forecast values. The values in the **Time stamp** column are marked with the suffix **FOR**, to indicate that calculated forecast values and no measured values have been exported.

9 Performing totalizations – “Totaling” workplace

i The **Totaling** menu item is available to users with **Read only**, **Scheduler** or **Operator** configured as their user role.

i The **Totaling** menu item is only available on the desktop version.

In the **Totaling** menu item, it is possible to add up the values of the following fields:

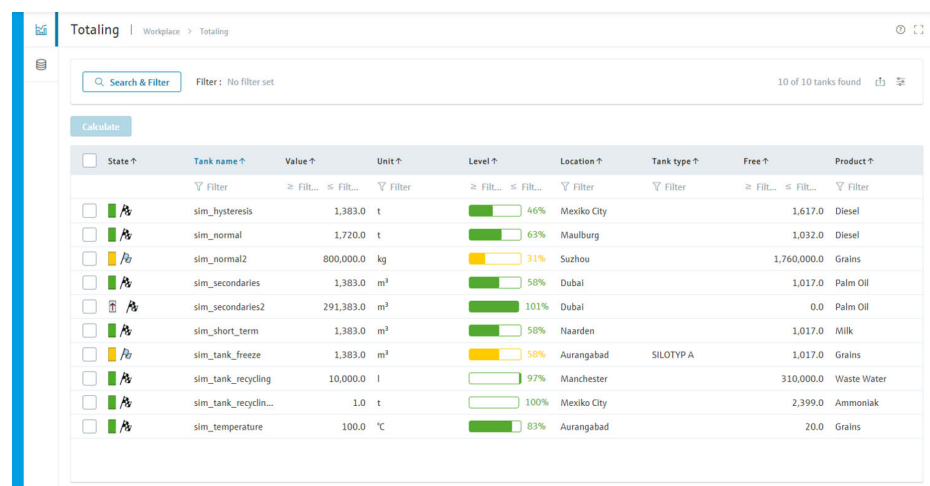
- **Value**
- **Capacity**
- **Free**
- **PD Amount**
- **Monetary value**

The totaled **Level** is represented graphically.

The values of standard tanks and the values of recycling tanks can be totaled. Tanks and aggregated tanks can be included in the calculation.

Performing totalizations

1. Click the **Totaling** menu item in the  **Workplace** menu.
 ↳ The working area displays a table with the assigned tanks:



State	Tank name	Value	Unit	Level	Location	Tank type	Free	Product
☐	sim_hysteresis	1,383.0	t	46%	Mexiko City		1,617.0	Diesel
☐	sim_normal	1,720.0	t	63%	Maulburg		1,032.0	Diesel
☐	sim_normal2	800,000.0	kg	31%	Suzhou		1,760,000.0	Grains
☐	sim_secondaries	1,383.0	m³	58%	Dubai		1,017.0	Palm Oil
☐	sim_secondaries2	291,383.0	m³	101%	Dubai		0.0	Palm Oil
☐	sim_short_term	1,383.0	m³	58%	Naarden		1,017.0	Milk
☐	sim_tank_freeze	1,383.0	m³	58%	Aurangabad	SILOTYP A	1,017.0	Grains
☐	sim_tank_recycling	10,000.0	l	97%	Manchester		310,000.0	Waste Water
☐	sim_tank_recyclin...	1.0	t	100%	Mexiko City		2,399.0	Ammoniak
☐	sim_temperature	100.0	°C	83%	Aurangabad		20.0	Grains

2. In the table, select the checkboxes for all the tanks that are to be totaled. The table can only be filtered using the filter functions in order to select the desired tanks more quickly.

i At least one tank must be selected for the calculation.

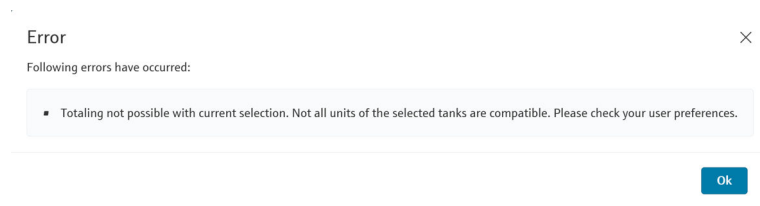
i In order for the monetary value to be calculated, a price must first be entered in the **Product details** tab in the **Configuration** menu. See the "Creating a product" section.

i Only tanks with convertible units and currencies can be totaled. Preferred units and currencies are set in the user preferences. Convertible values are then converted into this preferred unit or currency, and the tanks can then be totaled. See the "Selecting and changing user preferences" section.

i If the checkbox in the column header is ticked, all currently displayed tanks will be selected in the table (enabled). If the checkbox is deactivated, all currently displayed tanks will be deselected (disabled).

3. Click the **Calculate** button.

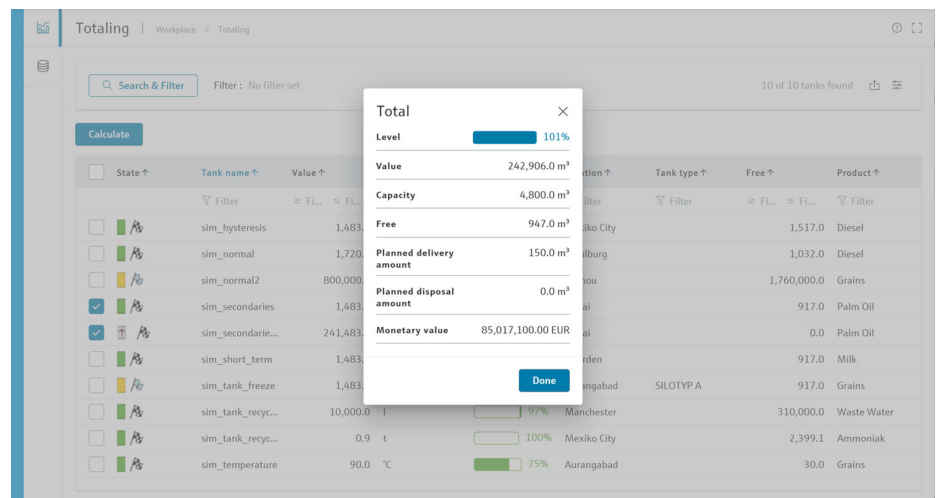
- ↳ If tanks with different units or monetary values are totaled, SupplyCare will display an error message and the calculation will not be performed.



4. Click **OK** to confirm the error message.

5. Select compatible tanks for the calculation.

- ↳ The **Total** dialog box is displayed:



6. Click the **Done** button to close the calculation.

- ↳ The dialog box is closed and the table is displayed.

7. Optional: Perform a new calculation.

- i** If it is not possible to calculate a monetary value, an information message as to why the calculation is not possible appears under the **Monetary value** line.

10 Displaying analysis data – “Analysis” workplace

 The **Analysis** menu item is available to users with **Scheduler** or **Operator** configured as their user role.

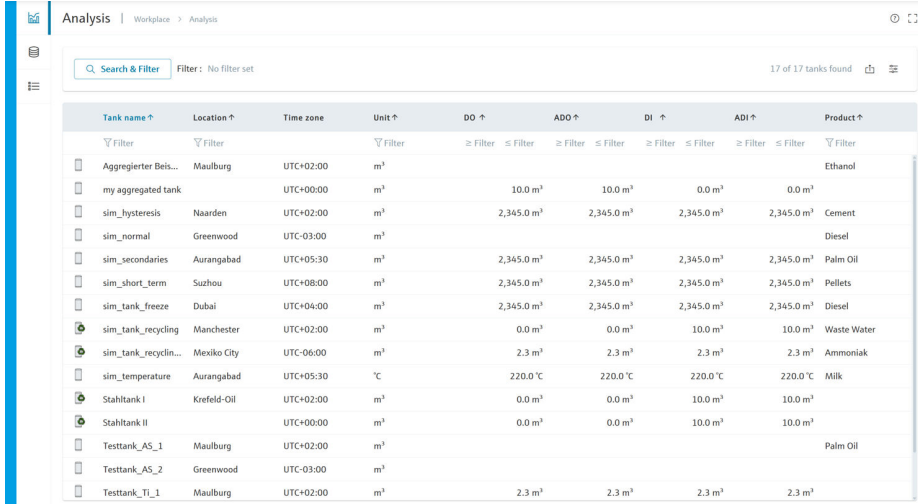
 The **Analysis** menu item is only available on the desktop version.

The menu item displays important indicators for the inflow and outflow of the individual tanks as data and charts. This data and these charts can be used to analyze business, warehouse and logistics processes and as the basis for future planning. All the information can be exported as an Excel spreadsheet. The charts can also be printed out.

 When tanks are transported and placed in a horizontal position, the devices continue to send measured data. SupplyCare processes the measured data according to alarms, scheduling data, calculation of inflows and outflows, etc. Therefore, the tank service status should be set accordingly before transporting. See the "Editing the tank service status" section.

Displaying analysis data

1. Click the **Analysis** menu item in the  **Workplace** menu.
 - ↳ The working area displays a table with the assigned tanks:



Tank name ↑	Location ↑	Time zone	Unit ↑	DO ↑	ADO ↑	DI ↑	ADI ↑	Product ↑
Aggregierter Beis...	Maulburg	UTC+02:00	m³					Ethanol
my aggregated tank		UTC+00:00	m³	10.0 m³	10.0 m³	0.0 m³	0.0 m³	
sim_hysteresis	Naarden	UTC+02:00	m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	Cement
sim_normal	Greenwood	UTC-03:00	m³					Diesel
sim_secondaries	Aurangabad	UTC+05:30	m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	Palm Oil
sim_short_term	Suzhou	UTC+08:00	m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	Pellets
sim_tank_freeze	Dubai	UTC+04:00	m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	2,345.0 m³	Diesel
sim_tank_recycling	Manchester	UTC+02:00	m³	0.0 m³	0.0 m³	10.0 m³	10.0 m³	Waste Water
sim_tank_recyclin...	Mexiko City	UTC-06:00	m³	2.3 m³	2.3 m³	2.3 m³	2.3 m³	Ammoniak
sim_temperature	Aurangabad	UTC+05:30	°C	220.0 °C	220.0 °C	220.0 °C	220.0 °C	Milk
StahlTank I	Krefeld-Oil	UTC+02:00	m³	0.0 m³	0.0 m³	10.0 m³	10.0 m³	
StahlTank II		UTC+00:00	m³	0.0 m³	0.0 m³	10.0 m³	10.0 m³	
Testtank_AS_1	Maulburg	UTC+02:00	m³					Palm Oil
Testtank_AS_2	Greenwood	UTC-03:00	m³					
Testtank_TI_1	Maulburg	UTC+02:00	m³	2.3 m³	2.3 m³	2.3 m³	2.3 m³	

2. Click on the appropriate tank in the table to display the analysis data.
3. Select the **Previous Day** or **KPIs** tab.
 - ↳ The selected tab displays the analysis data.

10.1 "Analysis" overview table

The  button in the filters and display options area opens the **Data selection** dialog box. The data that is displayed in the table columns are selected in the dialog box. The order of the columns can be changed as desired.

The following data is available for the overview table:

Planning type

The planning type is displayed: "Standard tank" or "Recycling tank"

Location

Displays the tank location. The location is the name of the location.

The name is entered in the **Location** field.

Path: Configuration → Tank → Tank details → Location.

The location is managed in the **Location** menu item.

Tank name

Displays the tank name. The tank name is entered in the **Tank name** field.
Path: Configuration → Tank → Tank details → Tank name.

Unit

The unit for the main measuring value (primary value) is specified via the **Tank unit** field.
Path: Configuration → Tank → Tank details → Tank unit.

In the case of mass units and volume units, priority is given to the personal settings for the **Mass unit** or **Volume unit** fields in the **User preferences** menu item.

Time zone

Time zone of the time stamp. The time zone of the location is used. If no location is assigned to the tank, the UTC + 00:00 time zone is used.

DO (daily outflow)

Displays the last calculated daily outflow.

ADO (average daily outflow)

Displays the value for "Average daily outflow". The value is calculated with the average amount per day. The calculated average amount is based on the configured "Forecast based on" value. For recycling tanks, this field is empty.

DI (daily inflow)

Displays the last calculated daily inflow.

ADI (average daily inflow)

Displays the value for "Average daily inflow". The value is calculated with the average amount per day. The calculated average amount is based on the configured "Forecast based on" value. For standard tanks, this field is empty.

Product

Displays the product in the tank.

10.2 Previous day

The tab displays important indicators for the inflows and outflows of the selected tank for the previous day.

Previous Day: 6/24/25 (UTC+05:30)	
Daily outflow	2,345.0 m³
Average daily outflow	2,345.0 m³
Daily inflow	2,345.0 m³
Day(s) until reaching safety stock	0d 11h
Next planned delivery time	-
Next planned delivery amount	-

The **Daily outflow** and **Daily inflow** fields display the last calculated values.

Daily outflow

Displays the calculated daily outflow for the date entered.

Average daily outflow/average daily inflow

The values are calculated with the average amount per day. The calculated average amount is based on the configured "Forecast based on" value.

- Standard tanks: Average daily outflow
- Recycling tanks: Average daily inflow

Daily inflow

Displays the inflow on the previous day.

Days until the safety stock is reached

Displays the estimated number of days remaining until the safety stock is reached. The value is calculated with the average amount per day.

If "Safety stock" has been disabled or if "0" is set, the **Day(s) until reaching safety stock** field will be empty.

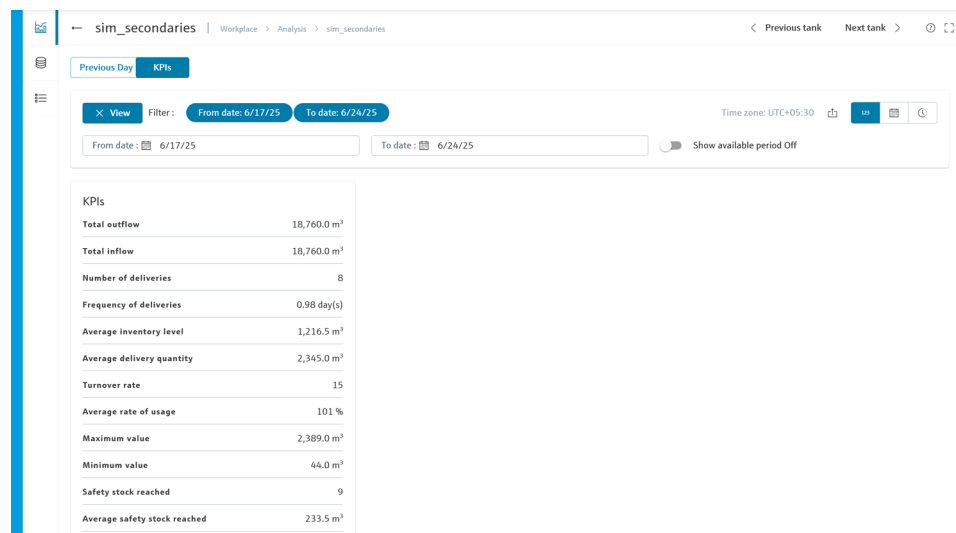
Next planned delivery/Next planned disposal

- Standard tanks: Displays the next planned delivery
- Recycling tanks: Displays the next planned disposal

10.3 Key performance indicators – KPIs

10.3.1 Show data

The **KPIs** tab displays important indicators for all the inflows and outflows of the selected tank.

**Showing data for a selected period**

1. Click the **Display** button to open the selection fields.
2. Enter the **From date** and **To date** to select the period. Enter the date directly or select from the date selector .
 - ↳ The values will be analyzed for the selected period.
3. Optional: Activate the **Show available period** change-over switch.
 - ↳ All stored values are analyzed.

i If no period is selected:

- Shows the **From date** field, the date 8 days prior to the current day
- Shows the **To date** field as standard, the date 1 day prior to the current day

i If the **Show available period** change-over switch is enabled, the **From date** and **To date** will be set to the period for which data is available. The **Show available period** change-over switch is disabled if the user changes the **From date** or **To date**.

Total outflow

Displays the calculated total outflow for the period entered.

Total inflow

Displays the calculated total inflow for the period entered.

Number of deliveries

Displays the number of deliveries for the period entered.

Frequency of deliveries/frequency of disposals

- Standard tanks: Displays the average delivery frequency for the period entered.
- Recycling tanks: Displays the average disposal frequency for the period entered.

Average inventory level

Displays the average amount for the period entered.

Average delivery quantity/average disposal quantity

To ensure that fluctuating changes in the level do not falsify the result, the value entered for the **Hysteresis** field is factored into the calculation when the tank is configured.

- Standard tanks: Displays the average delivery quantity for the specified period.
- Recycling tanks: Displays the average disposal quantity for the specified period.

Turnover rate

Displays the turnover rate for the period entered.

- Calculation for standard tanks: **Total outflow** divided by the **Average inventory level**.
- Calculation for recycling tanks: **Total inflow** divided by the **Average inventory level**.

Average rate of usage

Displays the average rate of usage for the period entered.

- Calculation for standard tanks: $(\text{Average inventory level} \div \text{Optimum}) \times 100$
If "Optimum" is disabled or the value is "0", the system will calculate with the capacity entered.
- Calculation for recycling tanks: $(\text{Average inventory level} \div \text{Safety stock}) \times 100$.
If "Safety stock" is disabled, the system will calculate with the capacity entered.

Maximum value

Maximum value for the period entered.

Minimum value

Minimum value for the period entered.

Safety stock reached

Specifies the number of times the safety stock has been undershot in the case of standard tanks and exceeded in the case of recycling tanks for the period entered.

- Valuation for standard tanks: The measured value is lower than the value entered for the safety stock.
- Valuation for recycling tanks: The measured value is larger than the value entered for the safety stock.
- Measured values within the set hysteresis are not counted. See "Hysteresis" in the "Creating a tank" section.
- If "Safety stock" is disabled, the **Safety stock reached** field will be empty.
- If the value for "Safety stock" = "0", the value in the **Safety stock reached** field will also be "0".

Average safety stock reached

- Standard tanks: Average value by which the safety stock was undershot for the period entered.
- Recycling tanks: Average value by which the safety stock was exceeded for the period entered.
- Measured values within the set hysteresis are not counted. See "Hysteresis" in the "Creating a tank" section.
- If "Safety stock" is disabled, the **Average safety stock reached** field will be empty.
- If the value for "Safety stock" = "0", the **Average safety stock reached** field will also be "0".

10.3.2 Exporting data

The data for the selected period can be saved to an Excel file.

The Excel file contains the following data:

- Tank name
- Location
- Time zone
- From date
- To date
- Total outflow
- Total inflow
- Number of deliveries
- Frequency of deliveries

Exporting data

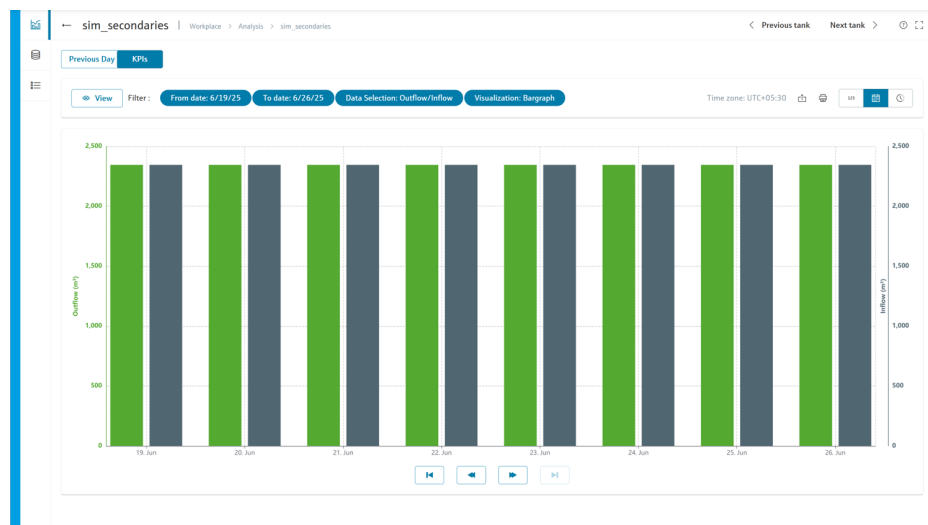
- Click the  button to export the data as an Excel spreadsheet.
 - ↳ A file is downloaded with the name “[Tank name]_KPI.xlsx”.

10.3.3 Chart – Daily

The chart shows the outflow, inflow or the difference between the inflow and outflow for the period selected, depending on the option selected.

View chart

1. Click the  button.
 - ↳ The working area shows the daily chart:



2. Click the  **View** button to open the settings for the chart.
3. Enter the **From date** and **To date** to select the period. Enter the date directly or select from the date selector .
4. In the **Data selection** drop-down list box, select the data that is to be shown in the chart: **Outflow/inflow**, **Outflow only**, **Inflow only** or **Delta only**.
5. In the **Visualization** drop-down list box, select the chart type: **Bargraph** or **Line**.

If the **Show available period** change-over switch is enabled, all available values will be displayed.

If the cursor is moved over the graphs in the chart, a window with the selected data (e.g. outflow), the specific measured value and the time stamp will appear.

Buttons for selecting the time period

	The displayed time period is moved forward by the current time period (into the past).
	The displayed time period is moved forward by 1 day (into the past).
	The time period displayed is moved backward by 1 day (into the future).
	The displayed time period is moved backward by the current time period (into the future).

 The charts will only become available and be reliable 48 hours after the respective measuring point has been added.

Exporting chart data

The chart data for the selected period can be saved in an Excel file.

The Excel file contains the following data:

- Tank name
- Time zone
- Time stamp
- From date
- Outflow
- Inflow
- Unit

- ▶ Click the  button to export the data as an Excel file.
 - ↳ A file is downloaded with the name “[Tank name]_ChartDaily.xlsx”.

Printing a chart

The chart displayed can be saved as a graphics file (PNG file).

- ▶ Click the  button to export the data as an image file.
 - ↳ A file is downloaded with the name “[Tank name]_ChartDaily.png”.

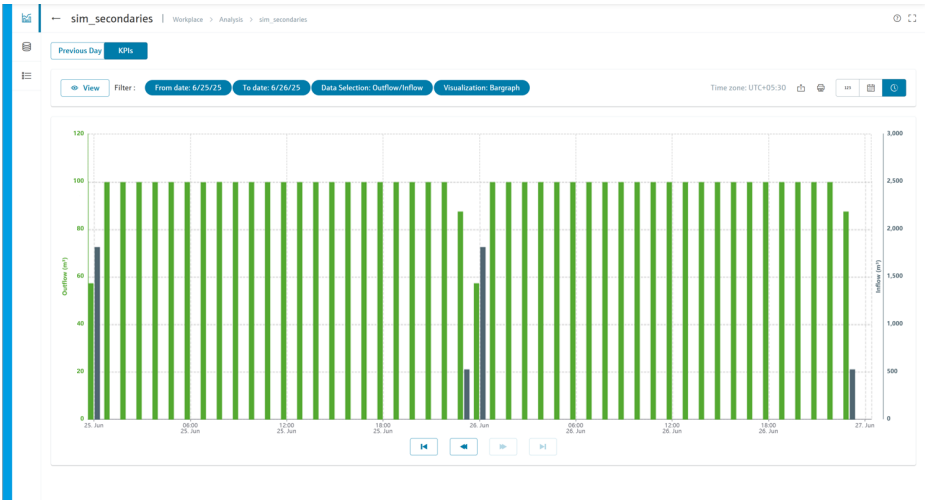
10.3.4 Chart – Hourly

The chart shows the outflow, inflow or the difference between the inflow and outflow for the period selected, depending on the option selected.

 24 values are shown per day.

View chart

- 1. Click the button.
 ↳ The working area shows the hourly chart:



- 2. Click the **View** button to open the settings for the chart.
- 3. Enter the **From date** and **To date** to select the period. Enter the date directly or select from the date selector .
- 4. In the **Data selection** drop-down list box, select the data that is to be shown in the chart: **Outflow/inflow**, **Outflow only**, **Inflow only** or **Delta only**.
- 5. In the **Visualization** drop-down list box, select the chart type: **Bargraph** or **Line**.

If the **Show available period** change-over switch is enabled, all available values will be displayed.

If the cursor is moved over the graphs in the chart, a window with the selected data (e.g. outflow), the specific measured value and the time stamp will appear.

Buttons for selecting the time period

	The displayed time period is moved forward by the current time period (into the past).
	The displayed time period is moved forward by 1 day (into the past).
	The time period displayed is moved backward by 1 day (into the future).
	The displayed time period is moved backward by the current time period (into the future).

The charts will only become available and be reliable 48 hours after the respective measuring point has been added.

Exporting chart data

The chart data for the selected period can be saved in an Excel file.

The Excel file contains the following data:

- Tank name
- Time zone
- Time stamp
- From date

- Outflow
 - Inflow
 - Unit
- ▶ Click the  button to export the data as an Excel file.
- ↳ A file is downloaded with the name “[Tank name]_ChartHourly.xlsx.

Printing a chart

The chart displayed can be saved as a graphics file (PNG file).

- ▶ Click the  button to export the data as an image file.
- ↳ A file is downloaded with the name “[Tank name]_ChartHourly.png.

11 Displaying tank locations in the map – “Map” workplace

i The **Map** menu item is available to people with **Read only**, **Scheduler** or **Operator** configured as their user role.

The menu item displays the locations of the individual tanks in an overview map (Google Maps). Detailed information can be displayed for every tank, e.g. value, planned deliveries or planned disposals.

The tanks can be filtered by the following:

- Tank name (as well as silo or object)
- Tank group
- Product
- Location
- Favorite

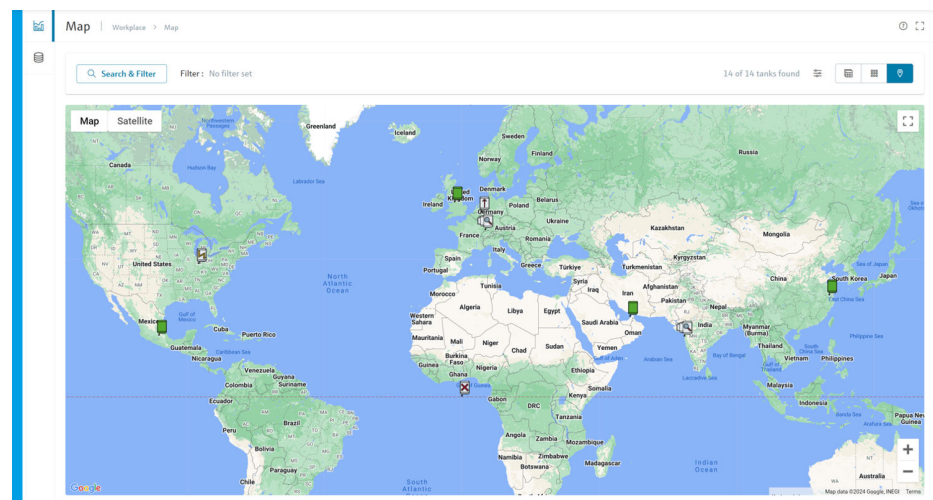
11.1 Viewing a map and associated information

i The following conditions must be met to display a tank or an aggregated tank on the map:

- The tank or aggregated tank must be assigned to a location. The user must have the geographical coordinates (longitude and latitude) of the location or the GPS data of the gateway is used. See the "Creating a location" section.
- The tank or aggregated tank must be assigned to a tank group.

Displaying a map

1. In the **Workplace** menu, click the **Map** menu item.
 - ↳ The working area shows an overview map with the tank locations:

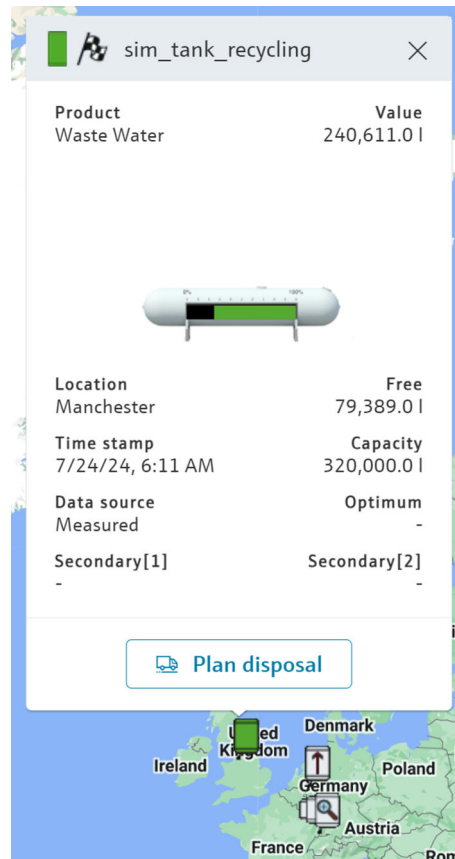


2. Optional: Select the filter to e.g. only display tanks at a particular location.
 - ↳ The map display is automatically adapted to the filter criteria and all the tanks for the locations in question are displayed. If no tanks that match the filter criteria are found, the map will remain empty.

11.2 Tank details

Viewing tank details

1. Click the tank on the map.
 - ↳ The working area shows the tank picture (widget) from the personalized tank overview:



2. Click the ✕ button in the header of the widget to close the tank details.

The following data is displayed for the tank in question:

- Symbols for the tank status and event, as well as the tank name
If GPS coordinates are available for this tank, the 📍 symbol will also be displayed.
- If there are several tanks in one location, scroll icons will be displayed
- Tank picture with bargraph
- 2 fields above and up to 8 fields below the tank picture, as per the configuration in my tank view (see the "Configuring my tank view" section)
- 🚚 Plan delivery or 🗑️ Plan disposal button

-  Clicking on the tank picture opens the detailed view with the tabs and all the information about the tank. All the information that is also accessible with access via the "Tank" workplace can be accessed here.

11.3 Planning a delivery or disposal

- 1. Click the  **Plan delivery** button, or click  **Plan disposal** in the widget.
 - ↳ The **Plan delivery** or **Plan disposal** dialog box appears.

Plan delivery

Tank name

sim_secondaries2

Forecast value

127,512.6

Range

13 day(s)

Delivery date and time *

6/19/24

10:00

Amount *

in m³

1200

Comment

Cancel

Save

- 2. Enter the **Delivery date and time** or use the proposed data.
- 3. Enter the planned **Amount** or use the proposed amount.
- 4. Click the  **Save** button.
 - ↳ The tank is marked on the map with a delivery van icon for a planned delivery or disposal. Example: 

 The proposed date and time for a delivery are calculated from the current date + standard delivery time + 1 hour.

The proposed date and time for a disposal are calculated from the current date + standard disposal time + 1 hour.

The standard delivery time or standard disposal time is determined when configuring the tank.

For a detailed description of how to plan deliveries or disposals, see the "Managing deliveries and disposals– "Scheduling" workplace" section.

12 Creating a reconciliation report – “Reconciliation” workplace

 The **Reconciliation** menu item is available to users with **Read only**, **Scheduler** or **Operator** configured as their user role.

 The **Reconciliation** menu item is only available on the desktop version.

12.1 Creating an ad hoc reconciliation report

The reconciliation report allows the creation of reports that show the development of the inventory in one or more tanks to a very precise degree.

Increased accuracy compared to level measurement alone is achieved by adding the flow meter measured values to the level readings for the input to a tank and the output from a tank.

The reconciliation report relates these 3 values to each other and compares them with one other, making it possible to visualize discrepancies.

 The reconciliation provides more precise measured values than those that are used in the analysis workplace. For this reason, there may be slight deviations between the reconciliation report and the values in the analysis workplace.

A reconciliation report can be generated in different ways:

- Ad hoc, at the request of a SupplyCare user
- Regularly, on the basis of varying time intervals

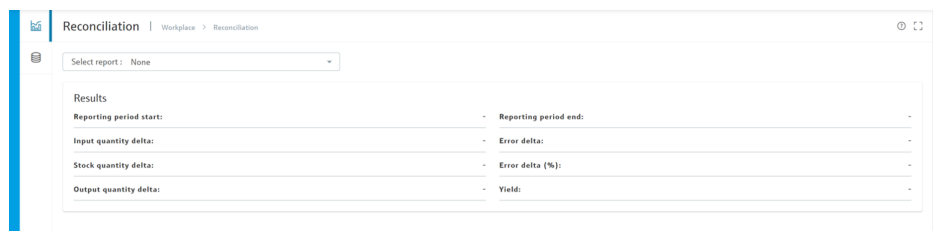
 In order to create an **ad hoc reconciliation report**, at least one report must have been created and configured.

 The configuration of the report cannot be changed here.

To change a report or to create a new one: See the "Configuring a reconciliation report" section in the "Managing master data" section

Creating an ad hoc reconciliation report

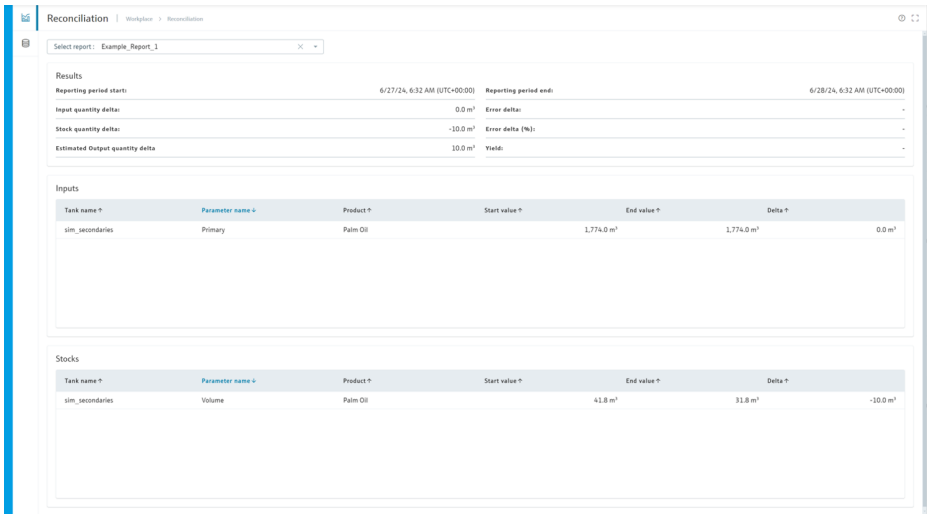
1. In the  **Workplace** menu, click the **Reconciliation** menu item.
 ↳ The working area shows the following view:



The screenshot shows the 'Reconciliation' workplace interface. At the top, there is a breadcrumb trail: 'Reconciliation | Workplace > Reconciliation'. Below this is a 'Select report:' dropdown menu with 'None' selected. The main area is titled 'Results' and contains a table with the following data:

Results	
Reporting period start:	Reporting period end:
Input quantity delta:	Error delta:
Stock quantity delta:	Error delta (%):
Output quantity delta:	Yield:

2. Select a report from the **Select report** drop-down list box.
- ↳ The data is calculated and displayed.



The **Results** field displays the following information:

Reporting period start

Start date and time of the report. The time zone defined in the user preferences is used as the From time.

Reporting period end

Ending date and time of the report. The time zone defined in the user preferences is used as the To time.

Input quantity delta

Value with unit for the input quantity delta. Sum of the differences between the measured values of all measuring points.

Error delta

Value with unit for the error delta. Measured product loss in units.

Stock quantity delta

Value with unit for the stock quantity delta. Sum of the differences between the measured values of all measuring points.

Error delta (%)

Value for the error delta in percent. Measured product loss in %.

Output quantity delta

Value with unit for the output quantity delta. Sum of the differences between the measured values of all measuring points.

Yield

Value (yield), factor for efficiency of a process (ideally: 1).

The **Inputs**, **Stocks** and **Outputs** tables display the following information for one or more tanks:

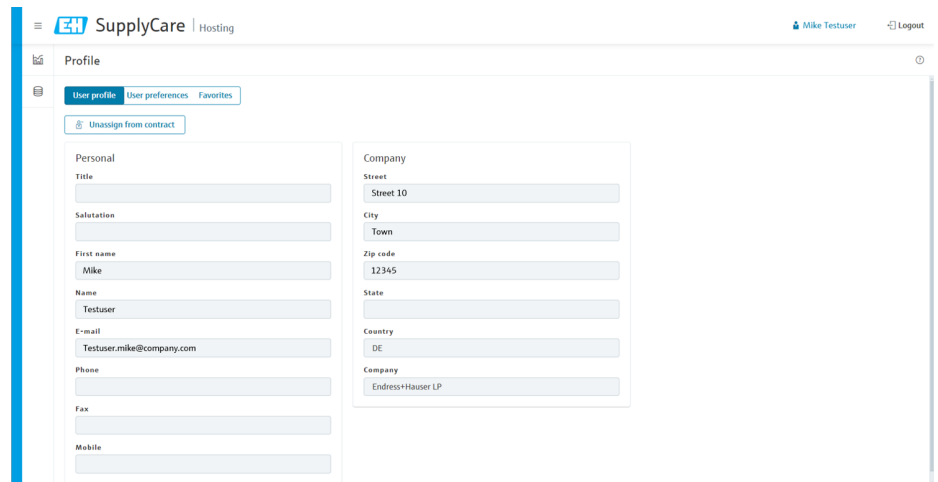
- Tank name
- Point name
- Product
- Start value
- End value
- Delta

 Only the tables that are part of the report are displayed.

13 User profile and user preferences

13.1 Viewing user profile

- Click on the user name in the header, using the  button.
- ↳ The working area shows the following view:

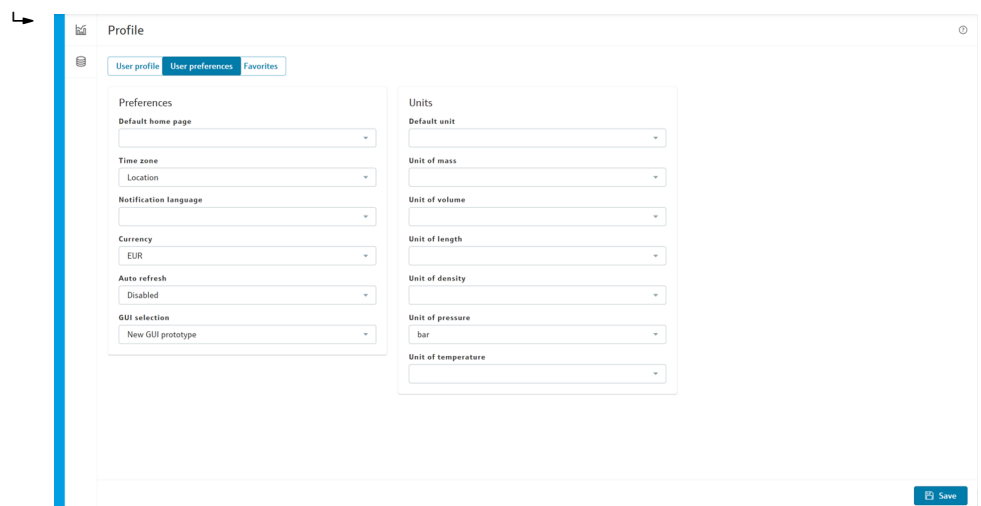


The screenshot shows the 'SupplyCare | Hosting' header with a user icon and 'Mike Testuser' name. The 'Profile' section has three tabs: 'User profile' (selected), 'User preferences', and 'Favorites'. Below the tabs is a 'Unassign from contract' button. The 'Personal' section includes fields for Title, Salutation, First name (Mike), Name (Testuser), E-mail (Testuser.mike@company.com), Phone, Fax, and Mobile. The 'Company' section includes fields for Street (Street 10), City (Town), Zip code (12345), State, Country (DE), and Company (Endress+Hauser LP).

13.2 Selecting and changing user preferences

-  Only users with **Read only**, **Scheduler** or **Operator** configured as their user role can change the user preferences.

1. Click on the user name in the header, using the  button.
2. Select the **User preferences** tab.



The screenshot shows the 'User preferences' tab selected. The 'Preferences' section includes dropdown menus for Default home page, Time zone, Location, Notification language, Currency (EUR), Auto refresh (Disabled), and GUI selection (New GUI prototype). The 'Units' section includes dropdown menus for Default unit, Unit of mass, Unit of volume, Unit of length, Unit of density, Unit of pressure (bar), and Unit of temperature. A 'Save' button is at the bottom right.

3. Click the ▼ button in the drop-down list box to select an option or change a setting.
 - ↳ All available options will be displayed in the list.
4. Click the  **Save** button to save the changes.
5. Alternatively, exit the page without saving to cancel the process.

The user preferences are divided into 2 groups:

■ **Preferences:**

- Default home page
- Time zone
- Notification language
- Currency
- Auto refresh

■ **Units:**

- Default unit
- Unit of mass
- Unit of volume
- Unit of length
- Unit of density
- Unit of pressure
- Unit of temperature

13.2.1 Setting preferences

Default home page

The default home page selected here is displayed in the working area following successful login. If an image is used on the home page, you must first click the **Next** button before the default home page is displayed.

Time zone

The time zone selected here is used in the following areas of the program:

- Workplace menu → Tank
 - **Notes and files** tab
 - **Event details** tab
- Workplace menu → My tank view
 - Tank overview
- Workplace menu → Event
 - Event table
 - **Event details** tab
 - **Event history** tab
- Configuration menu → Tank
 - Tank notes** tab
- Configuration menu → Aggregated tank
 - Tank notes** tab
- Configuration menu → Location
 - Location notes** tab

The following values can be selected for the time zone:

- **Location** (default) – Shows the time zone of the tank location. If a tank location is not defined for a tank, the value "UTC+00:00" is displayed.
- User preference – Displays the selected time zone. If the user does not select a time zone, the default value (location) is used.

Notification language

Sets the default language for notifications. The language selected here is used for event and limit notifications, as well as for the column names in the header of a report.

Currency

Specifies the default currency. The currency selected here is used in the following areas of the program:

- Workplace menu → Tank
 - **Notes and files** tab
 - **Event details** tab
- Workplace menu → My tank view
 - Tank overview
- Workplace menu → Event
 - Event table
 - **Event details** tab
 - **Event history** tab
- Workplace menu → Planning
 - Planning** tab
- Workplace menu → Totaling
 - Tank overview
- Workplace menu → Map
 - Tank overview
- Configuration menu → Tank
 - Tank notes** tab
- Configuration menu → Aggregated tank
 - Tank notes** tab
- Configuration menu → Location
 - Location notes** tab

If an exchange rate is defined between the currency selected here and the currency of the tank, the displayed monetary value will be converted into the currency selected here. If no price or currency is defined for a product, the monetary values for the tanks that use this product will remain empty.

Auto refresh

Sets the number of times the displayed data is updated. It can be updated for the following areas in the program:

- Workplace menu → Tank
 - Tank table
- Workplace menu → My tank view
 - Tank overview
- Workplace menu → Event
 - Event table
- Workplace menu → Planning
 - **Overview** tab
 - **Planning** tab
- Workplace menu → Map
 - Tank overview

The following values can be selected for the automatic update:

- **Disabled** (default) – The automatic update is switched off.
- **5 min., 10 min 15 min, 20 min or 30 min** – Refreshes the data after the specified time.

 The user is automatically logged out of the system after 30 minutes in the default setting (disabled). If the time value is set to 5 min, 10 min, 15 min, 20 min or 30 min, the automatic logout will be suppressed and the system will remain active. In any event, a forced logout will occur after 24 hours.

 The **Auto refresh** drop-down list box is only visible if the option is enabled by the system administrator for the user or the application (all users of this application).

13.2.2 Setting units

Tank unit filter

The following units can be selected as the tank unit:

- Mass
- Volume
- Length
- Density
- Pressure
- Temperature

The unit selected here is used in the following areas of the program:

- Workplace menu → Tank
 - Tank table
 - **Inventory chart** tab
 - **Tank details** tab
 - **Event details** tab
 - **Download history** tab
- Workplace menu → My tank view
 - Tank overview
 - **Inventory chart** tab
 - **Tank details** tab
 - **Event details** tab
 - **Download history** tab
- Workplace menu → Event
 - **Event details** tab
 - **Inventory chart** tab
 - **Tank details** tab, **Unit** field
- Workplace menu → Planning
 - Planning table
 - **Plan delivery/disposal** tab
 - **Planned delivery/disposal** tab
 - **Overview** tab
- Workplace menu → Analysis
 - Analysis table
 - **KPIs** tab
 - **Outflow/Inflow** tab
 - **Chart hourly** tab
 - **Chart daily** tab

13.3 Setting favorites

 Only users with **Read only**, **Scheduler** or **Operator** configured as their user role can set favorites.

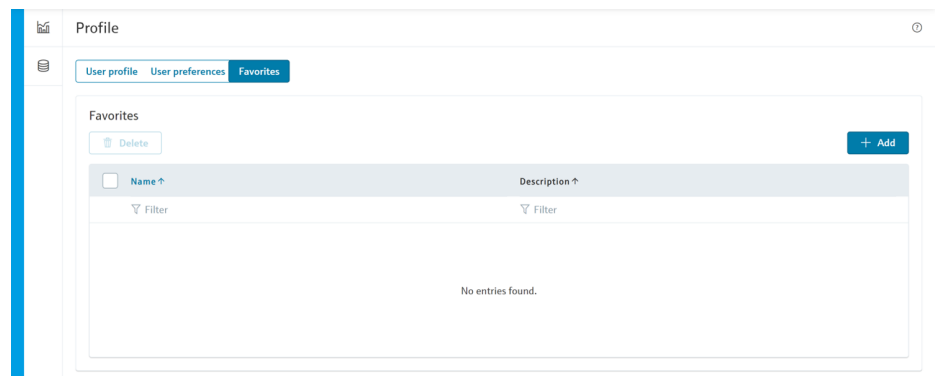
A tank can be included in multiple different favorites. There is no limit to the number of favorites.

Setting favorites

1. Click on the user name in the header, using the  button.

2. Select the **Favorites** tab.

➤ The working area displays the overview table:



3. Click the **+ Add** button.

➤ The **Favorite** dialog box appears:

Favorite ×

Name *
Test

Description
Grains

Tanks

☐	Tank name ↑	Location ↑	Product ↑	Tank type ↑	Buyer ↑	Supplier ↑
☐	sim_hysteresis	Mexiko City	Diesel			GCP
☐	sim_normal	Maulburg	Diesel			
☒	sim_normal2	Suzhou	Grains			
☐	sim_secondaries	Dubai	Palm Oil		Endress+Hauser (...)	Endress+Hauser...
☐	sim_secondaries2	Dubai	Palm Oil		Endress+Hauser (...)	Endress+Hauser...
☐	sim_short_term	Naarden	Milk			
☒	sim_tank_freeze	Aurangabad	Grains	SILOTYP A		
☐	sim_tank_recycl...	Manchester	Waste Water			
☐	sim_tank_recycl...	Mexiko City	Ammoniak			
☒	sim_temperature	Aurangabad	Grains			

× Cancel Save

4. Enter a name in the **Name** field. That name must be unique.

5. Optional: Enter a description in the **Description** field.

6. Select the checkbox of a tank in the table to add the desired tank to the favorites. The number is arbitrary.

7. Optional: Tick the checkbox in the column header to select all tanks in the table.

8. Click the **Save** button to save the favorite to the favorites list.

➤ The dialog box is closed and the selected tanks are displayed in the list.

i By default, the maximum number of tanks that can be selected simultaneously is limited to 100. The value is user-specific and can be defined differently for each contract.

i The tank table can be searched and sorted via the filter functions.

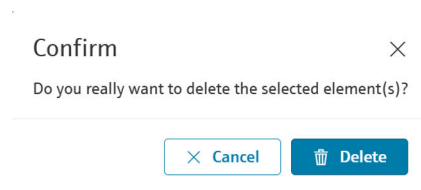
i Users can only view and select the tanks that have been assigned to them.

Changing favorites

1. Click the relevant favorite.
 - ↳ The **Favorite** dialog box appears.
2. Change the desired data.
3. Click the  **Save** button to save the changes.
 - ↳ The favorite is saved and will be displayed in the list.
4. Alternatively, click on the  **Cancel** button to cancel the process.

Deleting favorites

1. Tick the check box in front of the relevant favorite.
2. Click the  **Delete** button.
 - ↳ A confirmation prompt appears.



3. Click the  **Delete** button to delete the favorite.
 - ↳ The favorite is removed from the list.
 4. Alternatively, click on the  **Cancel** button to cancel the process.
-  Tanks that are removed from the user profile will also be removed from all favorites lists of that user profile.

14 Managing master data

14.1 Managing users

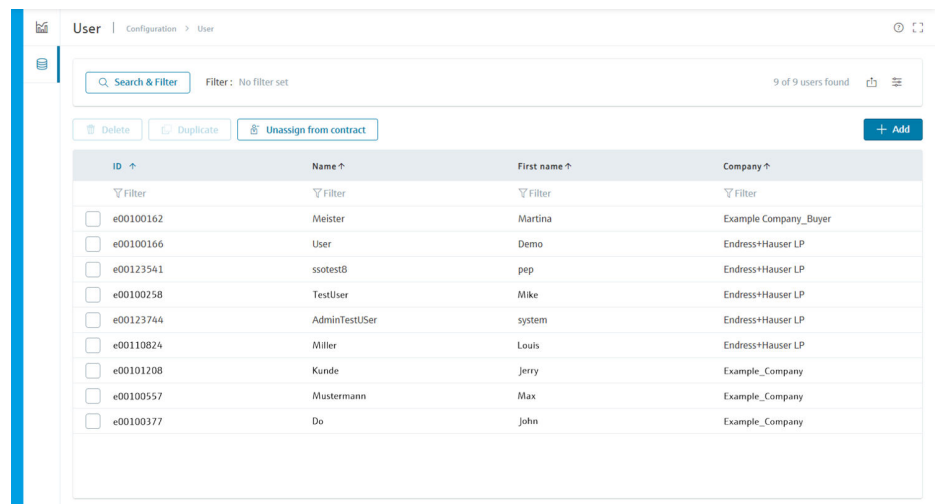
-  Only people whose user role is configured as **Master data** can create, change and delete users.
-  The **User** menu item is only available on the desktop version.

14.1.1 Creating users

Creating a user using the user setup wizard

The settings for **User roles** and **Tank groups** can be subsequently changed via the tabs.

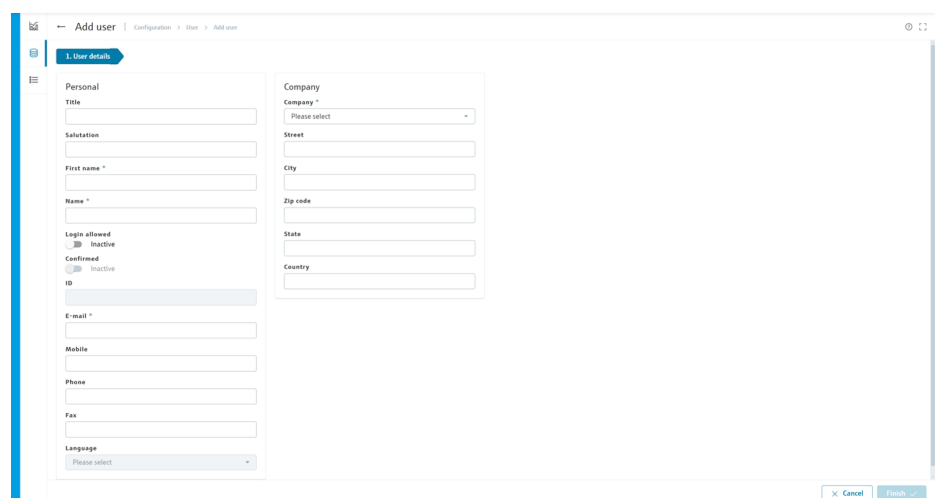
1. In the  **Configuration** menu, click the **User** menu item.
 - ↳ The working area shows the following view:



The screenshot shows the 'User' configuration page. At the top, there is a search bar and a filter dropdown. Below the search bar, there are buttons for 'Delete', 'Duplicate', and 'Unassign from contract'. A table lists 9 users with columns for ID, Name, First name, and Company. The table is filtered to show 9 of 9 users found.

ID	Name	First name	Company
e00100162	Meister	Martina	Example Company_Buyer
e00100166	User	Demo	Endress+Hauser LP
e00123541	ssotest8	pep	Endress+Hauser LP
e00100258	TestUser	Mike	Endress+Hauser LP
e00123744	AdminTestUser	system	Endress+Hauser LP
e00110824	Miller	Louis	Endress+Hauser LP
e00101208	Kunde	Jerry	Example_Company
e00100557	Mustermann	Max	Example_Company
e00100377	Do	John	Example_Company

2. Click the **+ Add** button.
 - ↳ The working area shows the **1. User details** tab.



The screenshot shows the '1. User details' form. It is divided into two main sections: 'Personal' and 'Company'. The 'Personal' section includes fields for Title, Salutation, First name, Name, Login allowed (radio buttons), Confirmed (radio buttons), ID, E-mail, Mobile, Phone, Fax, and Language. The 'Company' section includes fields for Company (dropdown), Street, City, Zip code, State, and Country. At the bottom right, there are 'Cancel' and 'Finish' buttons.

3. Enter the user's **first name**.
4. Enter user's **last name**.
5. Enter the **email**. The email address must be unique.

6. Select the **company** from the drop-down list box.

i If an email address is registered in the SupplyCare database, this email address cannot be assigned again to another user.

i A company must be created before a company can be selected.

7. Optional: Enter additional data for the user.

■ **Title**

■ **Salutation**

■ **Login authorization** – When the user is created and the **Login authorization** change-over switch is enabled, Endress+Hauser checks whether the user is authorized for SupplyCare Hosting. If the user is authorized, the user receives their login details from Endress+Hauser via the email address specified here.

The **Login authorization** change-over switch must be enabled to be able to assign a user role and a tank group to a user.

■ **Acknowledged** (read-only access only) – The change-over switch is activated by Endress+Hauser.

■ **ID** (read-only access only) – Login name. The **ID** is displayed once the user of Endress+Hauser is confirmed for SupplyCare Hosting.

■ **Mobile**

■ **Phone**

■ **Fax**

■ **Language** – The user can be assigned a language to be used for notifications. A language can only be assigned after the **Login authorization** change-over switch has been activated.

■ **Street** – Is entered automatically if the value is saved in the data for the company.

■ **City** – Is entered automatically if the value is saved in the data for the company.

■ **Zip code** – Is entered automatically if the value is saved in the data for the company.

■ **State** – Is entered automatically if the value is saved in the data for the company.

■ **Country** – Is entered automatically if the value is saved in the data for the company.

i The data for **Street**, **City**, **Zip code**, **State** and **Country** can be adjusted as required.

i The **2. User roles** tab will only appear if login has been allowed for the user.

8. Click the **Finish** ✓ button to save the new user.

9. Alternatively, click on the **Next** > button to assign a user role to the user. The user roles can also be assigned at a later time.

↳ The working area shows the **2. User roles** tab.

10. Activate the change-over switch in question to assign a user role to the user. Multiple user roles can be assigned to a user at the same time.

11. Click the **Finish** ✓ button to save the new user.
12. Alternatively, click the **Next** > button to assign a tank group to the user.
 - ↳ The working area shows the **3. Tank groups** tab.

The screenshot shows the 'Add user' configuration interface. The '3. Tank groups' tab is active. It displays a table with the following columns: Tank group, Description, Notifications, PP, SP, SST, TF, TH, PDL, PDE, SL1, SL2, and Spl. The table lists several tank groups, each with a checkbox in the 'Tank group' column and a corresponding row of checkboxes for the other columns. The tank groups listed are: Chemicals, Configtestgroup, Food and Beverage, NRW, Oil/Gas, Primaries, Tank group 1, T1_Tanks_2021, and Waste Water. At the bottom of the screen, there are buttons for 'Previous', 'Cancel', and 'Finish'.

13. Select the checkbox in question to assign a tank group to the user. Multiple tank groups can be assigned to a user at the same time.
 - ↳ The assigned tank groups are listed in the "Workplace – Tank" view.
14. Click the **Finish** ✓ button to save the new user.

i Only when the **Scheduler**, **Operator** or **Read only** user role is assigned to the user is the **3. Tank groups** tab shown.

Creating a user through duplication

- i** Duplicating a user opens the setup wizard. The settings in the **1. User details**, **2. User roles** and **3. Tank groups** tabs are taken from the template.
- i** A user's email address must be unique. If the entered email address already exists, the error message will appear.

For more information on duplicating a data record, see the "Duplicating master data" section.

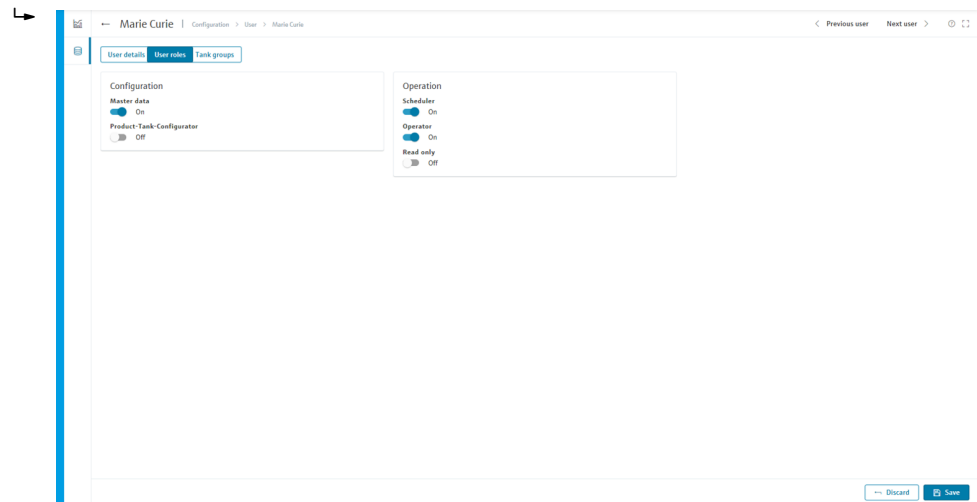
14.1.2 Assigning user roles

One or more user roles are assigned to a user via the **User roles** tab. The user receives different authorizations depending on the user role.

Authorization: See the "User roles and authorizations" section

1. In the **Configuration** menu, click the **User** menu item.
2. In the overview table, click on the respective user to assign the user roles.

3. Select the **User roles** tab.



4. Activate the change-over switch in question to assign a user role to the user. Multiple user roles can be assigned to a user at the same time.
5. Click the **Save** button to save the entries.
6. Alternatively, click on the **Discard** button to undo the change.

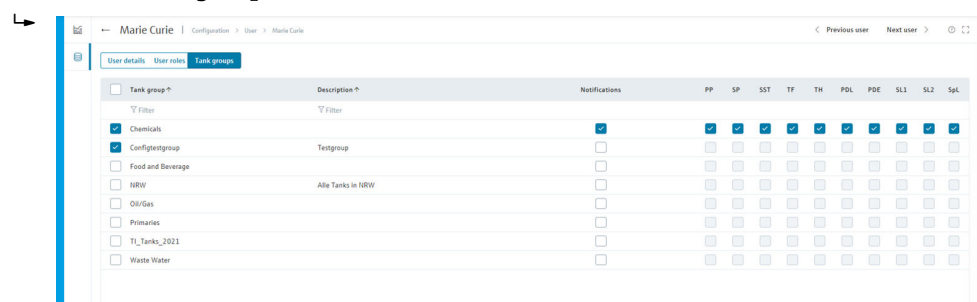
14.1.3 Assigning tank groups to a user and setting up notifications for tank events

One or more tank groups are assigned to a user using the **Tank groups** tab. In addition, the tank events for which the user should be informed can be defined.

i Only the assigned tank groups are displayed in the "Workplace" menu.

Assigning tank groups

1. In the **Configuration** menu, click the **User** menu item.
2. In the overview table, click the user in question to assign tank groups.
3. Select the **Tank groups** tab.



4. Tick the checkbox in the left-hand column to assign one or more tank groups to the user.

Setting up notifications

5. Tick the checkbox in the **Notifications** column for the relevant tank if you want the user to also be informed about tank events by email.
6. Check all the check boxes corresponding to the events for which the user should receive notification.
7. Click the **Save** button to save the entries.
8. Alternatively, click on the **Discard** button to undo the change.

The following events can be selected:

- **PP** – Plan point
- **SP** – Ship point
- **SST** – Safety stock
- **TF/SF/OF** – Tank freeze/silo freeze/object freeze
Includes all information about tank freeze/silo freeze/object freeze events.
- **TH/SH/OH**: Tank holdup/silo holdup/object holdup
Includes all the information on tank holdup/silo holdup/object holdup events.
- **PDL** – Planned delivery/disposal lifecycle
Includes all new planned and deleted deliveries or disposals.
- **PDE** – Planned delivery/disposal events
Includes all late, missed and fulfilled deliveries or disposals.
- **SL1, SL2** – Secondary limit 1, secondary limit 2
- **SpL** – Span limit

14.1.4 Changing the user

For additional information, see the "Changing master data" section.

14.1.5 Deleting users

-  A user can only be deleted if they are not assigned to any tank group, company contact or to a recipient of the report. The user must not be logged in. The tank group assignment is canceled in the **Tank groups** tab.

For additional information, see the "Deleting master data" section.

14.2 Managing tanks

-  Only people whose user role is configured as **Master data** and **Product-tank-configurator** can create, change and delete tanks.
-  Depending on the configuration, instead of **Tanks**, **Objects** or **Silos** may be displayed.

14.2.1 Creating a tank

-  A tank always has to be assigned to a tank group since you can only assign tank groups to a user.
-  The **Location**, **Buyer**, **Supplier** and **Product** fields first have to be created before you can select elements for these fields. The **Buyer** and **Supplier** are created as a company.

Creating a tank using the tank setup wizard

-  The settings for **Tank details**, **Tank groups**, **Device mapping** and **Tank linearization** can be subsequently changed via the tabs.
-  The tank setup wizard cannot be used to create aggregated tanks.

1. In the **Configuration** menu, click the **Tank** menu item.
 ↳ The working area shows the detailed view below:

Tank name ↑	Tank type ↑	Location ↑	Planning type	Unit ↑
sim_hysteresis	Tank_type_A45	Naarden	Standard	m³
sim_normal		Greenwood	Standard	m³
sim_secondaries		Aurangabad	Standard	m³
sim_secondaries_2		Maulburg	Standard	l
sim_short_term		Suzhou	Standard	m³
sim_tank_freeze		Dubai	Standard	m³
sim_tank_recycling		Manchester	Recycling	l
sim_tank_recycling_2		Mexico City	Recycling	l
sim_temperature		Aurangabad	Standard	°C
Stahltank I		Krefeld-Oil	Recycling	l
Stahltank II			Recycling	l
Testtank_AS_1		Aurangabad	Standard	l
Testtank_TI_1		Maulburg	Standard	l
Testtank_TI_2		Maulburg	Standard	l
TI_Tank_2021_1			Standard	

2. Click the **+ Add** button.
 ↳ The working area shows the **1. Tank details** tab.

3. Enter the **Tank name**. The tank name must be unique.
4. Select the **Planning type** from the drop-down list box.
 ↳ **Standard**: Specifies that it concerns planning the delivery.
Recycling: Specifies that it concerns planning a disposal.
 The event messages and the way the inventory chart and levels are displayed are adapted to this planning type.
5. Select the unit used for the tank from the **Tank unit** drop-down list box.
6. Enter the maximum tank capacity for the selected tank unit in the **Capacity** field.
- i** Tanks that are configured with a unit of volume, e.g. m³, can also be displayed in the equivalent mass when using an assigned product with density. For the correct procedure for creating a product, refer to the "Managing products" section.
7. Optional: Enter additional details about the tank.

- **Tank type**
- **Product**
- **Location**
- **Buyer** (company)
- **Supplier** (company)
- **Visualization** – Depicting the appropriate tank shape.

- **SDT** – Standard delivery time or standard disposal time.
 - **ADI/ADO based on** – Default setting: 14 days. This period is used for extrapolating in the inventory chart.
 - **Negative values** – If this option is enabled, negative measuring values will also be included in the ADI/ADO calculations.
 - **Forecast** – When checked, the forecast of the inventory will be displayed in the **Inventory chart** tab.
 - **Short term forecast** – Default setting: Disabled. If this option is activated, a second forecast line will be displayed in the inventory chart.
 - **Optimum** – Only available for standard tanks. The input box is displayed as soon as the change-over switch is activated.
 - **Plan point** – The entry field is shown as soon as the change-over switch is activated.
 - **Ship point** – Only available for standard tanks. The input box is displayed as soon as the change-over switch is activated.
 - **Safety stock** – The entry field is shown as soon as the change-over switch is activated.
 - **Hysteresis** – The hysteresis serves to prevent constant event messages, e.g. due to a fluctuating level.
 - **Use product unit** – This option can only be activated if a product is assigned to the aggregated tank and the units of the product and the tank are compatible. If this option is activated, the unit of the selected product will be automatically used in the **Tank unit** field. The values in the **Capacity**, **Optimum**, **Plan point**, **Ship point**, **Safety stock** and **Hysteresis** fields are converted based on the density entered for the product.
- To carry out editing and scheduling of tanks based on mass, the maximum capacity must be entered as a unit of volume, e.g. m³.

8. Click the **Next** > button to assign the tank to a tank group.
 ↳ The working area shows the **2. Tank groups** tab.

9. Select the checkbox for a tank group to assign the tank to this tank group.

 If a suitable tank group is not available, a new tank group can be created.
 Creating a tank group: See the "Managing tank groups" section.

10. Click the **Finish** ✓ button to save the new tank.

11. Alternatively, click the **Next** > button to assign devices and measuring points to the tank parameters.
 ↳ The workspace shows the **3. Device mapping** tab.

12. Assign the devices and measuring points. For detailed information, see the "Device mapping" section.

i The **Device mapping** tab is only available if the corresponding function has been activated in the selected SupplyCare contract. If device mapping is not available and should be activated, please contact Endress+Hauser: www.addresses.endress.com.

13. Click the **Finish** ✓ button to save the new tank.
14. Alternatively, click on the **Next** > button to assign a linearization to the tank.
 ↳ The working area displays the **4. Tank linearization** tab.

15. Select the type of linearization from the drop-down list. For detailed information, see the "Assigning linearization to a tank" section.
16. Click the **Finish** ✓ button to save the new tank.

Creating a tank through duplication

i Duplicating a tank opens the setup wizard. The settings in the **1. Tank details**, **2. Tank groups** and **4. Tank linearization** tabs are taken from the template. The settings in the **3. Device mapping** tab are not taken from the template and must be created again.

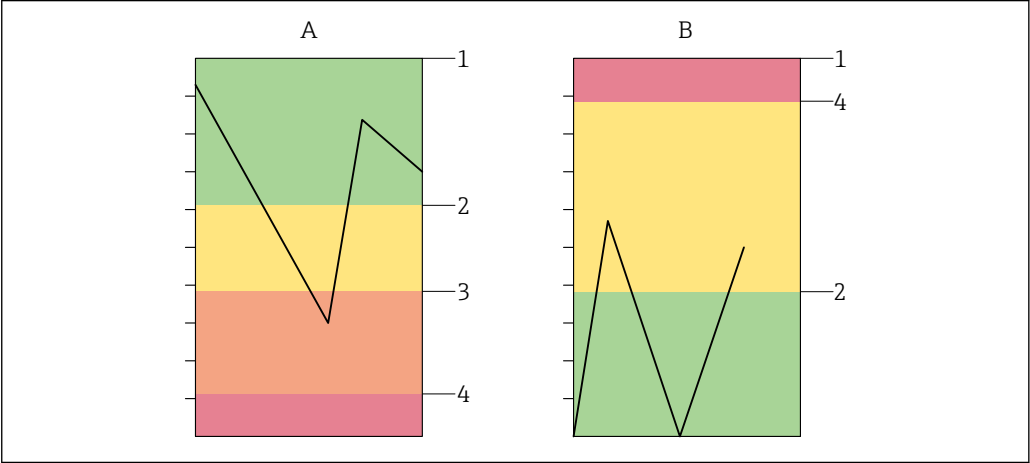
i The tank name must be unique. If the entered tank name already exists, the following error message will be shown: "The tank name already exists. Please enter another name."

For more information on duplicating a data record, see the "Duplicating master data" section.

Standard tank and recycling tank

SupplyCare makes a distinction between standard tanks and recycling tanks. A standard tank is one from which a product is removed. For a recycling tank, the tank is filled with the product.

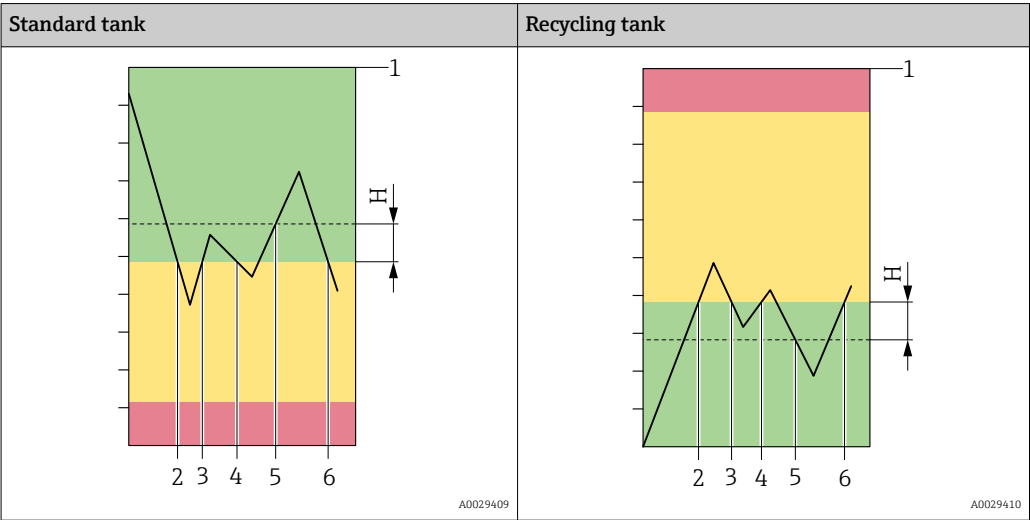
Selecting **Recycling** in the **Planning type** drop-down list turns the standard tank into a recycling tank. The display logic in the inventory chart and the notification logic are changed according to the figure below.



- A Standard tank
- B Recycling tank
- 1 Capacity
- 2 Plan point
- 3 Ship point
- 4 Safety stock

Hysteresis

The hysteresis pertains solely to event notifications. The hysteresis prevents multiple triggering of an event notification, e.g. due to fluctuating levels. The hysteresis applies to the following events: "Plan point", "Ship point" and "Safety stock".



- 1 Capacity
- 2 Standard tank:
The level falls below the limit value for the plan point. The "Plan point reached" event is triggered. The status of the event is set to **Open**.
Recycling tank:
The level rises above the limit value for the plan point. The "Plan point reached" event is triggered. The status of the event is set to **Open**.
- 3 Standard tank:
The level rises back above the limit value for the plan point. The status for event 2 remains **Open**. The tank status switches to "OK" (green).
Recycling tank:
The level falls below the limit value for the plan point. The status for event 2 remains **Open**. The tank status switches to "OK" (green).
- 4 Standard tank:
The level falls back below the limit value for the plan point. No new event is triggered. The status for event 2 remains **Open**. The tank status switches to "Plan point reached" (yellow). No new event is triggered, as the level has not first risen above the limit value for the plan point plus the hysteresis.
Recycling tank:
The level rises back above the limit value for the plan point. No new event is triggered. The status for event 2 remains **Open**. The tank status switches to "Plan point reached" (yellow). No new event is triggered, as the level has not first fallen below the limit value for the plan point minus the hysteresis.
- 5 Standard tank:
The level rises above the limit value for the plan point plus the hysteresis. The status of event 2 is now set to **Done**.
Recycling tank:
The level falls below the limit value for the plan point minus the hysteresis. The status of event 2 is now set to **Done**.
- 6 Standard tank:
The level falls back below the limit value for the plan point. A new "Plan point reached" event is triggered. The status of the event is set to **Open**.
Recycling tank:
The level rises back above the limit value for the plan point. A new "Plan point reached" event is triggered. The status of the event is set to **Open**.

14.2.2 Selecting and resetting a depicted tank shape

Via the **Tank details** tab, a graphic depicting the appropriate tank shape can be selected for a tank created. The selected graphic is also displayed in the "Workplace – Tank" view in the **Tank details** tab.

Selecting a depicted tank shape

1. In the  **Configuration** menu, click the **Tank** menu item.
2. Click on the relevant tank in the table to make changes.
3. Select the **Tank details** tab.
4. Click on the  picture in the **Visualization** field.
↳ The **Select tank picture** dialog box appears.
5. Click on the picture that applies to the created tank.
↳ The selected picture is displayed in the **Visualization** field.
6. Click the  **Save** button to save the selection.
7. Alternatively, click on the  **Discard** button to undo the change.

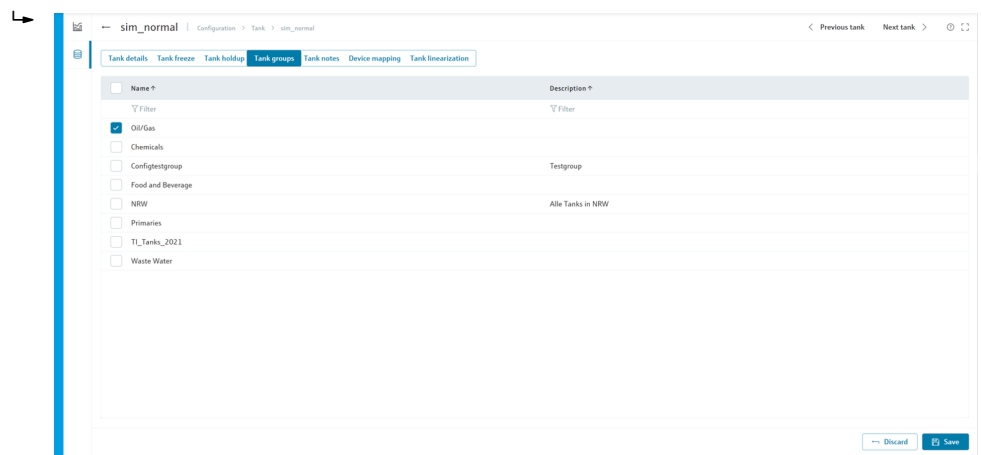
Resetting a depicted tank shape

1. In the  **Configuration** menu, click the **Tank** menu item.
2. Click on the relevant tank in the table to make changes.
3. Select the **Tank details** tab.

4. Click on the picture of the tank in the **Visualization** field.
↳ The **Select tank picture** dialog box appears.
5. Click on the  picture.
↳ The selected picture is displayed in the **Visualization** field.
6. Click the  **Save** button to save the selection.
7. Alternatively, click on the  **Discard** button to undo the change.

14.2.3 Changing tank-tank group assignment

1. In the  **Configuration** menu, click the **Tank** menu item.
2. Click on the relevant tank in the table to make changes.
3. Select the **Tank groups** tab.



4. Select the checkbox for a tank group to assign the tank to this tank group.
5. Optional: Untick the checkboxes of a tank group to deselect the assignment.
6. Click the  **Save** button to save the selection.
↳ The table is sorted again. Assigned tank groups are shown before non-assigned tank groups in alphabetical order.
7. Alternatively, click on the  **Discard** button to undo the change.

14.2.4 Configuring secondary values

If secondary values are assigned to the tank via the **Tank** menu item in the **Device mapping** tab, these secondary values will be displayed in the **Secondary values** tab. The tab is not visible if no secondary value has been assigned to the currently selected tank.

1. In the  **Configuration** menu, click the **Tank** menu item.
2. Click on the relevant tank in the table to make changes.

3. Select the **Secondary values** tab.

4. Activate the **Standard limits** change-over switch to monitor the secondary value using limits.
5. Alternatively, activate the **Span limits** change-over switch to monitor the secondary value using span limits.
6. Select limits or span limits.
7. Optional: Enter the **name** of the secondary value.
↳ The name is used in all views.
8. Click the **Save** button to save the selection.
9. Alternatively, click on the **Discard** button to undo the change.

Information on the secondary values if **Standard limits** are selected:

- Drop-down list box: **Upswing** or **Downswing** – The drop-down list box appears when **standard limits** are activated and only influences **Limit 1** and **Limit 2**.
- **Limit 1** and **Limit 2** – See the following section: Display of "Falling limits" and "Ascending limits".
- **Hysteresis** – Is used for Limit 1 and Limit 2. The hysteresis is within this range.

Information on the secondary values if **span limits** are selected:

- **Upper span limit** and **lower span limit** – Defines the monitoring range in which the secondary value is expected. The value is visible in the inventory chart.
- **Hysteresis** – Is used for the upper and lower span limit. The hysteresis is within this range.

Recommendation: Monitor the secondary value either using standard limits **or** using span limits. Do not use both methods. While this is possible, it can lead to misunderstandings.

With the span limits, a hysteresis applies to resetting events. The hysteresis range falls within the span limits. If the secondary value moves outside the set span limits, the status in the tank overview will be changed and events will be triggered. Events are only reset when the secondary value has returned far enough into the range that it has also exceeded the hysteresis range.

Display for "Falling limits" and "Ascending limits"

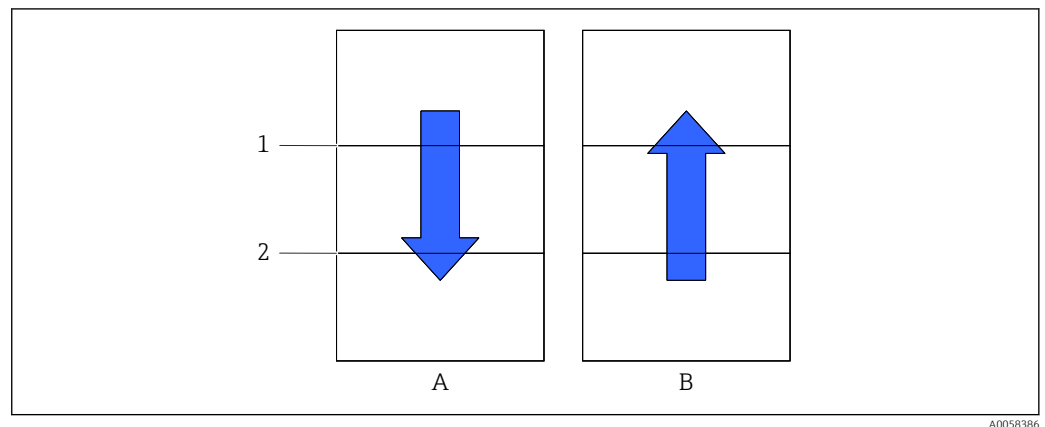
The drop-down list box contains the options "Falling limits" and "Ascending limits".

Downswing

- Limit 1 – Plan point
- Limit 2 – Safety stock

Rising

- Limit 1 – Safety stock
- Limit 2 – Plan point



A0058386

- A Downswing
 B Rising
 1 Limit 1
 2 Limit 2

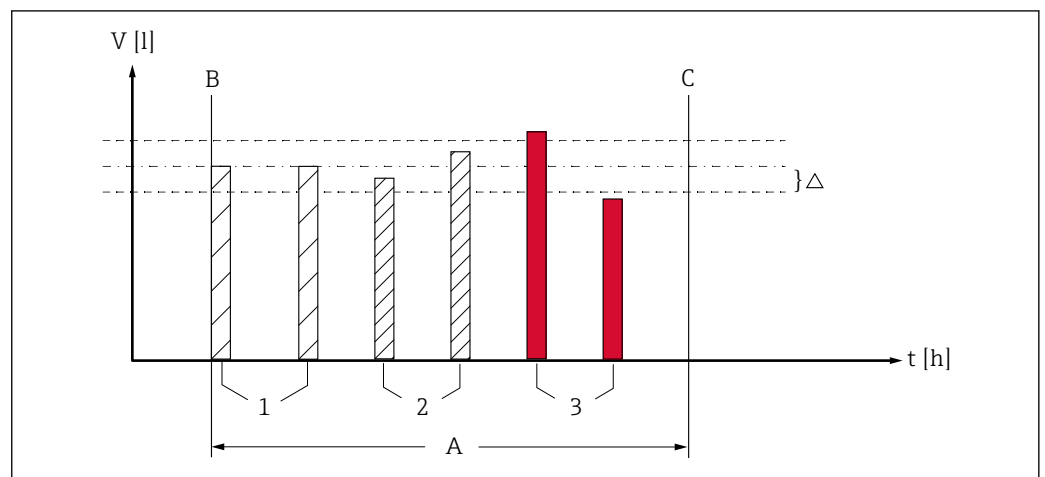
i The values for Limit 1 and Limit 2 are displayed in the overview table in the "Tank" workplace in the respective column for the plan point and safety stock.

14.2.5 Configuring tank freeze events

i The **Tank freeze** tab is only available on the desktop version.

Tank freeze events are generated using an internal limit. The limit is based on the latest acquired measurement for the tank within a defined period of time to detect e.g. material theft, leakage or defects.

The scheme for tank freeze events is shown below.

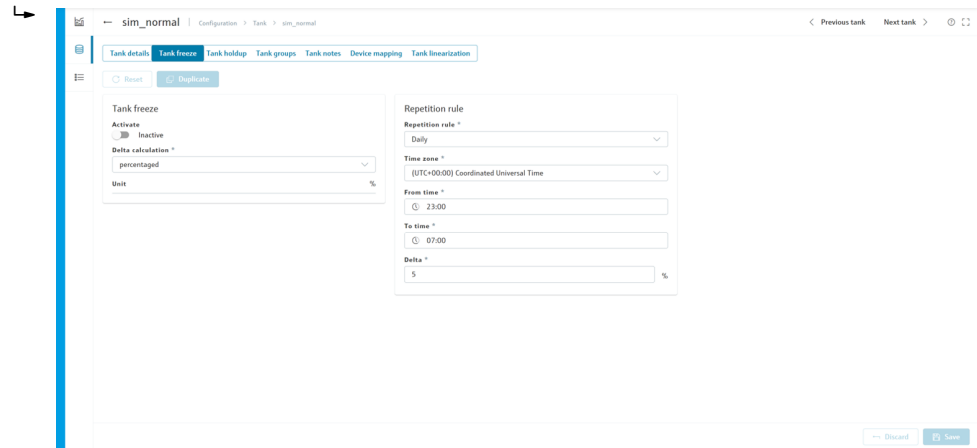


A0057560

- A Set monitoring time
 B Start of the monitoring time
 C End of monitoring time
 1 Level at start, unchanged level
 2 The level is changed but within the set freeze event delta. No tank freeze event is created.
 3 Level changed, outside of freeze event delta. A tank freeze event is created.

Configuring tank freeze events

1. In the  **Configuration** menu, click the **Tank** menu item.
2. In the table, click on the relevant tank to configure freeze events.
3. Select the **Tank freeze** tab.



4. Enable the **Enable** change-over switch to activate the option. This option is disabled by default.
5. In the **Delta calculation** drop-down list box, select the calculation mode for the delta.
 - ↳ **Absolute**: Sets the **delta** as a fixed value in the tank unit.
 - ↳ **Percentaged**: Specifies the **delta** as a percentage of the configured tank capacity. The **Unit** field indicates which unit has been configured for the tank capacity if delta calculation is set to "absolute". Otherwise "%" is displayed here.
6. In the **Repetition rule** drop-down list box, select a rule for the repetition of the monitoring period.
 - ↳ **Daily**: The monitoring time that should take place daily can be configured.
 - ↳ **Weekly on every...**: Monitoring times can be configured individually for each weekday.

 The calculation mode can be changed between **absolute** or **percentaged** at any time. If the calculation mode for the delta is changed, the delta value for the associated monitoring time will become invalid and will need to be re-entered.

 Only one type of repetition rule can be configured for a tank. Either "daily" or "weekly on every...". Only the repetition rule that was last configured and saved is valid.

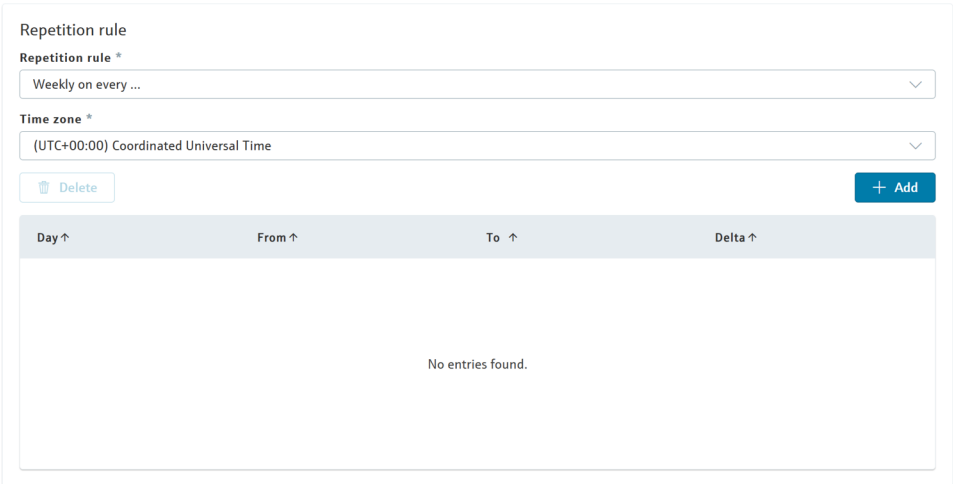
Configuring the "daily" repetition rule



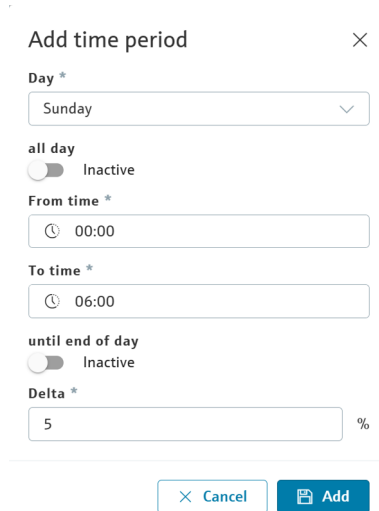
1. Select the **time zone** used for the configured monitoring times.
2. Enter the **From time** directly or select it via the time picker .
3. Enter the **To time** directly or select using the time picker .

4. Enter the **delta**. The value must be greater than "0".
 - At the start of the monitoring time, the last measured tank value, e.g. tank level, is saved ("frozen"). This "frozen" measurement is compared with the current measurements during the monitoring time. If the difference between the frozen measurement and the current measurement does not exceed the delta until the end of the monitoring time (positive or negative), a tank holdup event will be generated.
5. Click the  **Save** button to save the configuration.
6. Alternatively, click the  **Discard** button to undo the changes.

Configuring the "Weekly on every..." repetition rule



1. Click the  **Add** button.
 - The **Add time period** dialog box appears:



2. Select the **day** for which you want to add the time period.
3. Enter the **From time** directly or select it via the time picker .
4. Enter the **To time** directly or select using the time picker . The To time must be later than the From time.
5. Optional: Activate the **full-day** change-over switch to set the monitoring time to a time period of 0:00 h to 23:59 h.
 - The **From time** and **To time** input boxes are disabled and hidden. The From time is replaced by 0:00 h and the To time is replaced by 23:59 h.

6. Optional: Activate the **Until end of day** change-over switch to set the end of the monitoring time to 23:59 h.
 - ↳ The **To time** entry field is disabled and hidden. The To time is replaced by 23:59 h.
7. Enter the **delta**. The value must be greater than "0".
 - ↳ At the start of the monitoring time, the last measured tank value, e.g. tank level, is saved ("frozen"). This "frozen" measurement is compared with the current measurements during the monitoring time. If the difference between the frozen measurement and the current measurement does not exceed the delta until the end of the monitoring time (positive or negative), a tank holdup event will be generated.
The holdup event delta can be set separately for every monitoring time.
8. Click the  **Add** button to add the configuration to the list of active monitoring periods.
 - ↳ The dialog box is closed and the monitoring time is displayed in the list.
9. Optional: Configure other monitoring times.
10. Click the  **Save** button to save the configuration.
11. Alternatively, click the  **Discard** button to undo the changes.

To enter a monitoring period for one day that extends into the morning of the following day, proceed as follows:

1. Enter the **From time** and enable the **Until end of day** change-over switch to set the end of the monitoring time to 23:59 h.
2. Save the configuration.
3. Add another monitoring period for the following weekday.
4. Enter a **From time** of 0:00 h.
5. Enter the **To time**.
6. Select the same **delta**.
 - ↳ The entire monitoring time relates to the measurement at the From time on the first day.
7. Click the  **Save** button to save the configuration.

 Monitoring times cannot overlap.

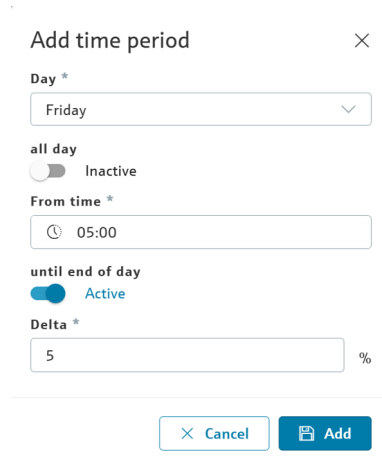
Changing the monitoring time

"Daily" repetition rule:

1. Enter the **From time** or **To time** directly or select using the time picker .
2. Click the  **Save** button to save the change.

"Weekly on every..." repetition rule:

1. Click the relevant monitoring time in the list.
 ↳ The **Add time period** dialog box appears.



The dialog box titled "Add time period" contains the following fields and controls:

- Day ***: A dropdown menu showing "Friday".
- all day**: A toggle switch currently set to "Inactive".
- From time ***: A time picker showing "05:00".
- until end of day**: A toggle switch currently set to "Active".
- Delta ***: A text input field showing "5" with a "%" symbol next to it.
- Buttons: "Cancel" and "Add".

The dialog box displays the last saved tank freeze configuration.

2. Adjust the configuration if necessary.
3. Click the **Add** button to save the changed monitoring time.
 ↳ The dialog box is closed and the changed monitoring time is displayed in the list.
4. Click the **Save** button to save the change.

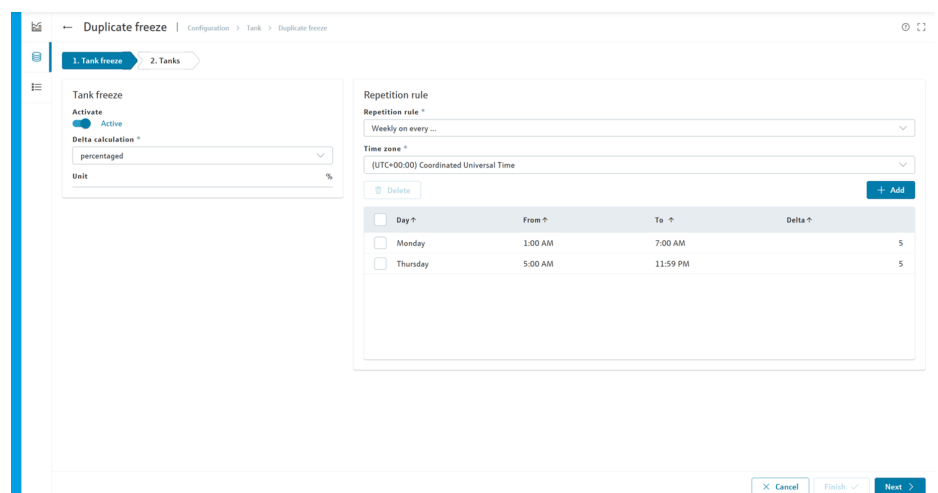
Resetting tank freeze events

- ▶ Click the **Reset** button.
 ↳ The tank freeze configuration is reset to the default setting.

Copying the tank freeze configuration to other tanks

If the tank freeze configuration for a tank is changed, the new configuration can be transferred to other tanks. In this case, it is not necessary to change the configuration for every additional tank.

1. Click the **Duplicate** button in the **Tank freeze** tab.
 ↳ The setup wizard opens and displays the **1. Tank freeze** tab.



The "Duplicate freeze" setup wizard is shown with the following sections:

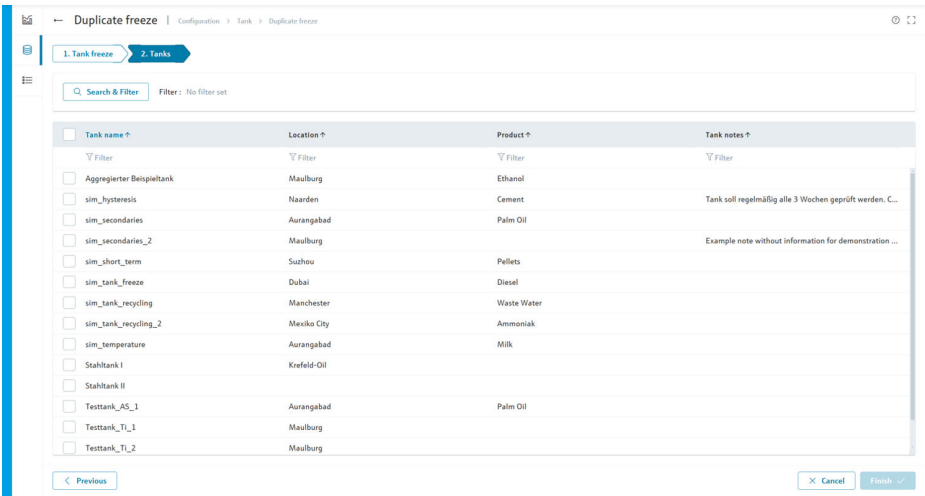
- Left sidebar**:
 - Tank freeze
 - Activate (Active)
 - Delta calculation (percentaged)
 - Unit (%)
- Main content area**:
 - Repetition rule**: "Weekly on every ..."
 - Time zone ***: "(UTC+00:00) Coordinated Universal Time"
 - Buttons**: "Delete" and "+ Add"
 - Table**:

Day ↑	From ↑	To ↑	Delta ↑
☐ Monday	1:00 AM	7:00 AM	5
☐ Thursday	5:00 AM	11:59 PM	5
- Bottom navigation**: "Cancel", "Finish", and "Next" buttons.

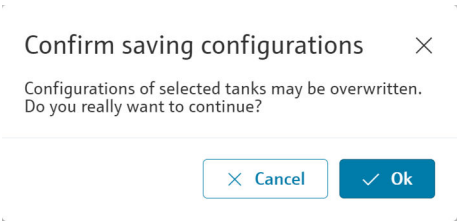
The tab displays the last saved tank freeze configuration.

2. Optional: Adjust the configuration as required.

3. Click the **Next** > button.
 ↳ The working area shows the **2. Tanks** tab.



4. Select the checkboxes for the tanks in question to which the tank freeze configuration is to be copied.
5. Click the **Finish** ✓ button to save the configuration to the marked tanks.
 ↳ The dialog box **Confirm saving configurations** appears.



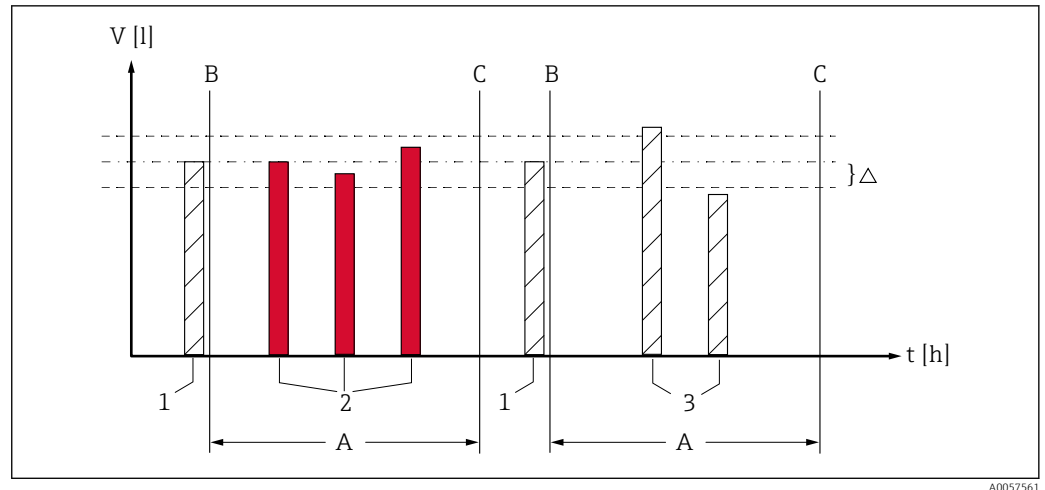
6. Click the ✓ **OK** button to confirm the confirmation prompt.
 ↳ The tank freeze configuration is copied to the selected tanks.
7. Alternatively, click on the ✕ **Cancel** button to cancel the process.
 ↳ The tank freeze configuration is **not** copied to the selected tanks.

14.2.6 **Configuring tank holdup events**

 The **Tank holdup** tab is only available on the desktop version.

Like tank freeze events, tank holdup events are generated using an internal limit. The limit is based on the last measurement received for the tank within a defined time to detect unused storage capacity, malfunctions or defects.

The scheme for tank holdup events is displayed below.



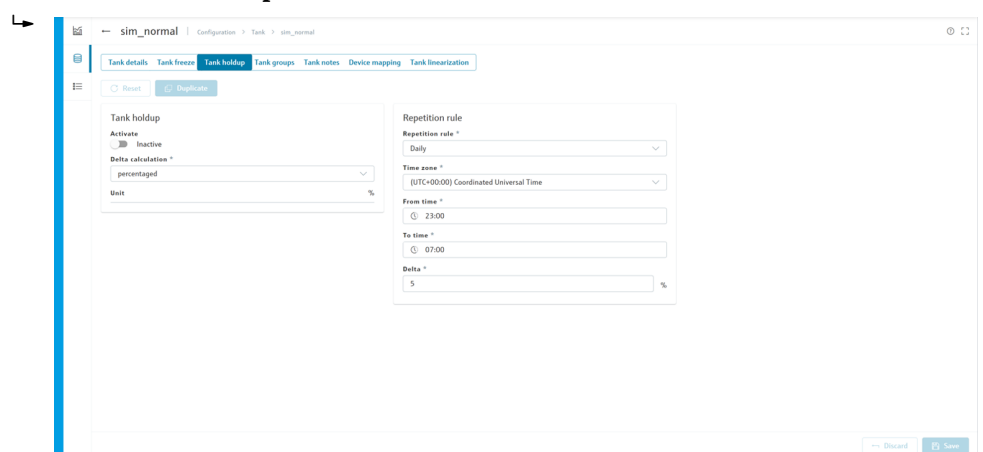
- A Set monitoring time
 B Start of the monitoring time
 C End of monitoring time
 1 Level at start
 2 Level unchanged or level changed but within the set event delta. A tank holdup event is created.
 3 Level changed, outside the event delta. A tank holdup event is not created.

Concept

In contrast to tank freeze events, the expected state of a tank is that its contents are removed or refilled, i.e. the level changes. In the period between two measurements, at least a certain amount (event delta) that corresponds to the normal expected pattern should be taken. If the set delta is not reached, an event will be generated. The tank holdup function is therefore suitable, for example, for monitoring tank stations with self-operation, where a certain level of withdrawal can be observed and is therefore expected in the future.

Configuring tank holdup events

1. In the **Configuration** menu, click the **Tank** menu item.
2. In the table, click on the tank in question to configure holdup events.
3. Select the **Tank holdup** tab.



4. Enable the **Enable** change-over switch to activate the option. This option is disabled by default.
5. In the **Delta calculation** drop-down list box, select the calculation mode for the delta.
 - **Absolute:** Sets the **delta** as a fixed value in the tank unit.
 - Percentaged:** Specifies the **delta** as a percentage of the configured tank capacity. The **Unit** field indicates which unit has been configured for the tank capacity if delta calculation is set to "absolute". Otherwise "%" is displayed here.

6. In the **Repetition rule** drop-down list box, select a rule for the repetition of the monitoring period.
 - ↳ **Daily**: The monitoring time that should take place daily can be configured.
 - Weekly on every...**: Monitoring times can be configured individually for each weekday.
 - No movement for...**: A period in days can be configured for the monitoring time.

 The calculation mode can be changed between **absolute** or **percentaged** at any time. If the calculation mode for the delta is changed, the delta value for the associated monitoring time will become invalid and will need to be re-entered.

 Only one type of repetition rule can be configured for a tank. Either "Daily", "Weekly on every..." or "No movement for...". Only the repetition rule that was last configured and saved is valid.

Configuring the "daily" repetition rule

Repetition rule
 Repetition rule *
 Daily

Time zone *
 (UTC+00:00) Coordinated Universal Time

From time *
 22:00

To time *
 06:00

Delta *
 6 %

1. Select the **time zone** used for the configured monitoring times.
2. Enter the **From time** directly or select it via the time picker ⌚.
3. Enter the **To time** directly or select using the time picker ⌚.
4. Enter the **delta**. The value must be greater than "0".
 - ↳ At the start of the monitoring time, the last measured tank value, e.g. tank level, is saved ("frozen"). This "frozen" measurement is compared with the current measurements during the monitoring time. If the difference between the frozen measurement and the current measurement does not exceed the delta until the end of the monitoring time (positive or negative), a tank holdup event will be generated.
5. Click the  **Save** button to save the configuration.
6. Alternatively, click the  **Discard** button to undo the changes.

Configuring the "Weekly on every..." repetition rule

Repetition rule

Repetition rule *

Weekly on every ...

Time zone *

(UTC+00:00) Coordinated Universal Time

Delete

+ Add

Day ↑	From ↑	To ↑	Delta ↑
No entries found.			

1. Click the **+ Add** button.
 ↳ The **Add time period** dialog box appears:

Add time period

Day *

Sunday

all day

☐ Inactive

From time *

00:00

To time *

06:00

until end of day

☐ Inactive

Delta *

5 %

Cancel Add

2. Select the **day** for which you want to add the time period.
3. Enter the **From time** directly or select it via the time picker ⌚.
4. Enter the **To time** directly or select using the time picker ⌚. The To time must be later than the From time.
5. Optional: Activate the **full-day** change-over switch to set the monitoring time to a time period of 0:00 h to 23:59 h.
 ↳ The **From time** and **To time** input boxes are disabled and hidden. The From time is replaced by 0:00 h and the To time is replaced by 23:59 h.
6. Optional: Activate the **Until end of day** change-over switch to set the end of the monitoring time to 23:59 h.
 ↳ The **To time** entry field is disabled and hidden. The To time is replaced by 23:59 h.

7. Enter the **delta**. The value must be greater than "0".
 - ↳ At the start of the monitoring time, the last measured tank value, e.g. tank level, is saved ("frozen"). This "frozen" measurement is compared with the current measurements during the monitoring time. If the difference between the frozen measurement and the current measurement does not exceed the delta until the end of the monitoring time (positive or negative), a tank holdup event will be generated.
 - The holdup event delta can be set separately for every monitoring time.
8. Click the  **Add** button to add the configuration to the list of active monitoring periods.
 - ↳ The dialog box is closed and the monitoring time is displayed in the list.
9. Optional: Configure other monitoring times.
10. Click the  **Save** button to save the configuration.
11. Alternatively, click the  **Discard** button to undo the changes.

To enter a monitoring period for one day that extends into the morning of the following day, proceed as follows:

1. Enter the **From time** and enable the **Until end of day** change-over switch to set the end of the monitoring time to 23:59 h.
2. Save the configuration.
3. Add another monitoring period for the following weekday.
4. Enter a **From time** of 0:00 h.
5. Enter the **To time**.
6. Select the same **delta**.
 - ↳ The entire monitoring time relates to the measurement at the From time on the first day.
7. Click the  **Save** button to save the configuration.

 Monitoring times cannot overlap.

Configuring the "No movement for..." repetition rule

Repetition rule

Repetition rule *

No movement for... ▾

Period (in days) *

7

 Days

Delta *

5

 %

1. Enter the **Period (in days)** to be used for the monitoring time. The value must be greater than "0".
2. Enter the **delta**. The value must be greater than "0".
 - ↳ At the start of the monitoring time, the last measured tank value, e.g. tank level, is saved ("frozen"). This "frozen" measurement is compared with the current measurements during the monitoring time. If the difference between the frozen measurement and the current measurement does not exceed the delta until the end of the monitoring time (positive or negative), a tank holdup event will be generated.
3. Click the  **Save** button to save the configuration.

4. Alternatively, click the  **Discard** button to undo the changes.

-  The selected period must not be greater than the configured measurement duration. 7 days are set as standard.

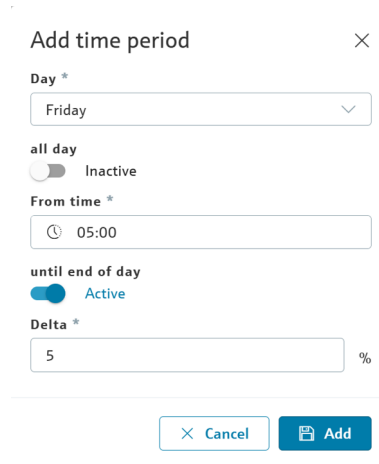
Changing the monitoring time

"Daily" repetition rule:

1. Enter the **From time** or **To time** directly or select using the time picker .
2. Click the  **Save** button to save the change.

"Weekly on every..." repetition rule:

1. Click the relevant monitoring time in the list.
 - The **Add time period** dialog box appears.



The dialog box titled "Add time period" contains the following fields and controls:

- Day ***: A dropdown menu showing "Friday".
- all day**: A toggle switch currently set to "Inactive".
- From time ***: A time picker field showing "05:00".
- until end of day**: A toggle switch currently set to "Active".
- Delta ***: A text input field containing the value "5", followed by a "%" symbol.
- At the bottom, there are two buttons: "Cancel" (with a close icon) and "Add" (with a save icon).

The dialog box displays the last saved tank freeze configuration.

2. Adjust the configuration if necessary.
3. Click the  **Add** button to save the changed monitoring time.
 - The dialog box is closed and the changed monitoring time is displayed in the list.
4. Click the  **Save** button to save the change.

"No movement for..." repetition rule:

1. Enter **Period (in days)**.
2. Click the  **Save** button to save the change.

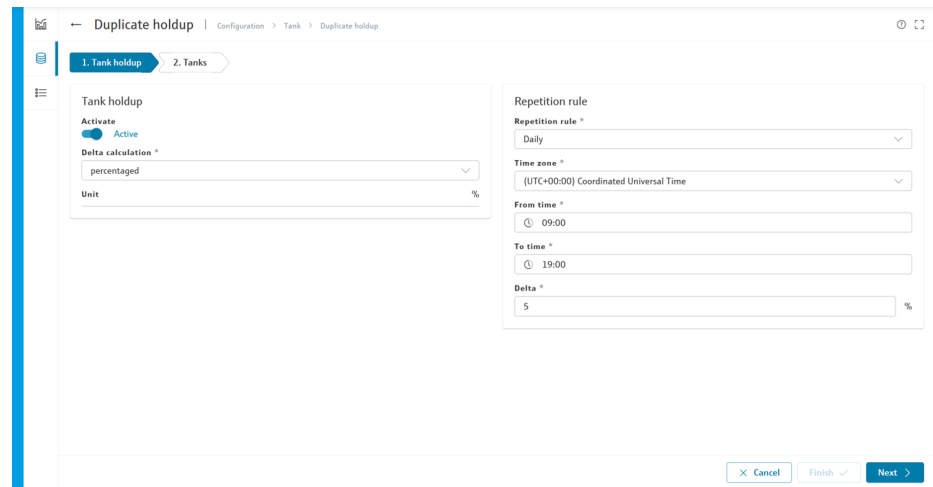
Resetting tank holdup events

- ▶ Click the  **Reset** button.
 - The tank holdup configuration is reset to the default setting.

Copying the tank holdup configuration to other tanks

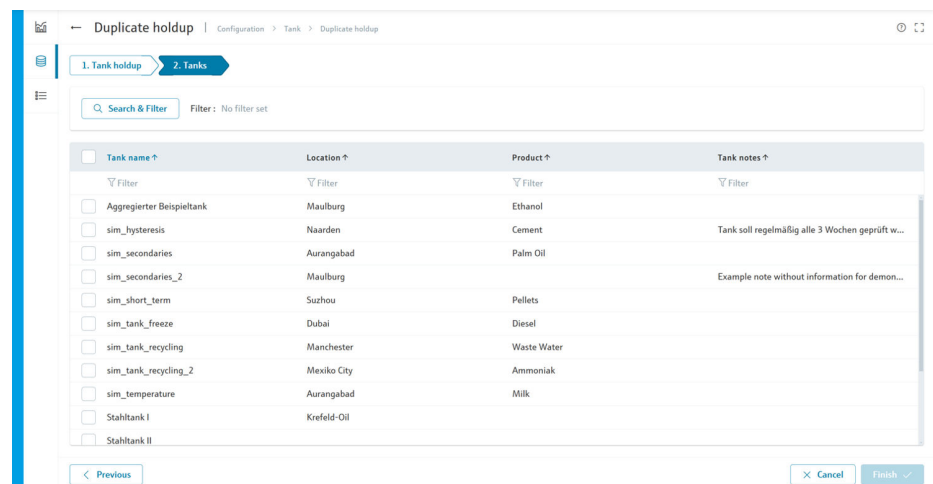
If the tank holdup configuration is changed for a tank, the new configuration can be transferred to other tanks. In this case, it is not necessary to change the configuration for every additional tank.

1. Click the  **Duplicate** button in the **Tank holdup** tab.
 ↳ The setup wizard opens and displays the **1. Tank holdup** tab.



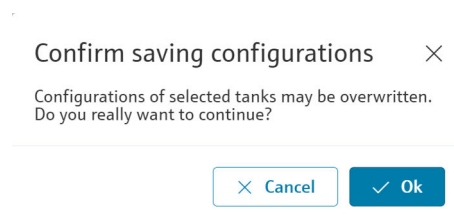
The tab displays the last saved tank holdup configuration.

2. Optional: Adjust the configuration as required.
3. Click the **Next** > button.
 ↳ The working area shows the **2. Tanks** tab.



Tank name	Location	Product	Tank notes
☐ Aggregierter Beispieltank	Maulburg	Ethanol	
☐ sim_hysteresis	Naarden	Cement	Tank soll regelmäßig alle 3 Wochen geprüft w...
☐ sim_secondaries	Aurangabad	Palm Oil	
☐ sim_secondaries_2	Maulburg		Example note without information for demon...
☐ sim_short_term	Suzhou	Pellets	
☐ sim_tank_freeze	Dubai	Diesel	
☐ sim_tank_recycling	Manchester	Waste Water	
☐ sim_tank_recycling_2	Mexiko City	Ammoniak	
☐ sim_temperature	Aurangabad	Milk	
☐ Stahltank I	Krefeld-Oil		
☐ Stahltank II			

4. Select the checkboxes for the tanks in question that should be copied to the tank holdup configuration.
5. Click the **Finish** ✓ button to save the configuration to the marked tanks.
 ↳ The dialog box **Confirm saving configurations** appears.



6. Click the ✓ **OK** button to confirm the confirmation prompt.
 ↳ The tank holdup configuration is copied to the selected tanks.
7. Alternatively, click on the ✕ **Cancel** button to cancel the process.
 ↳ The tank holdup configuration is **not** copied to the selected tanks.

14.2.7 Managing files and other information for a tank

Using the **Tank notes** tab, additional information and a maximum of 5 files can be added for a tank. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

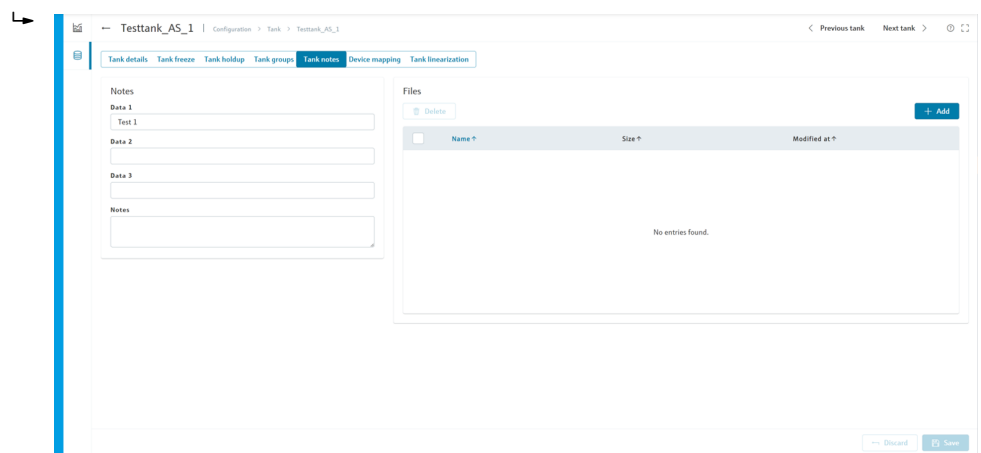
 By default, the number of files is limited to 5 files. If a different limit of files is required, please contact Endress+Hauser: www.addresses.endress.com.

The files must meet the following requirements:

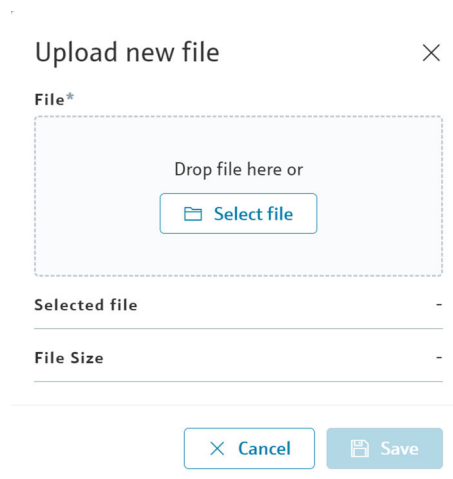
- File formats: doc, docx, xls, xlsx, pdf, ppt, pptx, jpg, jpeg, gif, png, bmp or txt
- File size: Maximum 5MB

Adding a file

1. In the  **Configuration** menu, click the **Tank** menu item.
2. Click on the tank in the table to add a file.
3. Select the **Tank notes** tab.



4. Optional: Enter a description in the **Data 1**, **Data 2**, **Data 3** and **Notes** fields.
5. Click the **+ Add** button.
 - The **Upload new file** dialog box appears:



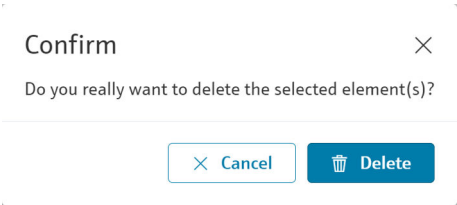
6. Click the  **Select file** button and select the file in the directory.
 - The file name is displayed in the **Selected file** field.
7. Alternatively, drag the file and drop it into the **File** field.
8. Click the  **Save** button to upload the file.
 - The file is displayed in the table with information about the file format, file name, file size and the date on which the file was last modified.

Downloading a file

- 1. In the **Configuration** menu, click the **Tank** menu item.
- 2. In the table, click on the tank in question.
- 3. Select the **Tank notes** tab.
- 4. Click the file name in the table.
 - ↳ The file is downloaded and can be opened in the local storage location.

Deleting a file

- 1. In the **Configuration** menu, click the **Tank** menu item.
- 2. In the table, click on the tank in question.
- 3. Select the **Tank notes** tab.
- 4. Select the checkbox in front of the file that should be deleted.
- 5. Click the **Delete** button.
 - ↳ The **Acknowledge** dialog box appears:



- 6. Click the **Delete** button to permanently delete the file.
- 7. Alternatively, click on the **Cancel** button to cancel the process.

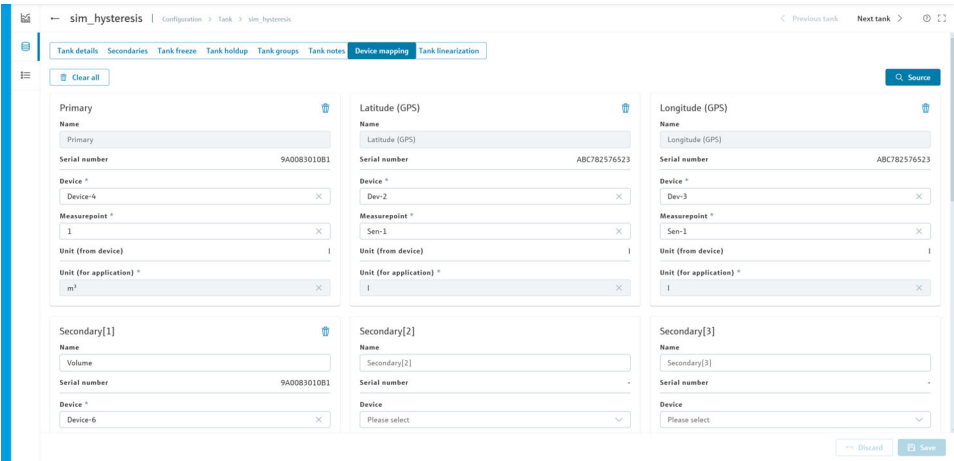
i Descriptions in the **Data 1**, **Data 2**, **Data 3** and **Notes** fields can be changed or reset at any time. Changes are only accepted after saving.

14.2.8 Device mapping

Using the **Device mapping** tab, devices can be assigned to a tank. The tab provides an overview of how the tank parameters are linked to the gateways and the corresponding measurepoints. The set units and units of measure are also displayed.

i The **Device mapping** tab is only available if the corresponding function has been activated in the selected SupplyCare contract. If **Device mapping** is not available and should be activated, please contact Endress+Hauser: www.addresses.endress.com.

All the fields can be edited with the exception of the **Primary**, **Latitude (GPS)** and **Longitude (GPS)** tank parameters and the corresponding names and units of measure.



Name

Contains the name of the tank parameter as a standard placeholder. The name of a tank parameter can be freely selected. Exception: **Primary**, Latitude (GPS) and **Longitude (GPS)**.

The individual texts are not translated, but displayed in every language as they are filled in the fields.

Serial number

Displays the assigned or selected serial number of the gateway.

Device

Displays the devices belonging to the gateway.

Measurepoint

Once a device offered by the gateway has been selected, the corresponding measuring points can be selected by means of the drop-down list box. Only devices that are not yet used are available in the selection.

Unit (from device)

If the device and measurepoint are assigned to a tank parameter, the unit is transmitted and displayed by the device.

Unit (for application)

If no other unit is specified manually, the unit will be automatically transferred from the device as the default value. As a prerequisite, the unit transferred from the device must have been detected by SupplyCare. If a measurepoint is selected, the field must be filled out.



Exceptions for the **Primary** tank parameter:

As soon as a measurepoint is assigned to this tank parameter, the tank unit will be taken over for this measurepoint in the **Unit (for application)** field. If this assignment is rescinded, the measurepoint again receives the unit transferred from the device.

Units with the same physical quantity are not converted, e.g. mm and m or °C and °F.

The **Primary** tank parameter is permanently named, i.e. the text cannot be edited. If the language of the user interface is changed, the text will be adapted accordingly.



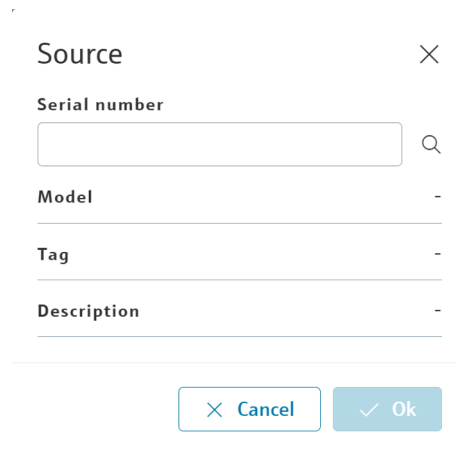
Exceptions are the **Latitude (GPS)** and **Longitude (GPS)** tank parameters:

These tank parameters are permanently named, i.e. the text cannot be edited. The **Unit (for application)** field always contains the degree unit (°). If a measurepoint is assigned here, it will automatically receive this unit.

Displaying and changing device mapping

1. In the **Configuration** menu, click the **Tank** menu item.
2. In the table, click on the relevant tank to display the device mapping.
3. Select the **Device mapping** tab.

4. Click the  **Source** button.
 ↳ The **Source** dialog box appears:



The **Source** dialog box is shown with a close button (X) in the top right corner. It contains the following fields:

- Serial number**: A text input field with a search icon (magnifying glass) to its right.
- Model**: A dropdown menu with a minus sign (-) as the selected option.
- Tag**: A dropdown menu with a minus sign (-) as the selected option.
- Description**: A dropdown menu with a minus sign (-) as the selected option.

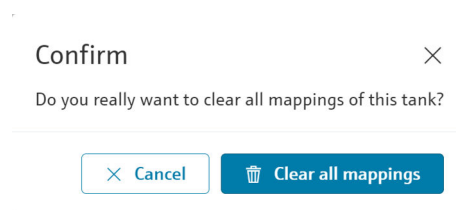
At the bottom of the dialog box are two buttons: **Cancel** (with a blue X icon) and **Ok** (with a green checkmark icon).

5. In the **Serial number** field, enter the serial number of a gateway.
 6. Click the  button to start the search.
 ↳ If the data for a found gateway is known, **Model**, **Tag** and **Description** are displayed.
 7. Click the  **OK** button to accept the serial number.
 8. Change related tank parameters from the drop-down list box. For certain gateways, such as for Micropilot FWR30, pre-filled fields are already provided.
 9. Click the  **Save** button to save the changes.
 10. Alternatively, click on the  **Discard** button to undo the change.
-  To assign additional measure points of a different gateway to the same tank, enter a new serial number via the  **Source** button.

Deleting device mapping

To delete all device mappings, proceed as follows:

1. In the  **Configuration** menu, click the **Tank** menu item.
2. In the table, click on that tank to delete the device mapping.
3. Select the **Device mapping** tab.
4. Click the  **Clear all** button to delete all device mappings.
 ↳ The **Acknowledge** dialog box appears:



The **Confirm** dialog box is shown with a close button (X) in the top right corner. It contains the following text:

Do you really want to clear all mappings of this tank?

At the bottom of the dialog box are two buttons: **Cancel** (with a blue X icon) and **Clear all mappings** (with a blue trash can icon).

5. Click the  **Clear all mappings** button.
 ↳ This mapping is permanently deleted and cannot be undone.
6. Alternatively, click on the  **Cancel** button to cancel the process.

To delete individual device mappings only, proceed as follows:

1. Click the  button in the field of the tank parameter in question to delete the measurepoint assignment.
2. Click the  **Save** button to save the changes.

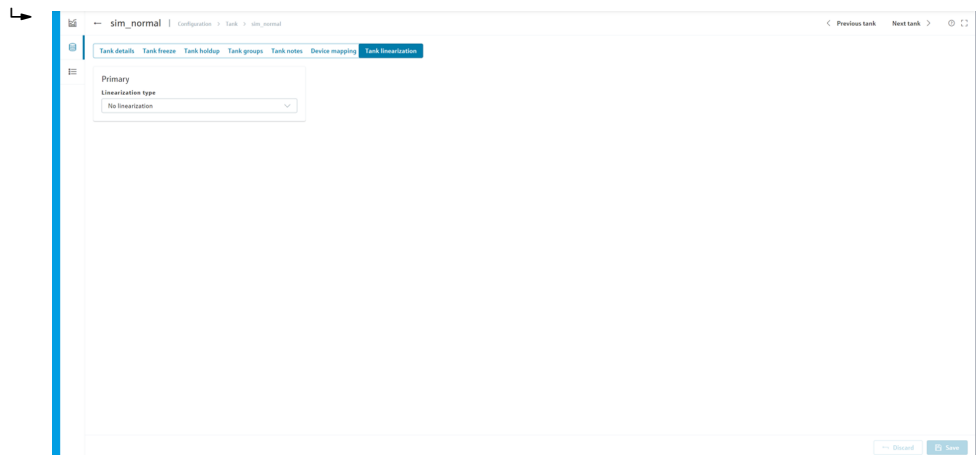
- Alternatively, click on the **Discard** button to undo the change.

14.2.9 Assigning linearization to a tank

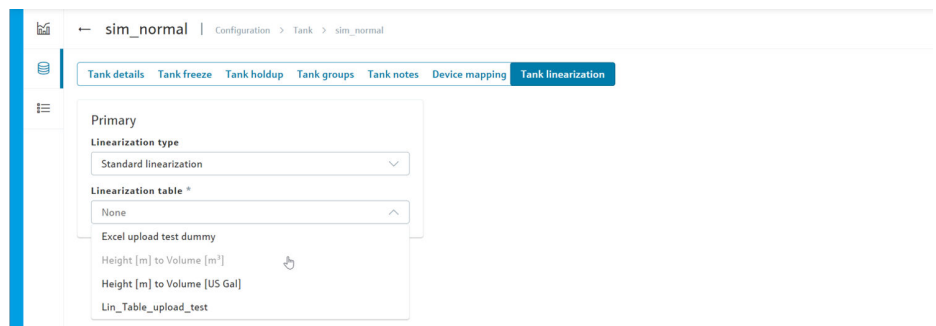
Using the **Tank linearization** tab, an existing linearization can be assigned directly to the primary value of a tank.

Assigning linearization

- In the **Configuration** menu, click the **Tank** menu item.
- Click on the appropriate tank in the table to add a linearization.
- Select the **Tank linearization** tab.



- Select the **Linearization type** from the drop-down list box.
 - If standard linearization is selected, the **Linearization table** drop-down list box will appear.



- In order to be able to select a linearization table, linearization tables must be available. For more information, see the "Managing linearization tables" section. Select the **linearization table** from the drop-down list.
- Click the **Save** button to save the changes.
- Alternatively, click on the **Discard** button to undo the change.



Depending on the contract:

In addition to the **Standard linearization**, the linearization types **Product dependent linearization** and **Event dependent linearization** can be enabled for selection.

Contact Endress+Hauser if necessary: www.addresses.endress.com

Assigning product-dependent linearization

This type of linearization makes it possible to automatically set linearization by selecting a product for a tank.

sim_normal | Configuration > Tank > sim_normal

Tank details Tank freeze Tank holdup Tank groups Tank notes Device mapping Tank linearization

Primary

Linearization type
Product dependent linearization

Tank type *
None

Product *
Diesel

Linearization in use

1. Select the **Tank type** from the drop-down list box.
2. Select the **product** from the drop-down list box.
 - ↳ The **Linearization in use** field displays the linearization name currently selected for the selected product and tank type. The linearization name depends on the **Linearization rules** tab in the **Linearization** menu item.
3. Click the **Save** button to save the changes.
4. Alternatively, click on the **Discard** button to undo the change.

Assigning event dependent linearization

Based on the desired primary or secondary values, including deltas, linearization can switch between 2 states. A different linearization table is then selected for each state.

sim_normal | Configuration > Tank > sim_normal

Tank details Tank freeze Tank holdup Tank groups Tank notes Device mapping Tank linearization

Primary

Linearization type
Event dependent linearization

Tank type *
None

Product *
Diesel

Switch to state B:
☐ Inactive

Based on *
Primary

Delta *
100 m³

Switch to state A:
☒ Active

Based on *
Primary

Delta *
45 m³

Linearization in use

1. Select the **Tank type** from the drop-down list box.
2. Select the **product** from the drop-down list box.
3. Either activate the **Switch to state B** change-over switch or activate the **Change to state A** change-over switch.
 - ↳ The other state setting is automatically adjusted. Only one of the two change-over switches can be **Active**.
4. Select the value that the trigger is based on in the **Based on** drop-down list box. Select either the primary value or one of the secondary values.
5. Enter the amount for **Delta** by which a selected value must be exceeded so that the status changes.
6. Click the **Save** button to save the changes. Enter the value as the floating point value. For a negative value, also enter the prefix.

7. Alternatively, click on the ↩ **Discard** button to undo the change.

14.2.10 Changing a tank

For additional information, see the "Changing master data" section.

14.2.11 Deleting a tank

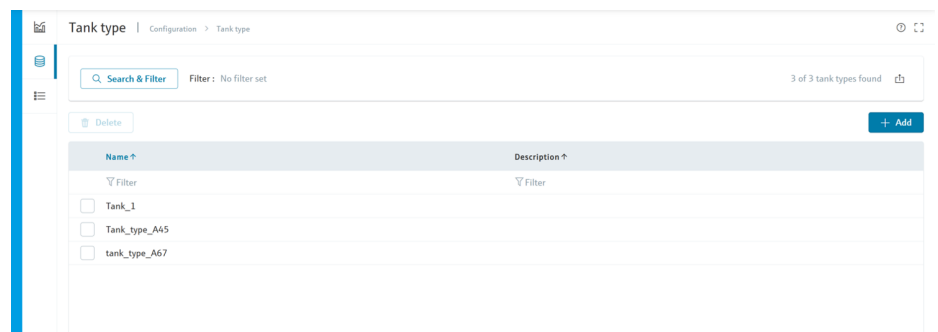
For additional information, see the "Deleting master data" section.

14.3 Managing tank types

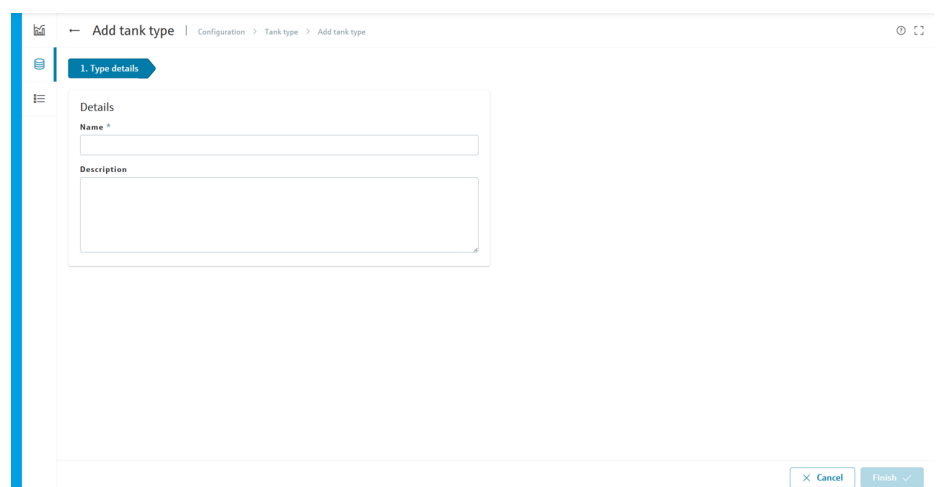
-  Only users whose user role is configured as **Master data** can create, change and delete tank types.
-  Depending on the configuration, the **object types** or **silo types** are displayed instead of any **tank types**.
-  The **Tank type** menu item is only available on the desktop version.

14.3.1 Creating a tank type

1. In the  **Configuration** menu, click the **Tank type** menu item.
↳ The working area shows the detailed view below:



2. Click the **+ Add** button.
↳ The working area shows the **1. Type details** tab.



3. Enter a **name**. The tank name must be unique.
4. Optional: Enter a multi-line description.
5. Click the **Finish** ✓ button to save the new tank type.

14.3.2 Adding, opening and deleting files and other information for a tank type

Using the **Type notes** tab, additional information and a maximum of 5 files can be added for a tank type.

For information about managing files, see the "Adding, opening and deleting files and other information about a tank" section.

14.3.3 Changing the tank type

For additional information, see the "Changing master data" section.

14.3.4 Deleting a tank type

For additional information, see the "Deleting master data" section.

14.4 Managing tank groups

i Only users whose user role is configured as **Master data** can create, change and delete tank groups.

i Only the tanks assigned to a tank group are displayed in "Workplace".

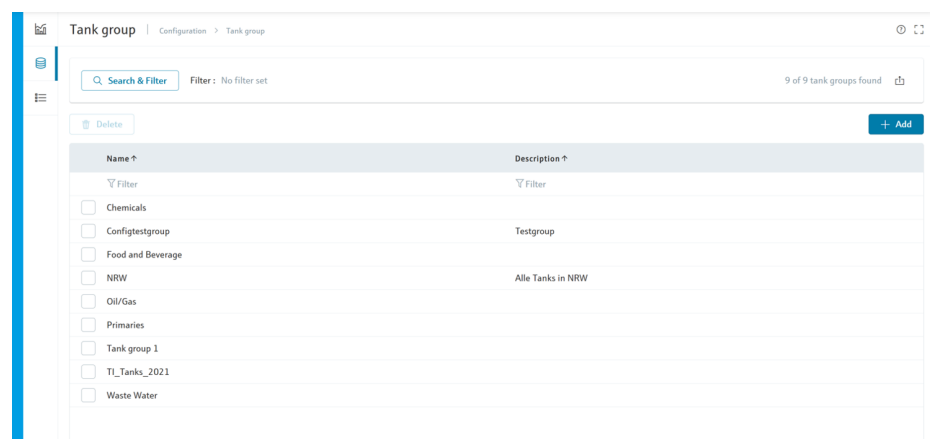
i Depending on the configuration, the **Object types** or **Silo types** are displayed instead of any **Tank groups**.

i The **Tank type** menu item is only available on the desktop version.

Tank groups are used to organize tanks and to assign authorized users to the tanks. In the tank assignment tab, these group tanks are assigned. In the user assignment tab, one or more users are assigned to the tank group. In the user assignment tab, the tank events for which the user is informed are also specified.

14.4.1 Creating a tank group

1. In the **Configuration** menu, click the **Tank group** menu item.
 ↳ The working area shows the detailed view below:



2. Click the **+** **Add** button.
 ↳ The working area shows the **1. Group details** tab.

← Add tank group | Configuration > Tank group > Add tank group

1. Group Details 2. Tank assignment 3. User assignment

Group Details

Name *

Description

Cancel Finish ✓ Next >

3. Enter a **name**. The tank name must be unique.
4. Optional: Enter a multi-line description.
5. Click the **Finish** ✓ button to save the new tank type.
6. Alternatively, click the **Next** > button to assign one or more tanks to the tank group.
 ↳ The working area shows the **2. Tank assignment** tab.

← Add tank group | Configuration > Tank group > Add tank group

1. Group Details 2. Tank assignment 3. User assignment

Tank name ↑	Product ↑	Location ↑
Aggregierter Beispieltank	Ethanol	Maulburg
sim_hysteresis	Cement	Naarden
sim_normal	Diesel	Greenwood
sim_secondaries	Palm Oil	Aurangabad
sim_secondaries_2		Maulburg
sim_short_term	Pellets	Suzhou
sim_tank_freeze	Diesel	Dubai
sim_tank_recycling	Waste Water	Manchester
sim_tank_recycling_2	Ammoniak	Mexiko City
sim_temperature	Milk	Aurangabad
Stahltank I		Krefeld-Oil
Stahltank II		
Testtank_AS_1	Palm Oil	Aurangabad

< Previous

Cancel Finish ✓ Next >

7. Assign one or more tanks to the tank group.
8. Click the **Finish** ✓ button to save the new tank type.

9.
- Alternatively, click the **Next** > button to assign one or more users to the tank group.
➡ The working range displays the **3. User assignment** tab.

☐	First name ↑	Name ↑	Notifications	PP	SP	SST	TF	TH	PDL	PDE	SL1	SL2	Spl
☐	John	Do	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Demo	User	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Max	Mustermann	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Jerry	Kunde	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Martina	Meister	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Louis	Miller	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	system	AdminTestUser	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Marie	Curie	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Pep	ssoTestB	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Mike	TestUser	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

10.
- Assign one or more Tusers to the tank group.
11.
- Click the **Finish** ✓ button to save the new tank type.

14.4.2 Assigning users to a tank group and setting up notifications for tank events

1.
- In the **Configuration** menu, click the **Tank group** menu item.
2.
- In the table, click on that tank to change the assignment.
3.
- Select the **User assignment** tab.

☐	First name ↑	Name ↑	Notifications	PP	SP	SST	TF	TH	PDL	PDE	SL1	SL2	Spl
☒	John	Do	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	Max	Mustermann	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	system	AdminTestUser	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	Marie	Curie	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	Jerry	Kunde	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	Louis	Miller	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Mike	TestUser	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Demo	User	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Pep	ssoTestB	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	Martina	Meister	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4.
- Tick the box in the left column to assign one or more users to the tank group.
5.
- Optional: Tick the checkbox in the **Notifications** column for the tank in question if the user should also be informed about tank events by email.
6.
- Check all the check boxes corresponding to the events for which the user should receive notification.
7.
- Click the **Save** button to save the changes.

Notifications can also be set up and managed via the **User** menu. See the "Assigning tank groups to a user and setting up notifications for tank events" section.

14.4.3 Changing a tank group

For additional information, see the "Changing master data" section.

14.4.4 Deleting a tank group

For additional information, see the "Deleting master data" section.

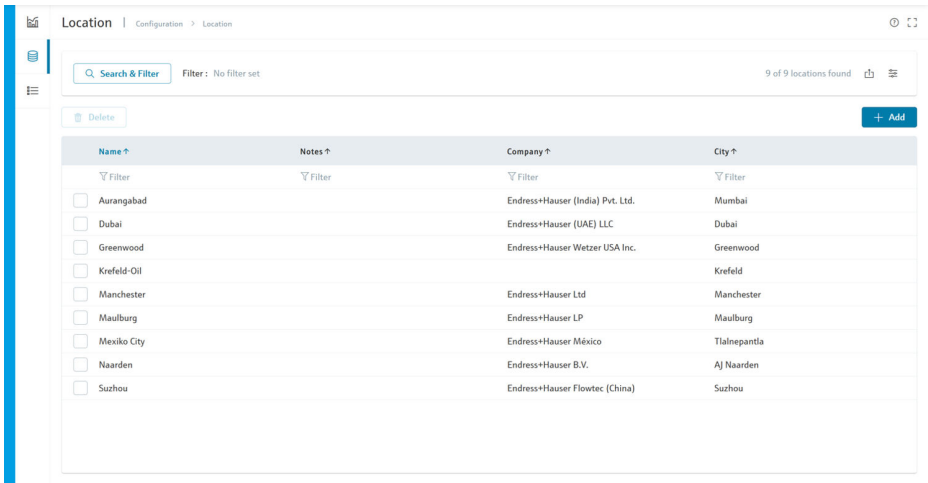
14.5 Managing locations

-  Only users whose user role is configured as **Master Data** can create, change and delete locations.
-  The **Location** menu item is only available on the desktop version.

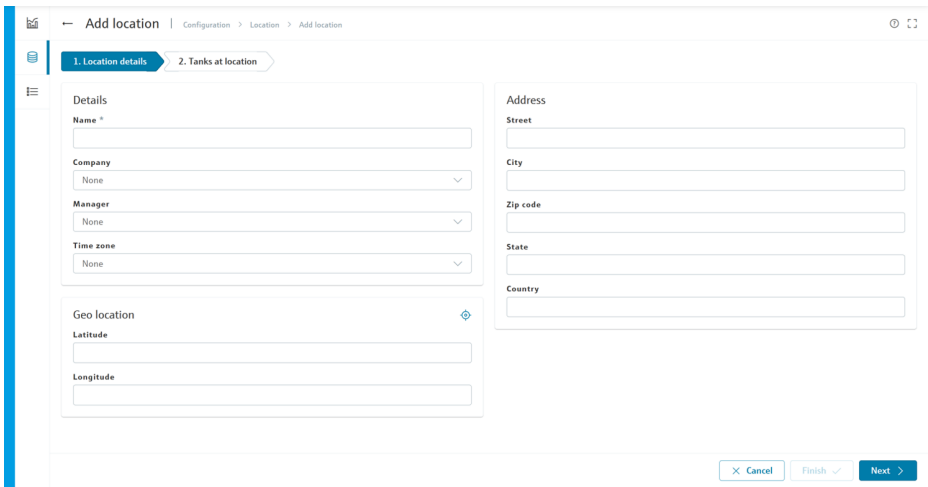
14.5.1 Creating a location

-  A tank must be created before you can assign this tank to a location. Another way is to create the location first and assign the tanks to the location at a later time.

- In the  **Configuration** menu, click the **Location** menu item.
 - The working area shows the detailed view below:



- Click the **+ Add** button.
 - The working area shows the **1. Location details** tab.



- Enter a **name**. The location name must be unique.

4. Select the **time zone** for the location.
 - ↳ All time data, in particular time stamps for measurements for tanks at this location, are displayed in this time zone.
If no time zone has been selected, the UTC + 00:00 time zone will be used.
5. Optional: Enter additional data about the location.
 - **Company**
 - **Manager** – Contact person at the company. If a contact person has not been created for the selected company, the field will remain empty.
 - **Street**
 - **City**
 - **Zip code**
 - **State**
 - **Country**
 - **Latitude and Longitude** – The geographical coordinates for this location. These coordinates are used to display the location on the overview map.
Latitude and longitude can also be determined automatically from the entered address information. See the "Determining the location automatically or entering it manually" section.
6. Click the **Finish** ✓ button to save the new location.
7. Alternatively, click the **Next** > button to assign one or more tanks to the location.
 - ↳ The working area shows the **2. Tanks at the location** tab.
The table shows the tanks which are already assigned to the location or not yet assigned to a location.
8. Assign tanks to the location. For detailed information, see the "Changing location-tank assignment" section.
9. Click the **Finish** ✓ button to save the location.

14.5.2 Adding, opening and deleting files and other information about a location

Using the **Location notes** tab, additional information and a maximum of 5 files can be added for a location. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

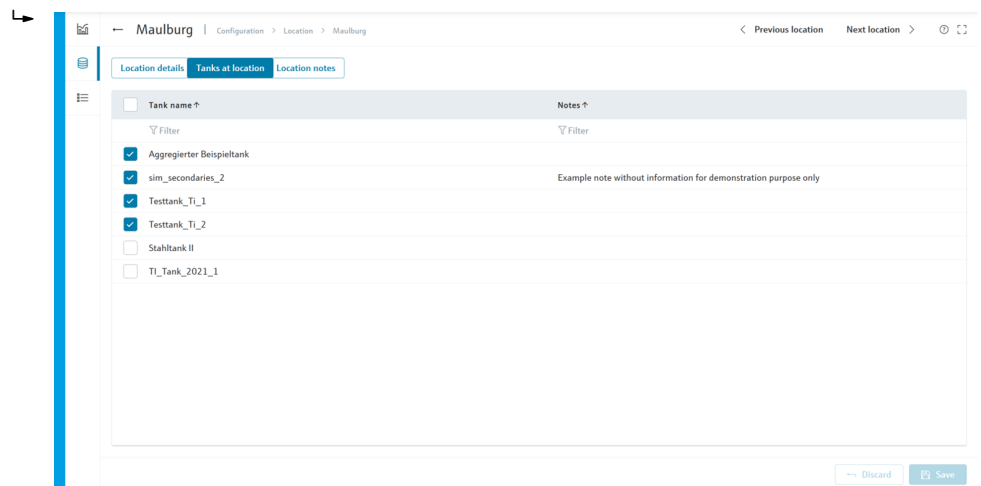
For information about managing files, see the "Adding, opening and deleting files and other information about a tank" section.

14.5.3 Changing location-tank assignment

Using the **Tanks at location** tab, tanks can be added to or removed from a location.

1. In the ☰ **Configuration** menu, click the **Location** menu item.

2. Select the **Tanks at location** tab.



3. Select the checkbox for a tank to assign the tank to this location.

4. Click the **Save** button to save the selection.

↳ The table is sorted again. Assigned tanks are shown before non-assigned tanks in alphabetical order.

5. Alternatively, click on the **Discard** button to undo the change.

14.5.4 Determining the location automatically or entering it manually

 If the address data is changed, the longitude and latitude must also be updated.

The longitude and latitude can either be determined automatically based on the address or entered manually.

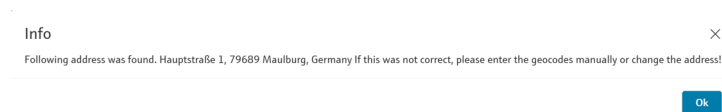
Determining the location automatically

1. Select the **Location details** tab.

2. The address details must not be left empty.

Click the  button in the **Geo location** field.

↳ If the address is found, a dialog box will appear where you can confirm the entered address details.



3. Click the OK button to confirm the longitude and latitude.

↳ The automatically calculated information is displayed in the **Latitude** and **Longitude** fields.

4. Click the **Save** button to save the change.

If the longitude and latitude cannot be computed because not enough address information is available, for example, the "Unknown or bad address. Please enter manually." message will appear.

Entering the location manually

1. Enter the **longitude** and **latitude** in the corresponding fields. The latitude value must be between -85 and 85 and the longitude value must be between -180 and 180. The number can contain up to 16 decimal places.

2. Click the  **Save** button to save the change.

 An automatically determined longitude and latitude can be overwritten at any time.

14.5.5 Displaying the location on the map

For more information, see the "Show map and associated information" section.

14.5.6 Changing a location

For additional information, see the "Changing master data" section.

14.5.7 Deleting a location

For additional information, see the "Deleting master data" section.

14.6 Managing companies

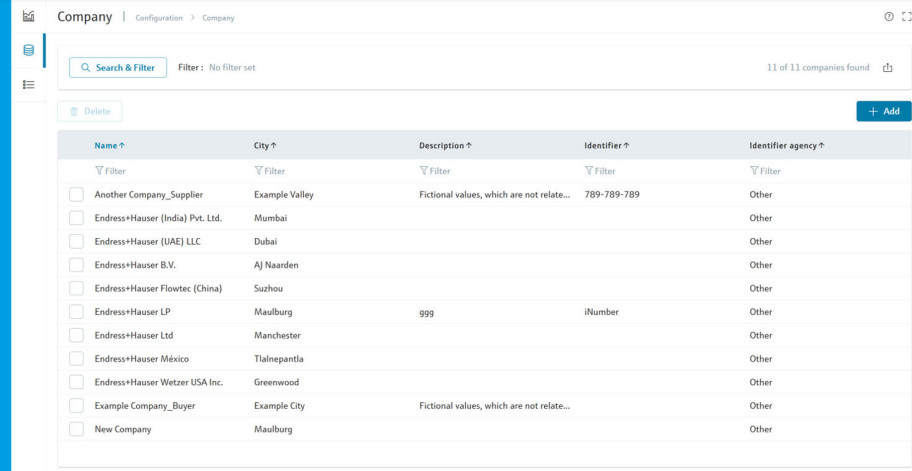
 Only users whose user role is configured as **Master data** can create, change and delete companies.

 The **Company** menu item is only available on the desktop version.

14.6.1 Creating a company

 The company name and the combination of the **Identifier** and **Identifier agency** fields may only be assigned once in the system.

1. In the  **Configuration** menu, click the **Company** menu item.
 ↳ The working area shows the detailed view below:



Name ↑	City ↑	Description ↑	Identifier ↑	Identifier agency ↑
☐ Another Company_Supplier	Example Valley	Fictional values, which are not relate...	789-789-789	Other
☐ Endress+Hauser (India) Pvt. Ltd.	Mumbai			Other
☐ Endress+Hauser (UAE) LLC	Dubai			Other
☐ Endress+Hauser B.V.	AJ Naarden			Other
☐ Endress+Hauser Flowtec (China)	Suzhou			Other
☐ Endress+Hauser LP	Maulburg	999	iNumber	Other
☐ Endress+Hauser Ltd	Manchester			Other
☐ Endress+Hauser México	Tlalnepantla			Other
☐ Endress+Hauser Wetzer USA Inc.	Greenwood			Other
☐ Example Company_Buyer	Example City	Fictional values, which are not relate...		Other
☐ New Company	Maulburg			Other

2. Click the **+** **Add** button.
 ↳ The working area shows the **1. Company details** tab.

3. Enter a **name**. The company name must be unique.
4. Optional: Enter additional data for the company.
 - **Contact** – Contact person at the company. To select a contact person, the contact person must have been added beforehand using the **User** menu item and assigned to the company.
 - **Identifier agency** – Organization responsible for managing the identifier for the companies. The selection complies with the CIDX standard. The identifier agency is required to create CIDX reports.
 - **Identifier** – Company ID to be used in the CIDX reports.
 - **Description** – Multi-line description text field.
 - **Street**
 - **City**
 - **Zip code**
 - **State**
 - **Country**
5. Click the **Finish** ✓ button to save the company.

14.6.2 Changing a company

For additional information, see the "Changing master data" section.

14.6.3 Deleting a company

For additional information, see the "Deleting master data" section.

14.7 Managing products

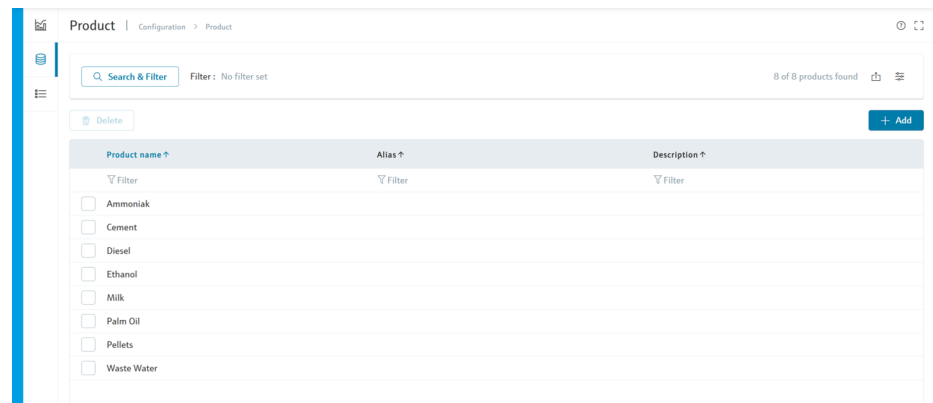
-  Only users whose user role is configured as **Master data** and **Product-tank-configurator** can create, change and delete products.
-  The **Product** menu item is only available on the desktop version.

14.7.1 Creating a product

i The tank must have been created before you can assign a tank to a product. Another possibility is that you first create the product and assign the tanks to the product at a later time.

i The **Product name** and the combination of the **Identifier** and **Identifier agency** fields may only be used once in the system.

1. In the **Configuration** menu, click the **Product** menu item.
 ↳ The working area shows the detailed view below:



2. Click the **+ Add** button.
 ↳ The working area shows the **1. Product details** tab.

 The screenshot shows the 'Add product' screen with the '1. Product details' tab selected. The form is divided into two main sections: 'Details' and 'Properties'. The 'Details' section includes fields for 'Product name *', 'Alias', 'Identifier agency *' (with a dropdown menu showing 'Other'), 'Identifier', and 'Unit *' (with a dropdown menu showing 'None'). The 'Properties' section includes 'Density *' (with a dropdown menu showing 'None'), 'Consistency *' (with a dropdown menu showing 'None'), 'Formula', and 'Price' (with a dropdown menu showing 'None'). At the bottom right, there are 'Cancel' and 'Finish' buttons.

3. Enter the **Product name**. The company name must be unique.
4. Select the **identifier agency** to choose the organization responsible for managing the identifier for the companies.
 ↳ The selection complies with the CIDX standard. The identifier agency is required to create CIDX reports.
5. Select the unit from the **Units** drop-down list box.
6. Enter the **density** of the product in the text box and select the corresponding unit from the drop-down list box.

i If the customer wants to edit and plan tanks or products based on mass, the product unit has to be defined as a mass, e.g. kg or t.

Total weight = net standard volume x reference density

7. Select **Consistency**.

8. Optional: Enter additional data about the product.

- **Alias** – Another name for the product, e.g. tradename, etc.
- **Identifier**

Unique product ID to be used in the CIDX reports.

- **Formula** – Chemical formula of the product

- **Price** – Price of the product

Important: If the unit is a volume unit in the price per unit (e.g., l in €/l), the tank contents must also be measured in a unit of volume. Example: Price in €/l, tank content measured in m³. The same applies to units of mass: Price in €/kg, tank capacity measured in t.

9. Click the **Finish** ✓ button to save the product.

14.7.2 Adding, opening and deleting files and other information about a product

Using the **Product notes** tab, additional information and a maximum of 5 files can be added for a product.

For information about managing files, see the "Adding, opening and deleting files and other information about a tank" section.

14.7.3 Changing a product

For additional information, see the "Changing master data" section.

14.7.4 Deleting a product

For additional information, see the "Deleting master data" section.

14.8 Managing linearization tables

 Only users whose user role is configured as **Master data** can create, change and delete linearization tables.

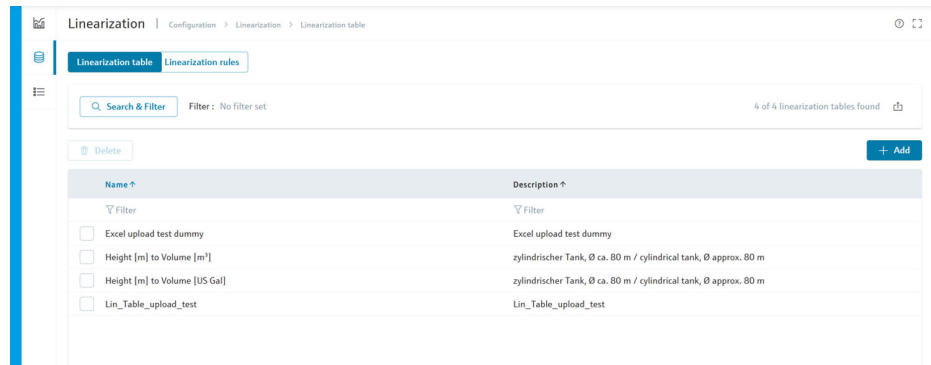
 The **Linearization** menu item is only available on the desktop version.

 No extrapolation is performed in the case of linearizations. Values outside the defined range are linearized with the nearest value.

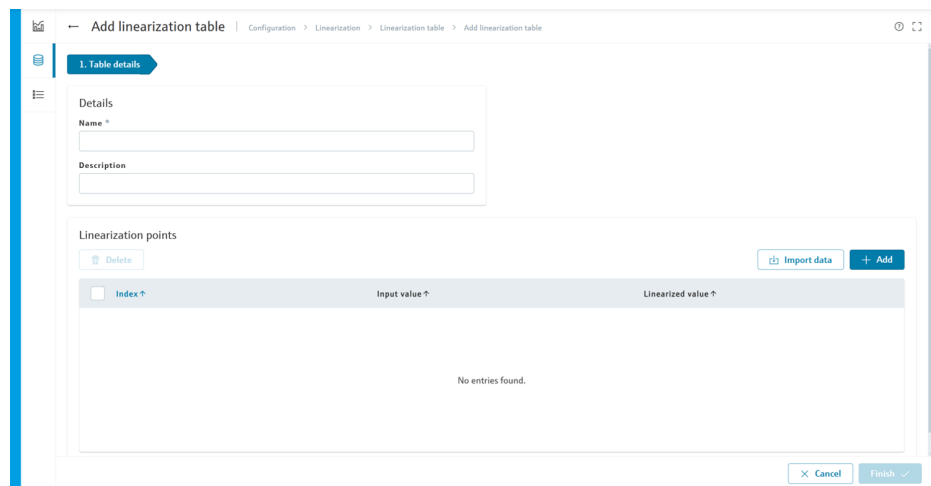
Linearization tables are used to assign a measured value (X-value) to the associated Y-value (e.g. a volume value). A linearization table must have a minimum of 2 points and can have a maximum 64 of points. A point consists of an index, input level (X-value) and input volume (Y-value).

14.8.1 Creating a linearization table

1. In the  **Configuration** menu, click the **Linearization** menu item.
 ↳ The working area shows the detailed view below:



2. Click the **+ Add** button.
 ↳ The working area shows the **1. Table details** tab.



3. Enter a **name**. The linearization table name must be unique.
4. Optional: Enter a multi-line description.
5. Add the **linearization points**. Either enter the pair of values for the **input value** (level value) and **linearized value** (volume value) individually or import them from a file (see chapters below).
6. Click the **Finish** ✓ button to save the linearization table.

14.8.2 Adding, changing and deleting linearization points

Adding a linearization point

1. Click the **+** **Add** button.
↳ The **Add linearization point** dialog box appears:

Add linearization point ×

Input value *

Linearized value *

× Cancel ✓ Apply

2. Enter values for **input value** and **linearized value**.
3. Click the **✓ Apply** button to save the pair of values in the linearization table.
↳ The dialog box is closed and the pair of values is displayed in the table.
4. Click the **Save** button to save the linearization table.

Changing the linearization point

1. Click on the pair of values in question in the linearization table.
↳ The **Edit linearization point** dialog box appears:

Edit linearization point ×

Input value *

0

Linearized value *

1

× Cancel ✓ Apply

2. Change the value in question.
3. Click the **✓ Apply** button to save the pair of values in the linearization table.
↳ The dialog box is closed and the linearization table is displayed.
4. Click the **Save** button to save the change.

Deleting a linearization point

1. Check the check box for the particular pair of values. It is possible to select multiple or all of the check boxes simultaneously.
2. Click the **Delete** button.
↳ The pair of values is removed from the table.
3. Click the **Save** button to save the change.

i The selected pairs of values are deleted from the table without a confirmation prompt. If values have been deleted by mistake, you can undo the deletion via the **Discard** button as long as the table is not saved.

14.8.3 Importing linearization points

 Please note: An import overwrites an existing linearization.

- 1. Click the  **Import data** button.
 - ↳ The **Import data** dialog box appears:

Import data

Please be aware that importing a linearization will overwrite your existing one.

You can copy a linearization table from a document and paste it in here. Select the decimal sign and data separator matching your inserted data and press apply. The stored table can be verified on the tab configuration.

Decimal Sign

Dot (.)

Data separator

Semicolon (;)

Cancel

Apply

- 2. Select **decimal sign** and **data separator**.
- 3. Copy the data structure to the text field.

Import data

Please be aware that importing a linearization will overwrite your existing one.

You can copy a linearization table from a document and paste it in here. Select the decimal sign and data separator matching your inserted data and press apply. The stored table can be verified on the tab configuration.

Decimal Sign

Dot (.)

Data separator

Semicolon (;)

0.000;0.000
0.079;0.066
0.159;0.138
0.238;0.218
0.317;0.306
0.397;0.401
0.476;0.505

Cancel

Apply

- 4. Click the  **Apply** button to save the pairs of values in the linearization table.
 - ↳ The dialog box is closed and the pairs of values are displayed in the table.
- 5. Click the  **Save** button to save the linearization table.

14.8.4 Changing a linearization table

For additional information, see the "Changing master data" section.

14.8.5 Deleting a linearization table

i You can only delete a linearization table if the linearization table is not assigned to a measuring device.

For additional information, see the "Deleting master data" section.

14.9 Managing linearization rules

i Only users whose user role is configured as **Master data** can create, change and delete linearization rules.

i The **Linearization** menu item is only available on the desktop version.

i Depending on the contract:

The **linearization rules** function can be enabled in addition to **linearization tables**.
Contact Endress+Hauser if necessary: www.addresses.endress.com

14.9.1 Creating a linearization rule

1. In the **Configuration** menu, click the **Linearization** menu item.
2. Select the **Linearization rules** tab.
 - ↳ The working area shows the detailed view below:

Tank type ↑	Product ↑	Default linearization (State A) ↑	Optional linearization (State B) ↑
☐ Tank_type_A65	Ethanol	Height [m] to Volume [m³]	
☐ tank_type_A67	Palm Oil	Height [m] to Volume [m³]	Height [m] to Volume [US Gal]

3. Click the **+ Add** button.
 - ↳ The working area shows the **1. Linearization rules details** tab.

1. Linearization rule details

Details

Tank type *
None

Product *
None

Default linearization (State A)
None

Optional linearization (State B)
None

4. Select the **tank type** for which the linearization rule should be created. The drop-down list box shows all the configured tank types that are saved in the contract.

5. Select the **product** for which the linearization rule should be created. The drop-down list box shows all the configured products that are saved in the contract.

 The combination of **tank type** and **product** must be unique.

6. In the **Default linearization (State A)** drop-down list box, select a linearization table. The drop-down list box shows all the configured linearization tables that are saved in the contract.
7. Optional: Select another linearization table in the **Optional linearization (State B)** drop-down list box. The drop-down list box shows all the configured linearization tables that are saved in the contract.
8. Click the **Finish** ✓ button to save the linearization rule.

14.9.2 Changing linearization rules

For additional information, see the "Changing master data" section.

14.9.3 Deleting linearization rules

For additional information, see the "Deleting master data" section.

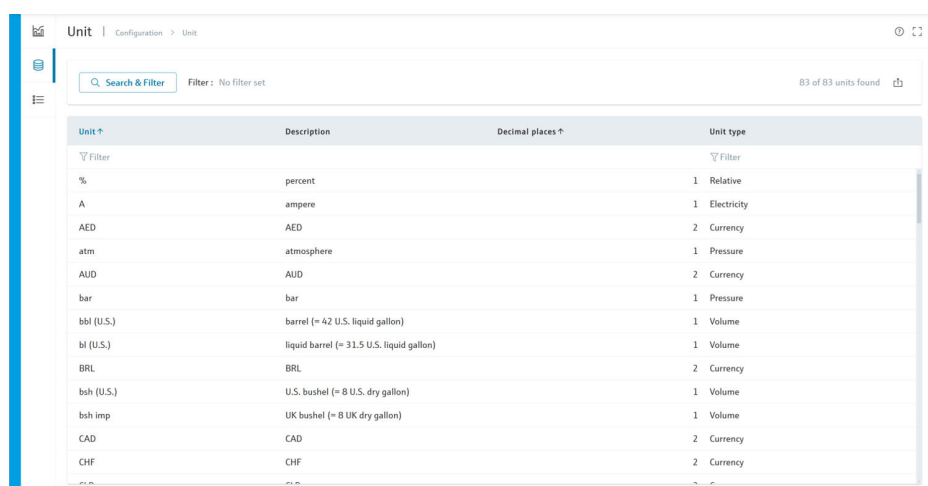
14.10 Managing units

 To change the number of decimal places for units or to add customer-specific units, please contact Endress+Hauser: www.addresses.endress.com

 The **Unit** menu item is only available on the desktop version.

The **Unit** menu item lists all the units along with their description, number of decimal places and unit type. "Customer-specific" types of units cannot be converted to another unit. Customer-specific units are for display purposes only.

- In the  **Configuration** menu, click the **Unit** menu item.
 - ↳ The working area shows the detailed view below:



Unit ↑	Description	Decimal places ↑	Unit type
Filter			Filter
%	percent	1	Relative
A	ampere	1	Electricity
AED	AED	2	Currency
atm	atmosphere	1	Pressure
AUD	AUD	2	Currency
bar	bar	1	Pressure
bbl (U.S.)	barrel (= 42 U.S. liquid gallon)	1	Volume
bl (U.S.)	liquid barrel (= 31.5 U.S. liquid gallon)	1	Volume
BRL	BRL	2	Currency
bsh (U.S.)	U.S. bushel (= 8 U.S. dry gallon)	1	Volume
bsh imp	UK bushel (= 8 UK dry gallon)	1	Volume
CAD	CAD	2	Currency
CHF	CHF	2	Currency

14.11 Managing aggregated tanks

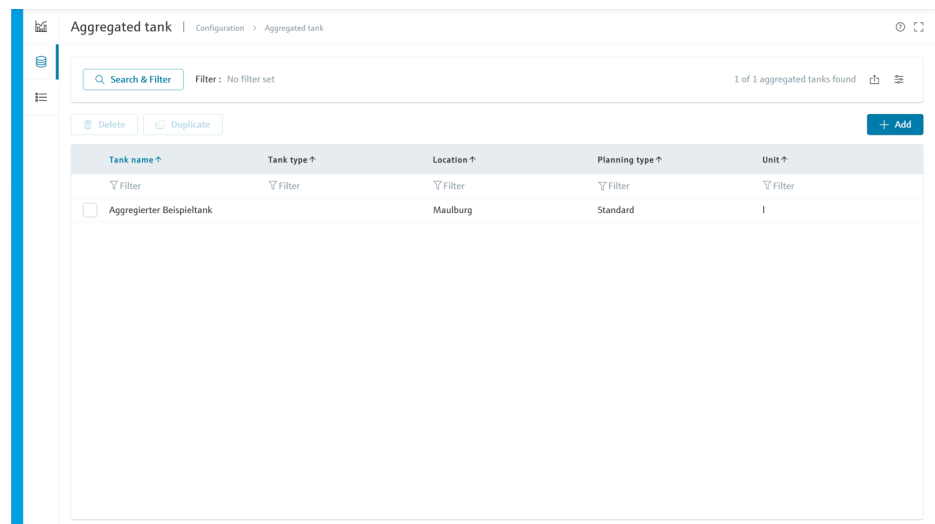
-  Only users whose user role is configured as **Master data** can create, change and delete aggregated tanks.
-  Depending on your configuration, instead of **Aggregated tanks**, **Aggregated objects** or **Silos** may be displayed.

14.11.1 Creating an aggregated tank

-  A tank always has to be assigned to a tank group since you can only assign tank groups to a user.
-  The **Location**, **Buyer**, **Supplier** and **Product** fields first have to be created before you can select elements for these fields. The **Buyer** and **Supplier** are managed under **Company**.
-  If a tank is assigned to an aggregated tank, this tank is removed from the **Tank assignment** tabs under the **Tank**, **Tank group** and **Report** menu items.
-  To make changes to a tank that is assigned to an aggregated tank, the tank must first be removed from the tank list.
-  If a tank that is already assigned to a tank group is assigned to an aggregated tank, this tank is removed from the tank group.
-  An aggregated tank always has to be assigned to a tank group since you can only assign tank groups to a user.

Creating an aggregated tank using the tank setup wizard

1. In the  **Configuration** menu, click the **Aggregated tank** menu item.
 ↳ The working area shows the detailed view below:



Tank name ↑	Tank type ↑	Location ↑	Planning type ↑	Unit ↑
☐ Aggregierter Beispieltank		Maulburg	Standard	I

2. Click the **+** **Add** button.
 ↳ The working area shows the **1. Tank details** tab.

3. Enter the **Tank name**. The tank name must be unique.
4. Select the **Planning type** from the drop-down list box.
 ↳ **Standard**: Indicates that the aggregated tank is a standard tank.
Recycling: Indicates that the tank is a recycling tank.
 The event messages and the way the inventory chart and levels are displayed are adapted to this planning type.
 The event messages and the way the inventory chart and levels are displayed are adapted to this planning type.
5. Select the **unit** from the drop-down list box that is used for the aggregated tank.
6. Optional: Enter additional details about the tank.

- **Tank type**
- **Product**
- **Location**
- **Buyer** (company)
- **Supplier** (company)
- **Visualization** – Depicting the appropriate tank shape.
- **SDT** – Standard delivery time or standard disposal time.
- **ADI/ADO based on** – Default setting: 14 days. This period is used for extrapolating in the inventory chart.
- **Negative values** – If this option is enabled, negative measuring values will also be included in the ADI/ADO calculations.
- **Forecast** – When checked, the forecast of the inventory will be displayed in the **Inventory chart** tab.
- **Short term forecast** – Default setting: Disabled. If this option is activated, a second forecast line will be displayed in the inventory chart.
- **Optimum** – Only available for standard tanks. The entry field is displayed as soon as the change-over switch is activated.
- **Plan point** – The entry field is shown as soon as the change-over switch is activated.
- **Ship point** – Only available for standard tanks. The entry field is displayed as soon as the change-over switch is activated.

- **Safety stock** – The entry field is shown as soon as the change-over switch is activated.
- **Hysteresis** – The hysteresis serves to prevent constant event messages, e.g. due to a fluctuating level.
- **Use product unit** – This option can only be activated if a product is assigned to the aggregated tank and the units of the product and the tank are compatible. If this option is activated, the unit of the selected product will be automatically used in the **Tank unit** field. The values in the **Capacity**, **Optimum**, **Plan point**, **Ship point**, **Safety stock** and **Hysteresis** fields are converted based on the density entered for the product.
To carry out editing and scheduling of tanks based on mass, the maximum capacity must be entered as a unit of volume, e.g. m³.

7. Click the **Finish** ✓ button to save the new tank.
8. Alternatively, click the **Next** > button to assign the tank to a tank group.
 - ↳ The working area shows the **2. Tank groups** tab.

Name	Description
☐ Chemicals	
☐ Configtestgroup	Testgroup
☐ Food and Beverage	
☐ NRW	All Tanks in NRW
☐ Oil/Gas	
☐ Primaries	
☐ Tank group 1	
☐ TI_Tanks_2021	
☐ Waste Water	

9. Select the check box for a tank group to assign the aggregated tank to this tank group.
10. Click the **Finish** ✓ button to save the new tank.
11. Alternatively, click the **Next** > button to assign tanks to the aggregated tank.
 - ↳ The working area displays the **3. Tank list** tab.

Tank name	Tank notes	Location
☐ sim_hysteresis	Check tank regularly every 3 weeks.	Naarden
☐ sim_secondaries		Aurangabad
☐ sim_short_term		Suzhou
☐ sim_tank_freeze		Dubai

12. Check the check box of the corresponding tanks to be assigned to the aggregated tank.
 -  The tank list contains only tanks of the same planning type, i.e. standard tanks or recycling tanks, as well as tanks that are not yet assigned to other aggregated tanks. In the measurepoint details tab, these tanks must first have a measurepoint and the same "Unit" (for application) as the aggregated tank assigned. Only these tanks can be added to the aggregated tank.
 -  When the user changes the tank unit in the **1. Tank details** tab, the proposed tank list is updated regarding the selected tank unit. All tanks previously marked are reset (deselected).
13. Click the **Finish** ✓ button to save the aggregated tank.
 - ➔ The aggregated tank is saved and displayed in the tank overview.

Creating an aggregated tank through duplication

-  Duplicating an aggregated tank opens the setup wizard. The settings in the **1. Tank details** and **2. Tank groups** tabs are taken from the template. The settings in tab **3. Tank list** are not taken from the template and must be created again.
-  The tank name must be unique. If the entered tank name already exists, the following error message will be shown: "The tank name already exists. Please enter another name."

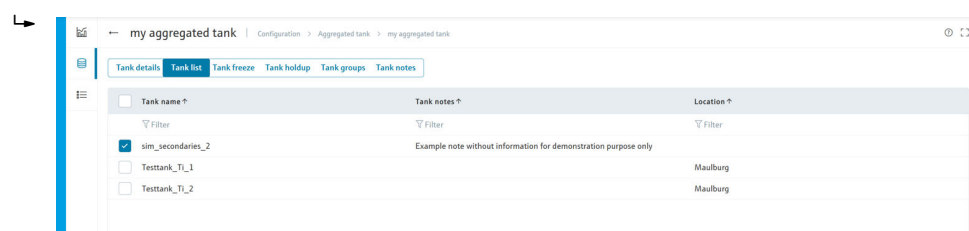
For more information on duplicating a data record, see the "Duplicating master data" section.

14.11.2 Selecting and deleting a depicted tank shape

For more information, see the "Selecting and resetting a depicted tank shape" section in the "Managing tanks" section.

14.11.3 Changing aggregated tank-tanks assignment

1. In the  **Configuration** menu, click the **Aggregated tank** menu item.
2. In the table, click on the aggregated tank in question to make changes.
3. Select the **Tank list** tab.



4. Select the checkbox for a tank to assign the tank to the aggregated tank.
5. Optional: Untick the checkboxes of a tank to deselect the assignment.
6. Click the  **Save** button to save the selection.
 - ➔ The table is sorted again. Assigned tanks are shown before non-assigned tanks in alphabetical order.
7. Alternatively, click on the  **Discard** button to undo the change.

In the following cases, a change can only be saved once the dialog box has been confirmed:

- One or more tanks are already assigned to a tank group:
The ✓ **OK** button saves the selection. The tank group assignment of the individual tanks is canceled.
- One or more tanks have one or more deliveries or disposals:
The ✓ **OK** button saves the selection. The deliveries or disposals of the individual tanks are removed.

The ✕ **Cancel** button closes the dialog box without saving the selection. The tank is not added.

If removing a single tank from an aggregated tank changes the capacity of the aggregated tank, i.e. the sum of the capacities of the individual tanks, a warning message will be displayed.

Assigning tanks to an aggregated tank has the following effects:

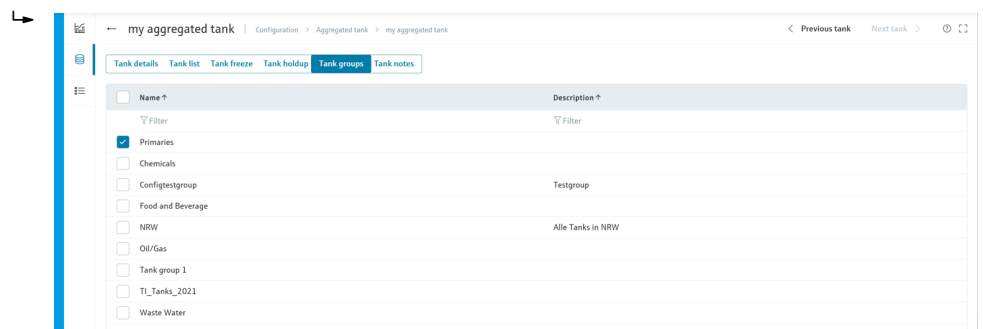
- Products, locations, buyers and suppliers that are assigned to the individual tanks are replaced by the products, locations, buyers and suppliers of the aggregated tank
- Files that have been uploaded as tank notes for each tank are removed
- The **Use product unit** checkbox is deactivated
- Any deliveries or disposals assigned to the individual tanks will be removed
- The individual tanks will be removed from all the tank groups
- The individual tanks will be removed from all reports
- The capacity of the aggregated tank in the **Tank details** tab will be updated

If the assignment of tanks to an aggregated tank is deselected, this will have the following effects:

- Products, buyers and suppliers of the individual tanks will be removed
- The location will remain the location of the aggregated tank
- The capacity of the aggregated tank in the **Tank details** tab will be updated

14.11.4 Changing the aggregated tank-tank group assignment

1. In the ☰ **Configuration** menu, click the **Aggregated tank** menu item.
2. In the table, click on the aggregated tank in question to make changes.
3. Select the **Tank groups** tab.



4. Select the check box for a tank group to assign the aggregated tank to this tank group.
5. Optional: Untick the checkboxes of a tank group to deselect the assignment.
6. Click the  **Save** button to save the selection.
 - ➔ The table is sorted again. Assigned tank groups are shown before non-assigned tank groups in alphabetical order.
7. Alternatively, click on the ↩ **Discard** button to undo the change.

In the following cases, a change can only be saved once the dialog box has been confirmed:

- One or more tanks are already assigned to a tank group:
The ✓ **OK** button saves the selection. The tank group assignment of the individual tanks is canceled.
- One or more tanks have one or more deliveries or disposals:
The ✓ **OK** button saves the selection. The deliveries or disposals of the individual tanks are removed.

The ✕ **Cancel** button closes the dialog box without saving the selection.

If removing a single tank from an aggregated tank changes the capacity of the aggregated tank, i.e. the sum of the capacities of the individual tanks, a warning message will be displayed.

The assignment of an aggregated tank to a tank group has the following effects:

- Products, locations, buyers and suppliers that are assigned to the individual tanks are replaced by the products, locations, buyers and suppliers of the aggregated tank
- Files that have been uploaded as tank notes for each tank are removed
- The **Use product unit** checkbox is deactivated
- Any deliveries or disposals assigned to the individual tanks will be removed
- The individual tanks will be removed from all the tank groups
- The individual tanks will be removed from all reports
- The capacity of the aggregated tank in the **Tank details** tab will be updated

If an aggregated tank is assigned to a tank group, this will have the following effects:

- Products, buyers and suppliers of the individual tanks will be removed
- The location will remain the location of the aggregated tank
- The capacity of the aggregated tank in the **Tank details** tab will be updated

14.11.5 Configuring aggregated tank freeze events

For more information, see the "Configuring tank freeze events" section.

14.11.6 Configuring aggregated tank holdup events

For further information, see the "Configuring tank holdup events" section.

14.11.7 Adding, opening and deleting files and other information for an aggregated tank

Using the **Tank notes** tab, additional information and a maximum of 5 files can be added for an aggregated tank. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

For more information, see the "Adding, opening and deleting files and other information for a tank" section.

14.11.8 Changing an aggregated tank

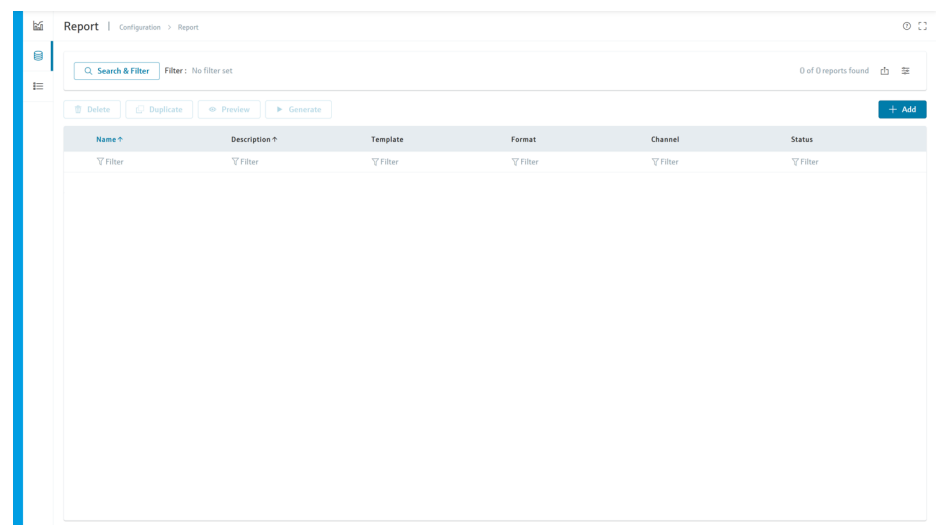
For additional information, see the "Changing master data" section.

14.11.9 Deleting an aggregated tank

For additional information, see the "Deleting master data" section.

14.12 Managing reports (using CIDX and CSV reports)

-  Only users whose user role is configured as **Master data** can set up reports.
 -  The **Report** menu item is only available on the desktop version.
 -  To use automatic data exchange in CIDX format, a server to receive the files must be set up on the receiver side. The URL, user name and password of the receiver side must be known.
 -  A maximum of five reports can be scheduled.
 -  Manual values are always marked with the suffix **MAN**.
- In the  **Configuration** menu, click the **Report** menu item.
- ↳ The working area shows the detailed view below:



CIDX and CSV formats

The generated CIDX and CSV files have the following format:

<contractNr>_<report.name>_<Timestamp"yyyymmdd_hhmmss">.<suffix>

Example: contract1_report1_20100505_1634031.xml

CIDX: The CIDX format used is "InventoryActualUsage, Version 4".

The CSV files contain the following table columns:

- **Tank name**, e.g. Tank 1
- **Time stamp**, e.g. 12.06.2009 17:20
- **Value**, e.g. 920.0
- **Unit**, e.g. l
- **Optimum**, e.g. 1 000
- **Plan point**, e.g. 100
- **Ship point**, e.g. 80
- **Safety stock**, e.g. 50

CIDX validation

Once the tanks are assigned to the report, validation is performed to check that the configuration complies with CIDX specifications. The following checks are performed:

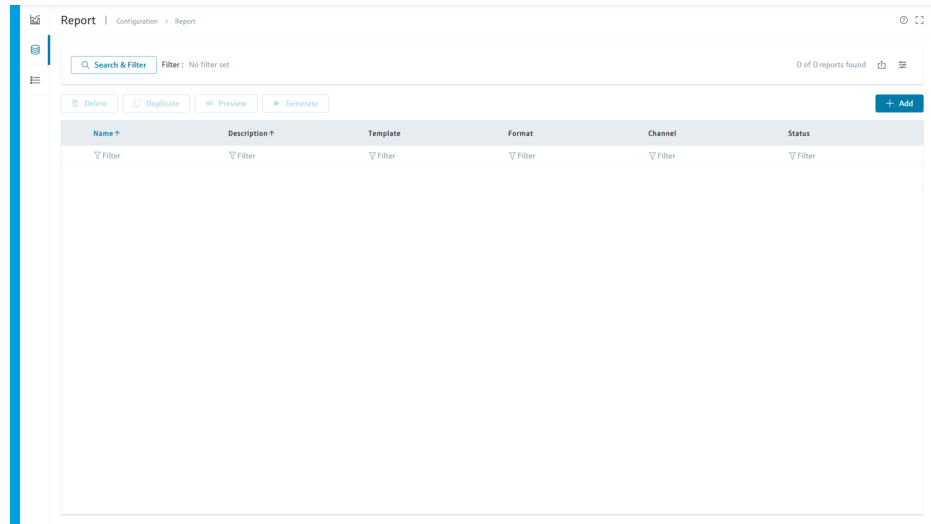
- Is a supplier assigned to the tank?
- Is a buyer assigned to the tank?
- Is a location assigned to the tank?
- Is a product assigned to the tank?
- Is a company assigned to the location?
- Is an identifier and identifier agency set for the buyer?

- Is an identifier and identifier agency set for the supplier?
- Have an identifier and identifier agency been set for the product?
- Have an identifier and identifier agency been set for the company of the location?
- Is a measure point assigned to the tank?

14.12.1 Creating a report

Creating a report using the report wizard

1. In the  **Configuration** menu, click the **Report** menu item.
 - ↳ The working area shows the detailed view below:



2. Click the **+ Add** button.
 - ↳ The working area shows the **1. Report details** tab.

3. Enter a **name**. The report name must be unique.
4. Optional: Enter a **description**.
5. Select **template** from the drop-down list box. **Custom report** is selected by default.
 - ↳ A description of the template will be shown under the drop-down list box.

6. Click the **Next** > button.
 ↳ The working area shows the **2. Column selection** tab.

If the **reconciliation report** has been selected as a template, the tab will not be displayed.

7. Select the information (columns) that should be analyzed in the report. To do so, check the box for the relevant information and move it between the two columns using the > and < buttons.
8. Optional: Select all the information simultaneously. To do so, tick the box in the column header.

 The sequence of the displayed information within a column can be changed using the drag-and-drop function.

Unassigned columns

Shows all columns that can be used in the report.

Assigned columns

Shows all the columns used in the report.

Including secondary values

Additional illustration of all secondary values. If this option is selected, no secondary values can be excluded from the report. If specific secondary values are to be selected, the **Secondary report** template must be selected in step 1.

Parameter

Selection of primary and secondary values.

The drop-down list box is only displayed if **Including secondary values** is also highlighted.

Using column names as headers

The column names are used as a heading.

Header language

Select the language for the column names in the report header. The language from the user settings is used by default. If no language is selected in the user preferences, the column names will be displayed in English.

The drop-down list box will only be shown when “**Add column names as headers**” is marked.

 If manual values should also be shown in the report, the **Value (with “manual” marking)** column must also be selected.

9. Click the **Next** > button.
 - The working area shows the **3. Tank assignment** tab.

If the **reconciliation report** has been selected as a template, the tab will not be displayed.

10. Select the **Assignment type** from the drop-down list box. **Tank** is selected by default.
11. Check the checkboxes of the tanks in question that should be assigned to the report.

i If a **reconciliation report** is selected as the template, the **2. Reconciliation role assignment** tab will be displayed instead of the **2. Column selection** and **3. Tank assignment** tabs. For this, see the "Configuring an inventory reconciliation report" chapter.

12. Click the **Next** > button.
 - For CIDX and CSV reports, validation is performed to check that the configuration complies with the specifications.
 - The working area shows the **4. Format selection** tab.

13. Select the output format from the **Format** drop-down list box. The option selected is empty by default.
 - If the option selected remains empty, the following format will be used:
CIDX Report template: **XML** output format
CSV report template: Output format **CSV – Semicolon**

The following formats can be selected:

- **CSV – Semicolon** – CSV file (values separated by semicolon)
- **CSV – Comma** – CSV file (values separated by comma)
- **CSV – Tab** – CSV file (values separated by tabulators)
- **XLSX** – Excel file
- **TXT** – Text file
- **XML** – XML file
- **PDF** – PDF file

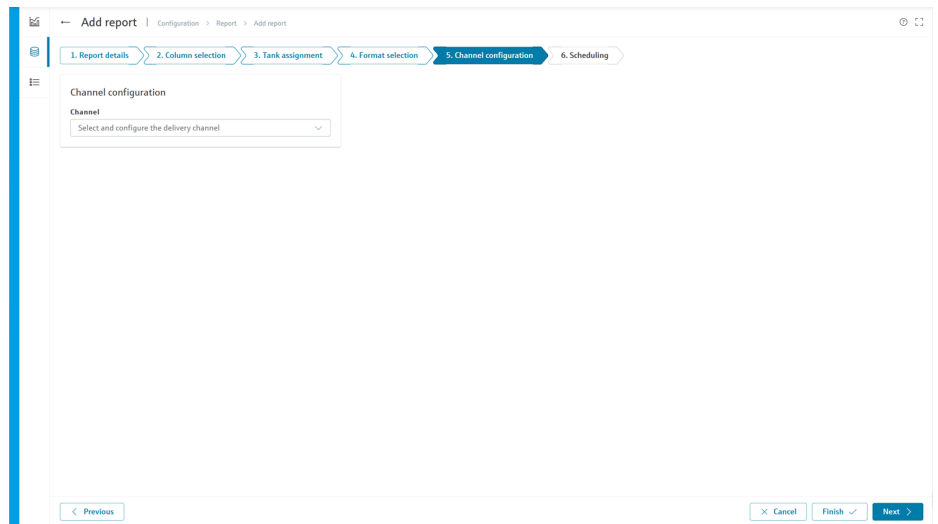
 If an **reconciliation report** has been selected as a template, only the **XLSX**, **XML** and **PDF** formats can be used.

14. Select the separator format from the **Separator (thousand separator | decimal separator)** drop-down list box.

↳ **Comma (,) | Point (.)** or **Point (.) | Comma (,)**

15. Click the **Next >** button.

↳ The working area shows the **5. Channel configuration** tab.



16. Select the **channel** from the drop-down list box. The option selected is empty by default.

↳ **Email** or **FTP**

Depending on the distribution channel selected, additional fields are displayed in the tab.

a) Configure distribution by email

Channel configuration

Channel: E-mail

☐ Name	First name	E-mail
☐ AdminTestUser	system	systemAdmin@rewaTest.fids
☐ Curie	Marie	marie@curie.com
☐ User	Demo	ExampleMailAddress@Provider.com
☐ wjz	htjz	wjz@idgm.de

Buttons: Previous, Cancel, Finish, Next

17. Check the checkboxes for the users in question that should be assigned as email recipients to the report. At least one user must be selected.

b) Configure distribution via FTP

Channel configuration

Channel: FTP

FTP mode: FTPS Passive

URL:

Port: 21

User name:

Password:

Buttons: Previous, Cancel, Finish, Next

18. Enter **FTP mode**. **FTPS Passive** is selected as standard.
19. Enter the **URL** to define the website of the selected channel.
20. Enter the **port**. Default value: 21
21. Optional: Enter the **user name** and **password**.

i **FTPS Passive:** With passive FTPS (explicit), the client initiates the data connection, since a firewall or router connection often prevents the connection from being established from the server. One TLS encryption is used when the connection is established.

i When establishing a connection from the client, port 21 is used in **explicit** mode with passive FTPS. The server must use a port between 10 000 and 11 000 for the data channel. The server must be configured accordingly. The IP address of the FTPS server must be registered with Endress+Hauser and approved for the connection.

22. Click the **Finish** ✓ button to save the new report.

23. Alternatively, click on the **Next** > button.
 ↳ The working area shows the **6. Scheduling** tab.

24. Enable the **Enable scheduling** change-over switch to activate the scheduling rule immediately as soon as the report has been completed.
25. Select the **time zone** from the drop-down list box. Standard value: (UTC + 00:00) Coordinated Universal Time
26. If the change-over switch is activated:
 Select the **repetition rule** from the drop-down list box.
- **Daily** – Scheduling possible by time or frequency.
 - **Weekly on every...** – Possible to select the days and schedule by time or frequency.
 - **Monthly on specified date** – Possible to select a start date and time for monthly generation (monthly repetition) of the report.
 - **Monthly on last day of a month** – Carried out on the last day of the month. Possible to select a time for creating the report (monthly repetition) once a month.

27. Click the **Finish** ✓ button to save the new report.

Configuring the "daily" repetition rule

1. In the **Scheduling by** drop-down list box, select either **Time** or **Frequency**.

a) Configure scheduling via "time"

2. Click the **+ Add** button.

↳ The **Add point in time** dialog box appears.

3. Select a **point in time**. Enter the time directly or select it via the time picker ⌚. The point in time must not be duplicated.
4. Click the **Add** button to save the point in time in the list.
↳ The dialog box is closed and the point in time is displayed in the table.

i The **Points in time** table can contain a maximum of 12 entries. To be able to add another point in time, you must delete a different point in time beforehand.

b) Configure scheduling via "frequency"

5. Select an **interval**.
6. Select the time period for which the scheduling is set. Either enter the time directly in the **From time** and **To time** fields or select them via the time picker ⌚. Use the format of hh:mm when entering the time directly.

Configuring the "Weekly on every..." repetition rule

1. Tick the checkbox showing the days on which the report should be created.
2. In the **Scheduling by** drop-down list box, select either **Time** or **Frequency**.
3. Scheduling by time:
See Section "a) Configure scheduling via "Time".
4. Scheduling via frequency:
See section "b) Configure scheduling via "Frequency".

Configuring the "Monthly on specified date" repetition rule

1. Select a day of a month in the **Start date for monthly recurrence** drop-down list box. Possible value: 1 to 31
2. Select the time for which the scheduling is set. Either enter the appropriate time directly in the **Schedule time** field or select it using the time picker ⌚. Use the format of hh:mm when entering the time directly.

Configuring the "Monthly on last day of month" repetition rule

- Select the time for which the scheduling is set. Either enter the appropriate time directly in the **Schedule time** field or select it using the time picker ⌚. Use the format of hh:mm when entering the time directly.

Creating a report through duplication

i Duplicating a report opens the setup wizard. The settings in the **Tank assignment**, **Format selection**, **Channel configuration** and **Scheduling** tabs are taken from the template.

i The report name must be unique. If the entered report name already exists, the following error message will be displayed: "The report name already exists. Please enter another name."

For more information on duplicating a data record, see the "Duplicating master data" section.

14.12.2 Downloading the report as a PDF file

A report can be downloaded and saved as a PDF file.

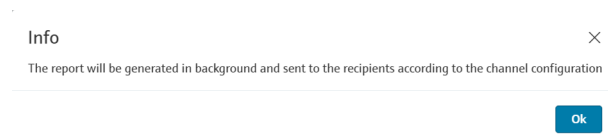
1. In the  **Configuration** menu, click the **Report** menu item.
 - ↳ The overview table appears.
2. Check the checkbox of the report for which the preview should be downloaded.
3. Click the  **Preview** button.
 - ↳ A file named "Report_<reportName>.pdf" is downloaded.

14.12.3 Creating reports and sending them immediately

Irrespective of the scheduling rules, a report can be created at any time and sent to the recipients as defined in the channel configuration. The scheduling rules remain unchanged.

i Only measured values with the status 0 are taken into account in reports in **CIDX** and **CSV** formats.

1. In the  **Configuration** menu, click the **Report** menu item.
 - ↳ The overview table appears.
2. Check the checkbox of the report to be generated.
3. Click the  **Generate** button.
 - ↳ The report is generated in the background and sent to the recipients. The following dialog box appears:



4. Click the **OK** button to confirm the message.

i The report is always generated when the  **Generate** button is clicked. The dialog box is only used to inform that a report has been generated and sent, regardless of whether the message is confirmed with **OK** or whether the dialog box is closed without confirmation.

14.12.4 Changing a report

For additional information, see the "Changing master data" section.

14.12.5 Deleting a report

For additional information, see the "Deleting master data" section.

14.13 Maintaining a reconciliation report

14.13.1 Description

The following section shows an example of a reconciliation report in xlsx format. This report provides data on three measurepoints: Inputs, stocks and outputs.

Reconciliation Report				
Report name:	UC1_A			
Description:				
Point name	Inputs	Stocks	Outputs	Unit
	Tank_UC1A	Tank_UC1A	Tank_UC1A	
	Secondary[1]	Primary	Secondary[2]	
Product	Product_A	Product_A	Product_A	
2017-01-11 12:47:34	5000	2000	3000	l
2017-01-12 12:47:34	5000	2000	3000	l
Measurement delta	0	0	0	l
Input quantity delta:	0			l
Stock quantity delta:	0			l
Output quantity delta:	0			l
Error delta:	0			l
Error delta (%):	0			%
Yield:	0			

- 1 Report name
2 Description
3 Parameter name: Name of the measuring points
4 Product
5 Measure time points (start time/end time)
6 Measured difference at one measurepoint
7 Sum of the differences between the measured values of all measurepoints of a type
8 Error delta: Measured product loss in units; error delta (%): Measured product loss in %; yield: Factor for
9 efficiency of a process (ideally: 1)
10 Column headers for the measurepoints, inputs, stocks and outputs

The reconciliation report allows the creation of reports that show the development of the inventory in one or more tanks to a very precise degree.

Increased accuracy compared to level measurement alone is achieved by increasing the level readings (stocks) from the flowmeters for the input for a tank (inputs) and the output from a tank (outputs).

The reconciliation report relates these 3 values to each other and compares them with one another, making it possible to visualize discrepancies.

 The reconciliation provides more precise measured values than those that are used in the “Analysis” workplace. For this reason, there may be slight deviations between the reconciliation report and the values in the “Analysis” workplace.

For each measuring point of the type **Input**, **Inventory** and **Output**, the difference between the start time and the end time of the measurement is calculated.

A reconciliation report can also be created if only 2 measuring points are available. One of these measurepoints must be **Stock**.

 To create the report, the last measurement prior to the entered start or end time of a measure point is used.

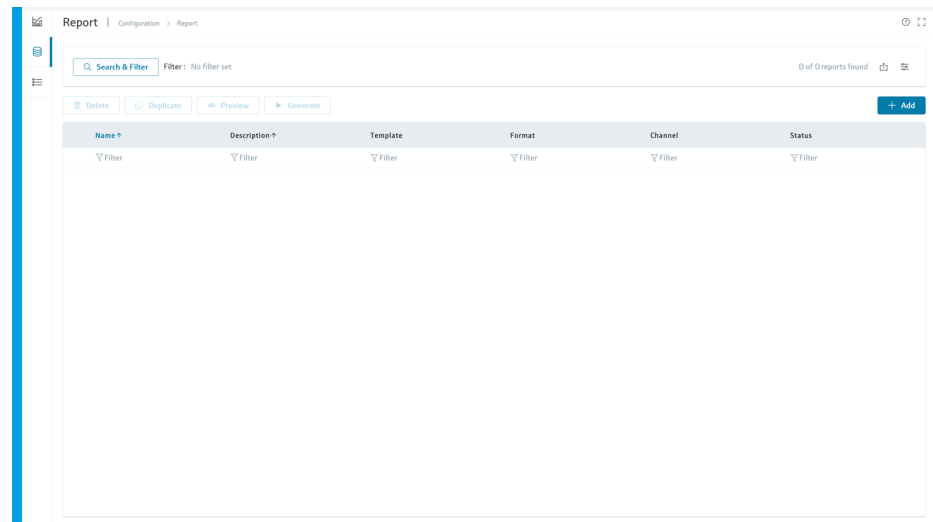
A reconciliation report can be generated in different ways and at different times:

- Ad hoc, at the request of a SupplyCare user
- Regularly, on the basis of varying time intervals

14.13.2 Configuring a reconciliation report

Creating a report using the report wizard

1. In the **Configuration** menu, click the **Report** menu item.
 ↳ The working area shows the detailed view below:



2. Click the **+ Add** button.
 ↳ The working area shows the **1. Report details** tab.

3. Enter a **name**. The report name must be unique.
4. Optional: Enter a **description**.
5. Select the **reconciliation report** from the **template** drop-down list box.
 ↳ A description of the template will be shown under the drop-down list box.

6. Click the **Next** > button.
 - ↳ The working area shows the **2. Reconciliation role assignment** tab.

Reconciliation role assignment

At least one tank parameter has to be defined as 'Input' or 'Output', and at least one tank parameter has to be defined as 'Stock'

Units: m³

Search & Filter Filter: No filter set 22 of 22 tank parameters found

Tank name	Parameter name	Reconciliation role
myConstituentTank_01	Primary	not assigned
myConstituentTank_02	Primary	not assigned
myConstituentTank_03	Primary	not assigned
sim_hysteresis	Primary	not assigned
sim_hysteresis	Latitude (GPS)	not assigned

Settings

Reporting period: 7 Day(s)

Language: EN

Navigation: Previous Cancel Finish Next

Here, one role (input, stock or output) is assigned to each of the existing measurepoints. Typically, primary values and secondary values are assigned to the individual roles. These measured values are then used for data alignment.

7. Select the **unit**. The default unit is cubic meters.

i Only primary values and secondary values can be evaluated for which the selected unit is compatible with the unit that was selected when configuring the tank. Volume units or mass units are compatible with each other.

8. Select the measurepoints of a tank. To do so, click on the desired measurepoint in the table. A row is displayed for each measurepoint.
 - ↳ The **Edit role** dialog box appears.

Edit role

Tank name: myConstituentTank_01

Parameter name: Primary

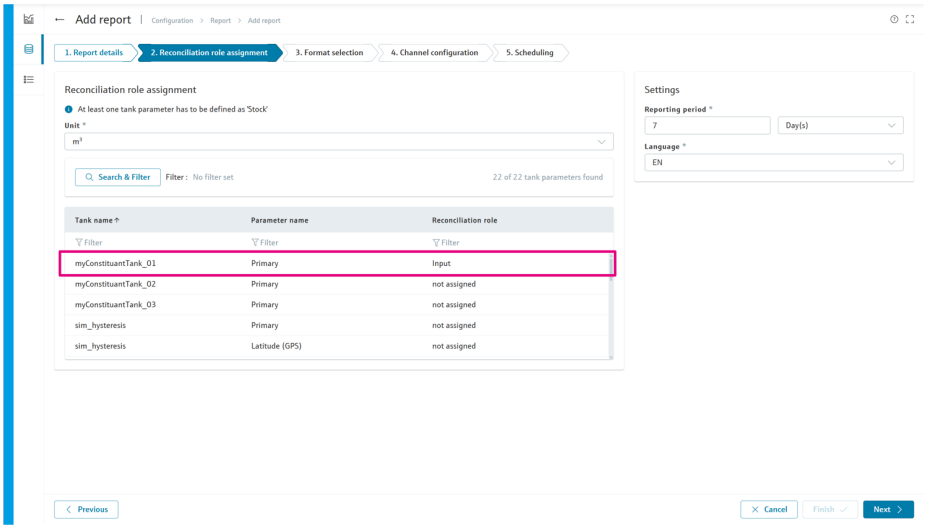
Role *: not assigned

Buttons: Cancel Apply

9. Select the **function** from the drop-down list box.
 - ↳ **Input, inventory or output**

10.
- Click the  **Apply** button to save the setting.

➤ The dialog box is closed and the selected function is displayed in the **Function** column for the measurepoint.



11.
- Select other measurepoints. At least two measurepoints are required for a report. One of these measurepoints must be **Stock**.

-  If a measure point is not assigned to a function, its value is 0 (standard).
-  The tanks can be filtered by **tank group**, **product** and **location**.

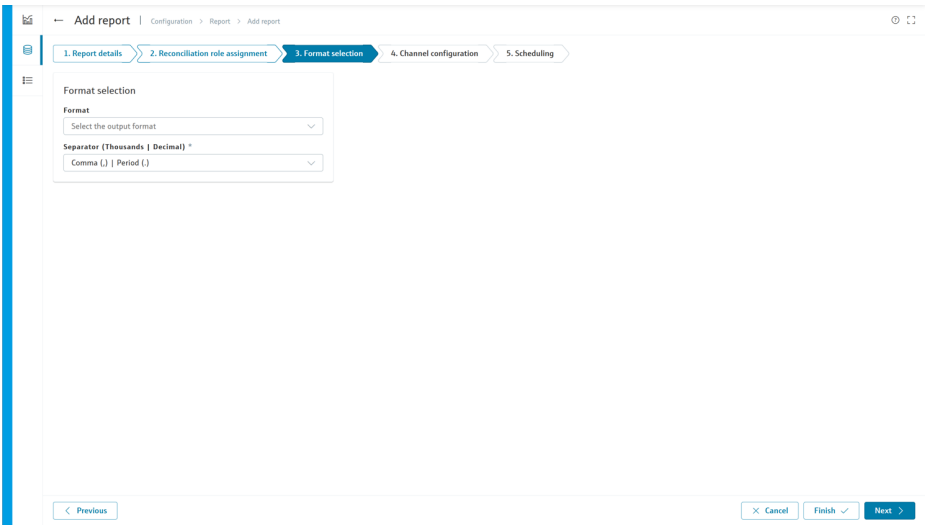
12.
- Make additional settings:

■ **Reporting period** – Time interval of inventory reconciliation report.

■ **Language** – Language of inventory reconciliation report.

13.
- Click the **Next** > button.

➤ The working area shows the **3. Format selection** tab.



14.
- Select the output format from the **Format** drop-down list box. The option selected is empty by default.

The following format can be selected:

- **XLSX** – Excel file
- **XML** – XML file
- **PDF** – PDF file

15. Select the separator format from the **Separator (thousand separator | decimal separator)** drop-down list box.
 - ↳ **Comma (,) | Point (.)** or **Point (.) | Comma (,)**
16. Click the **Next** > button.
 - ↳ The working area shows the **4. Channel configuration** tab.

17. Select the **channel** from the drop-down list box. The option selected is empty by default.
 - ↳ **Email** or **FTP**
Depending on the distribution channel selected, additional fields are displayed in the tab. Details of the different distribution channels are described in the "Creating a report using the report wizard" section.
18. Click the **Finish** ✓ button to save the new report.
19. Alternatively, click on the **Next** > button.
 - ↳ The working area shows the **5. Scheduling** tab.

20. Enable the **Enable scheduling** change-over switch to activate the scheduling rule immediately as soon as the report has been completed.

21. Make the settings for scheduling as described in the "Creating a report using the report wizard" section.
22. Click the **Finish** ✓ button to save the new report.

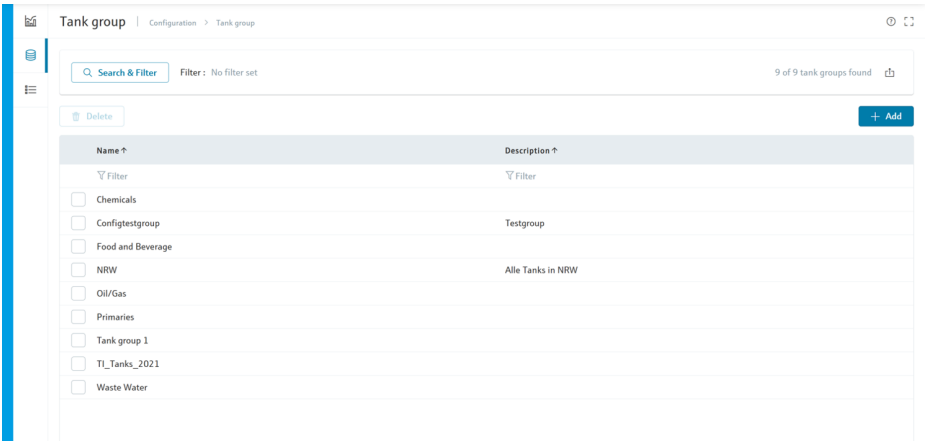
14.14 Setting up notifications (messaging)

SupplyCare Hosting can actively inform users of events by email. Depending on the event weighting, different people can be informed.

- Only users whose user role is configured as **Master data** can set up message notifications.
- Message notifications can only be set up for users with **Read only**, **Scheduler** or **Operator** configured as their user role.
- The email connection must be set up for SupplyCare before the user can be notified by email.

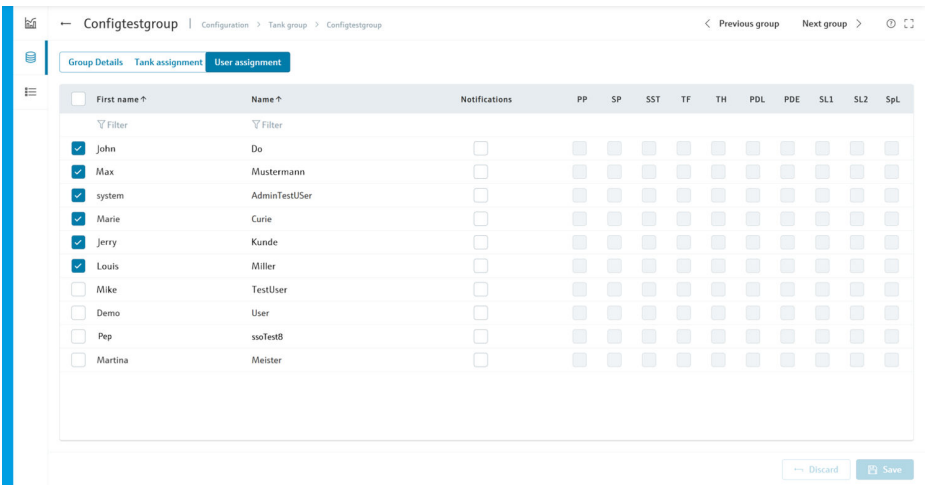
1. In the **Configuration** menu, click the **Tank group** menu item.

↳ The working area shows the detailed view below:



2. In the table, click on the relevant tank group to assign a user.
3. Select the **User assignment** tab.

↳ All users with **Read only**, **Scheduler** and **Operator** user roles are listed in the table.



4. Tick the box in the left column to assign one or more users to the tank group.
5. Tick the checkbox in the **Notifications** column for the user in question if the user should also be informed about tank events by email.

6. Check all the check boxes corresponding to the events for which the user should receive notification.

7. Click the  **Save** button to save the changes.

 Notifications can also be set up and managed via the Configuration menu → User.

15 Separators in export and report formats

This chapter explains the right thousand and decimal separator formatting used in all the export or reporting possibilities in SupplyCare.

Download to Excel

The download is performed in Excel format (standard). When the report is opened in Excel, it is displayed in the local Excel format system.

Download history

The character used as the thousand and decimal separator for the download depends on the language setting selected in the browser.

Notifications

The character that the notification uses as the thousand and decimal separator depends on the language setting selected in the user preferences.

Reports

The character to be used as the thousand and decimal separator in the report can be selected from a drop-down list in the Configuration menu → Report.

16 User roles and authorizations



Multiple user roles can be assigned to one person at the same time.

Master data

A person with **Master data** configured as their user role is authorized to perform the following:

- Creating, changing and deleting a user
- Assigning a user role to users
- Assigning a tank group to users
- Assigning notifications to users
- Changing your own user profile
- Creating, changing and deleting a tank
- Assigning a tank to a tank group
- Creating, changing and deleting aggregated tanks
- Assigning an aggregated tank to a tank group
- Creating, changing and deleting tank types
- Creating, changing and deleting locations
- Assigning a tank to a location
- Creating, changing and deleting companies
- Creating, changing and deleting products
- Uploading an existing linearization table
- Creating, changing and deleting linearization tables
- Creating, changing and deleting tank groups
- Assigning a product to a tank
- Creating, changing and deleting reports

Product-Tank-Configurator

A user with **Product-Tank-Configurator** configured as their user role is authorized to perform the following:

- Creating, changing and deleting a tank
- Assigning a tank to a tank group
- Creating, changing and deleting products
- Assigning a product to a tank

Read only

A user with **Read only** configured as their user role is authorized to perform the following:

- Viewing tanks (measured values)
- Show personalized tank view
- Viewing tanks on a map (Google Maps)
- Viewing and saving measured value history
- Viewing tank details
- Viewing location details
- Viewing the tank service status
- Viewing events
- Totaling
- Changing your own user profile
- Configuring user preferences

Operator

A person with the **Operator** user role is authorized to perform the following:

- Viewing tanks (measured values)
- Show personalized tank view
- Viewing tanks on a map (Google Maps)
- Viewing and saving measured value history
- Analyzing the history of existing measured values
- Viewing tank details
- Viewing location details
- Changing the tank service status
- Viewing and editing events
- Viewing the event history

- Totaling
- Changing your own user profile
- Configuring user preferences

Scheduler

A user with the **Scheduler** user role is authorized to perform the following:

- Viewing tanks (measured values)
- Show personalized tank view
- Viewing tanks on a map (Google Maps)
- Viewing and saving measured value history
- Viewing notifications and status displays about planned deliveries and disposals
- Analyzing the history of existing measured values
- Viewing tank details
- Viewing location details
- Viewing the tank service status
- Viewing and editing events
- Setting the resubmission date
- Viewing the event history
- Planning deliveries and disposals
- Totaling
- Changing your own user profile
- Configuring user preferences



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