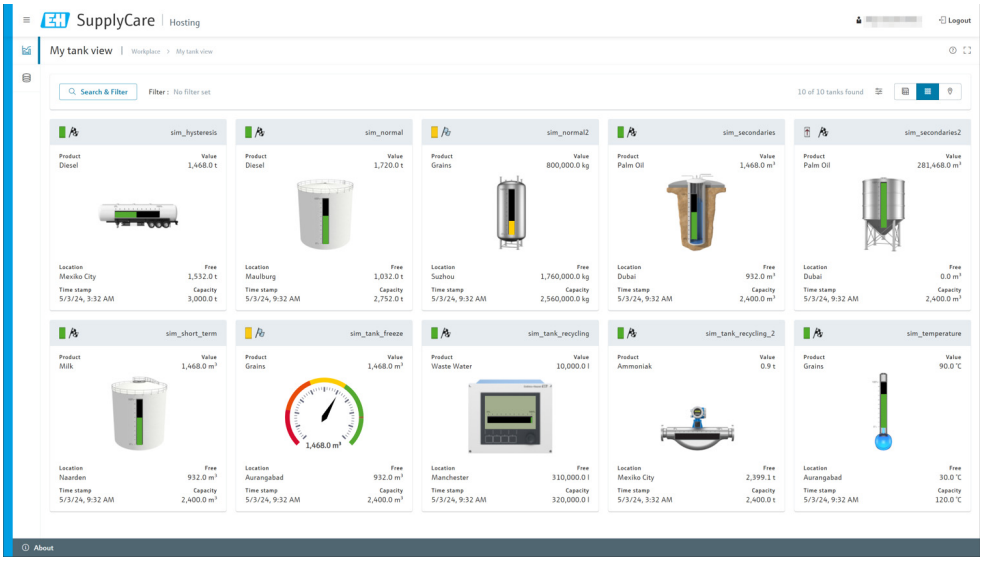
BA00050S/00/EN/26.24-00
71682517
2024-12-03

Valid as of software version:
4.0

Operating Instructions
SupplyCare Hosting SCH30

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



Endress+Hauser
People for Process Automation

Revision history

Operating Instructions	Valid for SW version	Revisions
BA00050S/21.18	3.3.xx	**Automatic updating of GPS coordinates** implemented.
BA00050S/22.19	3.4.xx	**SSL/TLS encryption** for email data exchange implemented. **FTP data transfer options** expanded.
BA00050S/23.21	3.4.xx	**Linearization function** expanded. **Silo template type** added.
BA00050S/24.22-00	3.6.xx	Users with the **master data role** can assign measuring instruments.
BA00050S/25.23-00	3.6.xx	**Inventory portal** introduced.
BA00050S/26.24-00	4.0.xx	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.

Table of contents

1 About this document

1.1 Document function

This documentation is intended to assist in the configuration and operation of SupplyCare Hosting.

1.2 Target audience

Aside from basic PC operating knowledge, no special training is needed to implement the management operations of the Supply Chain Management software. Nevertheless, it is recommended to obtain training from Endress+Hauser on how to use the system.

1.3 Symbols and conventions in this document

1.3.1 Symbols used

Safety symbols

Symbol	Meaning
 A0011189-EN	**DANGER!** This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.
 A0011190-EN	**WARNING!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.
 A0011191-EN	**CAUTION!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.
 A0011192-EN	**NOTICE!** This symbol contains information on procedures and other facts that do not result in personal injury.

Symbols for certain types of information

Symbol	Meaning
 A0011193	**Tip** Indicates additional information.
 A0011195	**Reference to page** Refers to the corresponding page number.
1. , 2. , 3. ...	Sequence of steps
 A0018373	Result of a sequence of actions

Symbols in graphics

Symbol	Meaning
1, 2, 3 ...	Numbers of the individual elements
1., 2., 3. ...	Sequence of steps
A, **B**, **C** ...	Displays
 A0011187	**Hazardous area** Indicates a hazardous area.
 A0011188	**Indicates a non-hazardous area.** Safe area (non-hazardous area)

1.3.2 Conventions in this manual

Typographical emphasis and special symbols have been used to provide a clear structure to the contents of this manual and to highlight important information.

Text emphasis

The following table provides a brief overview of the conventions used for text emphasis in this manual.

Text emphasis	Meaning	Example
Bold	Keyboard entry, button, tab, menu, instruction, directory path, commands	Select the **Event details** tab. Click on the **Event** menu item.

1.3.3 Figures

The screen shots depicted in this manual are sample screens and can differ from what actually appears on your screen. The screens depend on personal browser settings, on the end device used, and on the application itself.

1.4 Documentation

1.4.1 Operating Instructions

Document no.	Product	Document type
TI01229S	SupplyCare Hosting SCH30	Technical Information
SD03269S	SupplyCare Hosting API	Special documentation

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2 Basic safety instructions

2.1 Requirements for operating personnel

The personnel who carry out commissioning, diagnostics and maintenance must fulfill the following requirements:

Trained, qualified experts:
- Must have a corresponding qualification for their respective function and task
- Must have been authorized to carry out their function by the plant owner/operator
- Must be familiar with regional/national regulations and provisions
- Prior to commencing work, must have read and understood the instructions in these Operating Instructions and in the supplementary documentation and certificates (depending on the application)
- Must adhere to instructions and basic conditions

Operating personnel must fulfill the following requirements:
- Must have been instructed and authorized by the system owner/operator in relation to the requirements of the task.
- Must follow the instructions in these Operating Instructions.

2.2 IT security

Our warranty is valid only if the operating program is used as described in these Operating Instructions.

IT security measures that provide additional protection for the operating program and associated data transfer must be implemented by the system operator itself in line with its security standards.

2.3 Intended use

SupplyCare Hosting is a web-based software solution for the coordination of material and information flow along the supply chain. SupplyCare Hosting gives you complete transparency at anytime and from anywhere regarding inventory levels in tanks, silos and containers – even if these are situated in remote locations.
Using measuring and transmission technology installed onsite, current inventory data is collected and sent to SupplyCare. With SupplyCare, you have a constant overview of the current state of all your inventories. Critical levels are clearly indicated, and you can also be actively informed about such levels if required. Calculated prognosis provides additional assurance 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.

2.4 Technical improvement

Endress+Hauser reserves the right to make technical improvements to the hardware and software without prior notice. Such improvements will not be documented if they do not affect the control functions of the software. Should such improvements affect operation, a new version of the Operating Instructions will be created to reflect this. For more information, see the revision history section of this manual.

3 System description

3.1 Inventory control with SupplyCare

SupplyCare Hosting comprises software components and information relating to inventory control.
SupplyCare can collect and visualize inventory levels, availability, consumption and needs of tanks and silos online. This facilitates the economization of business and logistic processes, as well as the reduction of excess stock levels or stockouts. Covering all aspects from onsite measurement through to global remote data transmission and decentralized visualization, as well as integration into ERP systems, SupplyCare offers a universal solution based on applicable standards. And, as an additional benefit, SupplyCare is modular in design.

3.2 SupplyCare Hosting

SupplyCare Hosting is a web-based software solution for displaying and monitoring the levels of e.g. tanks, silos or containers that are situated all over the world.

3.3 Display of inventory data

In SupplyCare, the inventory levels in tanks and silos are determined at regular intervals. The current and previous inventory data can be displayed at any time → 39, → 60 and → 89.

3.4 Managing master data

With SupplyCare, you can create and manage master data for locations, companies, tanks, products and users → 99.

3.5 Automatic updating of GPS coordinates

With a GPS tracker attached to a tank and its GPS coordinates transmitted via the gateway, the current location of the tank can be determined at any time and displayed in SupplyCare. The GPS coordinates are automatically updated in SupplyCare along with other measured data.
The automatic updating of the 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 that location. These are not changed if the GPS data transmitted by the GPS tracker is optionally used as the location for the tank.

Use GPS data as location
Existing tanks → 32
New tanks → 104 and → 107

3.6 Reports and connection to ERP systems

With SupplyCare, you can create on-demand or regular reports with measured data and master data. → 153.

3.7 Event management

An event management system is integrated into SupplyCare. It shows events such as when inventory stocks fall below safety or reporting levels. In addition, notifications can be sent via email to predetermined users → 63 and → 165.

3.8 Alarm messages

In the event of technical problems, e.g. connection problems, alarm messages are generated and alarm emails are sent to the System Administrator.

3.9 Retrieval of measured values

The inventory levels in the tanks and silos are recorded by measuring instruments onsite. The measured values are sent to the hosting environment of Endress+Hauser via gateways, so that they are then 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, 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 make it more intuitive and easier to operate 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

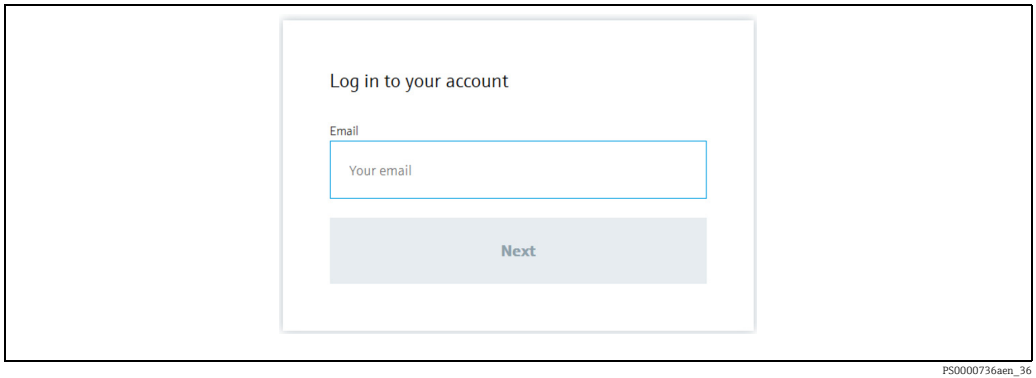
These are the officially supported browsers that we recommend for the SupplyCare Hosting application. The use of any other browser version or technology may result in limited functionality and visualization.

4 User interface

4.1 Starting the program

1. Open your web browser.
2. Enter the URL or IP address for SupplyCare. The URL is: https://inventory.endress.com

The following screen appears:



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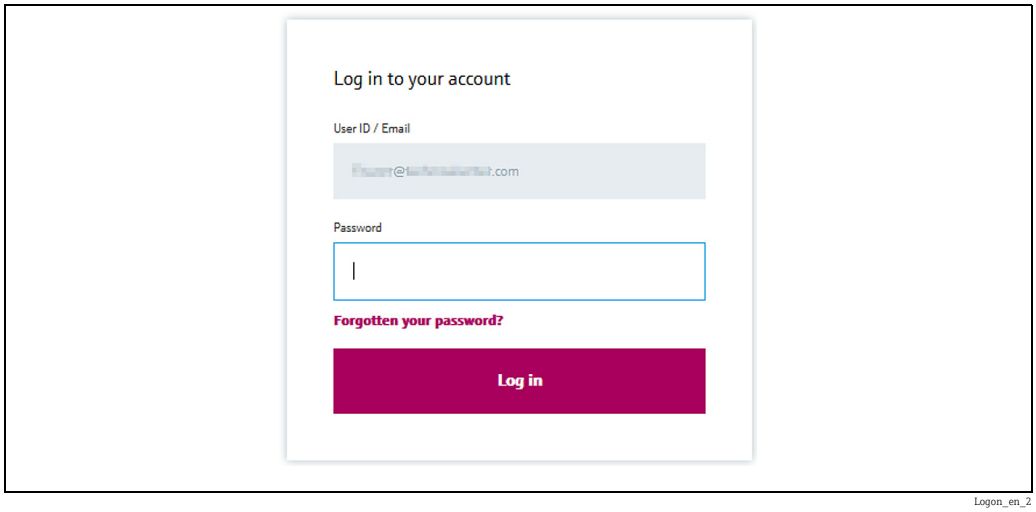
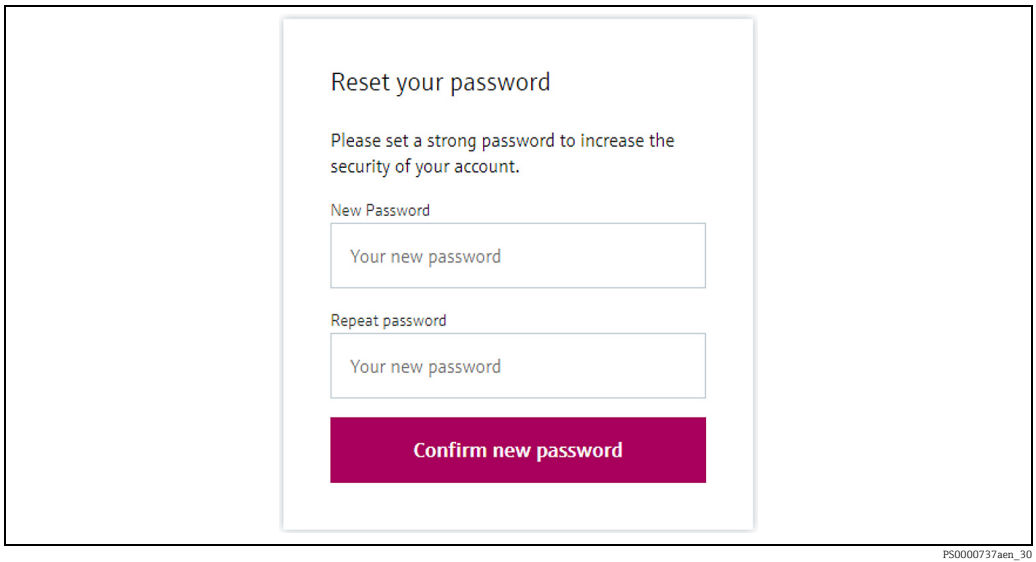
3. Enter your **Email** address and click **Next**.



Logon_en_2

4. Enter your **Password** and click **Log in**.

The first time that you log in, you will be prompted to reset your password.



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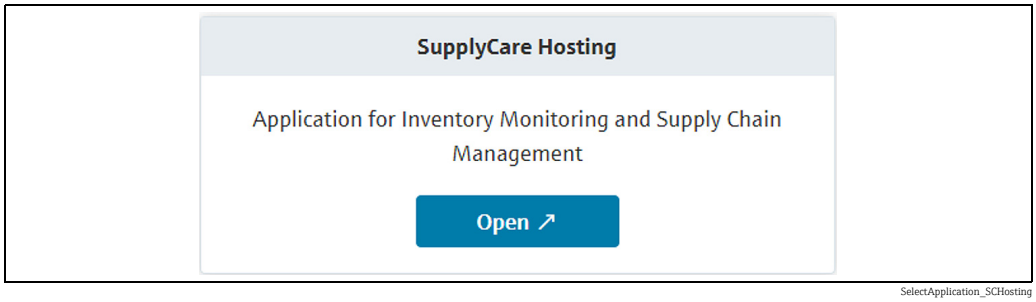
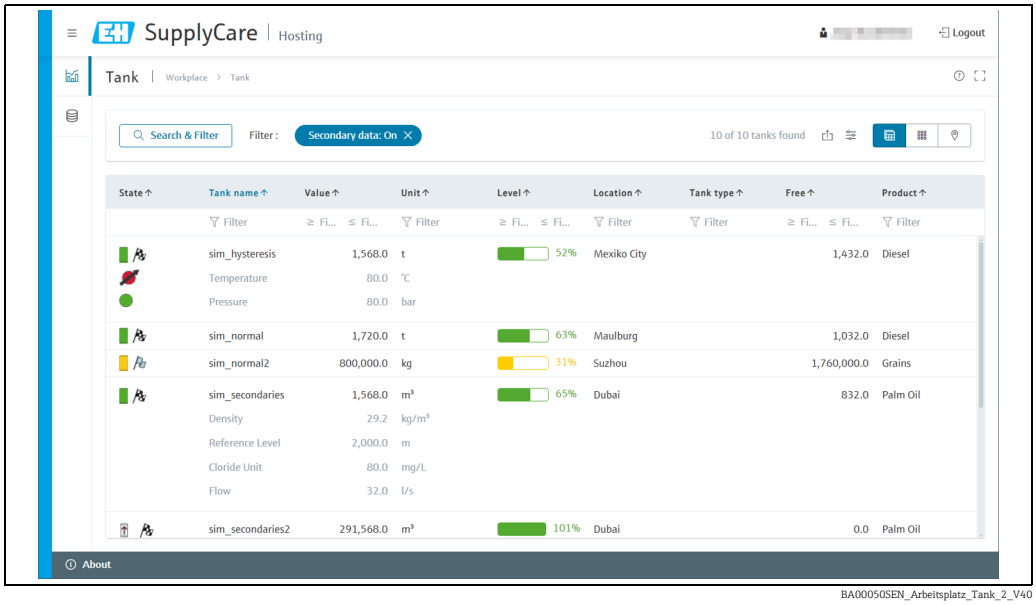
5. Enter your new password in both the **New password** and **Repeat password** fields.
6. Click **Confirm new password** to save the new password.
7. If you exclusively use SupplyCare Hosting, you will then be redirected to this application straightaway.
   If you have other applications in the Inventory Portal, select **SupplyCare Hosting** and click on the **Open** button.



SelectApplication_SCHosting

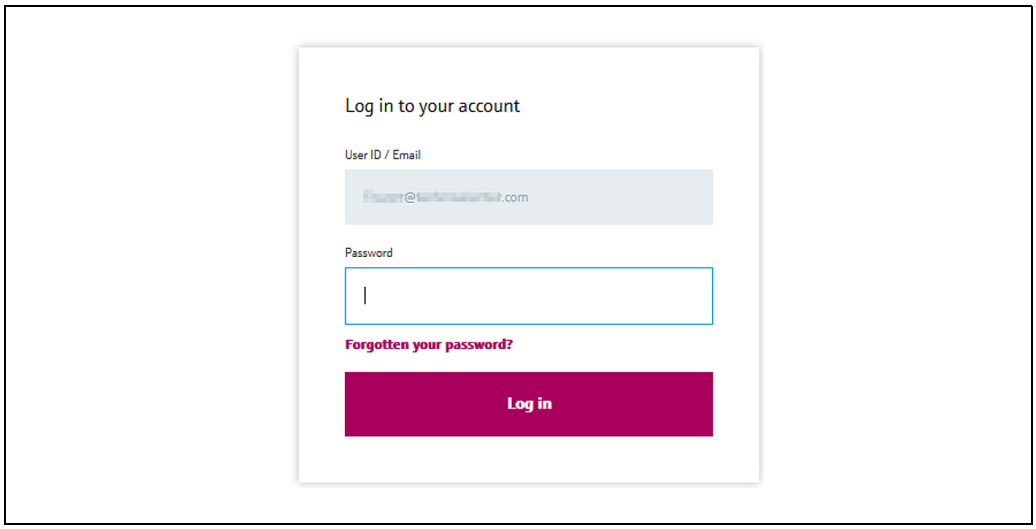
8. The portal window is displayed within the browser window. The view depends on the user role you have been assigned.



BA00050SEN_Arbeitsplatz_Tank_2_V40

4.1.1 Password forgotten

If you've forgotten your password or want to reset your password, click on the **Forgotten your password?** link and follow the instructions.



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4.2 Page structure of desktop version

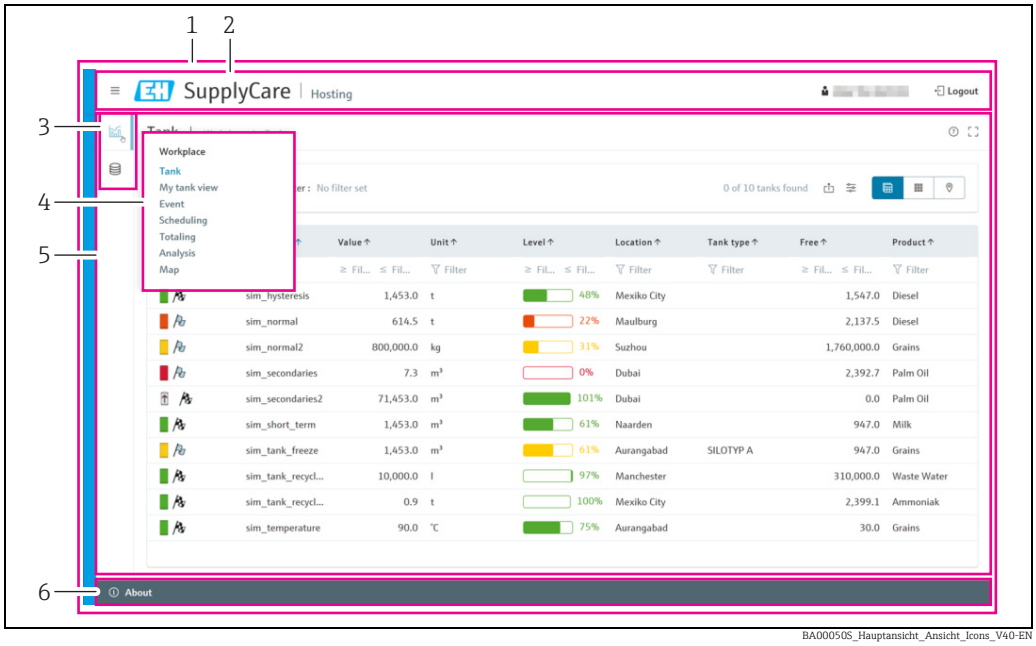
4.2.1 Portal window

The menus and corresponding menu items vary depending on the user role, which also results in changes to the portal window (→ 15).

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

SupplyCare is modular in design. The menu items differ for this reason. Furthermore, the contents of the application window can also differ, as well as the contents of the dialog windows.

You can see the arrangement of the individual objects in the desktop version of the portal window in the graphic below.



BA00050S_Hauptansicht_Ansicht_Icons_V40-EN

1 *Portal window*
2 *Header*
3 *Menu bar*
4 *Menu items*
5 *Application window*
6 *Footer*

4.2.2 Header

The header contains the ☰ button for changing the menu view in the menu bar, the name of the application you selected in the Inventory Portal, the link to the user profile and the **Logout** button.

4.2.3 Menu bar

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

Menus

Different menus are shown here depending on the user role.

Multiple user roles can be simultaneously assigned to one user. The menu tree then displays the menus for all the assigned user roles.

Menu items

Different menu items are listed in the menus depending on the user role. The following table lists the menu items that are shown according to the assigned user roles.

Due to the modular design of SupplyCare, the menu items in the **Workplace**, **Configuration** and **Profile** menus may differ. The **Profile** menu is opened by clicking on the username.

	Menus		
User role	**Workplace**	**Configuration**	**Profile**
Read-only	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Totaling ▪ Map ▪ Inventory reconciliation [3)]	–	▪ User profile ▪ User preferences ▪ Favorites
Operator	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Totaling ▪ Analysis ▪ Map ▪ Inventory reconciliation [3)]	–	▪ User profile ▪ User preferences ▪ Favorites
Scheduler	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Scheduling ▪ Totaling ▪ Analysis ▪ Map ▪ Inventory reconciliation [3)]	–	▪ User profile ▪ User preferences ▪ Favorites
Product-tank configurator	–	▪ Tank ▪ Product	▪ User profile
Master data	–	▪ User ▪ Tank ▪ Aggregated tank ▪ Tank type ▪ Tank group ▪ Location ▪ Company ▪ Product ▪ Linearization ▪ Unit ▪ Report	▪ User profile

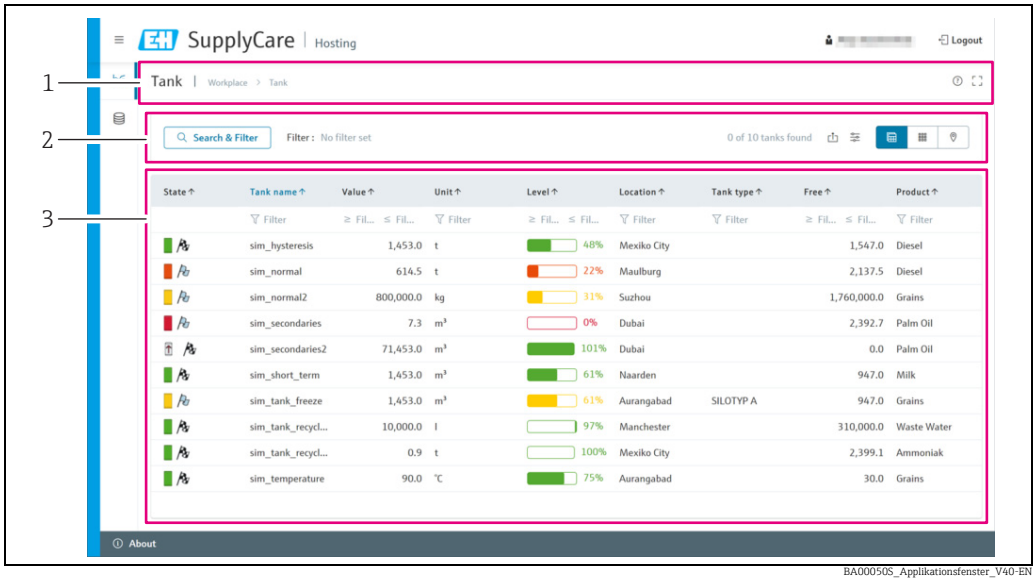
1) Only users with the **Operator** user role can change the service status for a tank.
2) Only users with the **Scheduler** or **Operator** user role can change the status of an event.
3) Only available if required and following prior activation.

4.2.4 Application window

The content of the application window varies depending on the menu item selected. The currently active menu item is shown in blue in the menu bar and in the extended header.

Due to the modular design of SupplyCare, the contents in the "Overview" as well as the contents in the dialog boxes may differ.

Most of the application windows contain the following views:
- Extended header
- Filters and display options
- Overview



BA00050S_Applikationsfenster_V40-EN

1 Extended header
2 Filters and display options
3 Overview

Extended header

The extended header displays the current application, as well as the buttons for "Help" and "Fullscreen" (switches to fullscreen mode). In fullscreen mode, the button (close fullscreen mode) replaces the fullscreen button.

Filters and display options

The filters and display options area displays the **Search & Filter** button, the currently set filters, the number of tanks or events found, and additional functional buttons. Clicking on **Search & Filter** displays all available filter functions.

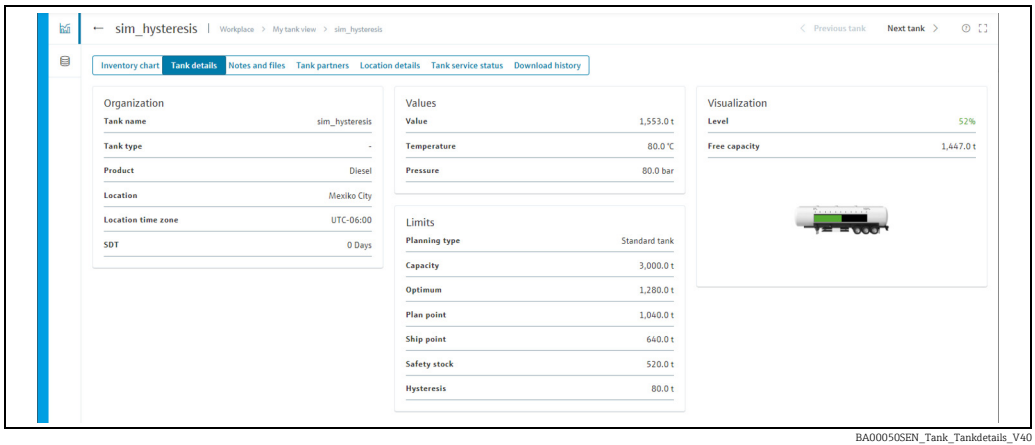
Functional buttons:

Button	Function
	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 currently active workplace is highlighted in blue.

Overview

In the overview, the selected information is either listed in tabular form or displayed as a graphical view (widgets, overview map).
Clicking on a tank (list or graphic) will take you directly to the detail views with additional information on the selected workplace.
Where necessary, the information in the detail view is further divided by means of tabs.

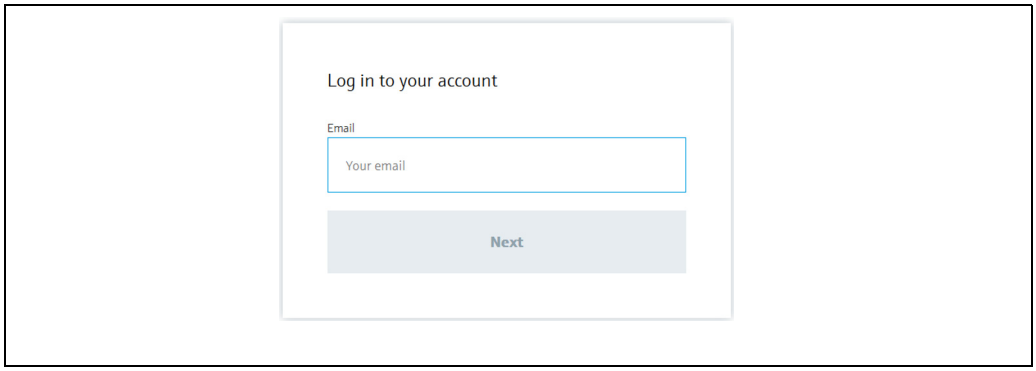


BA00050SEN_Tank_Tankdetails_V40

4.2.5 Logout

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

Clicking on **Logout** will take you back to the **Log in** screen:



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4.3 Page structure of mobile version

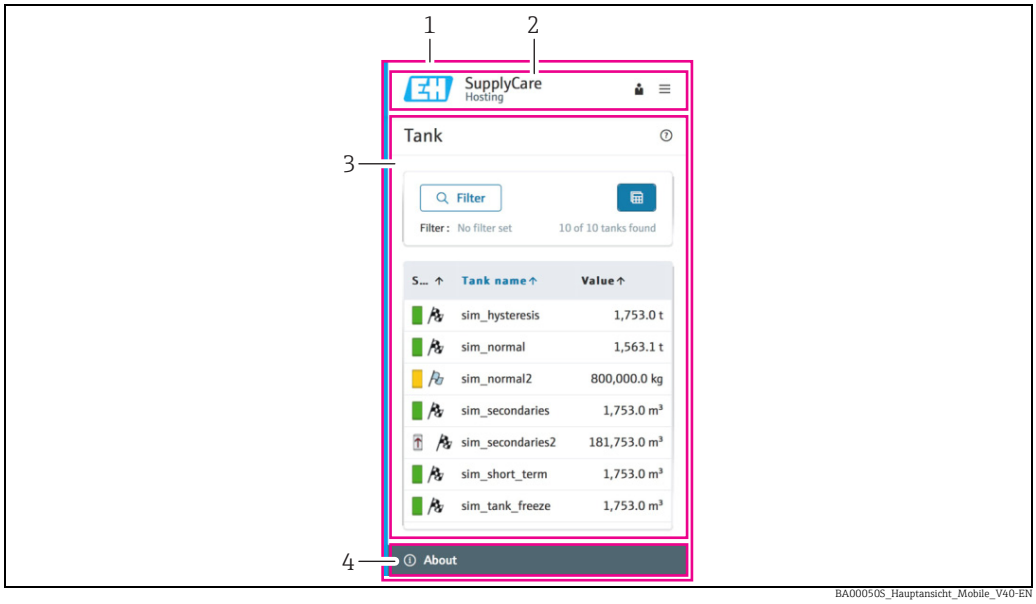
4.3.1 Portal window

The menus and corresponding menu items vary depending on the user role, which also results in changes to the portal window (→ 19).

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

SupplyCare is modular in design. The menu items differ for this reason. Furthermore, the contents of the application window can also differ, as well as the contents of the dialog windows.

You can see the arrangement of the individual objects in the mobile version of the portal window in the graphic below.



1 *Portal window*
2 *Header*
3 *Application window*
4 *Footer*

4.3.2 Header

The header contains the name of the application you selected in the Inventory Portal, the user profile and the ☰ button for selecting menu items.

4.3.3 Menu bar

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

Menus

Different menus are shown here depending on the user role.

Multiple user roles can be simultaneously assigned to one user. The menu tree then displays the menus for all the assigned user roles.

Menu items

Different menu items are listed in the menus depending on the user role. The following table lists the menu items that are shown according to the assigned user roles.

Due to the modular design of SupplyCare, the menu items in the **Workplace**, **Configuration** and **Profile** menus may differ. The **Profile** menu is opened by clicking on the username.

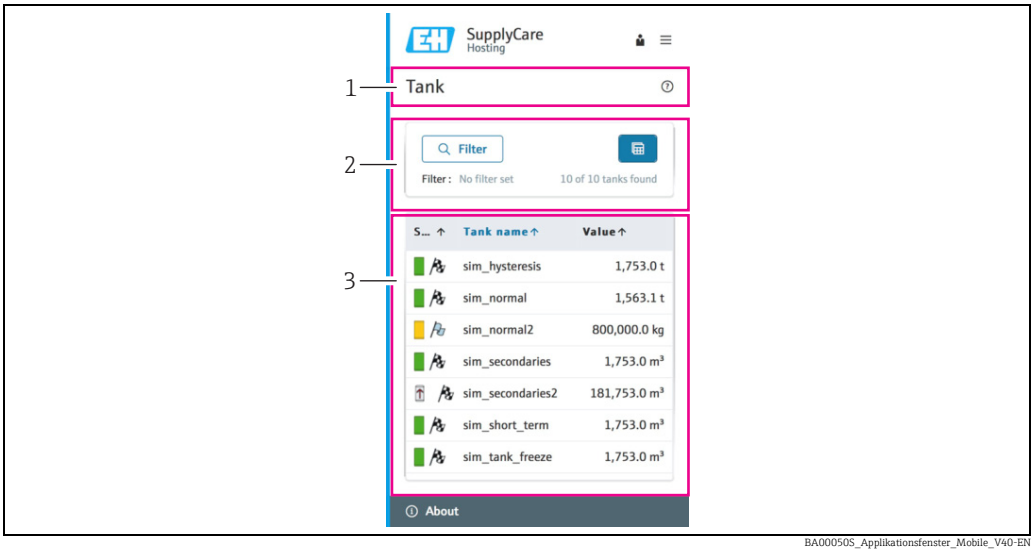
	Menus		
User role	**Workplace**	**Configuration**	**Profile**
Read-only	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Map	–	▪ User profile ▪ User preferences ▪ Favorites
Operator	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Map	–	▪ User profile ▪ User preferences ▪ Favorites
Scheduler	▪ Tank [1)] ▪ Tank overview ▪ Event [2)] ▪ Map	–	▪ User profile ▪ User preferences ▪ Favorites
Product-tank configurator	–	▪ Tank	▪ User profile
Master data	–	▪ Tank	▪ User profile
1) Only users with the **Operator** user role can change the service status for a tank. 2) Only users with the **Scheduler** or **Operator** user role can change the status of an event.			

4.3.4 Application window

The content of the application window varies depending on the menu item selected. The currently active menu item is displayed in the extended header.

Due to the modular design of SupplyCare, the contents in the "Overview" as well as the contents in the dialog boxes may differ.

Most of the application windows contain the following views:
- Extended header
- Filters and display options
- Overview



BA00050S_Applikationsfenster_Mobile_V40-EN

1 Extended header
2 Filters and display options
3 Overview

Extended header

The extended header displays the current application, along with the "Help" button ⓘ. Fullscreen is not available in the mobile version.

Filters and display options

The filters and display options area displays the 🔍 **Filter** button, the number of tanks or events found, and quick-select buttons for the workplace. Clicking on 🔍 **Filter** displays all available filter functions.
If a filter is active, the **Reset filters** link appears under the 🔍 **Filter** button. Clicking on the **Reset filters** link resets all filters.

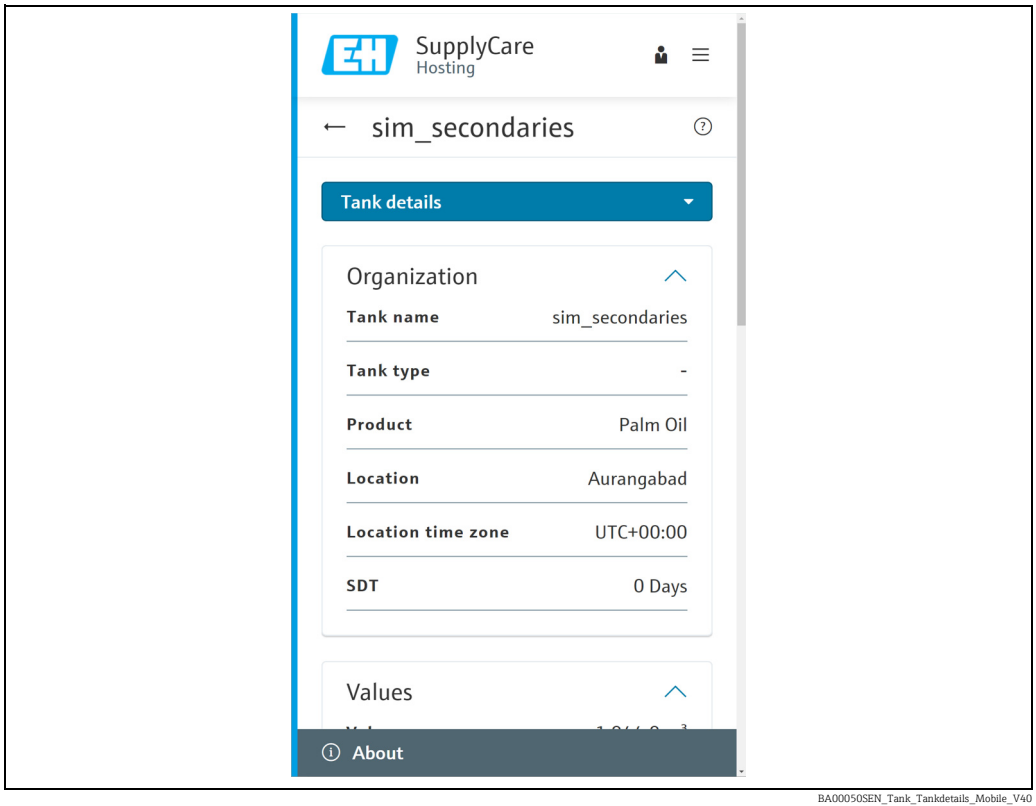
Functional buttons:

Button	Function
	Quick select: Tank workplace
	Quick select: Tank overview workplace
	Quick select: Map workplace

Clicking on the functional button displays all 3 workplaces to select from. The button of the currently active workplace is highlighted in blue.

Overview

In the overview, the selected information is either listed in tabular form or displayed as a graphical view (e.g. widgets or graphic).
Clicking on a tank (list or graphic) will take you directly to the detail views with additional information on the selected workplace.
Where necessary, the information in the detail view is further divided by means of a selection menu.



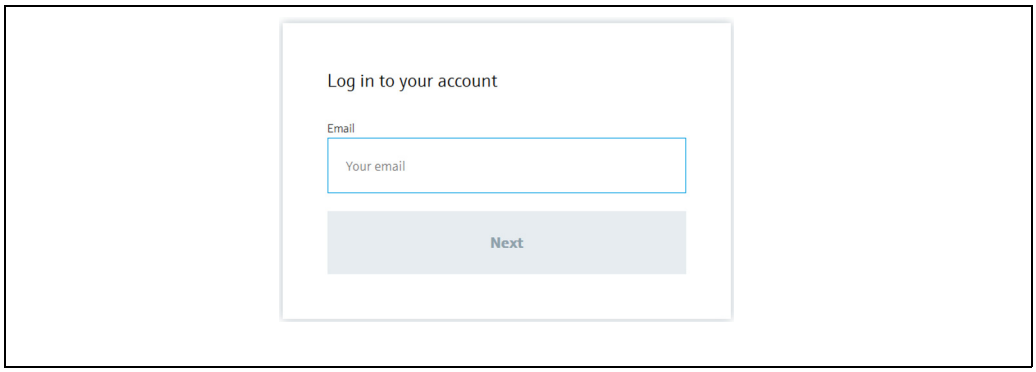
BA00050SEN_Tank_Tankdetails_Mobile_V40

In place of the tabs used in the desktop version, selection menus are instead used in the mobile version.

4.3.5 Logout

Click on the ☰ button. The menu bar is displayed.

Clicking on **Logout** will take you back to the **Log in** screen:



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4.4 Elements

The following elements are available in the individual views:

Element	Function
Input fields	One-line input fields to enter a value (text or digits). Multi-line input fields to enter longer portions of text.
Output fields	One-line output fields to display a value (text or digits). Multi-line output fields to display longer portions of text.
Tables	Multi-column tables in which individual rows can be selected.
Picklists	These allow the user to select from specified values.
Checkboxes and sliders	These allow the user to activate or deactivate certain functions.

4.5 Symbols

4.5.1 Standard buttons

The following standard buttons are used to edit and process individual objects:

Button	Function
	**Add** – Creates a new object or new content that can be saved with **Save**.
	**Delete** – Deletes the contents of an object. A dialog box appears, in which the user must confirm the deletion by pressing the **Ok**. button.
	**Save** – Saves modified contents and newly created objects.
	**Cancel** – Aborts an action.
	**Discard** – Undo action without saving.
	**Duplicate data record** – Duplicates the master data of a selected object.
	**Calendar** – Button for selecting a period of time (e.g. resubmission date, start and end date for a history).
	**Time** – Button for selecting a time (e.g. delivery time).
	**Export** – Button for downloading data such as measured values or system settings to an Excel spreadsheet or PDF file.
	**Print** – Button for printing charts.
	**Views** – Allows adjustments to be made to the information displayed.
	**Search and filter** – Opens the area with search fields and filter fields.
	**Finish** – Saves newly created objects that have been created using the setup wizard.
	**Back** – Returns to the previous view.
	**Next** – Moves forward to the next view.
	**Reset** – Resets settings to the default values.
	**Reset** – Another button that resets settings to the default values.

4.5.2 Symbols for events

Status display

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

Priority (weight)

Symbol	Meaning
	**Plan point**
	**Ship point**
	**Safety stock**
	**Freeze event**

4.5.3 Symbols for tanks

SupplyCare allows users to select between the template types "Tank", "Silo" and "Object" for the user interface. These template types have the exact same functionality. However, depending on your selection, the descriptions in the menu, in the **Overview** and in the **Detailed view** change, as well as the symbols and tool tips that appear when you move the cursor over a symbol.

The symbols for tanks, silos and objects are shown in the following tables. The descriptions that are different are listed after this (→ 27). Please note that the template type "Tank" is used in all remaining chapters of these Operating Instructions.

Status display

Symbol		Meaning
Tank/silo	Object	
		**OK (GREEN)** Standard tank/silo/object: The current (last measured) inventory level of the container in question is above the plan point/observance limit. Recycling tank/silo/object: The current (last measured) inventory level of the container in question is below the plan point/observance limit.
		**OK (GREEN)** Aggregated standard tanks/silos/objects: The current (last measured) inventory level of the aggregated container in question is above the plan point/observance limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the aggregated container in question 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 container in question is below the plan point/observance limit. Recycling tank/silo/object: The current (last measured) inventory level of the container in question is 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 aggregated container in question is below the plan point/observance limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the container in question is above the plan point/observance limit.

Symbol		Meaning
Tank/silo	Object	
		**Ship point/point of action reached (ORANGE)** Standard tank/silo/object: The current (last measured) inventory level of the container in question is 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 container in question is 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 container in question is below the safety stock/critical limit. Recycling tank/silo/object: The current (last measured) inventory level of the container in question is 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 container in question is below the safety stock/critical limit. Aggregated recycling tanks/silos/objects: The current (last measured) inventory level of the container in question is above the safety stock/critical limit.
		**Erroneous measured data** – Communication error. No measured data is available for the tank/silo or the object in question. The status is also shown for displayed secondary data if the container is not out of service.
		**Erroneous measured data** – Communication error. No measured data is available for the aggregated tank/silo or the aggregated object in question.
		**Out of service** – The tank/silo/object is not available (e.g. due to overhaul). The time period for which the container is out of service is marked in gray in the inventory chart.
		**Out of service** – The aggregated tank/silo/object is not available (e.g. due to overhaul). The time period for which the associated container is out of service is marked in gray in the inventory chart.
		**Overfilled** – The measured value is higher than the capacity of the tank/silo or the maximum for the object.
		**Overfilled** – The measured value is higher than the capacity of the aggregated tank/silo or the maximum for the aggregated object.
		**Erroneous measured data** – The measured value is lower than the zero point of the tank/silo/object.
		**Erroneous measured data** – The measured value is lower than the zero point of the aggregated tank/silo/object.

Status display for secondary values

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

4.5.4 Symbols for tanks ("Map" workplace)

Symbol		Meaning
Tank/silo	Object	
		**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)** – Multiple tanks/silos/objects available at the location. All containers have an 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.
		**Erroneous measured data** – No delivery/disposal planned.
		**Erroneous measured data** – Planned delivery/disposal.
		**Erroneous measured data** – Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		**Erroneous measured data** – 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.
		**Diverse** – Multiple tanks/silos/objects with different status indicators are available at the location. The containers can each have different scheduling statuses (delivery/disposal planned or not planned).
		**Overfilled** – No delivery/disposal planned.
		**Overfilled** – Planned delivery/disposal.
		**Overfilled** – Aggregated tank/aggregated silo/object: No delivery/disposal planned.
		**Overfilled** – Aggregated tank/aggregated silo/object: Planned delivery/disposal.
		**Erroneous measured data** – No delivery/disposal planned.
		**Erroneous measured data** – Planned delivery/disposal.

Symbol		Meaning
Tank/silo	Object	
		**Erroneous measured data** – Aggregated tank/aggregated silo/object: No delivery/ disposal planned.
		**Erroneous measured data** – Aggregated tank/aggregated silo/object: Planned delivery/disposal.

4.5.5 Symbols for scheduling and analysis

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

4.5.6 Symbols for delivery and disposal status

Symbol	Meaning
	**Detected** – The **Detected** status is displayed in the following situations: ▪ The system has detected a delivery or disposal which has been scheduled too early or too late. You can process this delivery or disposal in the **Details** tab using the **Confirm** button. ▪ The system has detected a missing delivery or disposal. You can process this delivery or disposal in the **Details** tab using the **Mark as fulfilled** button. ▪ The system has detected that measured data is missing. You can process this delivery or disposal in the **Details** tab using the **Mark as fulfilled** button.
	**Confirmed** – The **Confirmed** 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/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 flagged by SupplyCare as **Delivery made (recorded)/Disposal made (recorded)**. If the system has detected a missing delivery/disposal or missing measured data, you can process this delivery/disposal in the **Details** tab using the **Mark as fulfilled** button. The delivery/disposal is displayed as **Delivery fulfilled (confirmed)/Disposal fulfilled (confirmed)**.
	**Edited** – A planned delivery or disposal has been edited.

4.6 Descriptions

Depending on whether "Tank", "Silo" or "Object" was selected as the template type, the descriptions in the menu, in the "Overview" and in the "Detailed view" change, as well as the symbols and tool tips that appear when you move the cursor over a symbol.

Aside from the general substitution of the word "Tank" or "Silo" with the word "Object" (or vice versa), the following descriptions differ according to which template type was selected:

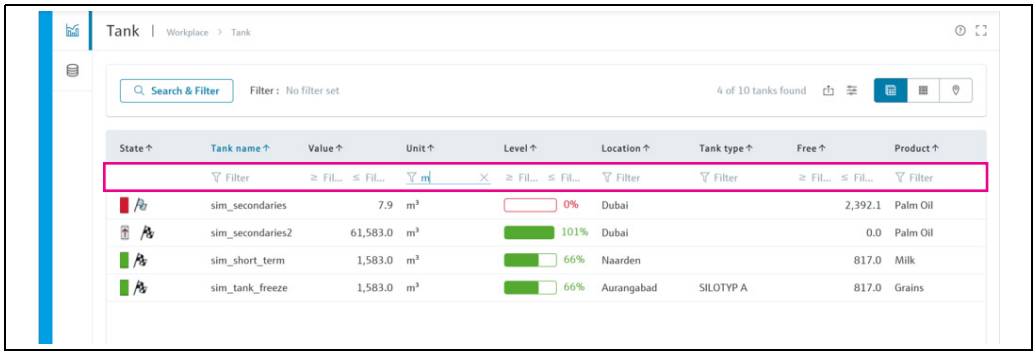
Standard template type "Tank"/"Silo"	Standard template type "Object"
Tank name / Silo name	Object
Tank details / Silo details	Details
Tank partner / Silo partner	Partner
Tank service status / Silo service status	Service status
PP (Plan point)	OL (Observance limit)
SP (Ship point)	POA (Point of action)
SST (Safety stock)	CL (Critical limit)
DSST (Day(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
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

You can use the filter function to reduce the number of data records displayed for a table. The filter functions are entered in the top line of the table.



BA00050S_Tank_Filterfunktion_Tabelle_V40-EN

1. In the top line of the table, enter a designation in the desired field – either in its entirety, or just the first few letters thereof.
2. Only table entries that match the input will then be displayed.
   To display all the contents of the table again, delete the input you've just entered.

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

There is no ability to filter tables in the mobile version.

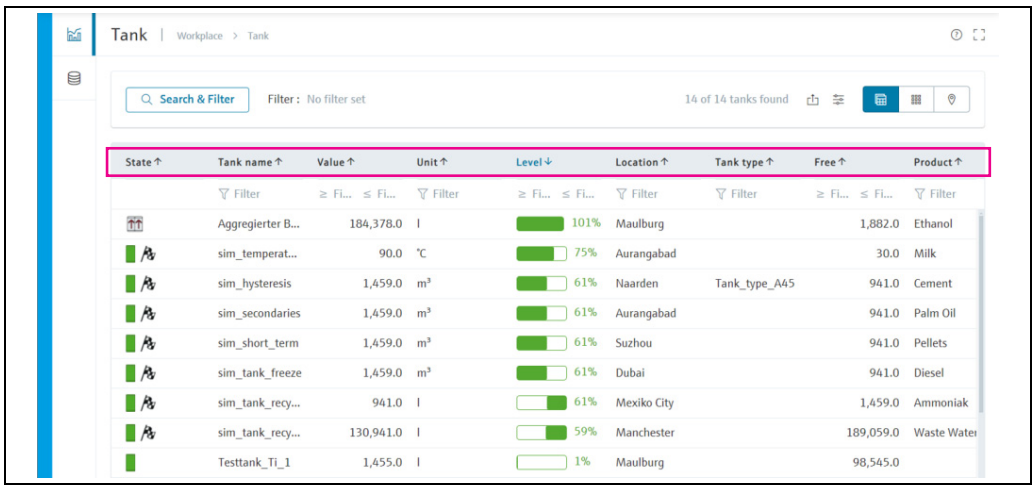
As a general rule, you can use the following filter functions for the individual fields:

Description		Example	
Filter	**Group**	**Input**	**Result (data displayed)**
▽	String	Tank_	All entries that contain the sequence of characters "Tank_", e.g. Tank_Recycling_07 etc.
	Integers	1	All entries that contain "1", e.g. TI_Tank_2021_1 etc.
≥	Integers	8	All rows with values greater than or equal to 8
	Floating point numbers	8.2	All rows with values greater than or equal to 8.2
≤	Integers	8	All rows with values less than or equal to 8
	Floating point numbers	8.2	All rows with values less than or equal to 8.2

Date columns cannot be filtered, only sorted.

Sorting

By clicking to change the respective arrow buttons in the table head, the data records can either be sorted in ascending ↑ or descending ↓ order for a given column.



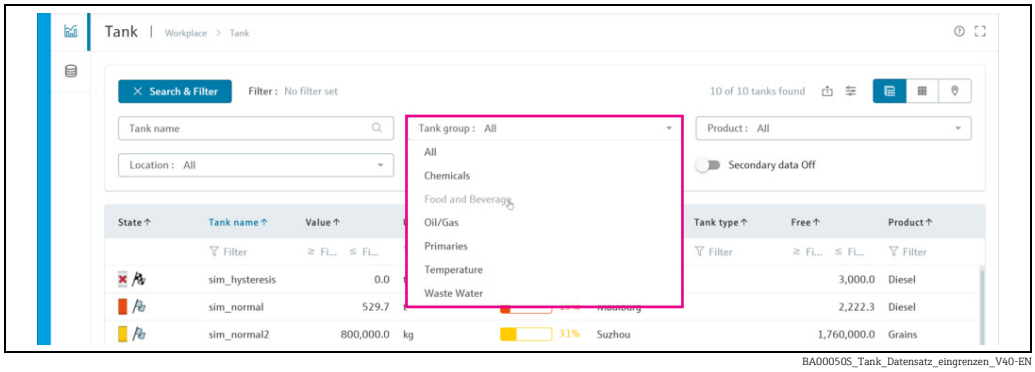
BA00050S_Tank_Sortierung_Tabelle_V40-EN

The column by which the data records are currently being sorted has its name highlighted in blue.

4.7.2 Limiting the data records displayed (Search & Filter)

The filters and display options area includes picklists that allow you to narrow down the data records to be displayed, e.g. by **Tank group**, **Product**, **Favorite** or **Location**.
When you select a value from the picklist, the data records that match this filter criterion are automatically displayed. The contents of the picklists are reset to the default values once you leave the overview.

The contents are not reset if the **Tank**, **Tank overview** or **Map** workplace is opened via the respective quick-select buttons , and . The currently set filters are also applied to this workplace, and only the accordingly filtered tanks, silos or objects will be shown.



BA00050S_Tank_Datensatz_eingrenzen_V40-EN

1. Click on the **Search & Filter** button.
2. Click on the desired picklist and select a data record.

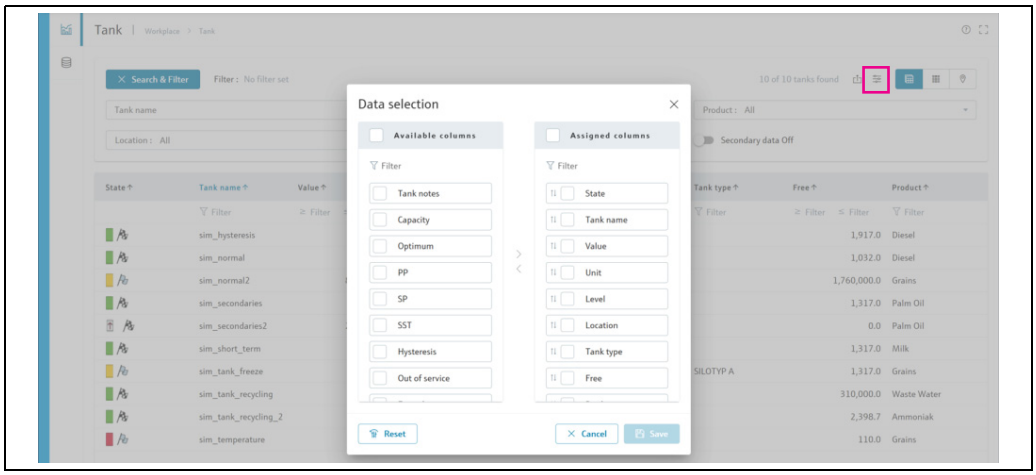
The **Favorite** picklist is empty by default. You must first create a favorite before you can select it from this picklist. Edit favorites → 96

3. Only data records that match the filter criterion will then be displayed.
In the filters and display options area, the applied filters will also be highlighted in blue.

4. To display all the data records again, remove the filters.
You can remove a filter by clicking on ✕ in the picklist or in the blue field for the displayed filter.

4.7.3 Changing the displayed information

The ⚙ button in the filters and display options area opens the **Data selection** window. Using this window, you can show or hide columns or change the column order. The selected settings are then saved for the respective user.

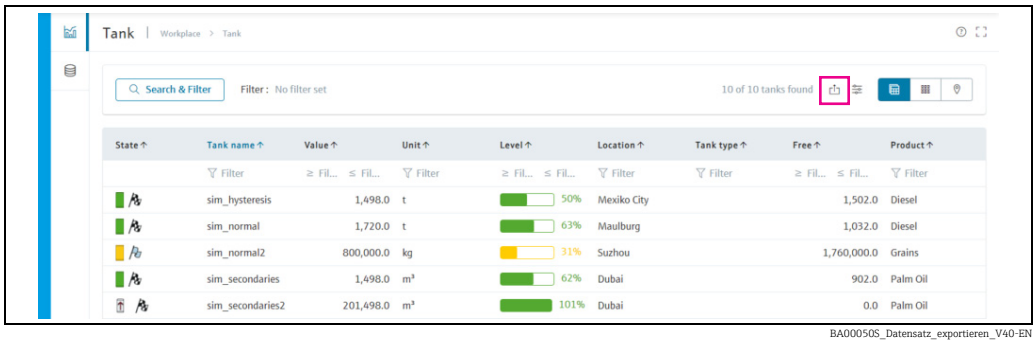


BA00050S_Tank_Spaltenanzeige_Tabelle_ändern_V40-EN

The data selection button ⚙ is not available in the mobile version.

4.7.4 Exporting data records

You can export the displayed data records as an Excel file by clicking on the ⬆ button in the filters and display options area. Data records can be exported for the **Tank**, **Event**, **Scheduling**, **Totaling** and **Analysis** workplaces.



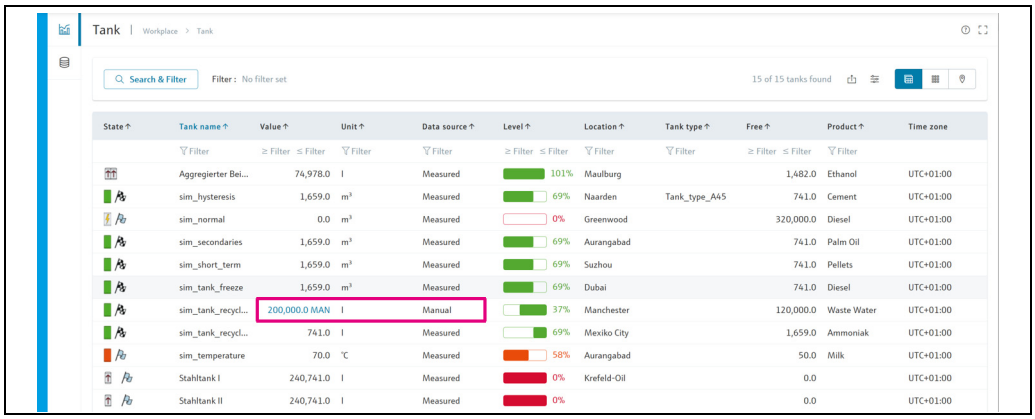
BA00050S_Datensatz_exportieren_V40-EN

The exported Excel file contains all the displayed data records and all the displayed table columns. If you want to export additional or different data, you will first need to adjust the displayed information accordingly (→ 30).

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

4.7.5 Viewing 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** 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**.



BA00050SEN_Arbeitsplatz_Tank_manuell_V40

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

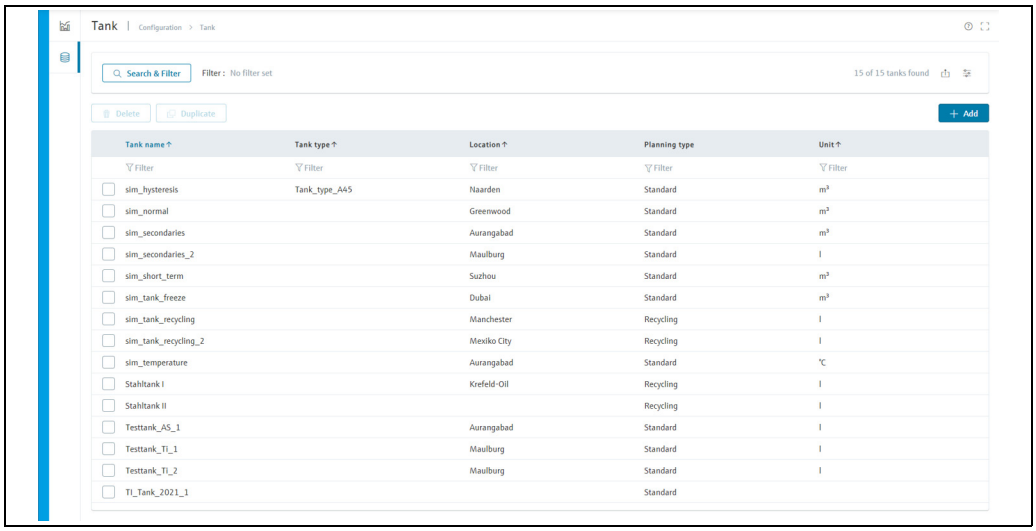
No thousand separator is used for numerical values that appear in views, histories or reports that are downloaded, sent or printed out.

The number of places after the decimal point is defined in the **Configuration** menu, under the **Unit** menu item. Only users whose user role is configured as **Master data** can change the number of places displayed after the decimal point for the units.

4.7.6 Changing master data

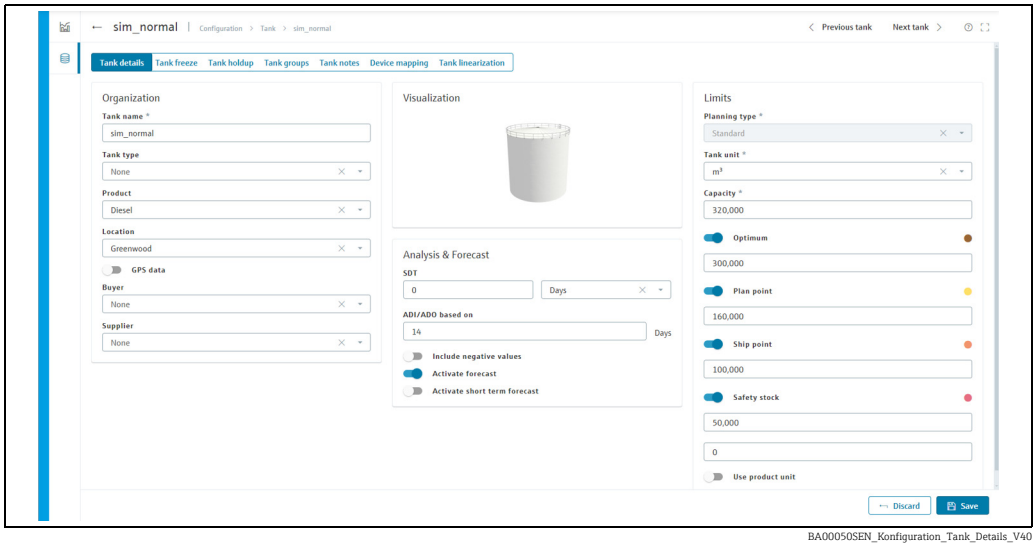
Depending on your particular user role, you can change data records in the master data for "Company", "User", "Tank", "Aggregated tank", "Tank type", "Location", "Product", 'Tank groups" and other menus.
The following example shows how to change the data for a tank. The same procedure can be followed for other master data.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. The following detail view is displayed in the application window:



BA00050SEN_Konfiguration_Tank_V40

4. In the table, click on the tank for which you want to make changes.
5. Select the **Tank details** tab.



BA00050SEN_Konfiguration_Tank_Details_V40

6. Make the necessary changes.

GPS data: Activate this slider to display the GPS data from a GPS tracker on the tank. **Attention**: This option can only be used if the necessary measuring points have been assigned to the tank.

7. Click on the **Save** button to save your changes.
If you want to discard your changes, click on the **Discard** button instead.

8. If you want to make changes in additional tabs, proceed in the same manner as described for the **Tank details** tab.

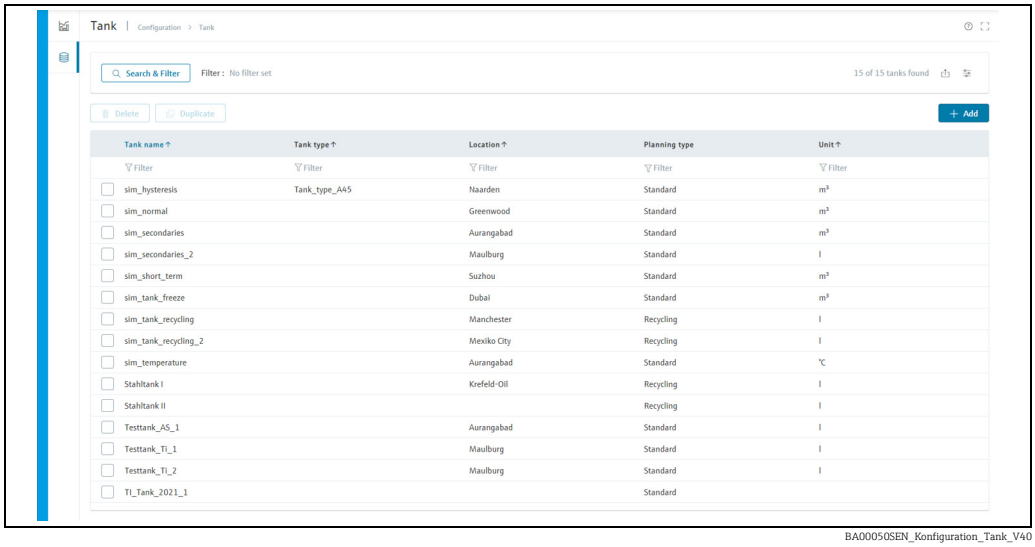
4.7.7 Deleting master data

Depending on your particular user role, you can delete data records in the master data.

A data record can only be deleted if the **Delete** button is shown for it. 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.

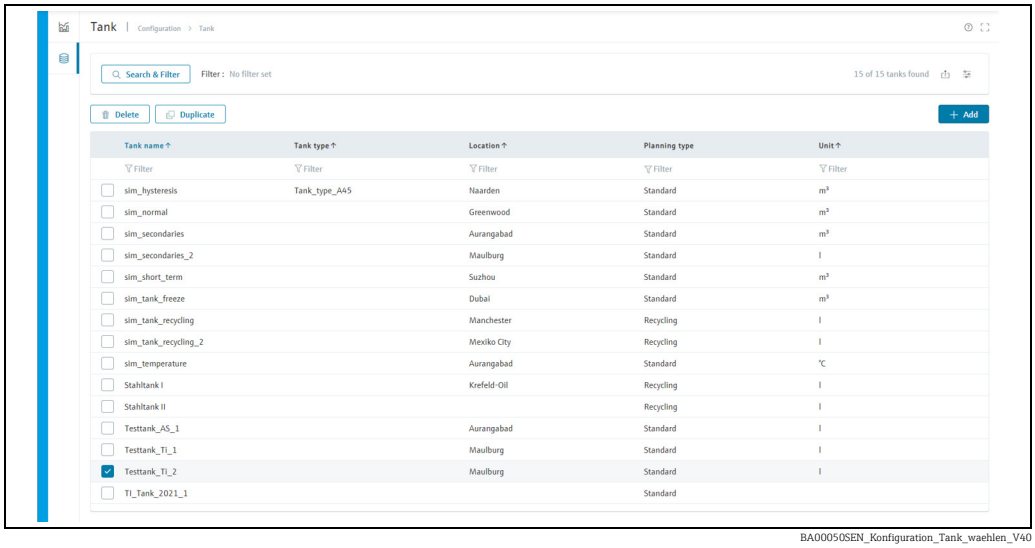
The following example shows how to delete the data for a tank. The same procedure can be followed for other master data.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. The following detail view is displayed in the application window:



BA00050SEN_Konfiguration_Tank_V40

4. In the overview table, select the checkbox of the tank that you want to delete.



BA00050SEN_Konfiguration_Tank_waehlen_V40

5. Click on the **Delete** button to delete the tank.
6. You will be shown a confirmation prompt asking "Do you really want to delete the selected elements?".
7. Click on the **Delete** button to delete the tank. Alternatively, click on the **Cancel** button to abort the process.

4.7.8 Creating master data

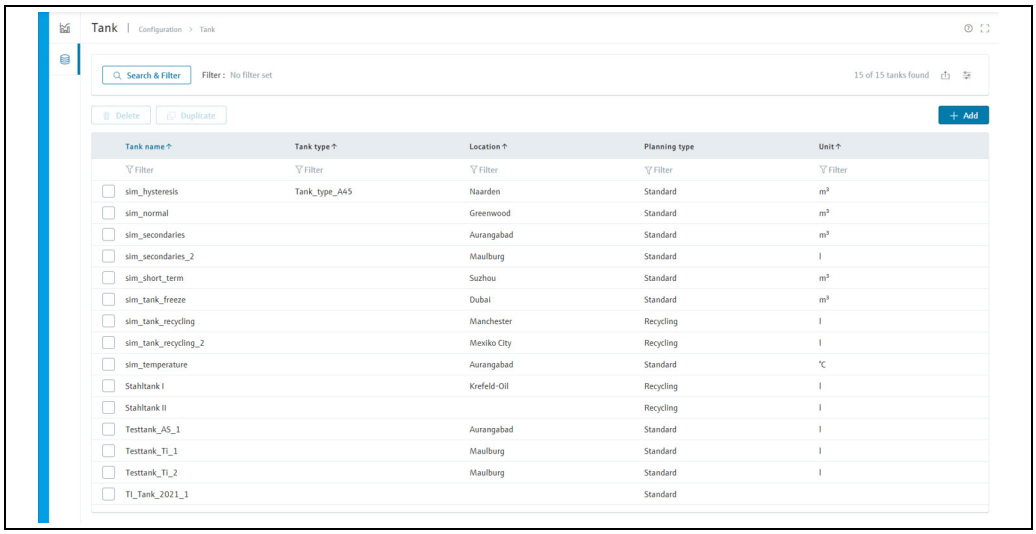
Depending on your particular user role, you can create data records in the master data.

SupplyCare provides different options for creating a data record: This can either be done using the setup wizard, or by duplicating an existing data record (→ 36).

The setup wizard makes it simple to select the settings for a new data record. The setup wizard guides you step-by-step through the individual configuration pages. The settings can be subsequently changed via the corresponding tabs.

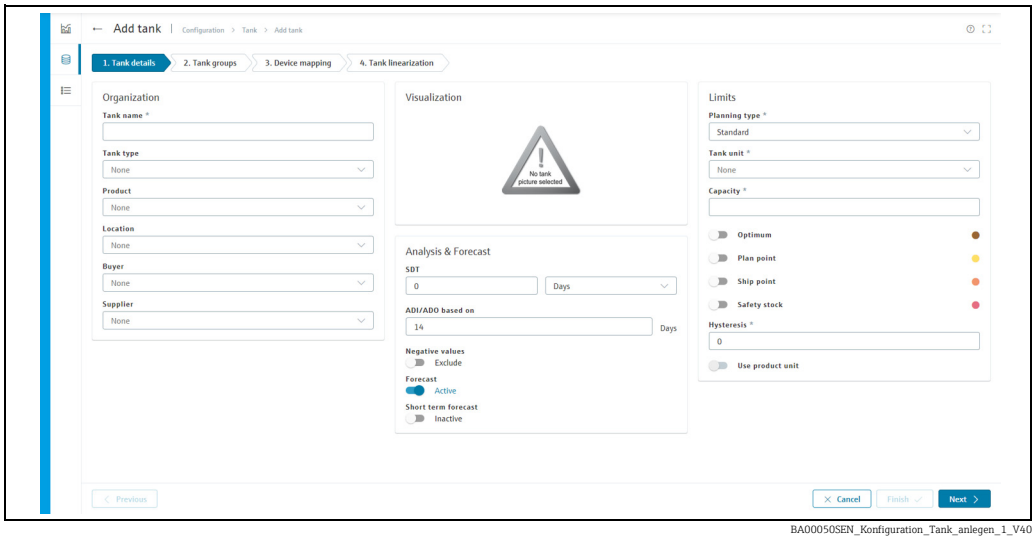
The following example shows how to create the data record for a tank. The same procedure can be followed to create other data records.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. The following detail view is displayed in the application window:



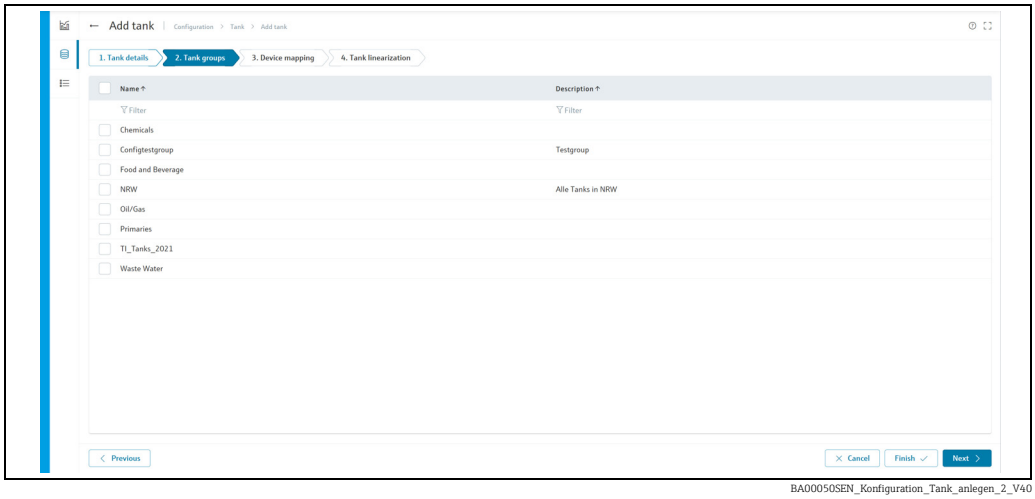
BA00050SEN_Konfiguration_Tank_V40

4. Click on the **Add** button.
5. The first step of the setup assistant is displayed in the application window:



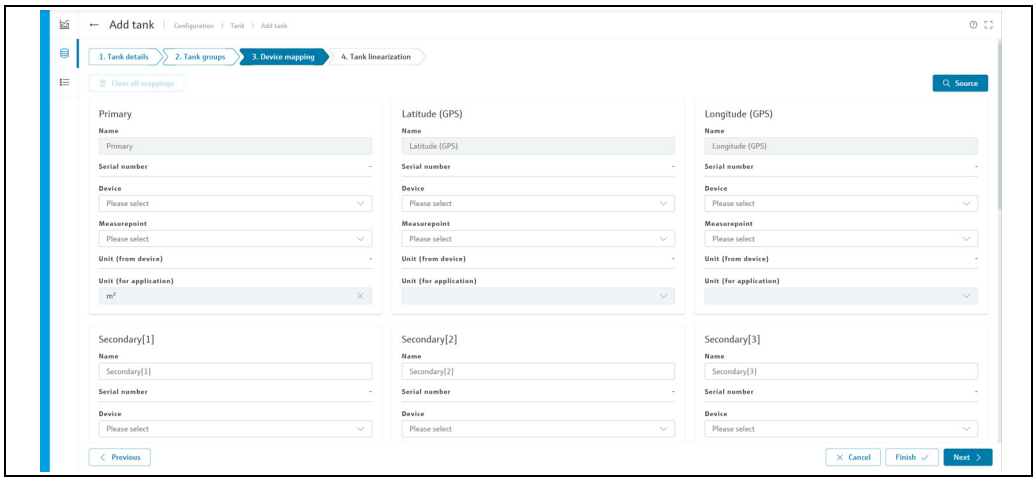
BA00050SEN_Konfiguration_Tank_anlegen_1_V40

6. Enter the mandatory data for the data record. You can also enter additional data for the data record.
7. Click on the **Next** ❯ button to go to the next step.
   Click on the **Finish** ✓ button to confirm and complete the creation of the data record.
   Alternatively, click on the ✕ **Cancel** button to abort the process.
8. Clicking on the **Next** ❯ button will open the next configuration page:

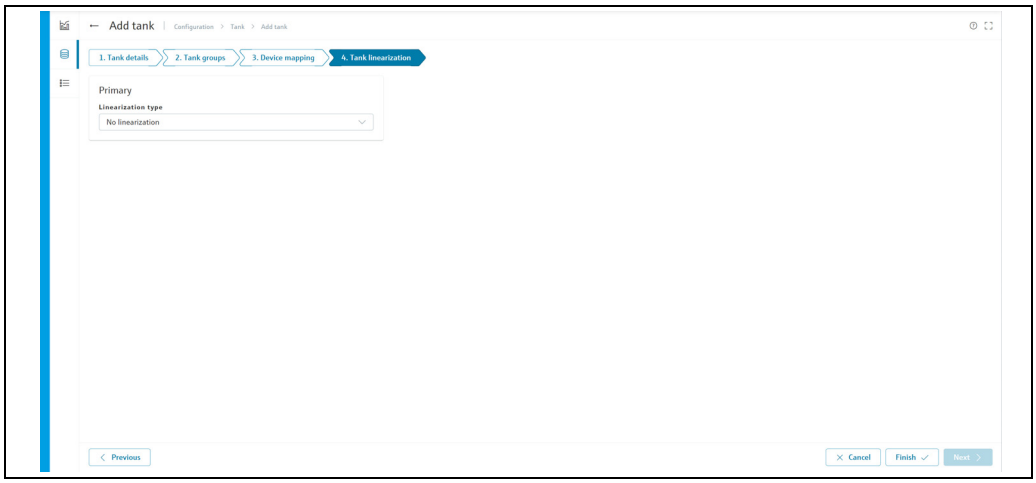


BA00050SEN_Konfiguration_Tank_anlegen_2_V40

9. Enter the necessary data.
10. If you wish to return to the previous view, click on the **Back** ❮ button. If you wish to abort the process, click on the **Cancel** ✕ button; otherwise, click on the **Finish** ✓ button to confirm and complete the creation of the data record. If additional configuration steps are available, you can open the subsequent configuration pages by clicking on the **Next** ❯ button as necessary:



BA00050SEN_Konfiguration_Tank_anlegen_3_V40



BA00050SEN_Konfiguration_Tank_anlegen_4_V40

11. Click on the **Finish** ✓ button to confirm and complete the creation of the data record.

4.7.9 Duplicating master data

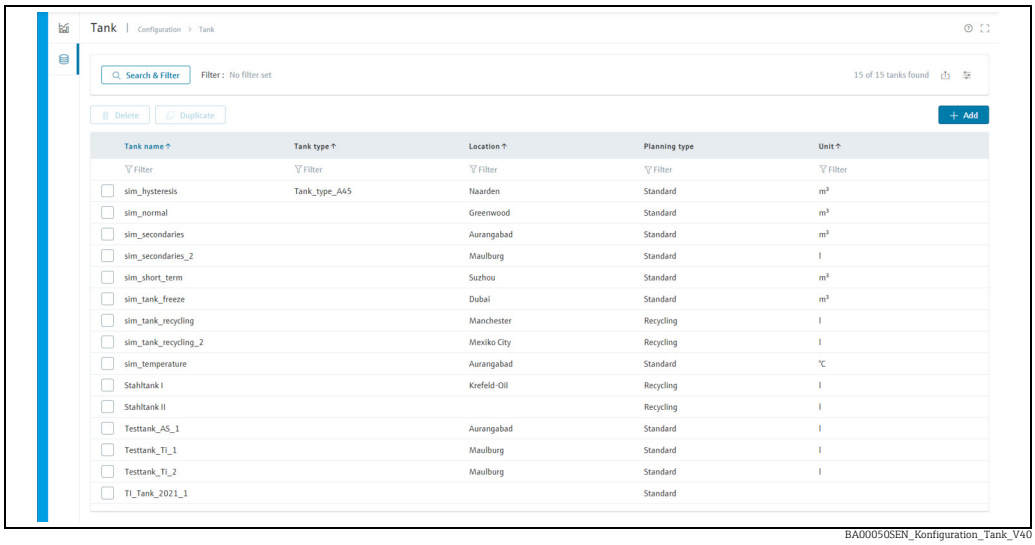
Depending on your particular user role, you can duplicate data records in the master data.

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.

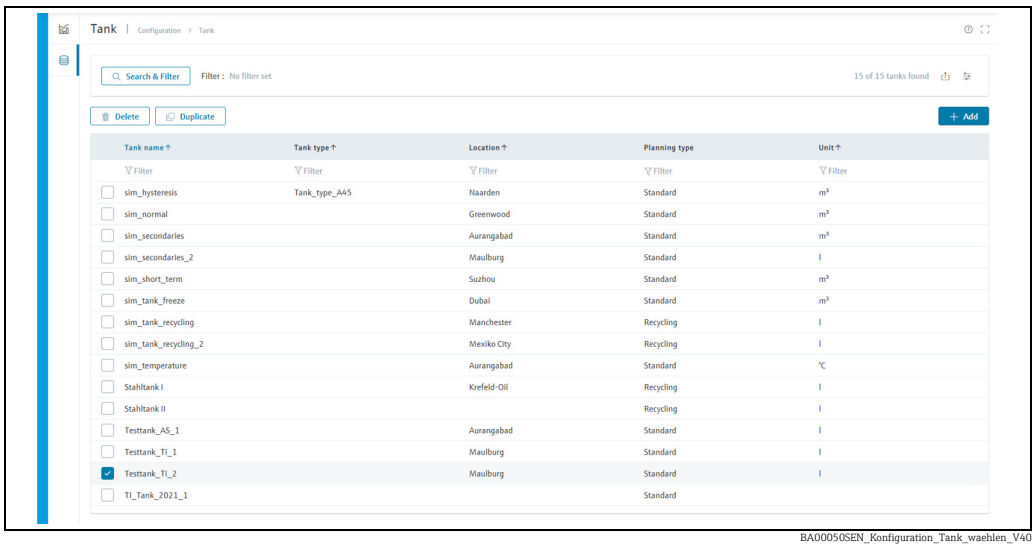
The following example shows how to duplicate the data record for a tank. The same procedure can be followed to duplicate other data records.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
4. The following detail view is displayed in the application window:



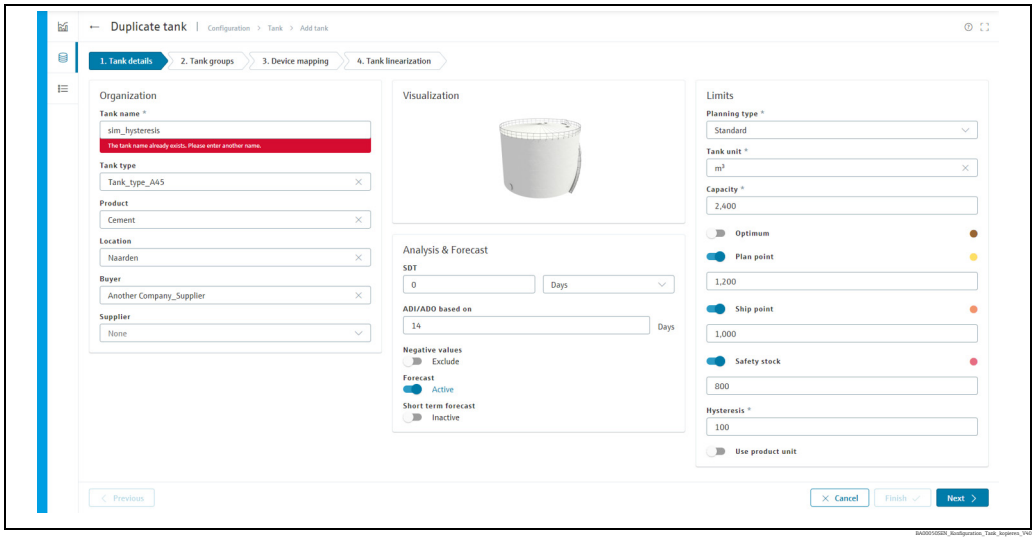
BA00050SEN_Konfiguration_Tank_V40

4. In the overview table, select the checkbox of the tank that you want to duplicate.



BA00050SEN_Konfiguration_Tank_waehlen_V40

5. Click on the **Duplicate** button. The setup wizard for the data record opens.

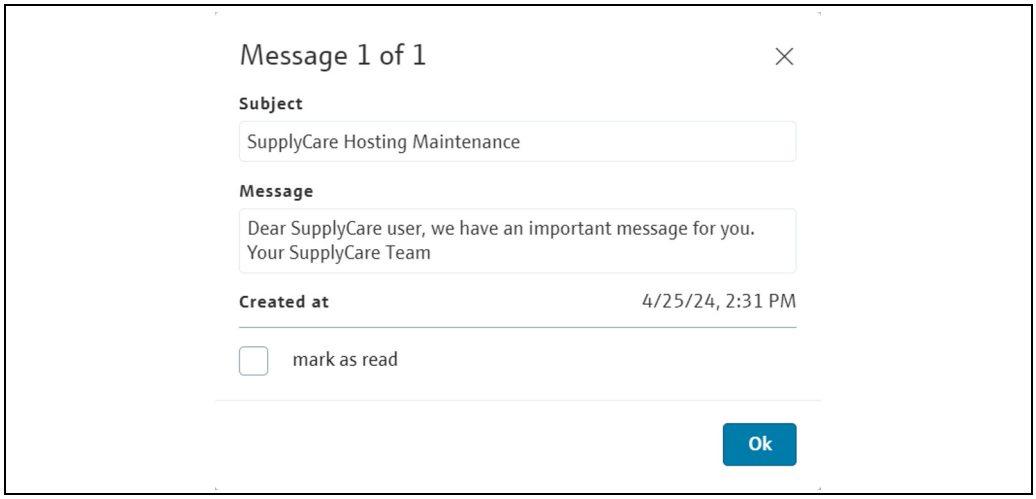


6. Make the necessary changes. Managing master data → 99.

4.8 Receiving messages (messaging)

All users can receive a notification message.

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



BA00050SEN_Nachricht_Pop-Up_V40

The following options are available:

Button/field	Meaning
〈 Previous	This button is displayed if multiple messages are available. Click on the 〈 **Previous** button to view and process the previous message.
Next 〉	This button is displayed if multiple messages are available. Click on the **Next** 〉 button to view and process the next message.
Ok	Click on the **Ok** button to exit the dialog.
Mark as read	Activate the **mark as read** checkbox to mark the currently displayed message as read. Clicking on the **Ok** button will then save this setting.

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

5 Monitoring tanks – "Tank" workplace

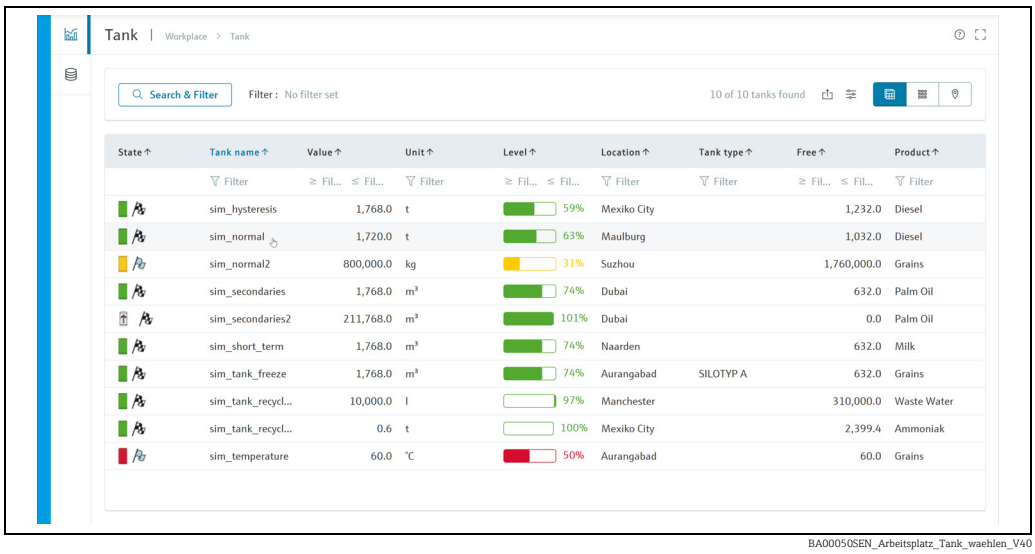
5.1 Viewing tanks and associated information

The **Tank** menu item is available to users 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 **Tank** menu item uses the time zone that has been configured in the user's settings (→ 94). "Location" is used for the factory setting.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item. A overview table of the tanks assigned to you is displayed.



BA00050SEN_Arbeitsplatz_Tank_waehlen_V40

3. In the table, click on the tank that you want to view additional details for.
The details of the selected tank are displayed in the application window:

BA00050SEN_Arbeitsplatz_Tank_Bestandsdiagramm_V40

5. Clicking on **Next tank** ❯ will display the details for the next tank in the tank list.
Clicking on ❮ **Previous tank** will display the details for the previous tank in the list.

   To hide the details again, click on ← next to the tank name. This will then take you back to the tank list.

6. You can choose between the following tabs:
Inventory chart, Tank details, Notes and files, Tank partners, Location details, Tank service status, Event details, Download history.

SupplyCare makes a distinction between standard tanks and recycling tanks. A standard tank is one from which a product is withdrawn. Conversely, a recycling tank is a tank that is filled with a product (→ 108).
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.

5.1.1 "Tank" overview table

The ⚙ button in the filters and display options area opens the **Data selection** window. In this window, you can select which data is to be displayed in the table columns, as well as change the order of this data.

The following columns are available for the overview table:

Columns	Description
Status	The symbol for the current tank status is shown on the display. See also the "Symbols for tanks" chapter, "Status display" section." (→ 23).
Location	The location is the name of the location of the tank. The name is selected when the tank is configured in the **Configuration** menu, **Tank** menu item, **Location** field. The location is configured in the **Configuration** menu, **Location** menu item.
Tank name	Indicates 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 indicates 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" is displayed as the value. ▪ The number of places after the decimal point is defined in the **Configuration** menu, under the **Unit** menu item. ▪ **Manual values** are displayed in blue and followed by the text **MAN**. This then also applies if a manual value is used for a tank that is part of an aggregated tank.
Unit	Indicates the unit. Existing secondary values can also be displayed in the column. ▪ The unit for the main measured value (primary value) is selected in the **Configuration** menu, **Tank** menu item, **Tank details** tab. The units for the additional 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. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
Data source	Provides information on the data and displays whether the data comes from a measured source or has been entered manually.

Columns	Description
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 under the **Product** menu item.
Tank notes	Indicates 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. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
Free to optimum	Indicates the amount that is still free until the optimum is reached. The value is calculated on the basis of the current inventory. If the current inventory is equal to or greater than the optimal inventory, a value of "0" is displayed. For standard tanks for which no optimum has been specified, no value is displayed; the same applies for recycling tanks.
Capacity	▪ The capacity of the tank is specified in the **Configuration** menu, **Tank** menu item, **Tank details** tab, **Capacity** field. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
Plan point (PP)	Plan point for 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. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
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** scheduling type is selected, the ship point is not displayed. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
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. ▪ The number of places after the decimal point is defined in the **Configuration** menu under the **Unit** menu item.
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. ▪ The number of places after the decimal point is defined in the **Configuration** menu, **Unit** menu item.
Out of service	The field is activated (displays an X) if the tank is currently "out of service".
From date	Indicates the date as of which a tank was/is/will be "Out of service".
To date	Indicates the date until which a tank was/is/will be "Out of service".
Supplier	Indicates the responsible supplier. The supplier is created as a company.
Buyer	Indicates the buyer. The buyer is created as a company.
Buyer ID	Is equivalent to the **ID** field in the **Company details** tab in the **Configuration** menu under the **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, **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 settings is used.
DSST (days until safety stock is reached)	Indicates the estimated number of days remaining until the safety stock is reached. The value is calculated with the average amount per day. The calculated average amount is based on the "Forecast based on" value.

Columns	Description
PD (planned delivery/planned disposal)	For standard tanks, the date and time for the next planned delivery will be displayed. For recycling tanks, the date and time for the next planned disposal will be displayed. If no delivery or disposal has been planned, the field will be empty. The time zone defined in the user settings 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 input fields can be found in the **Configuration** menu under the **Tank** menu item.
Latitude (GPS)	Geographic coordinates of the tank, silo or object, specified in degrees of **latitude** (decimal degrees, GPS). This value is only displayed if, in the **Configuration** menu, **Tank** menu item, **Tank details** tab, the **GPS data** slider has been activated.
Longitude (GPS)	Geographic coordinates of the tank, silo or object, specified in degrees of **longitude** (decimal degrees, GPS). This value is only displayed if, in the **Configuration** menu, **Tank** menu item, **Tank details** tab, the **GPS data** slider has been activated.

5.1.2 Inventory chart

The historical and expected pattern for the inventory is displayed in the diagram for the period selected. The distribution is 2/3 for the history (measured values) and 1/3 for extrapolation (calculated values).

Planned future deliveries (or disposals, for recycling tanks) are also included in the calculated value (forecast) and displayed.

If the tank is out of service, the inventory diagram is displayed with a darker background for the period of tank downtime → 49.

BA00050SEN_Tank_Bestandsdiagramm_Bestand_V40

Clicking on the **View** button will open a window where you can adjust the settings for the chart.
For the **Scaling** field, you can choose between the minimum/maximum scaling and automatic scaling. If "Min/Max" is selected, the inventory is displayed between "0" and "Capacity". If "Automatic" is selected, the inventory is displayed between the smallest and largest displayable value – including forecast values.
In the **Period selection** field, you can select the period of time for which the inventory chart is to be displayed.

In the **Parameter** field, you can select the parameter that is to be displayed in the inventory chart. You can also select multiple parameters at once.
The current **limit values** are specified as horizontal lines in various colors:

Color	Standard tanks	Recycling tanks
Green	Range between capacity and the plan point	Range between the empty state (value 0) and the plan point limit value
Yellow	Range between the limit values for the plan point and ship point	Range between the limit values for the plan point and safety stock
Orange	Range between the limit values for the ship point and safety stock	Not applicable
Red	Range between the limit values for the ship point and empty state (value 0)	Range between the limit values for the safety stock and capacity

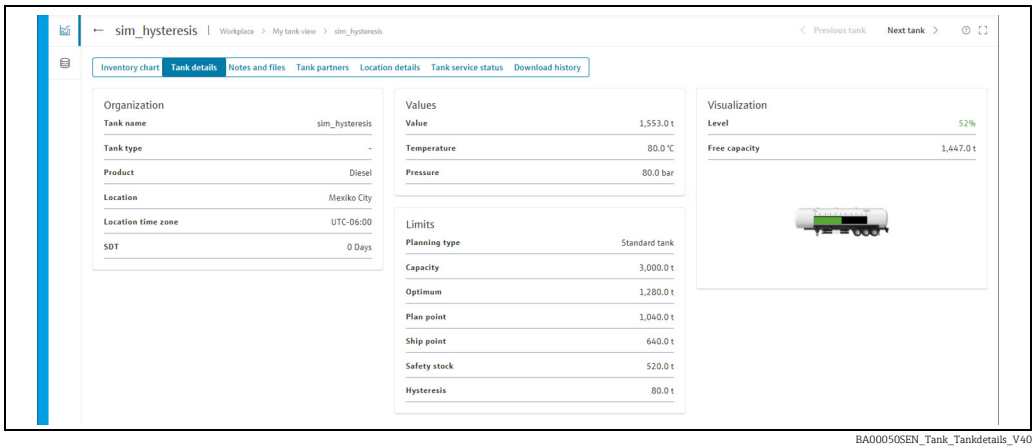
Clicking on the ⏮ button moves the displayed time period forward by 7 days (into the past).
Clicking on the ◀◀ button moves the displayed time period forward by 1 day (into the past).
Clicking on the ▶▶ button moves the displayed time period backward by 1 day (into the future).
Clicking on the ⏭ button moves the displayed time period backward by 7 days (into the future).
Clicking on the **Today** button returns to the standard view (with the current date).

Click on the 🖨 button to print the inventory chart.

To zoom into a specific time period, see → 📄 58.

5.1.3 Tank details

The **Tank details** tab displays information about the tank, its values (primary value and secondary values), its limit values, and a visualization of its status (level and free capacity). Secondary values are only displayed if secondary values are assigned to the tank.

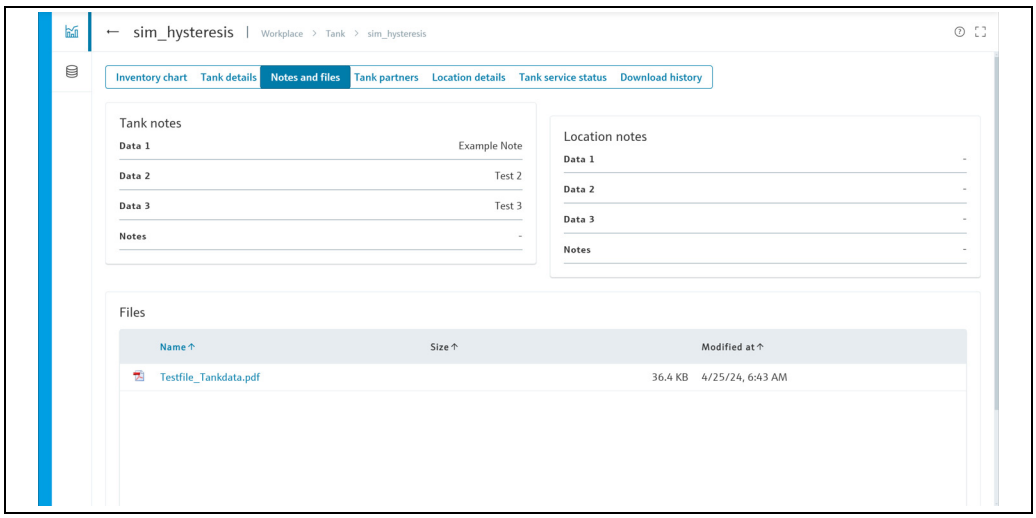


BA00050SEN_Tank_Tankdetails_V40

A detailed description of the fields is provided in the "Tank" overview table (→ 📄 40).

5.1.4 Notes and files

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



BA00050SEN_Tank_Notizen-Dateien_V40

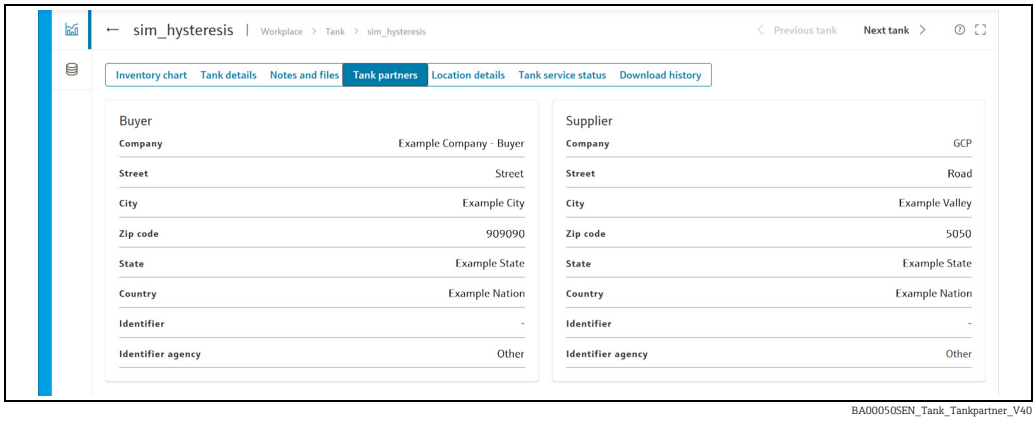
Via the **Files** table, you can open the files or save them locally as follows:

1. In the **Name** column of the table, click on the **File name** (hyperlink).
   The file is downloaded.
2. Click on the ↓ "Downloads" button in your browser window to display the current status of the download.
3. Click on the 🗀 "Show in folder" button to open the downloads folder on your PC; alternatively, click on the "Open" 🗁 button to view the file directly in the browser.

The buttons that are available will depend on the browser you are using.

5.1.5 Tank partners

Information on the buyer and supplier is displayed in this tab. If no buyer or supplier has been assigned to the currently selected tank, this tab will not be visible.

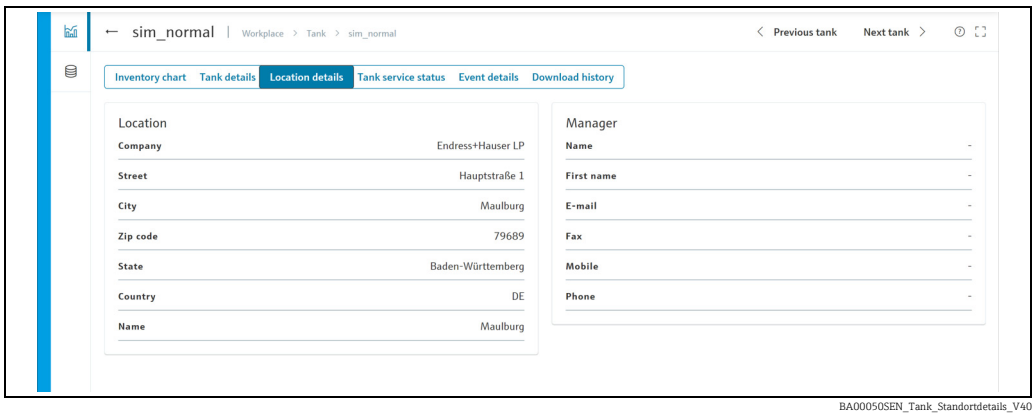


BA00050SEN_Tank_Tankpartner_V40

The tank partner, buyer and supplier are assigned to the tank via the **Configuration** menu, **Tank** menu item, **Tank details** tab (→ 🗎 104).

5.1.6 Location details

Information on the tank location is displayed in this tab.

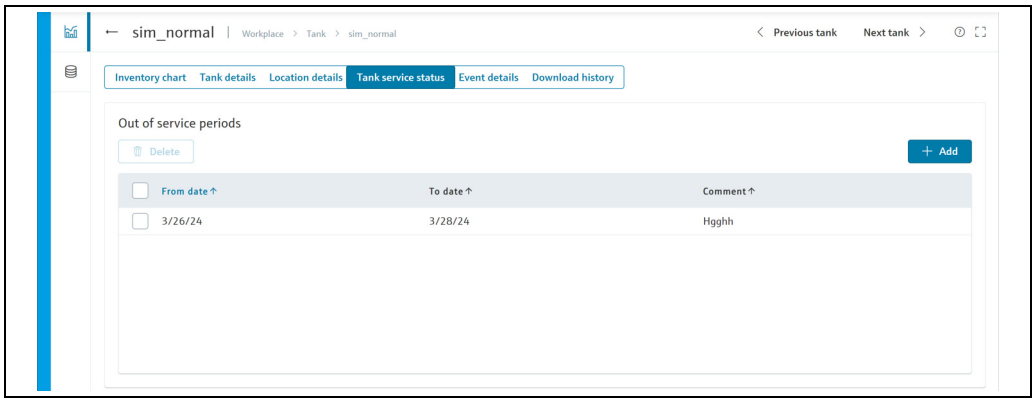


BA00050SEN_Tank_Standortdetails_V40

The location details are assigned to the tank via the **Configuration** menu, **Tank** menu item, **Tank details** tab (→ 104).

5.1.7 Tank service status

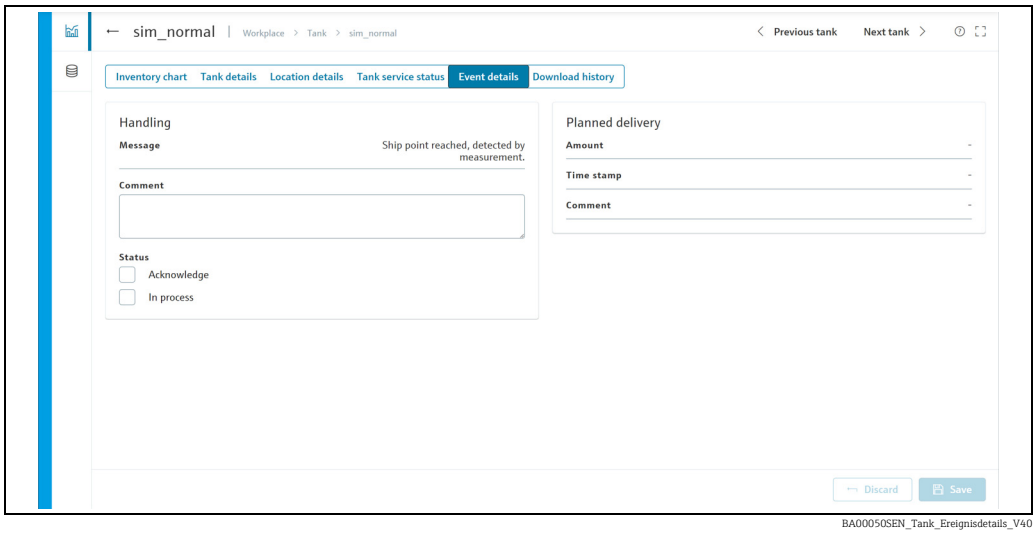
Information on the tank service is displayed in this tab.
Editing tank service status → 47



BA00050SEN_Tank_Servicestatus_V40

5.1.8 Event details

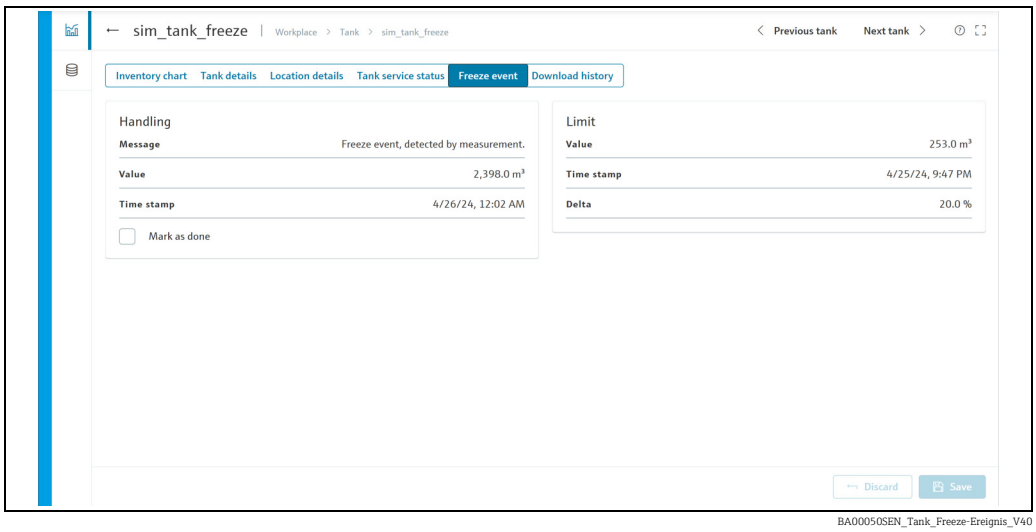
The event details for the currently applicable event (e.g. "Ship point reached") for the selected tank are shown in this tab. If no event is applicable for the currently selected tank, this tab will not be visible. For a description of the **Event details** tab → 65.



BA00050SEN_Tank_Ereignisdetails_V40

5.1.9 Freeze event

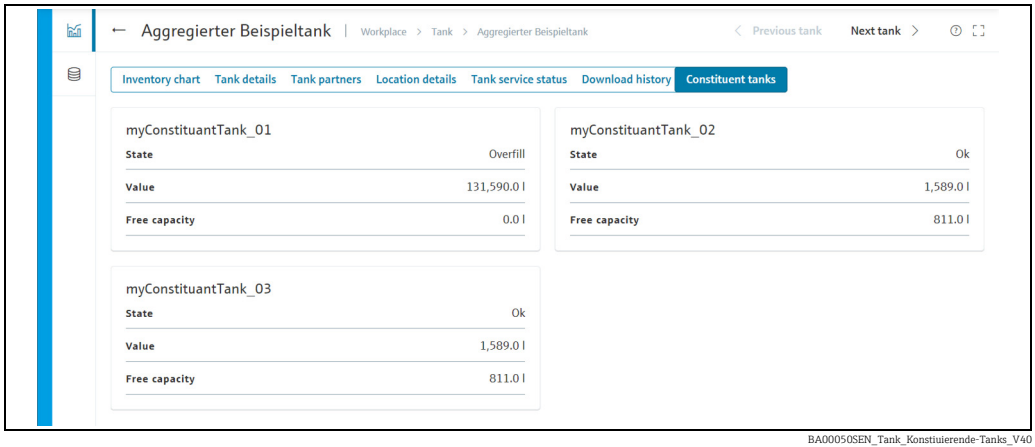
The event details for the currently applicable freeze event for the selected tank are shown in this tab. If no freeze event is applicable for the currently selected tank, this tab will not be visible.
For a description of the **Freeze event** tab → 65.



BA00050SEN_Tank_Freeze-Ereignis_V40

5.1.10 Constituent tanks

This tab displays information on all the associated tanks for the selected aggregated tank. This tab will only be visible if an aggregated tank has been selected.



BA00050SEN_Tank_Konstiuierende-Tanks_V40

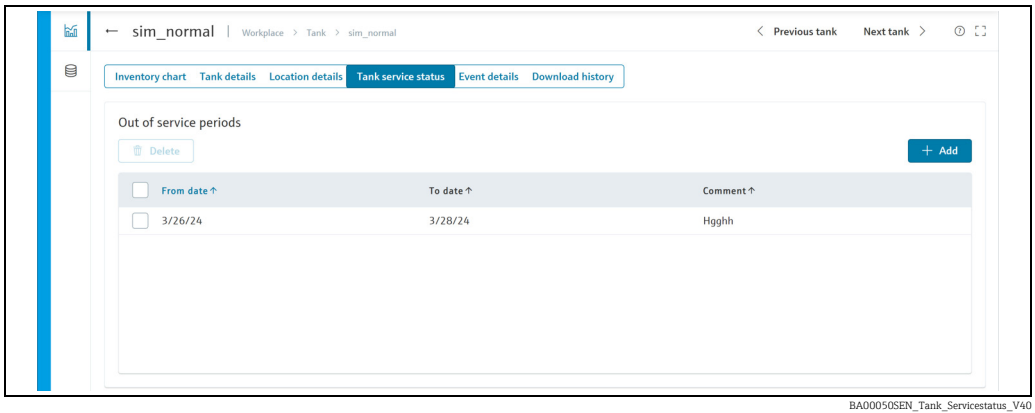
5.2 Editing tank service status

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.

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 already been entered as the end date for a previous period of tank downtime.

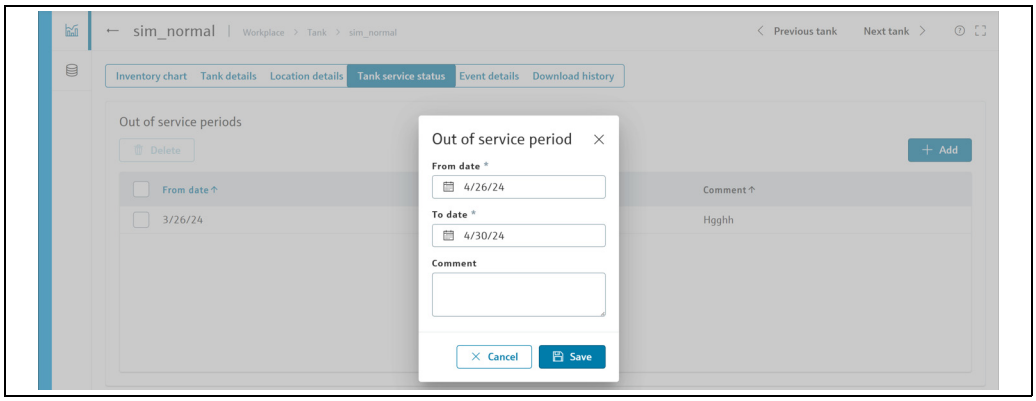
If a tank is out of order for a service, this is shown in the tank overview table by means of the ✖ symbol for individual tanks and the ✖✖ symbol for aggregated tanks. Measured values are no longer updated. Notifications of tank events are no longer produced.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item. A list of the tanks assigned to you is displayed.
3. In the overview table, select the tank whose service status you want to edit.
4. Select the **Tank service status** tab.
   The following view appears on the screen:



BA00050SEN_Tank_Servicestatus_V40

5. Click on the **Add** button.
   The **Out of service period** dialog box appears on the screen.



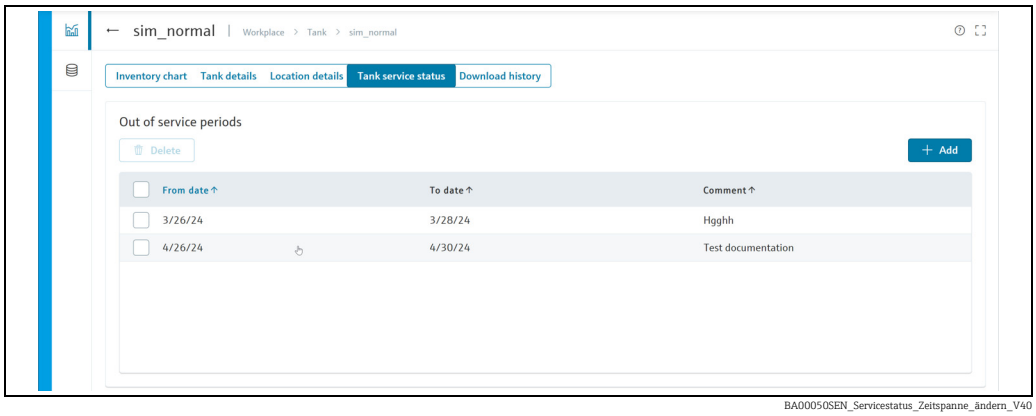
BA00050SEN_Servicestatus_Fenster_Zeitspanne_V40

6. Select a future period for which you intend for the tank to be out of service. You can either enter the respective dates in the **Start date** and **End date** fields directly, or use the button to select these. The dd.mm.yy format must be used when entering dates directly.

7. Where necessary, enter a comment in the **Comment** field.

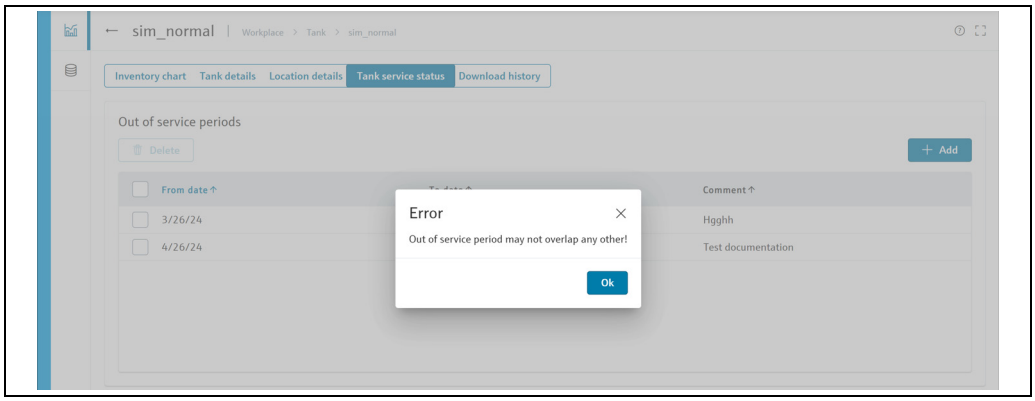
8. Click on the **Save** button to save the tank downtime in the list.
The tank downtime is saved and displayed in the table.

9. Change tank downtime: Click on the corresponding period of tank downtime. The **"Out of service period** dialog box opens. Enter the desired **Start date** and **End date**. Make sure that any entered tank downtime periods do not overlap with one another.



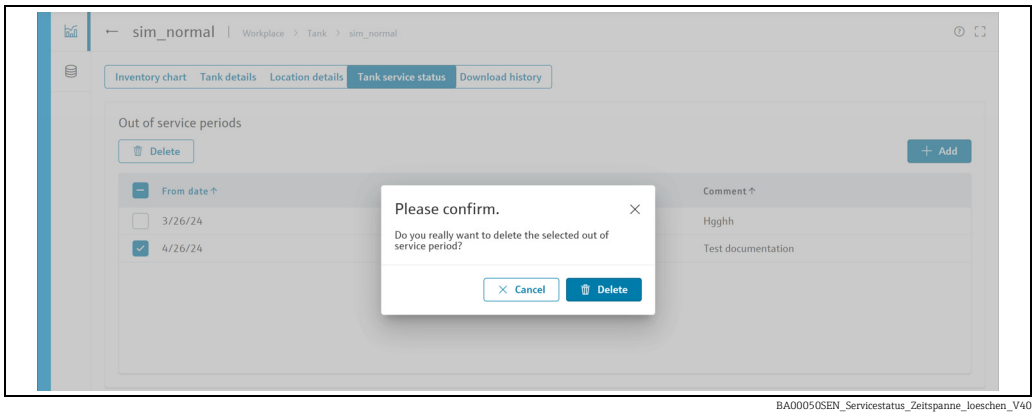
BA00050SEN_Servicestatus_Zeitspanne_ändern_V40

10. Click on the **Save** button to save your changes. If the specified tank downtime period overlaps with another tank downtime period , SupplyCare will display an error message. The change will then not be saved.



BA00050SEN_Servicestatus_Zeitspanne_Fehlermeldung_V40

11. Click on the **Ok** button to confirm the error message. Modify the dates in the **Start date** and/or **End date** fields as described previously.
12. Delete tank downtime period: Activate the checkbox next to the tank downtime period to be deleted, click on the **Delete** button, then confirm the deletion process in the following confirmation prompt by clicking on the **Delete** button there (or, alternatively, cancel the process with **Cancel**).



BA00050SEN_Servicestatus_Zeitspanne_loeschen_V40

5.2.1 Displaying tank out of service 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 downtimes. The inventory diagram is displayed with a darker background for the period of tank downtime.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank whose downtimes you want to display in the **Inventory chart** tab.
4. Select the **Inventory chart** tab. In the **Inventory chart** tab, the following detail view appears:

BA00050SEN_Servicestatus_Bestandsdiagramm_V40

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

Click on the button to print the inventory chart.

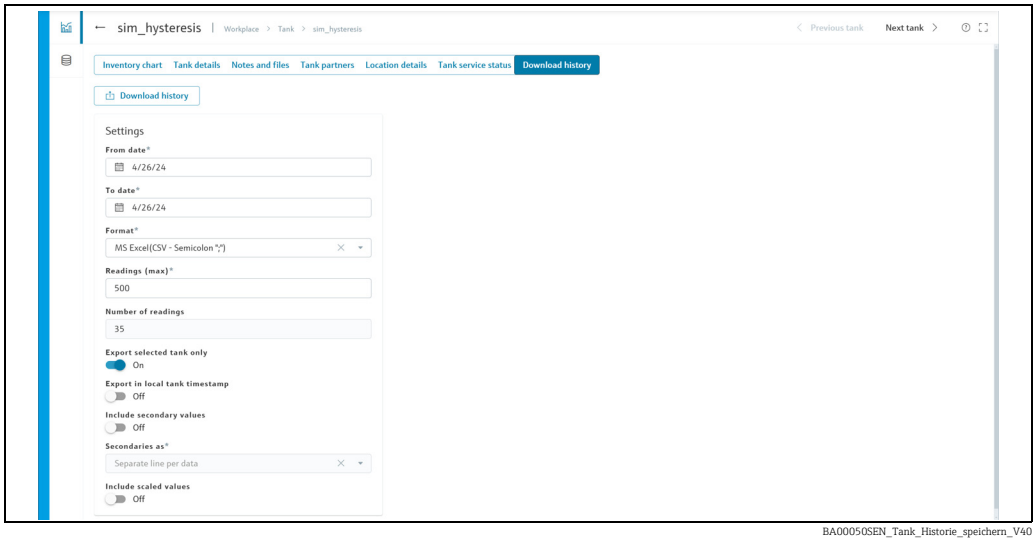
5.3 Download history

Via the **Download history** tab, the user has the option to download and save the measured value history for all tanks displayed in the overview or for a single 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 is marked with the suffix **MAN**.

This function is only available in the desktop version.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item. A list of the tanks assigned to you is displayed.
3. In the overview table, select the tank whose history you want to view as a chart or save as a CSV file.
4. Select the **Download History** tab.



BA00050SEN_Tank_Historie_speichern_V40

5. Select a time period in the past for which you want to download the data. You can either enter the respective dates in the **Start date** and **End date** fields directly, or use the button to select these. The dd.mm.yy format must be used when entering dates directly. The "UTC+00:00" time zone is used for the start and end date.
6. If you want to download the measured value history as a file, MS Excel (CSV - Semicolon, CSV - Comma or CSV - TAB) is available as the **Format**.
7. In the field **Readings (max.)**, specify the maximum number of main measured values (primary values) per tank.
8. The **Export selected tank only** slider is activated by default; with this enabled, only the data for the selected tank will be downloaded. To download the data from all of the tanks shown in the table, deactivate this slider.
9. Activate the **Export in local tank timestamp** slider if you want to display the export time stamp in the local time of the tank location. If the local time of the tank location is not available, the time stamp will be exported in UTC.
10. Activate the **Include secondary values** slider if you want to download the secondary values as well. This information is only relevant when downloading the data as an Excel file. From the drop-down list, select either the option of **Separate line per data** or **Single line full data**.
11. Activate the **Include scaled values** slider if you want to download the scaled values as well.
12. Click on the **Download history** button to download the measured values as an Excel spreadsheet.

The language of the header of the CSV file depends on the language setting in 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 as follows in the standard factory setting: yyyy-mm-dd, hh:mm:ss

Manual values are marked with the suffix **MAN**.

5.4 Viewing secondary values

Various measuring instruments allow additional measured variables (secondary values) to be recorded 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 eight secondary values can be assigned to a single tank.

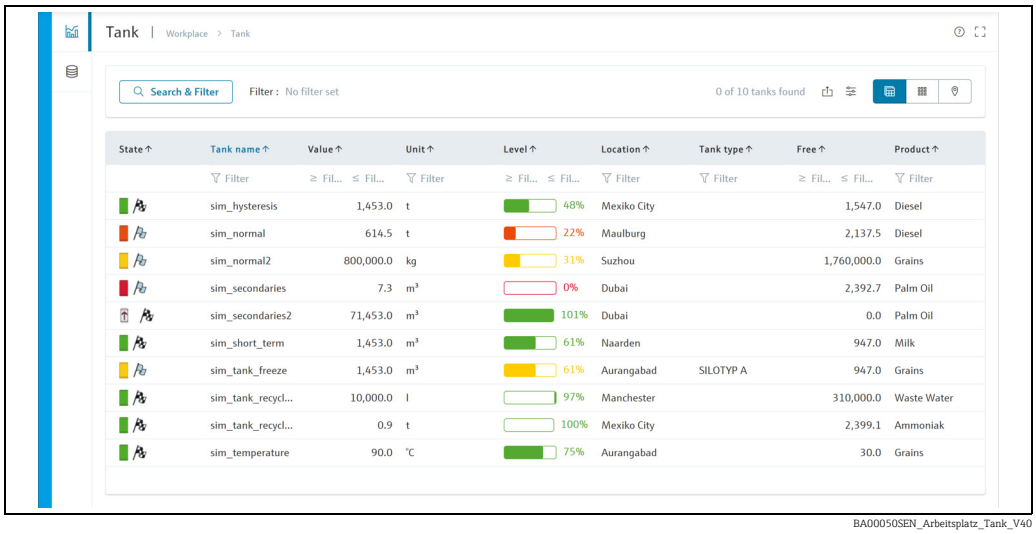
The units for secondary values are specified in the **Configuration > Tank** menu in the **Device mapping** tab, in the **Unit (for application)** field.

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

The secondary values are hidden by default.

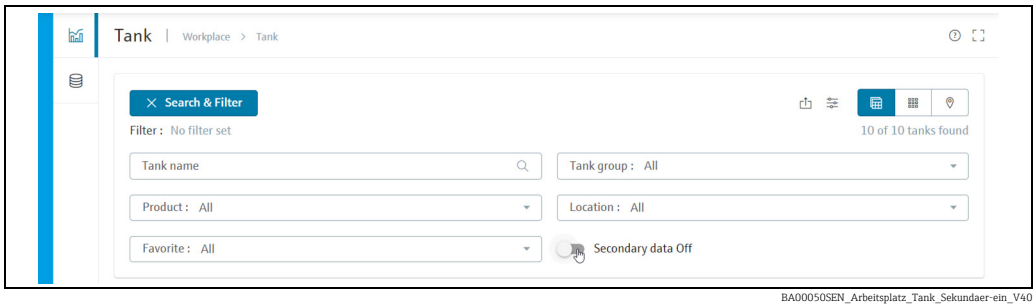
If a different setting has been selected for your contract, you can view the secondary values as described below.

1. In the menu bar, click on the workplace menu.
2. Click on the **Tank** menu item.
3. The following detail view is displayed in the application window:



BA00050SEN_Arbeitsplatz_Tank_V40

4. Click on the **Search & Filter** button.
The field expands downward to show the filter selection options.



BA00050SEN_Arbeitsplatz_Tank_Sekundaer-ein_V40

5. Activate the **Secondary data** slider.
6. All the associated secondary data is then shown below the respective tanks. Of this secondary data, the following information is shown if available: Tank name, Value, Unit, Hysteresis, Limit 1 and Limit 2, Time stamp and Data source.
7. To hide the secondary data again, simply deactivate the **Secondary data** slider.

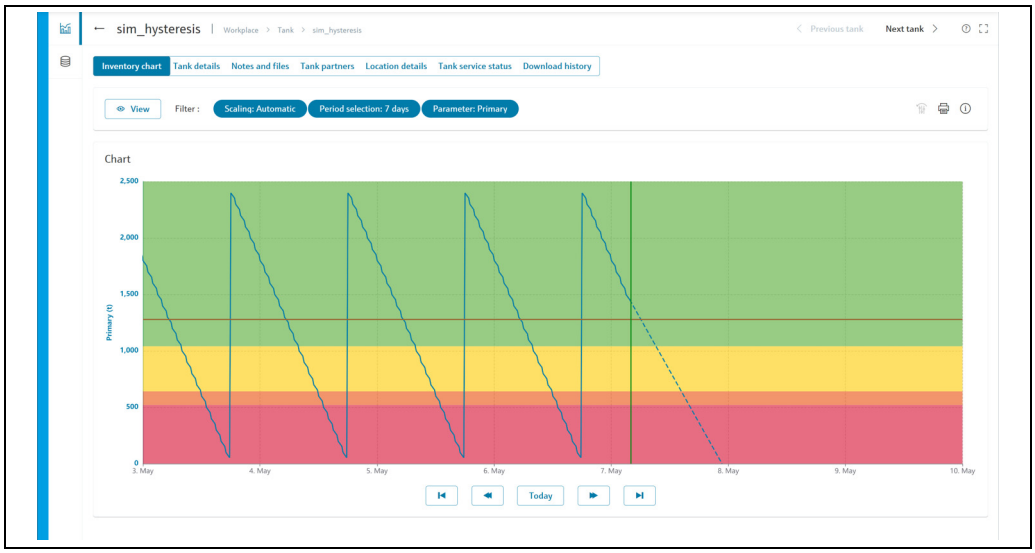
5.4.2 Viewing secondary values in the inventory chart

In the **Secondary values** tab in the **Configuration > Tank** menu item, users with the **Master data** user role can specify a name. This 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].

The secondary values are hidden by default.

If a different setting has been selected for your contract, you can view the secondary values as described below.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank whose secondary data you want to display in the **Inventory chart** tab.
4. The following detail view is displayed in the application window:

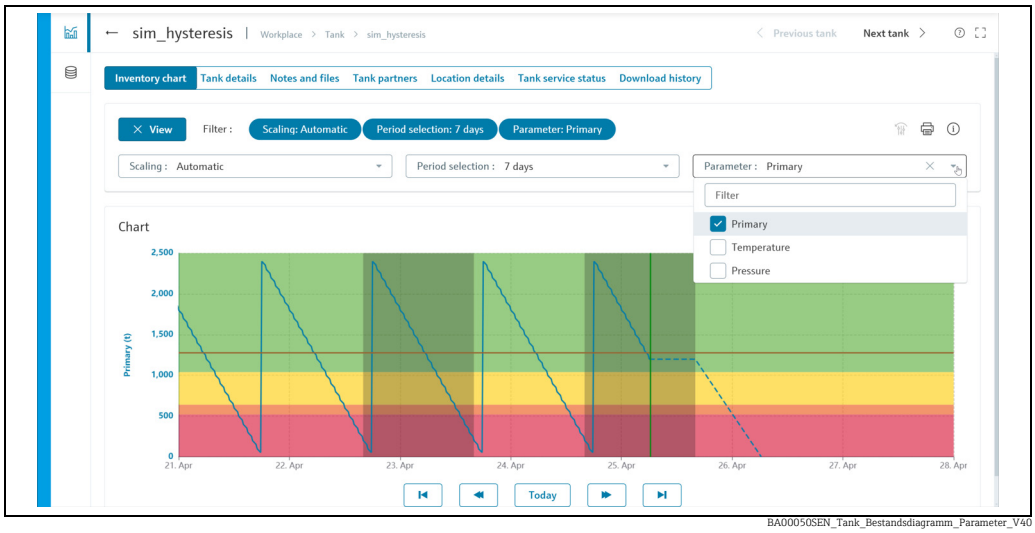


BA00050SEN_Arbeitsplatz_Tank_Bestandsdiagramm_V40

The inventory chart displays the graph for the primary value.

5. Click on the **View** button above the chart.
   The field expands downward and displays the selection fields **Scaling**, **Period selection** and **Parameter**.

6. Click on the **Parameter** field. The menu shows the selection fields for the primary value and all secondary values that are assigned to the tank.



BA00050SEN_Tank_Bestandsdiagramm_Parameter_V40

7. Select the checkbox for the parameter that you want to display the graph for.
   All selected parameters are displayed in the **Parameter** field and next to the **Filter:** indicator in the overview.

You can select any number of checkboxes. All the activated parameters will be displayed in a single graph.
The Y-axis labels for secondary parameters are displayed on the right side of the graph.

Click on the button to print the inventory chart.

If you move the cursor over the graph, the specific value and time stamp are displayed for the individual point in the graph.

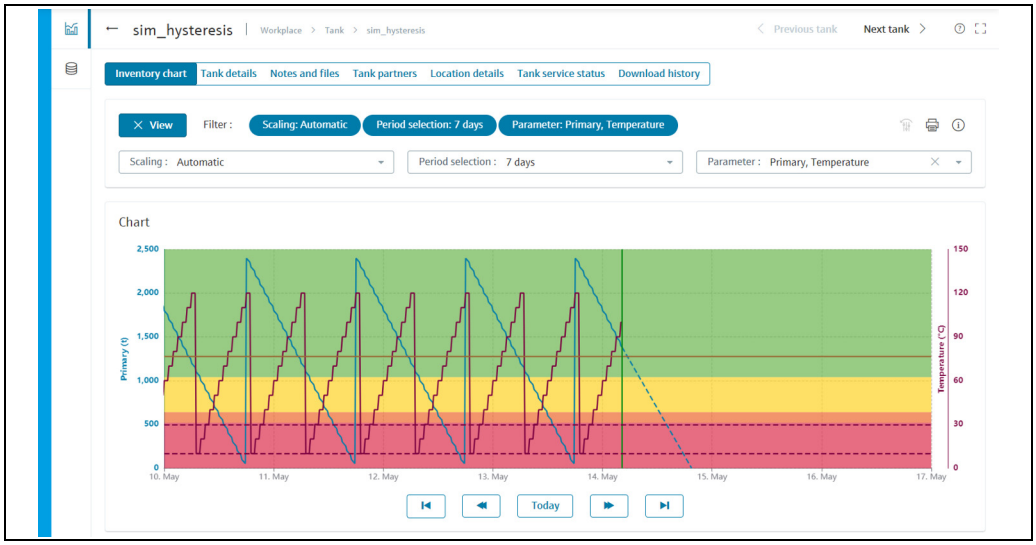
Upon exiting the inventory chart, all set filters are reset to their default values.

5.4.3 Limits or span limits of secondary values

Set limits or span limits of secondary values are displayed in the inventory diagram. If a secondary value exceeds set limits or span limits, it triggers status changes and messages, helping the user to monitor secondary values → 63 and → 165.

In the **Secondary values** tab in the **Configuration > Tank** menu item, users with the **Master data** user role can set limits or span limits → 111.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank whose secondary data you want to display in the **Inventory chart** tab.
4. Select the secondary values → 52.



BA00050SEN_Tank_Bestandsdiagramm_Sekundaer_V40

In addition to the graph for the primary value, the inventory chart will display the graphs for the secondary value and the span limits.

5. Deactivate the checkbox for a parameter to hide the graph.

You can also hide the primary value and have only the secondary values displayed.

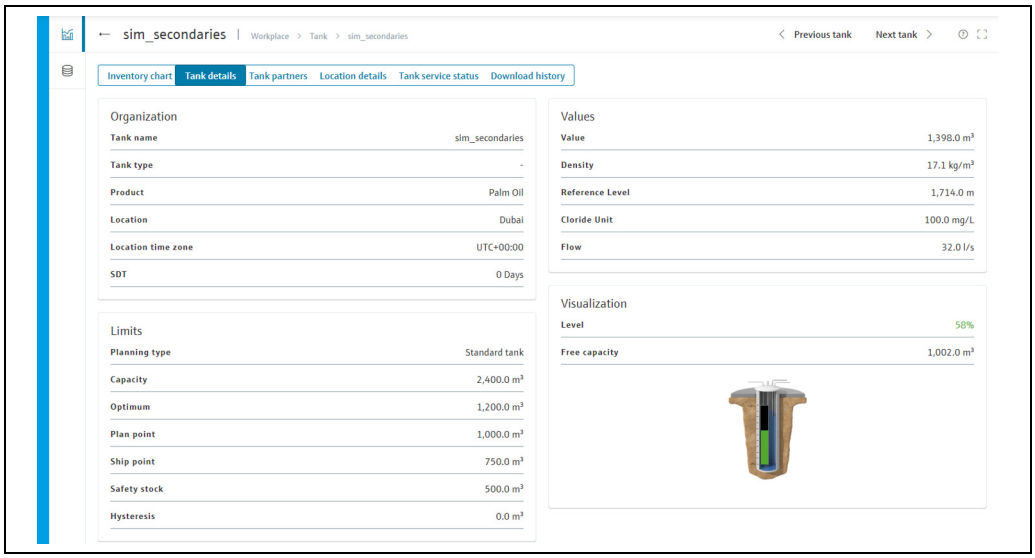
Click on the button to print the inventory chart.

If you move the cursor over the graph, the specific value and time stamp are displayed for the individual point in the graph.

Upon exiting the inventory chart, all set filters are reset to their default values.

5.4.4 Secondary data in the "Tank details' tab

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank whose secondary data you want to display.
4. Select the **Tank details** tab.



BA00050SEN_Tankdetails_Sekundaerwerte_V40

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

Secondary values are not displayed in the following cases:
- No secondary values have been assigned to the selected tank.
- The tank has supplied an erroneous measured value.

5.5 Viewing historical values and forecast values in the inventory chart

The inventory chart represents the values measured up to the present date with a continuous line, and the values calculated from the present date with a broken line. No forecast values are available for secondary values.

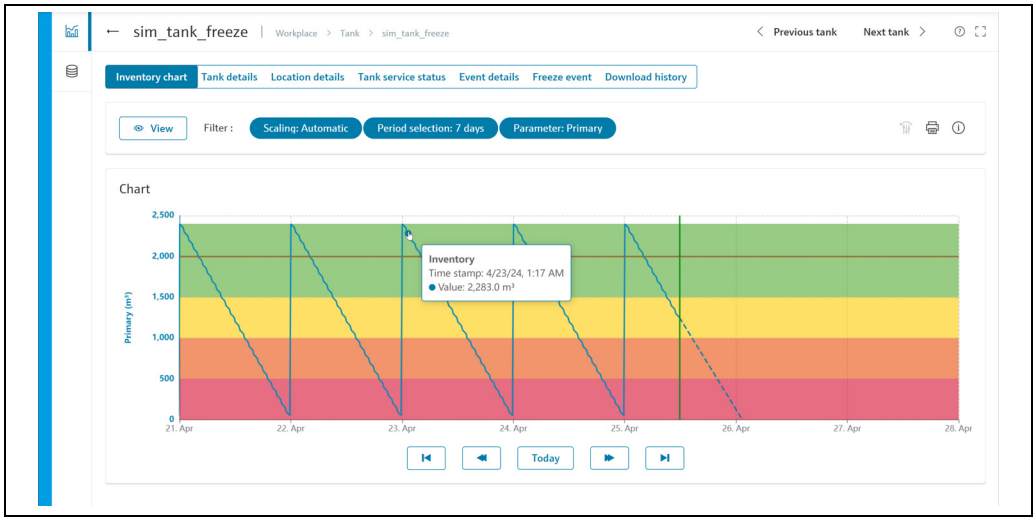
In the case of standard tanks, the forecast values are calculated from the "Average daily outflow" value. In the case of recycling tanks, the forecast values are calculated from the "Average daily inflow" value.

Multiple planned future deliveries (or disposals, for recycling tanks) are also included in the calculated value (forecast) and displayed.

BA00050SEN_Tank_Bestandsdiagramm_2_V40

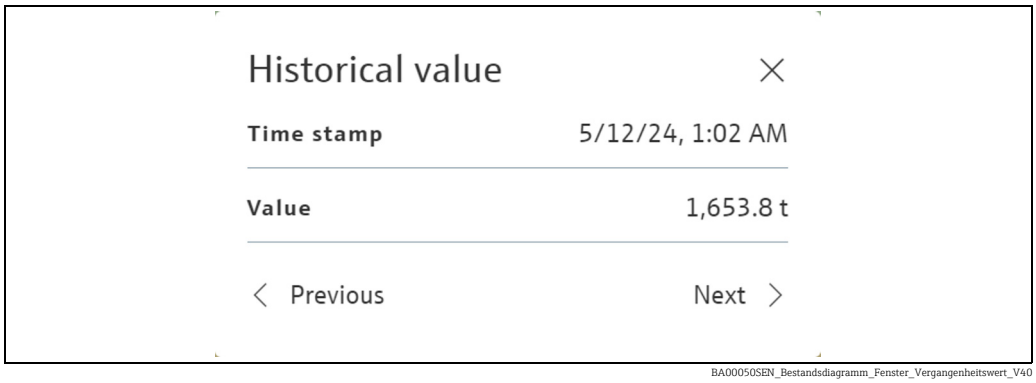
The inventory chart offers the following additional functionalities:

Mouseover function
Additional information is displayed if you move the cursor over a graph in the inventory chart. If the point in the graph is in the past, the "Inventory" window appears with information on the corresponding measured value and the time stamp. If the point in the graph is in the future, the "Forecast" window appears with information on the corresponding calculated value and the time stamp.



BA00050SEN_Tank_Bestandsdiagramm_Bestand_V40

Clicking on a point in the graph
A dialog box appears if you click on a point in the graph with the cursor. The **Historical value** dialog box appears for the values measured in the past. The **Forecast value** dialog box appears for the calculated values in the future. The **Current value** dialog box appears for the last measured value received.

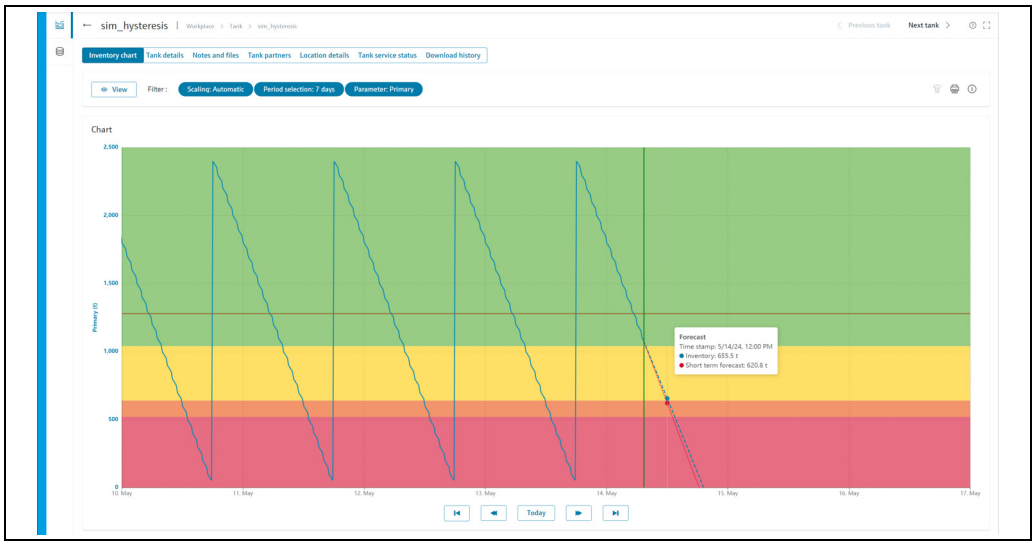


BA00050SEN_Bestandsdiagramm_Fenster_Vergangenheitswert_V40

Navigating via the dialog box
The **Value** field in the dialog box displays the measured value for the past and the calculated value for the future. The **Time stamp** field displays the associated date and time.
Click on the 〈 **Previous** button to view older measuring points.
Click on the **Next** 〉 button to view more recent measuring points.
If you want to view measuring points that are further back in time, change the number of displayed days in the **Period selection** field.

5.5.1 Short-term forecast

The short-term forecast is a second forecast line in the inventory chart that is calculated based on the data from the most recent hours. The period of time can be defined individually between 1 to 12 hours.



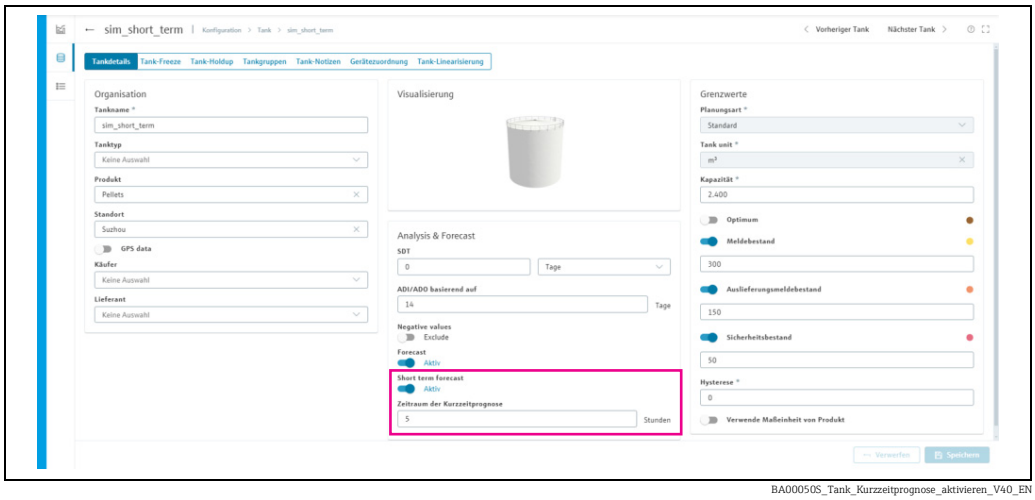
BA00050SEN_Bestandsdiagramm_Kurzzeitprognose_MouseOver_V40

The visualization of the short-term forecast is disabled by default. The short-term forecast and its associated time period are activated by Endress+Hauser. In order to display the short-term forecast for a specific tank, you must additionally go to the **Configuration > Tank** menu and, in the **Tank details** tab, **activate the short-term forecast**.

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 menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you intend to activate the short-term forecast.
4. Select the **Tank details** tab.
5. Activate the **Short term forecast** slider.



BA00050S_Tank_Kurzzeitprognose_aktivieren_V40_EN

6. In the **Period for short term forecast** field, enter the number of hours that should form the basis for calculating the short-term forecast.
7. Click on the **Save** button to save your changes.
   If you want to discard your changes, click on the **Discard** button instead.

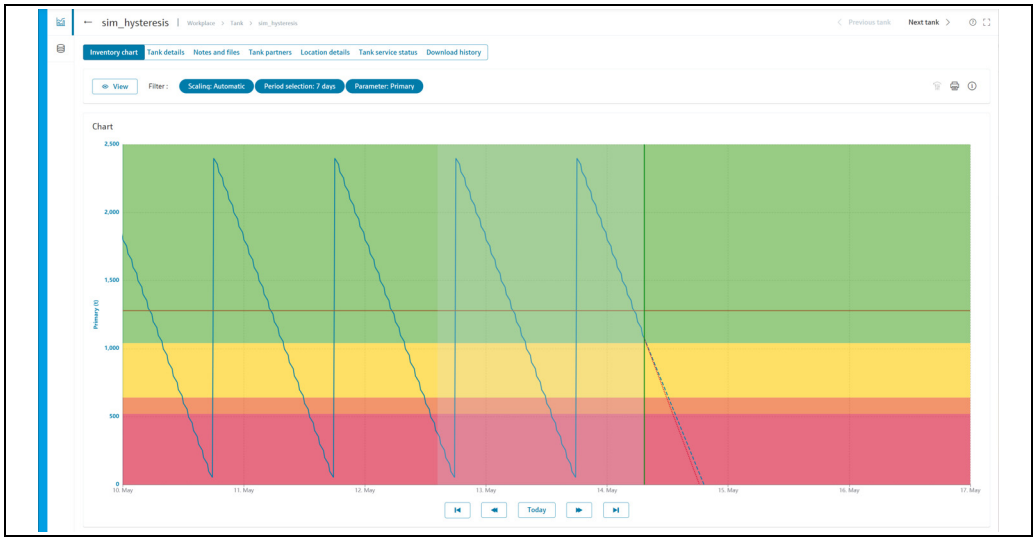
5.6 Zoom functions in the inventory chart

You can use the zoom function to enlarge a section in the inventory chart in order to get a closer look at the data.

1. Set the start of the zoom-in zone.

To do so, proceed as follows:
– Using the left mouse button, click on the desired starting point.
– While holding the left mouse button, drag the mouse to the left or right.
– The selected zone is marked with a light background. You can move the zone to the left or right by dragging the mouse.
– Alternatively: Scroll with the mouse wheel.

2. Release the mouse button once you have selected the zone.
3. The inventory chart with the selected zone is loaded.
4. Click on the **Today** button to zoom out again.



BA00050SEN_Bestandsdiagramm_Zoom_V40

You can also zoom into and out of the inventory chart using the mouse wheel.

When using the mobile version on a touchscreen device, you can use two fingers to zoom in and out of the inventory chart.

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 in the desktop version.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Tank** menu item.
3. In the overview table, select the tank for which you want to plan a delivery or disposal.
4. Select the **Inventory chart** tab.
5. Click on the graph in the inventory chart for the date on which you are planning a delivery or disposal. The planned date must be in the future.
6. The **Forecast value** dialog box is displayed.
7. Click on the **Plan delivery** (standard tanks) or **Plan disposal** (recycling tanks) button.
8. The **Plan delivery** dialog box appears for standard tanks. The **Plan disposal** dialog box appears for recycling tanks.
9. You can view and enter the following data here:

- **Tank name**: Name of the selected tank.
- **Forecast value**: Indicates the projected level.
- **Date and time of delivery** (mandatory): Enter the date and time. The date and time can be entered directly. Alternatively, the date can be selected via the button in the calendar, and the time via the button in the dialog box.
- **Amount** (mandatory): Enter the planned amount.
- **Range**: This field shows 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.
- **Comment**: Enter a comment or a note.

10. Click on the **Save** button to save your changes. Alternatively, click on the **Cancel** button to abort the process.
11. A truck icon indicates the delivery and disposal in the inventory chart. If you move the cursor over the truck icon, information on the planned delivery or disposal is displayed along with the corresponding date and time.

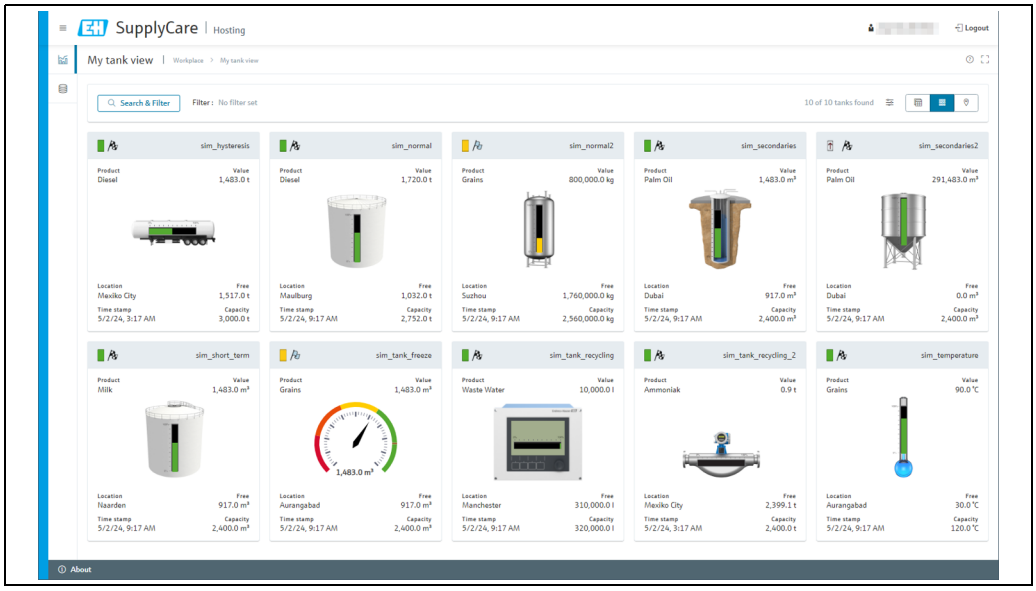
6 Viewing personalized tank view – My tank view" workplace

The personalized tank view shows you the tanks that you selected in your user profile in the **My tank view** tab (→ 93).

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

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **My tank view** menu item.
3. You are shown a list of all the tanks that you selected in the user profile.

You can filter the tank display using the picklists in the filters and display options area by **Tank name**, **Tank group**, **Product**, **Location** and **Favorite**. Whenever a selection is made, only the tanks within that group are displayed on the screen.



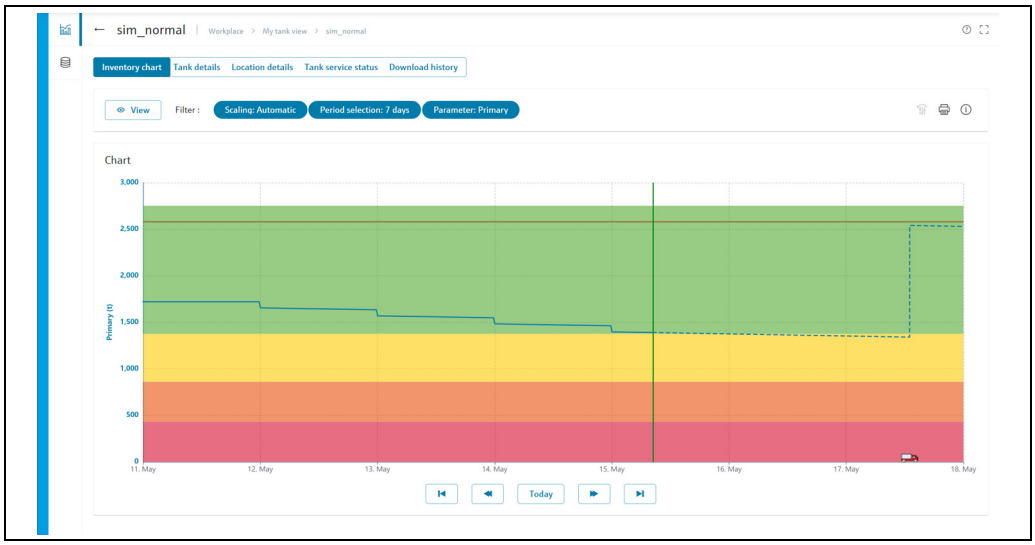
BA00050SEN_Arbeitsplatz_Tankuebersicht_V40

4. As a standard setting, the following primary data (provided it is available) is displayed for every tank: Tank name, Product, Value with unit, Location, Time stamp, Free capacity with unit, Capacity with unit.

The displayed data is freely configurable → 61.

The view is updated whenever the page is reloaded.
Alternatively, the view can be set to refresh automatically. To do so, select the time interval between each reload of the view from the **Auto refresh** picklist in the user settings (→ 94).

5. Click on the picture of the tank to see more tank details (→ 43).

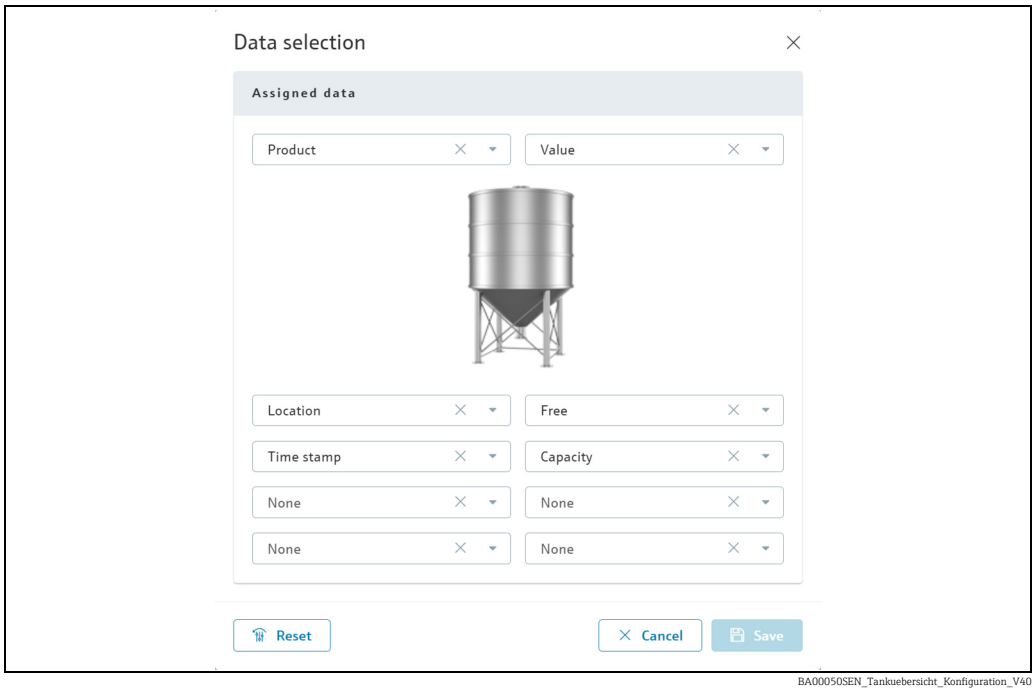


BA00050SEN_Tankuebersicht_Bestandsdiagramm_V40

6.1 Configuring the "My tank view"

This function is only available in the desktop version. The settings from the desktop version are automatically applied on mobile devices.

1. Click on the ⚙ button to configure the additional information in the tank overview. The **Data selection** dialog box is displayed.



BA00050SEN_Tankuebersicht_Konfiguration_V40

2. Click on the ▼ button in the picklist to display the data that can be selected, then select the required element.

   Click on the ✕ button in the picklist if no data should be shown in this field.

Up to a maximum of 10 different items of master data or values can be displayed. These can be selected as desired. The position of the selection fields in the tank view cannot be changed.

3. Click on the **Save** button to save the configuration; alternatively, click on the **Cancel** button to abort the process.

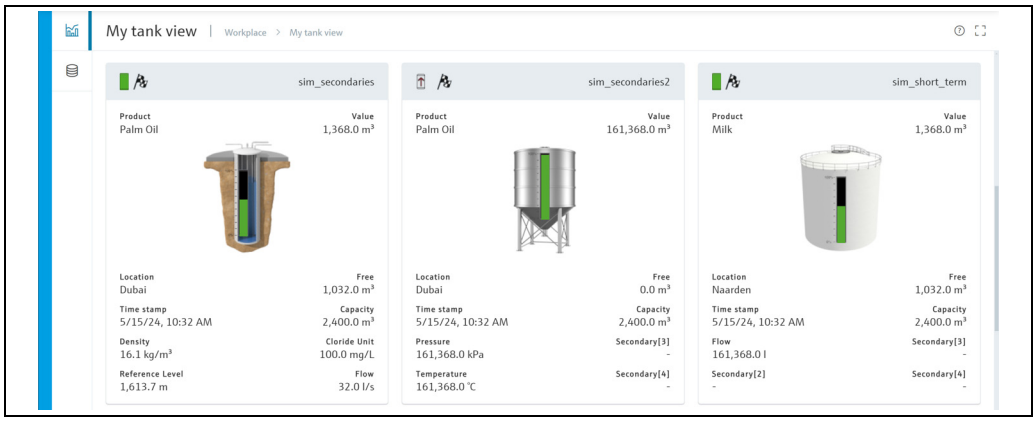
   The **Reset** button will reset the configuration to the standard settings.

The configuration of the tank overview is changed for all tanks in the "My tank view".

6.2 Viewing secondary values

If secondary values are available for the tank, these can also be displayed in the "My tank view". Up to 8 secondary values can be displayed.

1. Click on the button to configure the additional information in the tank overview. The **Data selection** dialog box is displayed (→ 61).
2. From the picklist, select the element Secondary[1], Secondary[2], Secondary[3], Secondary[4], Secondary[5], Secondary[6], Secondary[7] or Secondary[8].
3. Click on 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 is displayed; the field for the value remains empty ("-").



BA00050SEN_Tankuebersicht_Sekundaerwerte_V40

7 Editing events – Workplace > Event

7.1 Event management – Status and severity of events

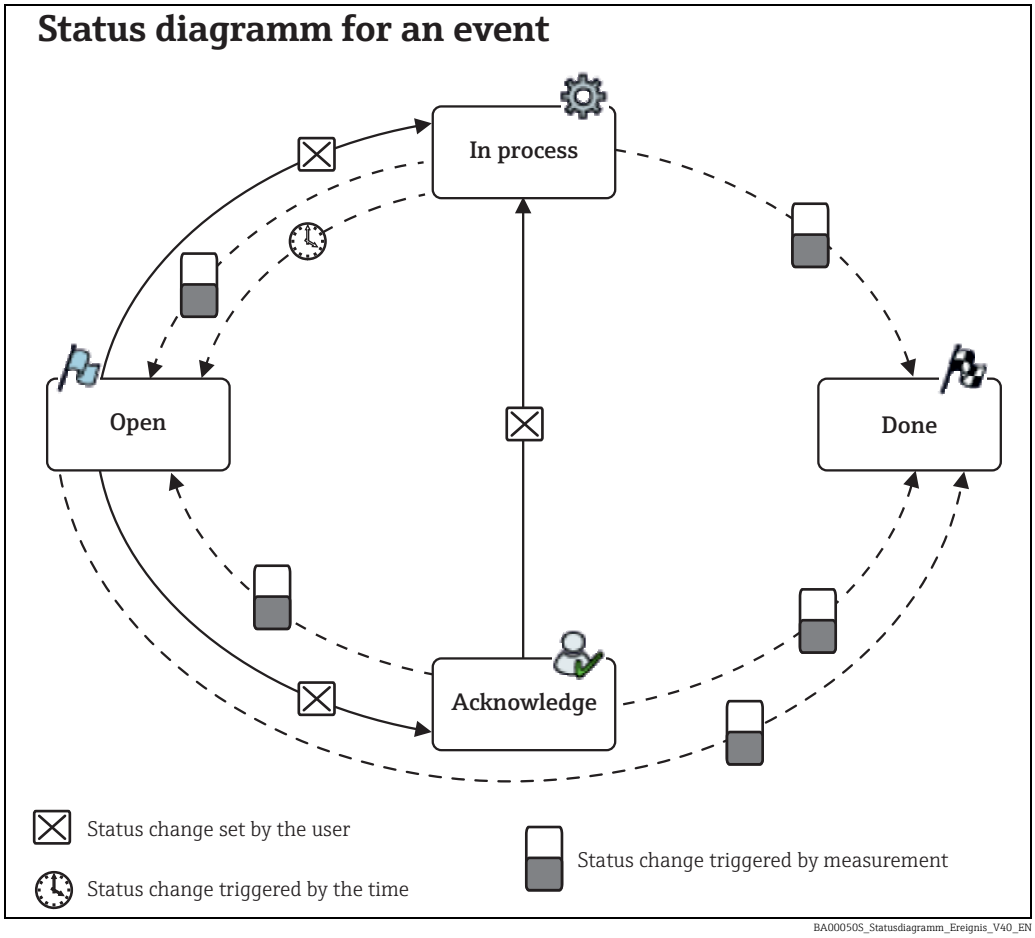
An event is triggered if a limit value is undershot (Plan point, Ship point, Safety stock). The status of the event is then set to **Open**. The weighting (severity) is derived from the limit value, i.e. reaching the plan point is categorized as not critical (low) while reaching the safety stock level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

Once an event has been generated, the user can change the status to **Acknowledged** or **In process**. For the purposes of subsequent event monitoring, the change is stored with a time stamp and the ID of the user.

If an event is in the **Acknowledged** or **In process** status and a critical limit value is reached, the event returns to the **Open** status. If, for standard tanks, an inventory that is above the plan point is detected (and for recycling tanks, if an inventory that is below the plan point is detected), the event assumes the status **Done** and no other 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 accordingly exceeded or undershot.

The following point must be noted with regard to the **In process** status. If the tank is not refilled by the set resubmission date, the event status returns to **Open**.

The following diagram shows the status for an event in SupplyCare Hosting:



If a tank with the status **Open**, **In process** or **Acknowledged** is placed out of service, the event changes 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 here.
If a critical limit is reached, as determined by another measurement, the status of the event is set to **Open**.

If a tank is deleted, all its associated events are deleted.

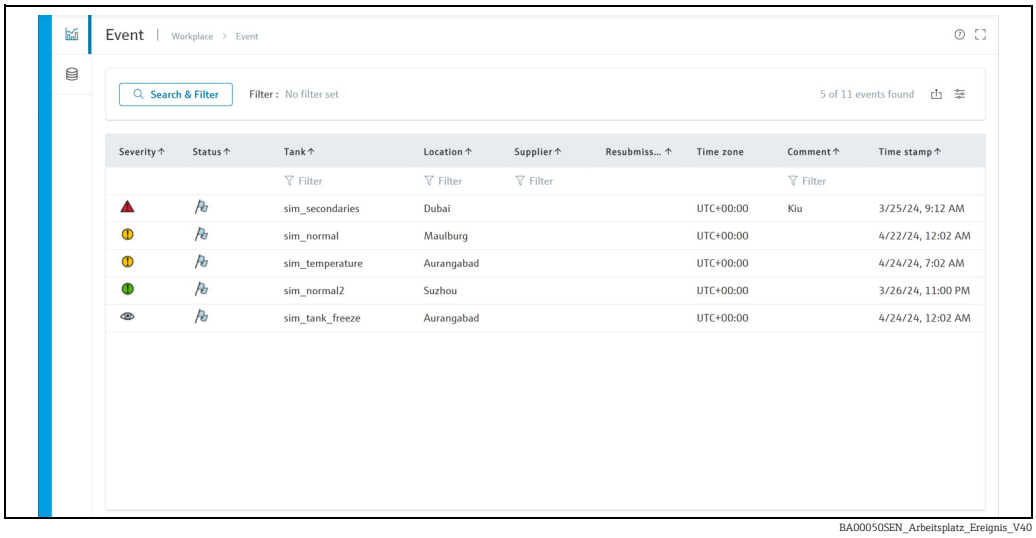
7.2 Viewing event messages

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 (→ 93). "Location" is used for the factory setting. The time zone configured for the location is used for the **Inventory chart** and **Tank details** tabs (→ 138). "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; for recycling tanks, they are triggered if the 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 e-mail notifications.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Event** menu item.
3. The following window opens with an overview of all events:



BA00050SEN_Arbeitsplatz_Ereignis_V40

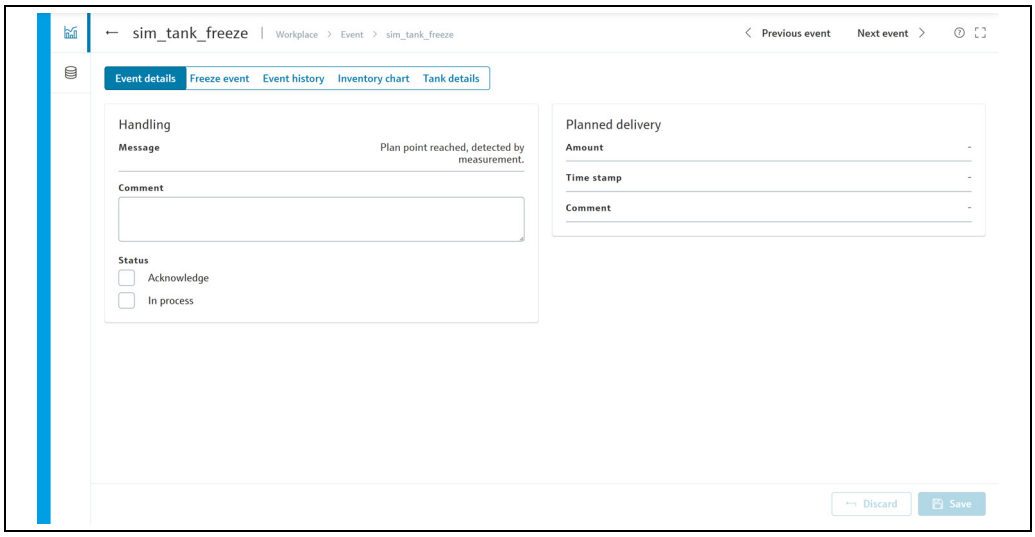
4. Select filter criteria via the **Search & Filter** button to filter the displayed events:

– **Type**: Filters by event type, e.g. "freeze events".
– **Status**: Filters by event status, e.g. "open".
– **Severity**: Filters by the importance of the event, e.g. "high".

If the set filters do not overlap (i.e. do not result in any events), the message "No entries found" is displayed. Delete the last set filter to restore the previous filter configuration, or alternatively delete all filters to return to the overview table.

5. In the overview table, click on an event which you would like to view or for which you require further information.
6. In the detail view, you can choose between the following tabs:
Event details, Freeze event, **Event history**, **Inventory chart** or **Tank details**.

7.2.1 Event details

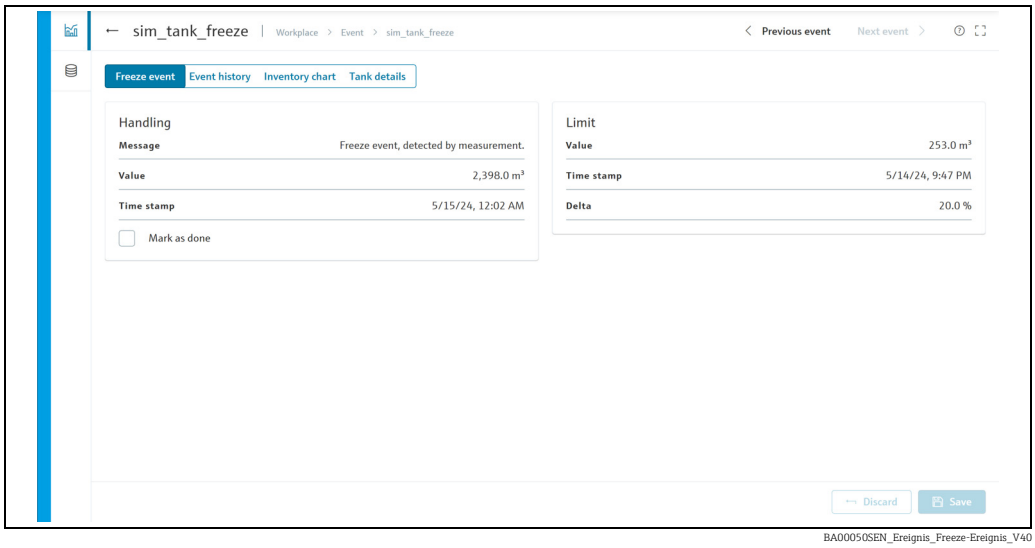


BA00050SEN_Ereignis_Ereignisdetails_V40

This tab contains information and options for handling the event:
Message: Brief description of the type of event
Comment: Field for remarks
Acknowledge: Checkbox to acknowledge the event
In process: Checkbox to mark the event as "In process"

In addition, the display contains information about the planned delivery/planned disposal:
Amount: Planned delivery amount/disposal amount
Time stamp: Date and time of the planned delivery/disposal
Comment: Remark on the planned delivery/disposal

7.2.2 Freeze event



BA00050SEN_Ereignis_Freeze-Ereignis_V40

This tab contains information and an input field for handling:
Message: Brief description of the type of event
Value: Value and unit of the received measurement
Time stamp: Time of the measurement in the respective time zone
Mark as done: Checkbox to acknowledge the event

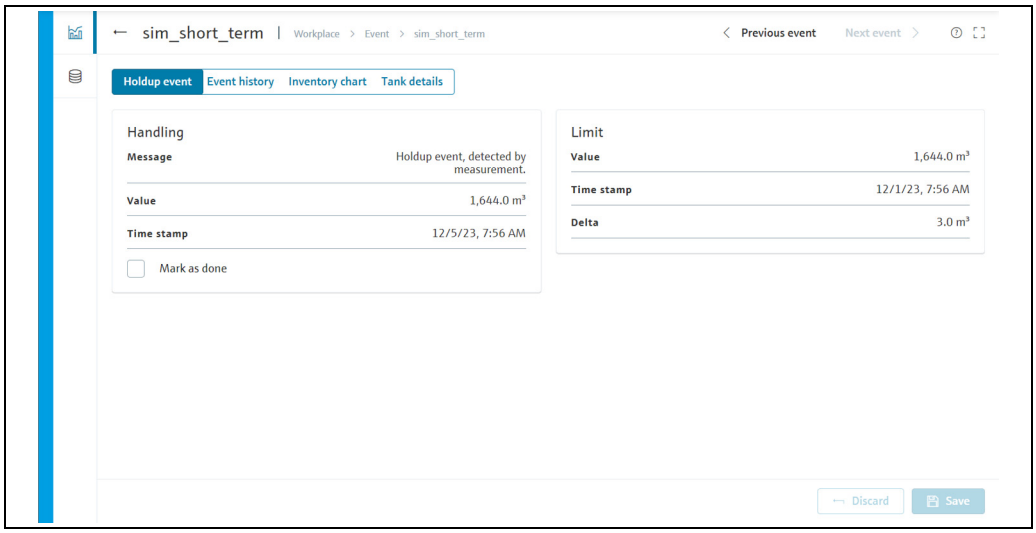
1. Activate the **Mark as done** checkbox to acknowledge the event.
2. Click on the **Save** button to save the change.

   If you want to discard your changes, click on the **Discard** button instead.

A freeze 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 freeze event occurs in the next check period, the previously created event is transferred to the event history.

Information on the **Limit** is also displayed here:
Value: "Frozen" measurement in the corresponding unit
Time stamp: Time of the "frozen" measurement in the respective time zone
Delta: Numerical value and unit for the set event delta

7.2.3 Holdup event



BA00050SEN_Ereignis_Holdup-Ereignis_V40

This tab contains information and an input field for handling:
Message: Brief description of the type of event
Value: Value and unit of the first measured level after the set monitoring time
Time stamp: Time of the first measurement after the set monitoring time, in the corresponding time zone
Mark as done: Checkbox to acknowledge the event

Information on the **Limit** is also displayed here:
Value: Value and unit of the first measured level prior to the set monitoring time
Time stamp: Time of the last measurement prior to the set monitoring time, in the corresponding time zone
Time zone: Time zone of the measurement
Delta: Numerical value and unit for the set event delta

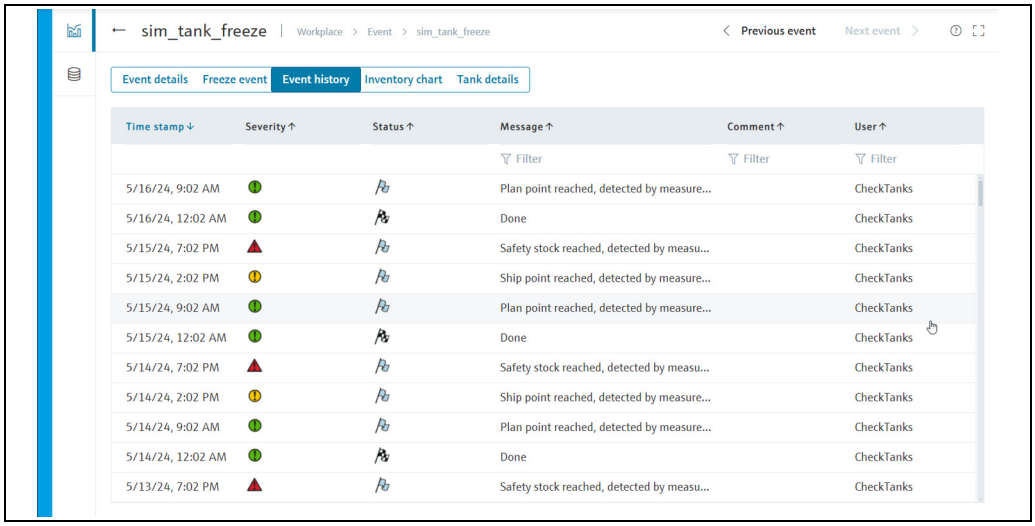
1. Activate the **Mark as done** checkbox to acknowledge the event.
2. Click on the **Save** button to save the change.

   If you want to discard your changes, click on the **Discard** button instead.

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 in the desktop version.



BA00050SEN_Ereignis_Historie_V40

This tab displays the history of an event selected in the overview table. The screen includes **Time stamp**, **Severity**, **Status**, **Message**, **Comment** and **User**.

7.2.5 Inventory chart

The inventory chart of the associated tank is shown here for the currently selected event. For a description of the **Inventory chart** tab, see → 42.

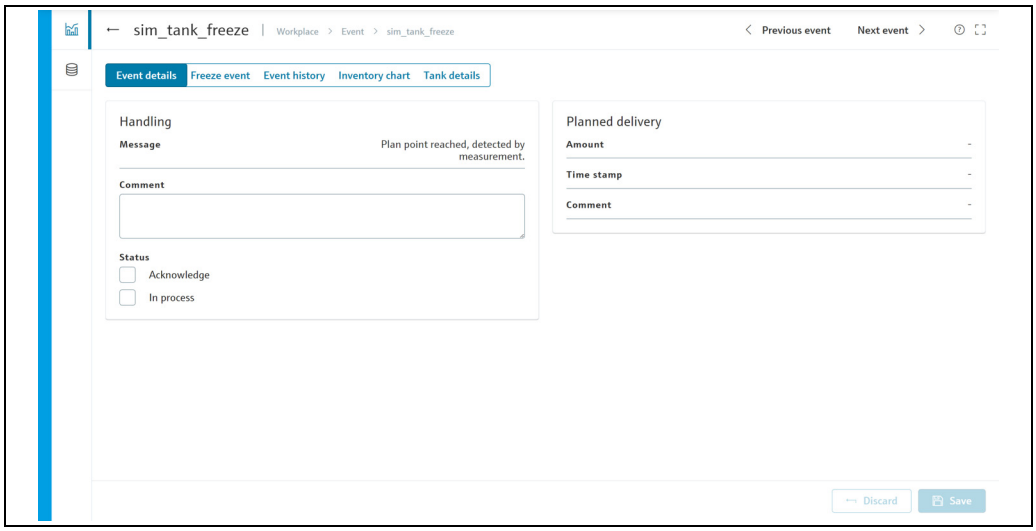
7.2.6 Tank details

The tank details of the associated tank are shown here for the currently selected event. For a description of the **Tank details** tab, see → 43.

7.3 Processing events

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

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Event** menu item.
3. In the overview table, select the event that you want to process.
4. Select the **Event details** tab.



BA00050SEN_Ereignis_Ereignisdetails_V40

5. If you have acknowledged this event, activate the **Acknowledge** check box.
   If replenishment measures have already been initiated, activate the **In process** check box and change the resubmission date if necessary.
   You can enter comments on this event in the **Comment** section.

If the status of the event was set to **In process**, the system monitors whether the tank is replenished by the **Resubmission date**. If this is not the case, the status of the event is reset to **Open** and the appropriate notification messages are triggered. By default, the **Resubmission date** is calculated from the standard delivery time. This can also be set individually for every event, however.

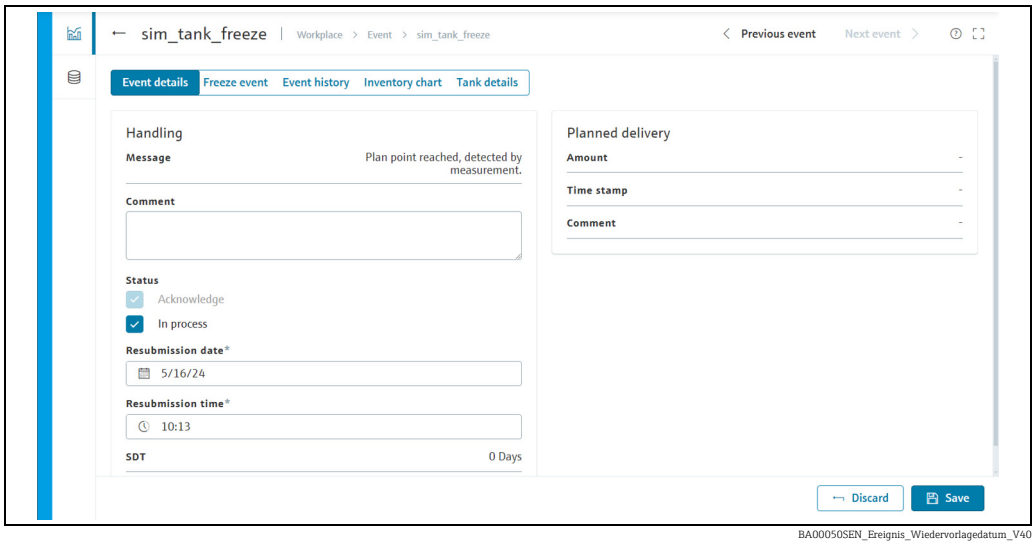
6. Click on the **Save** button to save your changes.
   If you want to discard your changes, click on the **Discard** button instead.

7.4 Setting the resubmission date

Only users whose user role is configured as **Scheduler** or **Operator** can set a resubmission date for events.

You can only set a resubmission date for the **In process** option.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Event** menu item.
3. In the overview table, select the event that you want to process.
4. Select the **Event details** tab.
5. Activate the **In process** check box.



BA00050SEN_Ereignis_Wiedervorlagedatum_V40

6. Either enter the date directly in the **Resubmission date** field or use the button.
7. If necessary, specify a time (in hours and minutes) for the **Resubmission time** fields.
8. Click on the **Save** button to save your changes.
   If you want to discard your changes, click on the **Discard** button instead.

If a standard tank is refilled and the inventory is again above the plan point, the status of the event automatically changes to **Done**. If a recycling tank is drained and the inventory is once again below the plan point, the status of the event automatically changes to **Done**.

The "Standard delivery time" is displayed for standard tanks, and the "Standard disposal time" for recycling tanks.

8 Planning deliveries and disposals – "Scheduling" workplace

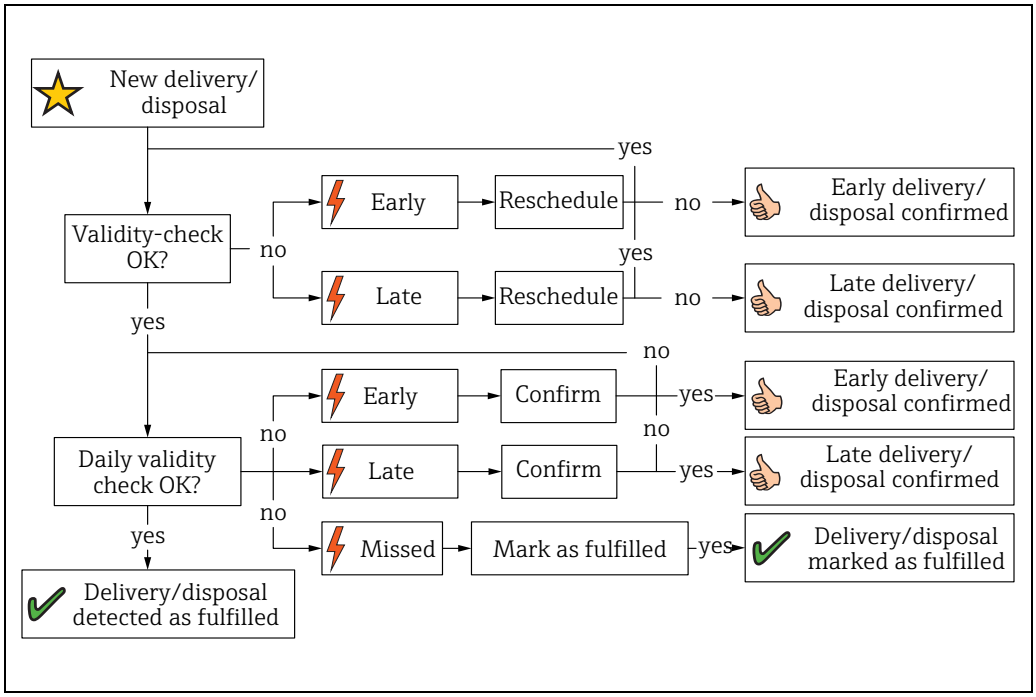
The **Scheduling** menu item is only available in the desktop version.

8.1 Status management – delivery and disposal

Whenever a delivery/disposal is created or edited, the system checks whether the delivery/disposal has been planned too early or too late. The forecast data determined by SupplyCare is used to check the information. The user can either reschedule the early or late delivery/disposal, or confirm this as an early or late delivery/disposal.

SupplyCare monitors the deliveries and disposals daily. If it detects an early or late delivery/disposal, this delivery/disposal can be confirmed. If it detects a missing delivery/disposal, this delivery/disposal 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 → 104 and → 109.

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

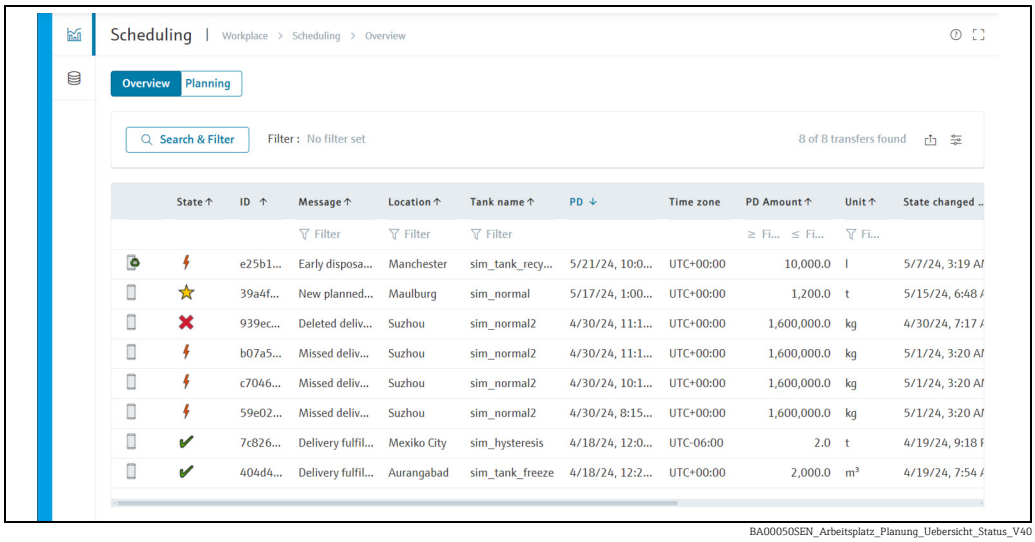


8.2 Status display and notification of planned deliveries and disposals

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

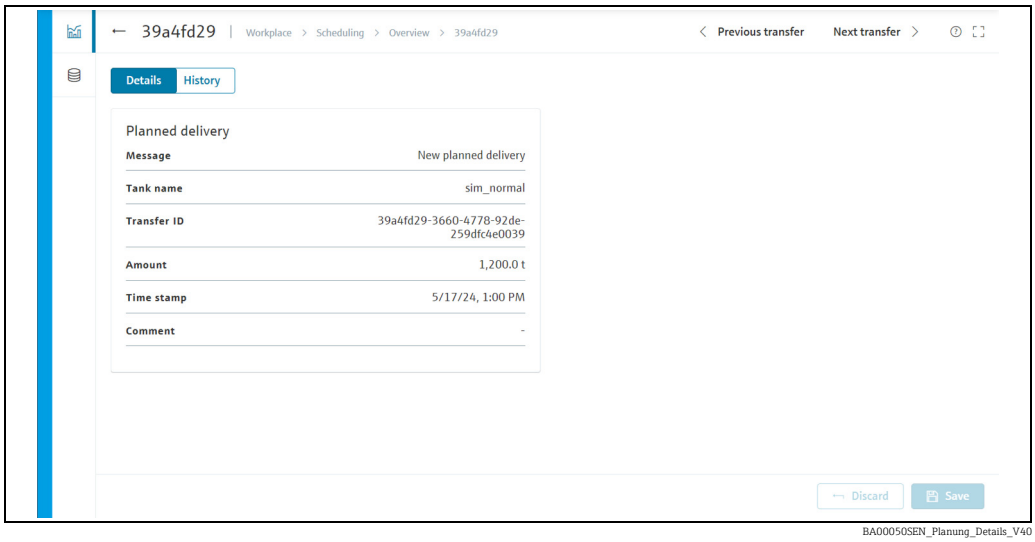
For a user to receive notification, the PDL and/or PDE checkboxes must be activated in the **Tank group** tab (menu **Configuration > User** → 102).

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Overview** tab.
4. The window displays the following overview of all the statuses for all the disposals and deliveries:



BA00050SEN_Arbeitsplatz_Planung_Uebersicht_Status_V40

5. Click on a delivery or disposal in the overview table to view the **Details** or the **History**.
6. The following window is displayed:



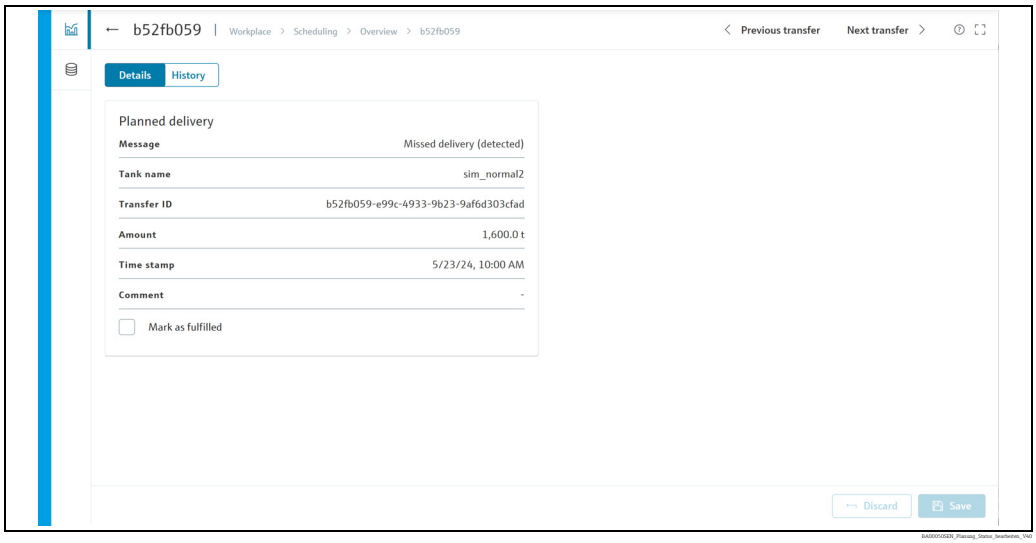
BA00050SEN_Planung_Details_V40

8.2.1 Processing the status

The following status information can be displayed:

Symbol	Meaning
	Detected – The **Detected** status is displayed in the following situations: ▪ The system has detected a delivery or disposal which has been scheduled too early or too late. You can process this delivery or disposal in the **Details** tab using the **Confirm** button. ▪ The system has detected a missing delivery or disposal. You can process this delivery or disposal in the **Details** tab using the **Mark as fulfilled** button. ▪ The system has detected that measured data is missing. You can process this delivery or disposal in the **Details** tab using the **Mark as fulfilled** button.
	Confirmed – The **Confirmed** 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/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 created, this is flagged by SupplyCare as **Delivery created (recorded)/ Disposal created (recorded)**. If the system has detected a missing delivery/disposal or missing measured data, you can process this delivery/disposal in the **Details** tab using the **Mark as fulfilled** button. The delivery/disposal is displayed as **Delivery fulfilled (confirmed)/Disposal fulfilled (confirmed)**.
	Edited – A planned delivery or disposal has been edited.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. In the overview table, select a delivery or disposal whose status you want to process.
4. Select the **Details** tab. The following tab appears:

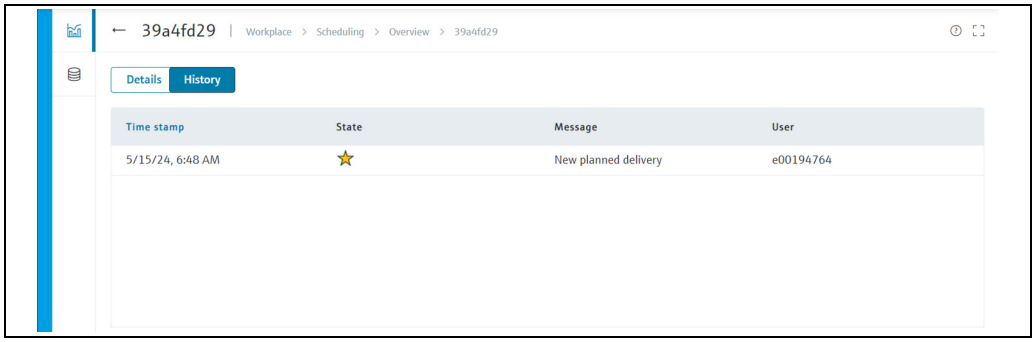


You can process the following statuses with the **Mark as fulfilled** button:
– Missed delivery/disposal (recorded)
– Missed delivery/disposal (no measurement)

You can process the following statuses with the **Confirm** button:
– Early delivery/disposal (detected)
– Late delivery/disposal (detected)

8.2.2 Viewing status history

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. In the overview table, select a delivery or disposal whose scheduling history you want to view.
4. Select the **History** tab. The following tab appears:



BA00050SEN_Planung_Historie_V40

8.3 Planning deliveries and disposals – "Scheduling" workplace

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

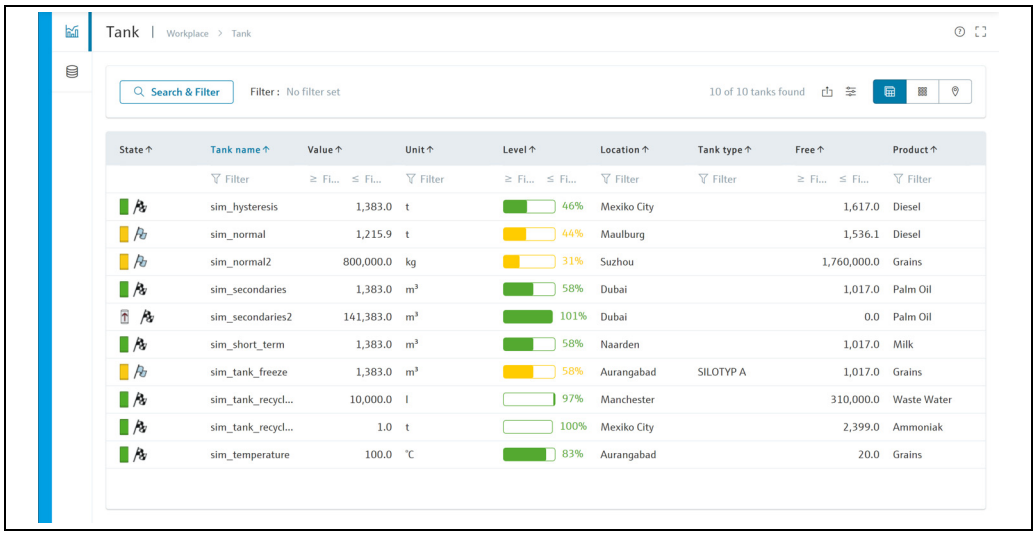
You can plan multiple deliveries for each standard tank, but you can only plan a maximum of 3 deliveries per day. You can plan multiple disposals for each recycling tank, but you can only plan a maximum of 3 disposals per day. There must be a 30-minute interval period between each of the deliveries or disposals.

The time zone that was 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 a tank is out of service, this is indicated in the calendar with a bar and the symbol. No deliveries or disposals can be planned for this period.

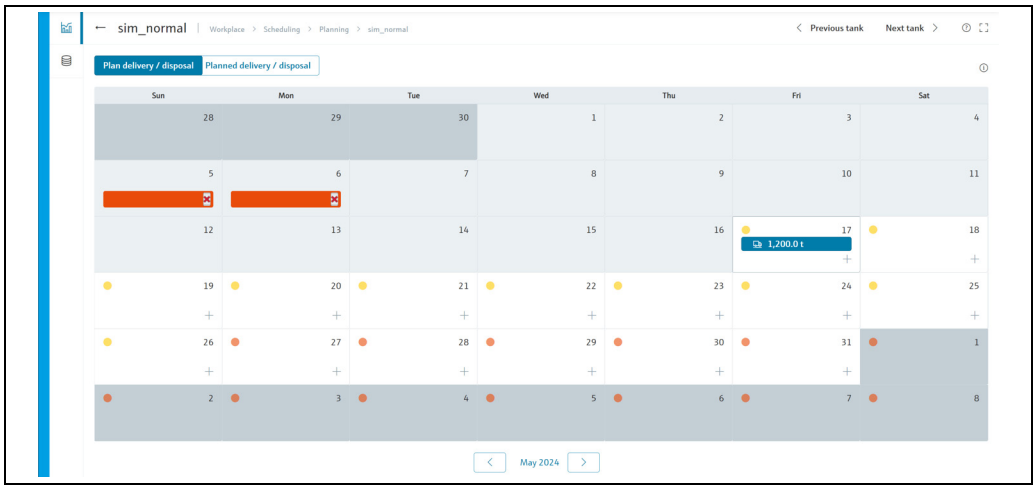
Planned deliveries and disposals are indicated by a delivery van in the calendar and in the **Inventory chart** tab.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Planning** tab. The following view is displayed in the application window:



BA00050SEN_Planung_Planung_V40

4. In the overview table, click on the tank for which you want to plan a delivery or disposal.
5. The following detail view is displayed in the application window:



BA00050SEN_Planung_Lieferung_planen_V40

The current month is displayed in the calendar. The current day (indicated by a dark border) as well as all days in the future for the displayed month have a white background and are marked with a colored dot. The color of the dot indicates the forecast value for the tank status for that particular date.
Days in the past for the displayed month are have a light gray background. Days of other months have a dark gray background.

Color	Standard tanks	Recycling tanks
Green	"OK": The forecast value is larger than the plan point.	"OK": The forecast value is between 0 and the plan point.
Yellow	"Plan point": The forecast value is between the plan point and the ship point.	"Plan point": The forecast value is between the plan point and the safety stock.
Orange	"Ship point": The forecast value is between the ship point and the safety stock.	Not applicable

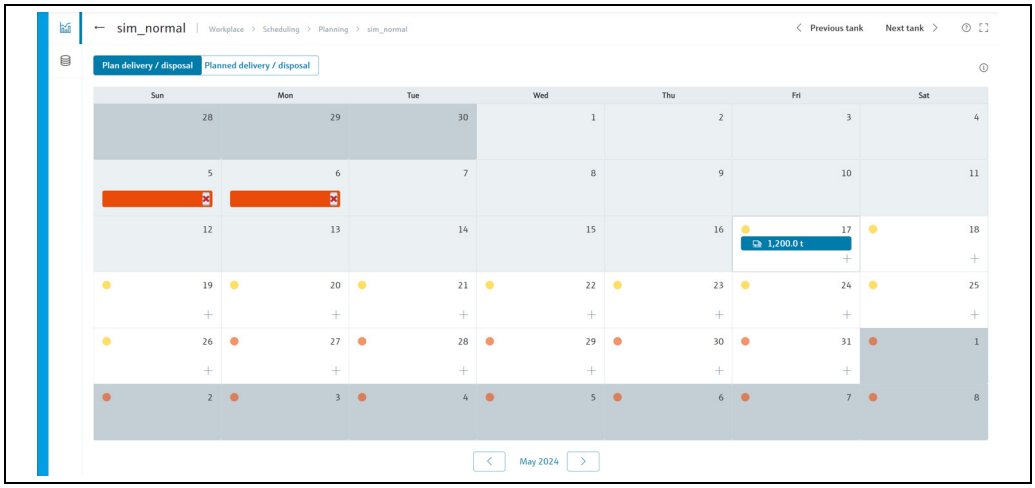
Color	Standard tanks	Recycling tanks
Red	"Safety stock": The forecast value is below the safety stock.	"Safety stock": The forecast value is above the safety stock.
	Out of service	Out of service

Click on the ⓘ button to the top right of the calendar to display the legend.

00:00 (midnight) is the time that is used to determine the color or the tank status for the particular date. For example, if the "Ship point" is reached at 4 a.m. (04:00) on May 15, and the "Safety stock" is reached at 8:30 p.m. (20:30) that same day, May 15 is given a red marking for "Safety stock".

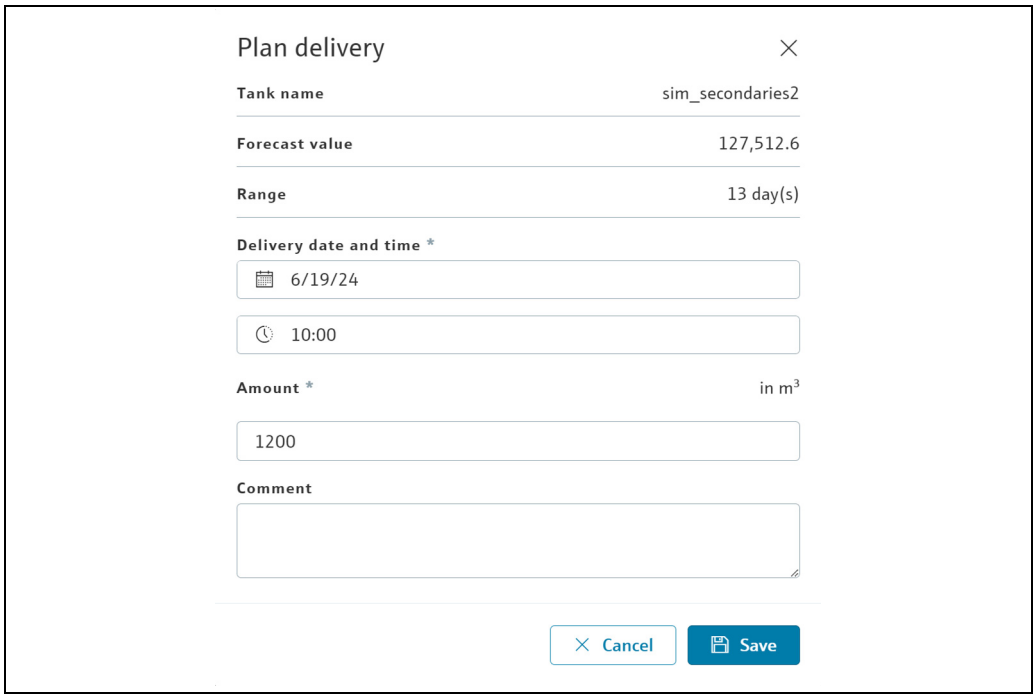
8.3.1 Plan a delivery or disposal

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Planning** tab.
4. In the overview table, click on the tank for which you want to plan a delivery or disposal.
5. The following detail view is displayed in the application window:



BA00050SEN_Planung_Lieferung_planen_V40

6. Click on the **Plan delivery/disposal** tab.
7. In the calendar, select the month for which you are planning a delivery or disposal by clicking the > button as necessary.
8. A gray "**+**" indicates the days on which a delivery/disposal is possible. Click on the gray "**+**".
9. The **Plan delivery** dialog box appears for standard tanks. The **Plan disposal** dialog box appears for recycling tanks.



BA00050SEN_Planung_planen_Pop-Up_V40

12. You can view or enter the following data here:

- **Tank name**: Indicates the tank name
- **Forecast value**: Indicates the projected level
- **Range**: This field shows 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.
- **Delivery date and time**: The day selected in the calendar is automatically used for the date. However, this can be adjusted by clicking on the button. The time starts at 00:00 and can be changed by clicking on the button or by directly typing in the numerical values.
- **Amount**: Enter the planned amount.
- **Comment**: Enter a comment or a note.

A plausibility check is carried out when the data is entered. If the entered data is implausible, an error message appears, or a notification about this is displayed directly under the input field in question → 77.

13. Click on the **Save** button to save your changes. Click on the **Cancel** button to abort the process.

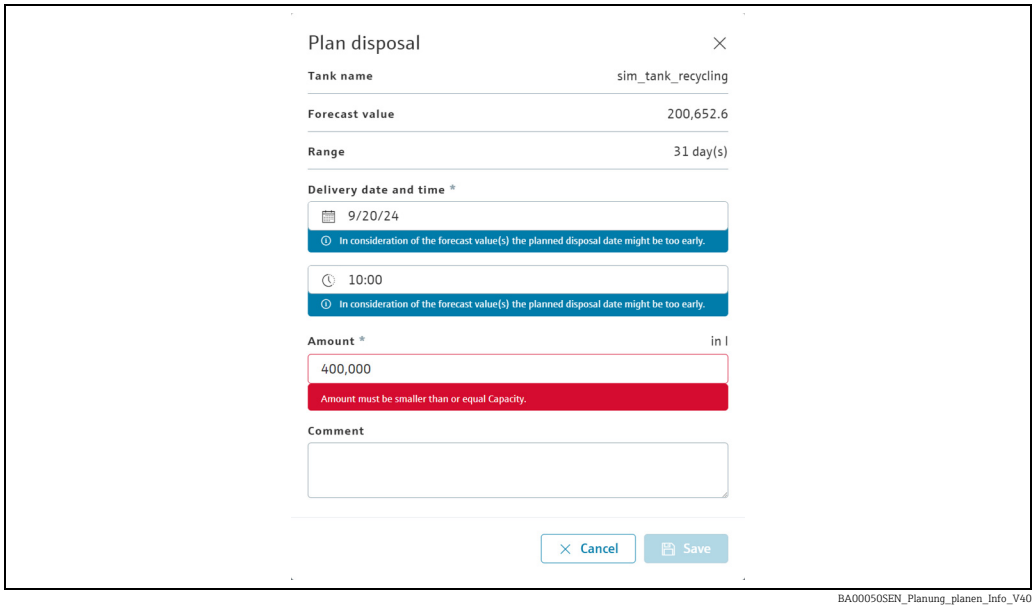
14. Deliveries and disposals are entered in the calendar with a truck icon and the planned amount. If you move the cursor over this field, the delivery amount will be displayed.

8.3.2 Plausibility check

The plausibility check only checks the latest planned delivery/disposal.

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

Whenever data is entered for a planned delivery or a planned disposal, a plausibility check is carried out. The planned amount, date and time are all checked. The planned date and the planned time are checked with the calculated values for the safety stock (SST) and plan point (PP). If the planned date is before the calculated date on which the plan point will be reached, the following information message is shown: "In consideration of the forecast value(s), the planned delivery/disposal date might be too early". If the planned date is after the date on which the safety stock will be reached, the following information message is shown: "In consideration of the forecast value(s), the planned delivery/disposal date might be too late" .
If the planned amount is e.g. over the capacity of the tank, the following error message is shown: "Amount must be smaller than or equal to Capacity.".

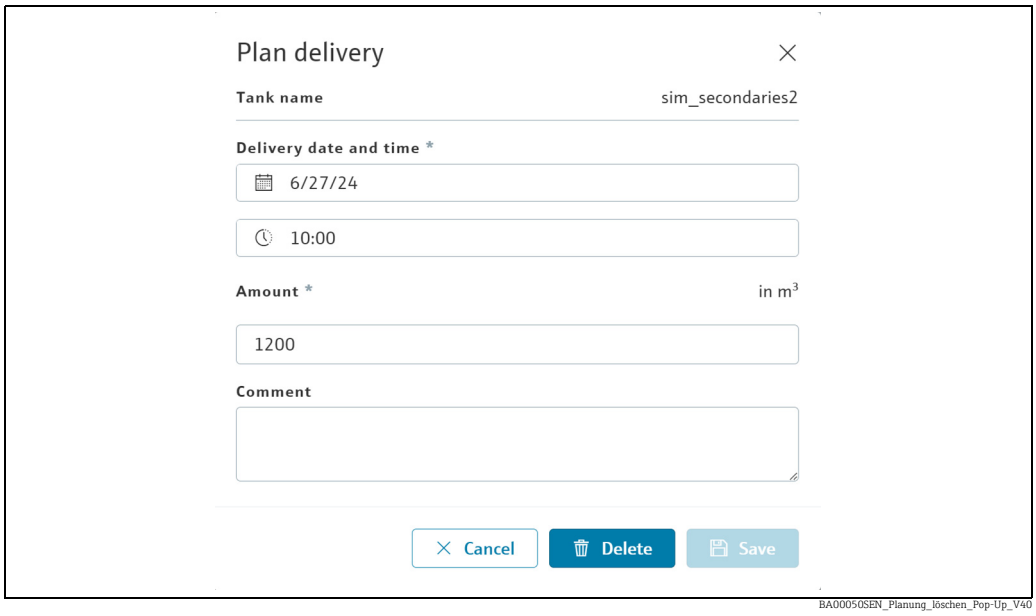


BA00050SEN_Planung_planen_Info_V40

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

8.3.3 Deleting a delivery or disposal

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Planning** tab.
4. In the table, click on the tank for which you want to delete a delivery or disposal.
5. Click on the **Plan delivery/disposal** tab.
6. In the calendar, click on the entry that you want to delete.
7. The **Plan delivery** dialog box appears for standard tanks. The **Plan disposal** dialog box appears for recycling tanks.



8. Click on the **Delete** button to delete the delivery or disposal.
9. The prompt "Do you really want to delete?" is displayed.
10. Click on the **OK** button to delete the entry. Click on the **Cancel** button to abort the process.

8.3.4 Editing a delivery or disposal

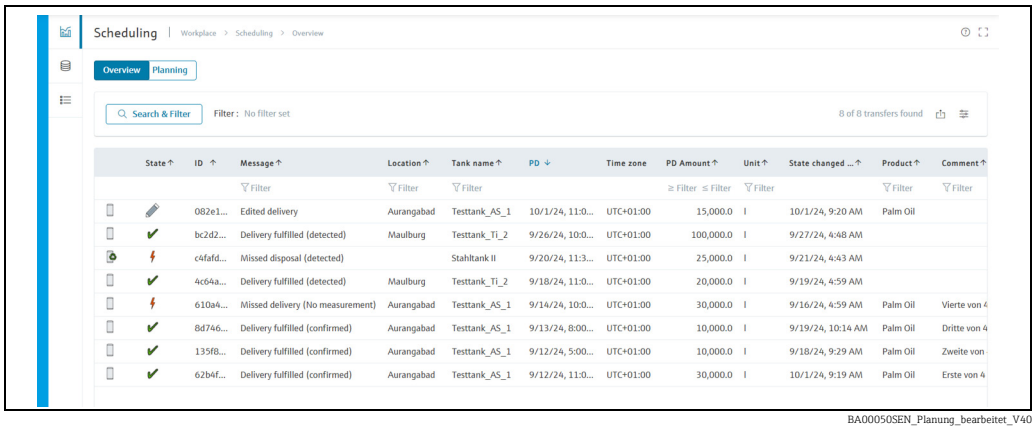
Deliveries or disposals with one of the following statuses can be edited:

- 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.

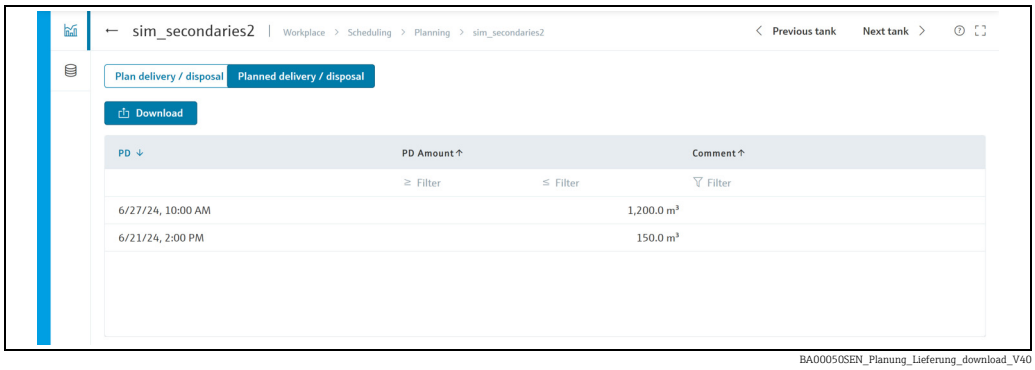
1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Planning** tab.
4. In the overview table, click on the tank for which you want to edit a delivery or disposal.
5. Click on the **Plan delivery/disposal** tab.
6. In the calendar, click on the entry that you want to edit.
7. The **Plan delivery** dialog box appears for standard tanks. The **Plan disposal** dialog box appears for recycling tanks.
8. Edit the desired data, e.g. enter a different amount in the **Amount** field.
9. Click on the **Save** button to save your changes. Click on the **Cancel** button to abort the process.
10. Deliveries and disposals are entered in the calendar with a delivery van icon and the planned amount. If you move the cursor over this field, the delivery amount will be displayed.
11. The status of the edited delivery or disposal is changed to "Edited" in the overview table and displayed with the symbol.



BA00050SEN_Planung_bearbeitet_V40

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

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Scheduling** menu item.
3. Click on the **Planning** tab.
4. In the overview table, click on the tank for which you want to display the deliveries or disposals.
5. Click on the **Planned delivery/disposal** tab.
6. The following detail view is displayed in the application window:



BA00050SEN_Planung_Lieferung_download_V40

7. All the deliveries or disposals for the selected tank are listed in the table, with information on the date (**PD** column), amount (**PD amount** column) and a comment.
8. Click on the **Download** button to download the table as an Excel spreadsheet.

9 Totaling – Workplace > Totaling

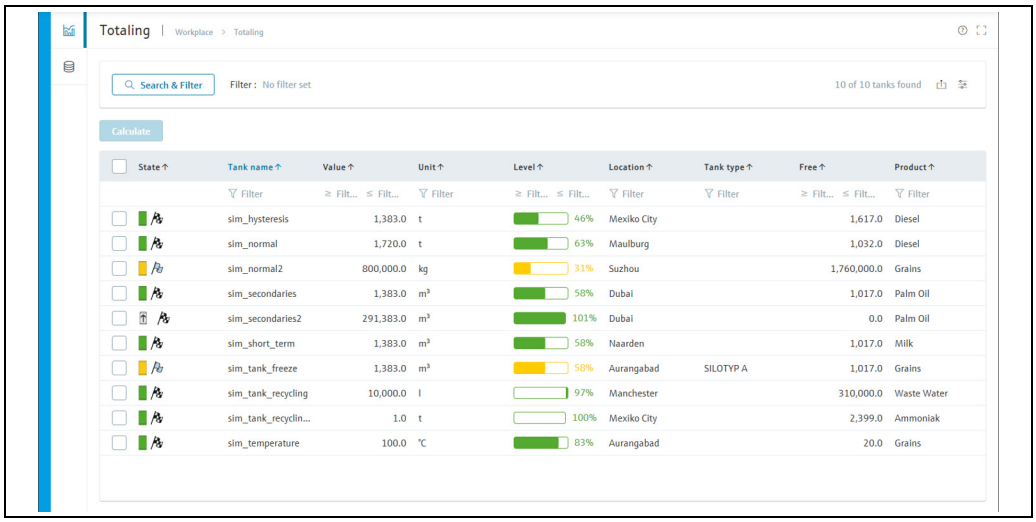
The **Totaling** menu item is available to users with **Read only**, **Scheduler** or **Operator** configured as their user role.

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

9.1 Totaling

In the **Totaling** menu item, it is possible to add up the values of the **Value**, **Capacity**, **Free**, **PD amount** and **Monetary value** fields. The totalized **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.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Totaling** menu item.
3. The following view is displayed in the application window:



BA00050SEN_Arbeitsplatz_Summierung_V40

4. In the table, select the checkboxes of the tanks that are to be totaled.
   The table can first be filtered using the filter functions in order to select the desired tanks.

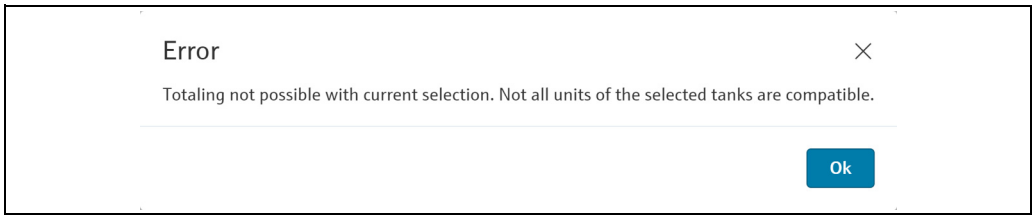
At least one tank must be selected for the calculation.

In order for the monetary value to be calculated, a price must first be entered in the **Product details** tab in the **Configuration** menu → 143.

Only tanks with convertible units and currencies can be totaled.

Selecting the overarching checkbox in the column header will select (activate) all tanks that are currently displayed in the table. Deselecting this checkbox will deselect (deactivate) all currently displayed tanks.

5. Click on 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.

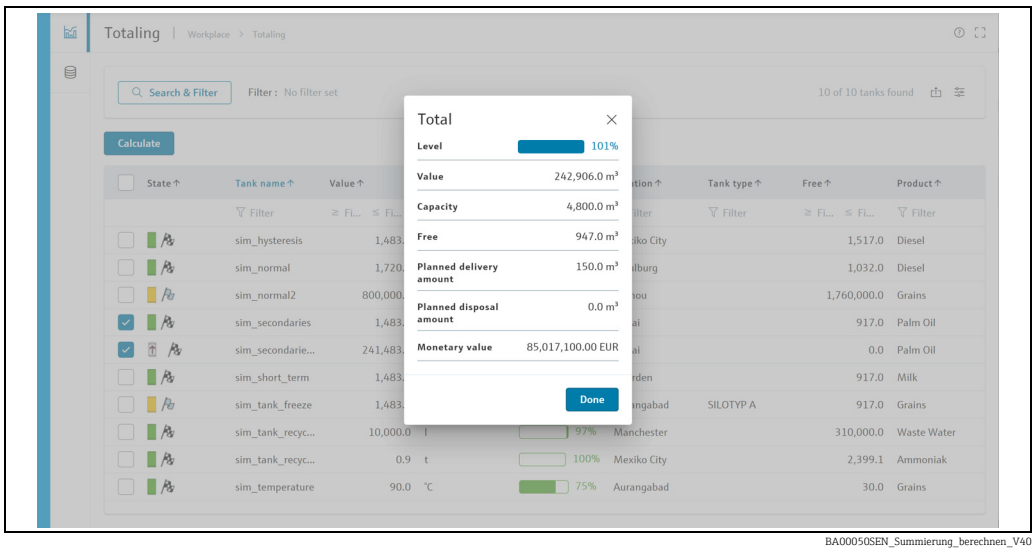


BA00050SEN_Summierung_Fehlermeldung_V40

5. Click on the **Ok** button to confirm the error message. Make sure that the tanks selected for the calculation are compatible.

You can specify preferred units and currencies in the user settings. Convertible values are then converted into this preferred unit or currency, and the tanks can then be totaled. → 93

6. The following detail view is displayed in the application window:



BA00050SEN_Summierung_berechnen_V40

7. Click on the **Done** button to close the calculation. The detail view is closed and the picklist is displayed. You can then carry out a new calculation.

If it is not possible to calculate a monetary value, an information message as to why the calculation was not performed is displayed under the monetary value line.

10 Viewing analysis data – "Analysis" workplace

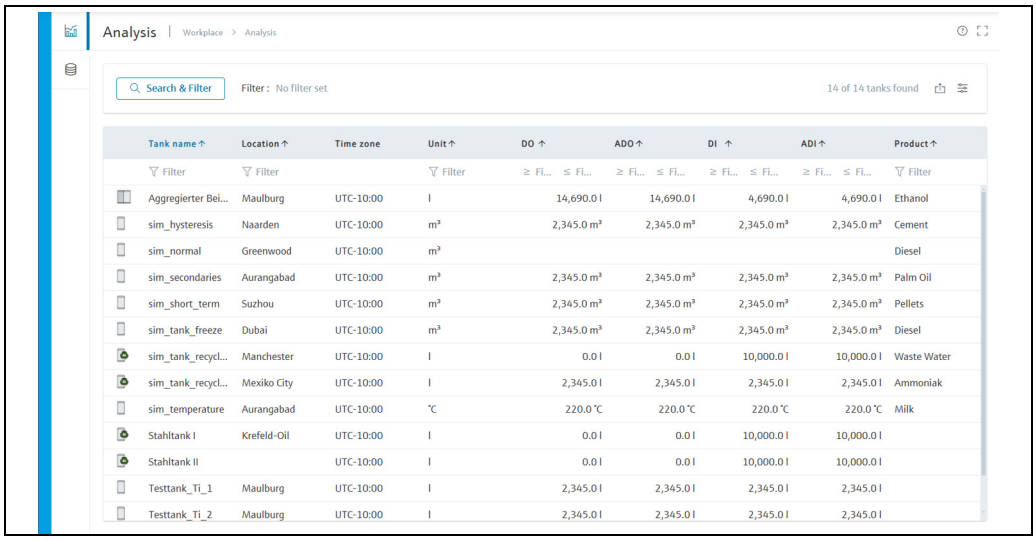
The **Analysis** menu item is available to users with **Scheduler** or **Operator** configured as their user role.

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

This menu item allows you to view important indicators for the inflows and outflows of the individual tanks as data and charts. You can use these data and charts to analyze your business, warehouse and logistics processes and use them as the basis for future planning. You can export all the information to an Excel spreadsheet. In addition, it is also possible to print out the charts.

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, prior to transport, the tank service status should be set accordingly → 47.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Analysis** menu item. A list of the tanks assigned to you is displayed.



BA00050SEN_Arbeitsplatz_Analyse_V40

3. In the table, click on the tank whose analysis data you want to view.
4. You can choose between the following tabs:
Previous day and **KPIs**.

10.1 "Analysis" overview table

Clicking on the button in the table header in the overview opens a context menu. Via this context menu, you can show, hide and move table columns.

The following columns are available for the overview table:

Columns	Description
Planning type	The planning type is displayed: "Standard tank" or "Recycling tank"
Location	Indicates the tank location. The location is the name of the location. The name is selected in the **Configuration** menu, **Tank** menu item, **Location** field. The location is specified in the **Location** menu item.
Tank name	Indicates 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 measured value (primary value) is specified via the **Unit** field in the **Tank details** tab. In the case of mass units and volume units, priority is given to your 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.
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. This field is empty for recycling tanks.
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. This field is empty for standard tanks.
Product	Indicates the product in the tank.

10.2 Previous day

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

BA00050SEN_Analyse_Vorheriger-Tag_V40

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

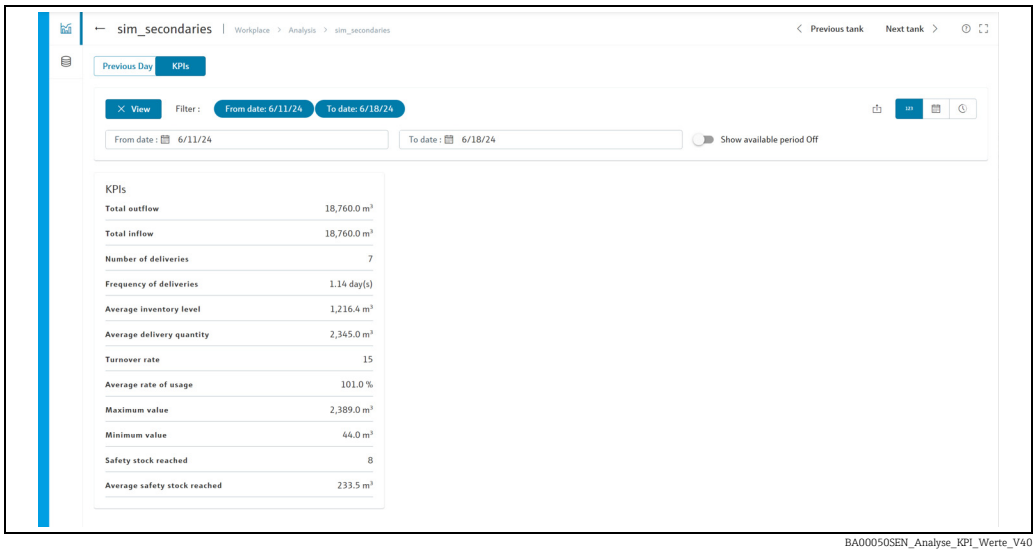
Descriptions of the fields

Field	Description
Daily outflow	Displays the calculated daily outflow for the date entered.
Average daily outflow/ average daily inflow	▪ Standard tanks: Average daily outflow ▪ Recycling tanks: 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.
Daily inflow	Indicates the inflow on the previous day.
Days until safety stock is reached	Indicates 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 the value is "0", the **Days until the safety stock is reached** field is empty.
Next planned delivery/Next planned disposal	▪ Standard tanks: Displays the next planned delivery ▪ Recycling tanks: Displays the next planned disposal

10.3 KPIs (key performance indicators)

10.3.1 Show data

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



BA00050SEN_Analyse_KPI_Werte_V40

The **View** button opens the picklists.
Using the **From date** and **To date** fields, you can enter a period for which you want to analyze the values. If you activate the **Show available period** slider, all the saved values will be analyzed.

By default, the **From date** field displays the date 8 days prior to the current day if no period has been selected. By default, the **To date** field displays the date 1 day prior to the current day if no period has been selected.

If the **Show available period** slider is activated, the **From date** and **To date** will be set to the period for which data is available. The **Show available period** slider is deactivated as soon as the user changes the **From date** or **To date**.

Descriptions of the fields

Field	Description
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	▪ Standard tanks: Displays the average delivery quantity for the period entered. ▪ Recycling tanks: Displays the average disposal quantity for the period entered. 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.
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: (**Average inventory level** divided by the **Optimum**) * 100 If "Optimum" has been disabled or if the value is "0", the system calculates with the capacity entered. ▪ Calculation for recycling tanks: (**Average inventory level** divided by the **Safety stock**) * 100 If "Safety stock" has been disabled, the system calculates with the capacity entered.
Maximum value	Maximum value for the period entered.
Minimum value	Minimum value for the period entered.
Safety stock reached	Specifies how many 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: Measured value < value entered for safety stock ▪ Calculation for recycling tanks: Measured value > value entered for safety stock ▪ All measured values within the set hysteresis are not counted (→ 109). ▪ If "Safety stock" has been disabled, the **Safety stock reached** field is empty. ▪ If the value for "Safety stock" is "0", the **Safety stock reached** field is "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. If "Safety stock" has been disabled, the **Average safety stock reached** field is empty. If the value for "Safety stock" is "0", the value in the **Average safety stock reached** field is also "0".

10.3.2 Exporting data

The data for the selected period can be downloaded as an Excel file.

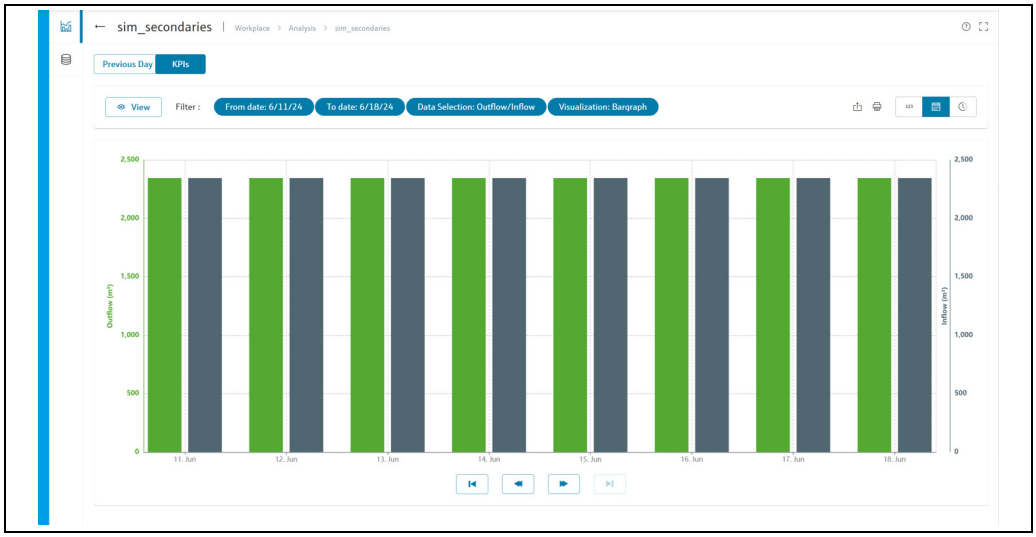
The Excel file contains the following data: Tank name, Location, From date, To date, Total outflow, Total inflow, Number of deliveries, Frequency of deliveries.

Click on the button to export the data as an Excel file.
The "[Tank name]_KPI.xlsx" file is downloaded.

10.3.3 Chart daily

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

Click on the button.
The chart daily is displayed on the screen.



BA00050SEN_Analyse_Diagramm_Tag_V40

Clicking on the **View** button will open a window where you can adjust the settings for the chart.
Using the **From date** and **To date** fields, specify a period for **Chart daily**.
In the **Data selection** field, select the data that is to be shown in the chart: **Outflow/inflow**, **Outflow only**, **Inflow only** or **Delta only**.
In the **Visualization** field, select the chart type: **Bargraph** or **Line**.

If you activate the **Show available period** slider, all available values will be analyzed.

If you move the cursor over a graph in the chart, a window appears with the selected data (e.g. outflow), the specific measured value and the time stamp.

Clicking on the button moves the displayed time period forward by the amount of time for the currently selected period (into the past).
Clicking on the button moves the displayed time period forward by 1 day (into the past).
Clicking on the button moves the displayed time period backward by 1 day (into the future).
Clicking on the button moves the displayed time period backward by the amount of time for the currently selected period (into the future).

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

Exporting chart data

The chart data for the selected period can be downloaded as an Excel file.

The Excel file contains the following data: Tank name, Time stamp, From date, Outflow, Inflow and unit.

Click on the button to export the data as an Excel file.
The "[Tank name]_ChartDaily.xlsx" file is downloaded.

Printing the chart

The displayed chart can be saved as an image file (.png file).

Click on the button to export the data as an image file.
The "[Tank name]_ChartDaily.png" file is downloaded.

10.3.4 Chart hourly

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

24 values per day are shown.

Click on the button.
The chart hourly is displayed on the screen.

BA00050SEN_Analyse_Diagramm_Stunde_V40

Clicking on the **View** button will open a window where you can adjust the settings for the chart.
Using the **From date** and **To date** fields, you can specify a period for **Chart hourly**.
In the **Data selection** field, select the data that is to be shown in the chart: **Outflow/inflow**, **Outflow only**, **Inflow only** or **Delta only**.
In the **Visualization** field, select the chart type: **Bargraph** or **Line**.

If you activate the **Show available period** slider, all available values will be analyzed.

If you move the cursor over a graph in the chart, a window appears with the selected data (e.g. outflow), the specific measured value and the time stamp.

Clicking on the button moves the displayed time period forward by the amount of time for the currently selected period (into the past).
Clicking on the button moves the displayed time period forward by 1 day (into the past).
Clicking on the button moves the displayed time period backward by 1 day (into the future).

Clicking on the ▶| button moves the displayed time period backward by the amount of time for the currently selected period (into the future).

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

Exporting chart data

The chart data for the selected period can be downloaded as an Excel file.

The Excel file contains the following data: Tank name, Time stamp, From date, Outflow, Inflow and unit.

Click on the button to export the data as an Excel file.
The "[Tank name]_ChartHourly.xlsx" file is downloaded.

Printing the chart

The displayed chart can be saved as an image file (.png file).

Click on the button to export the data as an image file.
The "[Tank name]_ChartHourly.png" file is downloaded.

11 Viewing tank locations on the map – Map" workplace

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

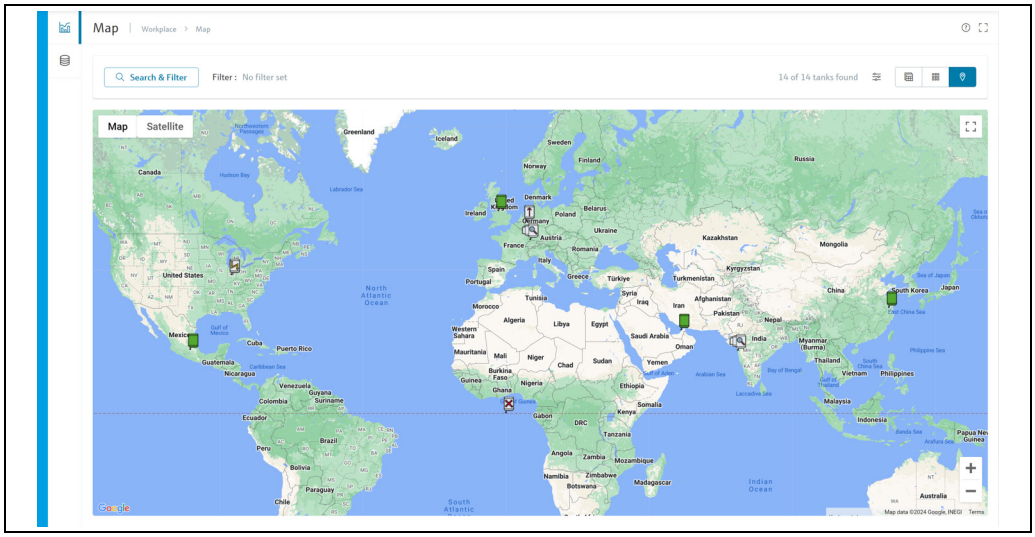
You can use this menu item to get an overview of the locations of the individual tanks on Google Maps. The tanks can be filtered by Tank name (or Silo name/Object name), Tank group, Product, Location and Favorite. You can view detailed information on every tank, e.g. value, planned deliveries or planned disposals.

11.1 Viewing the map and associated information

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 specific location. For the location, the geographical coordinates (longitude and latitude) must be present, or the GPS data of the gateway is used. → 138.
- The tank or aggregated tank must be assigned to a tank group.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Map** menu item. A map with an overview of the tank locations is displayed.

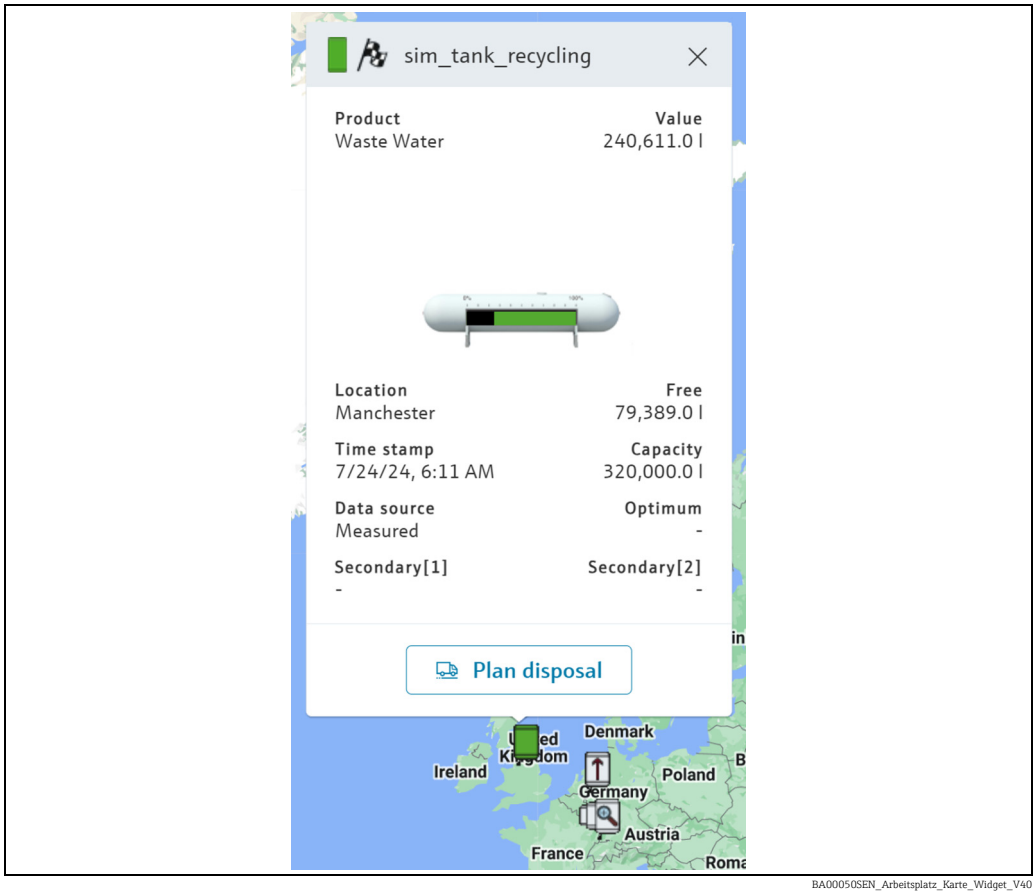


BA00050SEN_Arbeitsplatz_Karte_V40

The map view is automatically adapted to the filter criteria so that you see all the tanks for the locations in question.
If no tanks that match the filter criteria are found, the map remains empty.

11.2 Tank details

1. If you click on a tank on the map, the tank image (widget) from the personal "My tank view" opens.
2. The following data is displayed for the tank:



BA00050SEN_Arbeitsplatz_Karte_Widget_V40

– Symbols for the tank status and event, as well as the tank name.
  If GPS coordinates are available for this tank, the symbol is also shown.
– If there multiple tanks at the same location, scroll icons will be displayed.
– Tank image with bargraph
– 2 fields above and up to 8 fields below the tank image, as per the configuration in the tank overview (→ 61).
– **Plan delivery** or **Plan disposal** button.

Clicking on the tank image opens the detail view with the tabs and all the information about the tank. All the information that is also available in the Workplace > Tank can be accessed here.

3. To close the window, click on the symbol on the top right.

11.3 Planning a disposal or delivery

1. Click on the **Plan delivery** or **Plan disposal** button in the window with the tank details.
2. The **Plan delivery** or **Plan disposal** dialog box opens → 76.

12 Creating an inventory reconciliation report – Workplace > Reconciliation

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

The **Inventory reconciliation** menu item is only available in the desktop version.

12.1 Creating an ad hoc inventory reconciliation report

The inventory reconciliation report allows the creation of reports that show the development of the inventory in one or more tanks to an extremely precise degree.
The increased accuracy compared to the level measurement alone is achieved by adding the measured values of the flowmeters for the inflow to a tank (input) and the outflow from a tank (output) to the level measurements.
The inventory reconciliation report relates these three values to each other and compares them with one other, making it possible to visualize discrepancies.

The inventory 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 inventory reconciliation report and the values in the Analysis workplace.

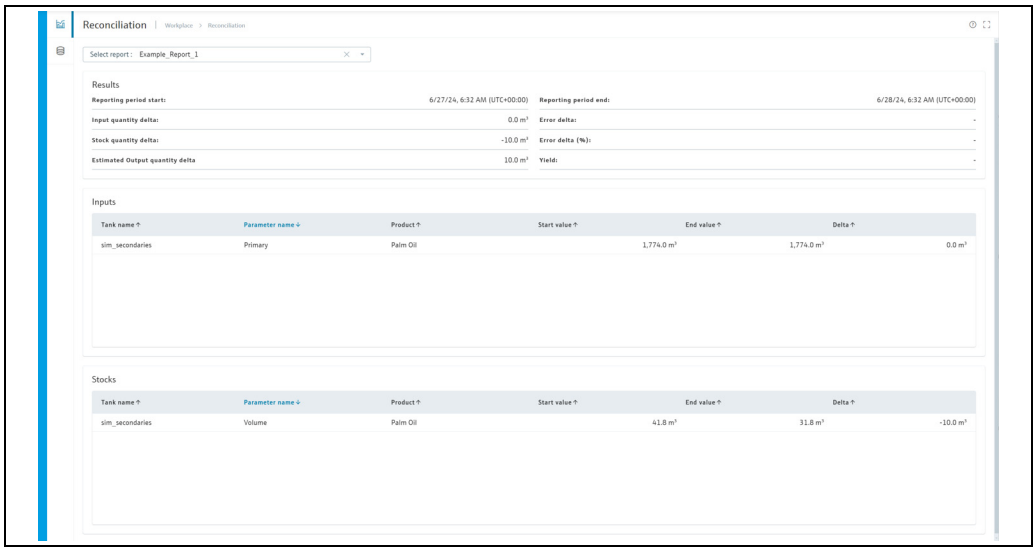
An inventory reconciliation report can be generated in different ways.
- Ad hoc, on the request of a SupplyCare user
- Regularly, on the basis of variably definable time intervals → 161

In order to create an **Ad hoc inventory reconciliation report**, at least one report must have first been created and configured. Create report: → 161.

1. In the menu bar, click on the **Workplace** menu.
2. Click on the **Inventory reconciliation** menu item.
   The following view is displayed in the application window:

BA00050SEN_Arbeitsplatz_Reconciliation_V40

3. Select a report from the **Select report** picklist. The data is calculated and displayed.



BA00050SEN_Reconciliation_Report_V40

The following information is displayed in the **Result** field:
Reporting period start: Start date and start time of the report; the time zone defined in the user settings is used for the start time
Reporting period end: End date and end time of the report; the time zone defined in the user settings is used for the end time
Input quantity delta: Value with unit for the inflow amount delta
Error delta: Value with unit for the error delta
Stock quantity delta: Value with unit for the inventory amount delta
Error delta (%): Value for the error delta in percent
Output quantity delta: Value with unit for the outflow amount delta
Yield: Value

Below the result field, the **Inputs**, **Stocks** and **Outputs** tables are displayed with the information Parameter name, Product, Start value, End value and Delta for one or more tanks.

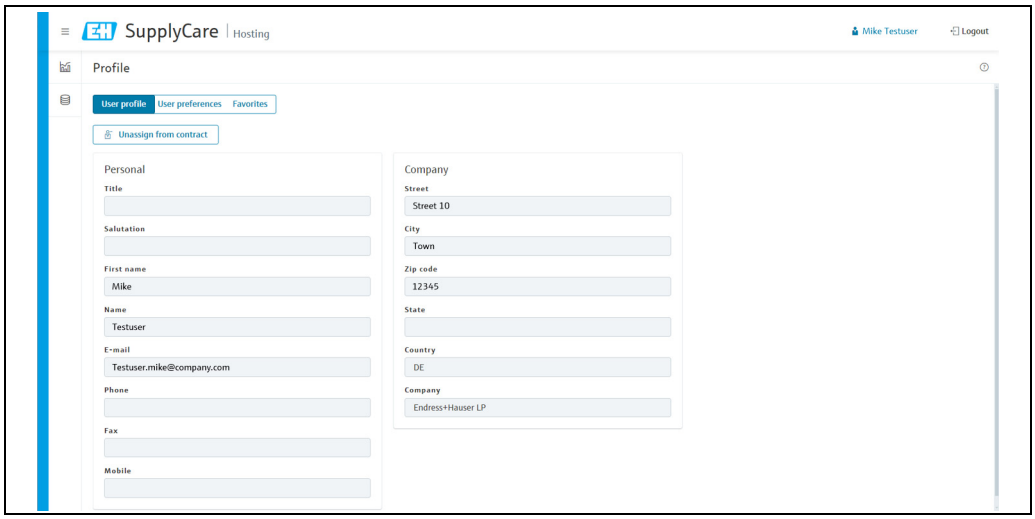
Only the tables that are part of the report are displayed.

It is not possible to change the configuration of the report here. If you want to change a report or create a new one, click on the **Configuration** menu in the menu bar and select the **Report** menu item → 161.

13 User profile and user settings

13.1 View userprofile

1. Click on the button in the header (your username).
2. The following view is displayed in the application window:

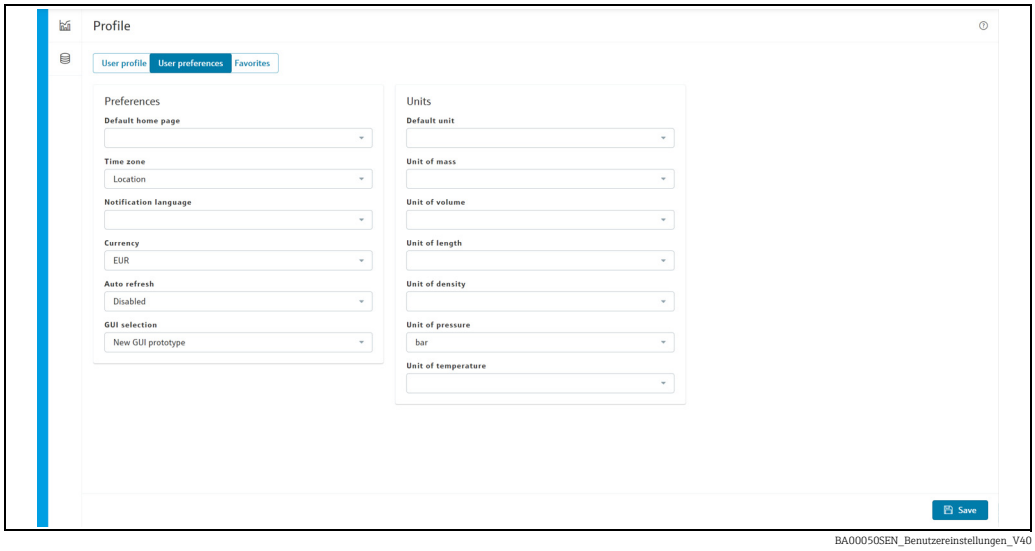


BA00050SEN_Benutzerprofil_V40

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 button in the header (your username).
2. Click on the **User preferences** tab.



BA00050SEN_Benutzereinstellungen_V40

3. Click on the button for a field to select an option or change a setting.
4. Click on the **Save** button to save your changes.
To abort the process, exit the page.

The user preferences are divided into two groups:

- **Preferences**: Default home page, Time zone, Notification language, Currency and Auto refresh
- **Units**: Default unit, Unit of mass, Unit of volume, Unit of length, Unit of density, Unit of pressure and Unit of temperature

13.2.1 Setting preferences

Default home page

The **Default home page** selected here is displayed in the application window following successful login. If a splash screen image is used in the application window, the default home page is displayed once the user clicks **Next**.

Time zone

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

Menu	Description
Workplace – Tank	▪ **Notes and files tab** ▪ **Event details tab**
Workplace – My tank view	▪ Tank overview
Workplace – Event	▪ "Event" table ▪ **Event details tab** ▪ **Event history tab**
Configuration – Tank	▪ **Tank notes tab**
Configuration – Aggregated tank	▪ **Tank notes tab**
Configuration – Location	▪ **Location notes tab**

You can select the following values:

- **Location** (Standard): The time zone of the tank location is displayed. If no tank location is defined, the value "UTC+00:00" is displayed.
- **User preference**: The selected time zone is displayed. If the time zone is empty, the value "UTC+00:00" is displayed.
- **UTC**: The value "UTC+00:00" is displayed. UTC is the standard abbreviation for Coordinated Universal Time.

Notification language

You can define the default language for notifications. The **Language** selected here is used for event and limit notifications, as well as for the names of the columns in the header of a report.

Currency

You can define a default currency. The **Currency** selected here is used in the following areas of the program:

Menu	Description
Workplace – Tank	▪ **Notes and files tab** ▪ **Event details tab**
Workplace – My tank view	▪ Tank overview
Workplace – Event	▪ Event table ▪ **Event details tab** ▪ **Event history tab**
Workplace – Scheduling	▪ **Planning tab**
Workplace – Totaling	▪ Tank overview
Workplace – Map	▪ Tank overview
Configuration – Tank	▪ **Tank notes tab**
Configuration – Aggregated tank	▪ **Tank notes tab**
Configuration – Location	▪ **Location notes tab**

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

Auto refresh

You can define how frequently the displayed data is to be updated. The following areas of the program contain data that can be automatically refreshed:

Menu	Description
Workplace – Tank	▪ Tank table
Workplace – My tank view	▪ Tank overview
Workplace – Event	▪ Event table
Workplace – Scheduling	▪ **Overview tab** ▪ **Planning tab**
Workplace – Map	▪ Tank overview

You can select the following values:
- **Disable**: The **Auto refresh** function is switched off (default setting).
- **5 min**, **10 min**, **15 min**, **20 min** or **30 min**: The data is updated after the selected period of time.

With the default setting (**Disable**), the user is automatically logged out of the system after 30 minutes.
If any of the update intervals of **5 min**, **10 min**, **15 min**, **20 min** or **30 min** are selected, the automatic logout is suppressed and the system will remain active. In any event, a forced logout will occur after 24 hours.

The **Auto refresh** field is only visible if this option has been enabled by the system administrator for a given user or for the application (i.e. for all users of this application).

13.2.2 Setting units

Tank unit filter

If you have selected Mass, Volume, Length, Density, Pressure or Temperature as the tank unit, the unit selected here is used in a number of areas in the program. These areas are specified in the following table.

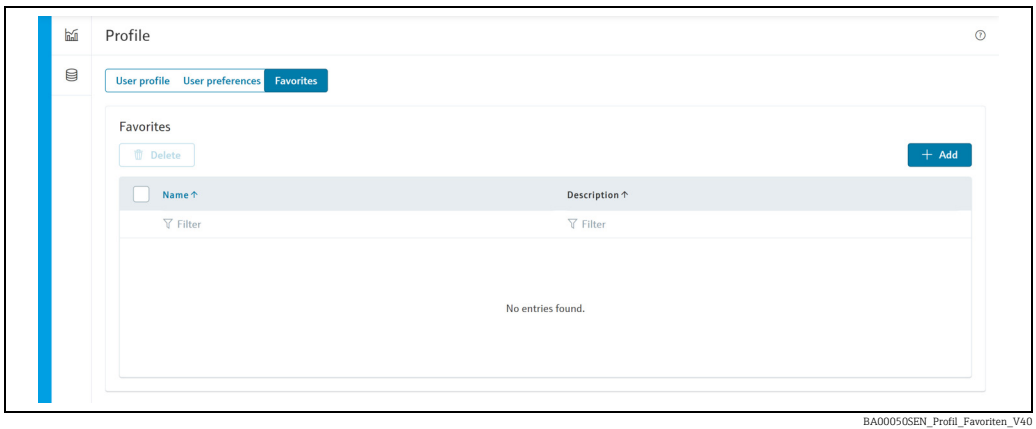
Menu	Description
Workplace – Tank	▪ "Tank" table ▪ **Inventory chart tab** ▪ **Tank details tab** ▪ **Event details tab** ▪ **Download history tab**
Workplace – My tank view	▪ Tank overview ▪ **Inventory chart tab** ▪ **Tank details tab** ▪ **Event details tab** ▪ **Download history tab**
Workplace – Event	▪ **Event details tab** ▪ **Inventory chart tab** ▪ **Tank details** tab, **Unit field**
Workplace – Scheduling	▪ "Planning" table ▪ **Plan delivery/disposal tab** ▪ **Planned delivery/disposal tab** ▪ **Overview tab**
Workplace – 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.

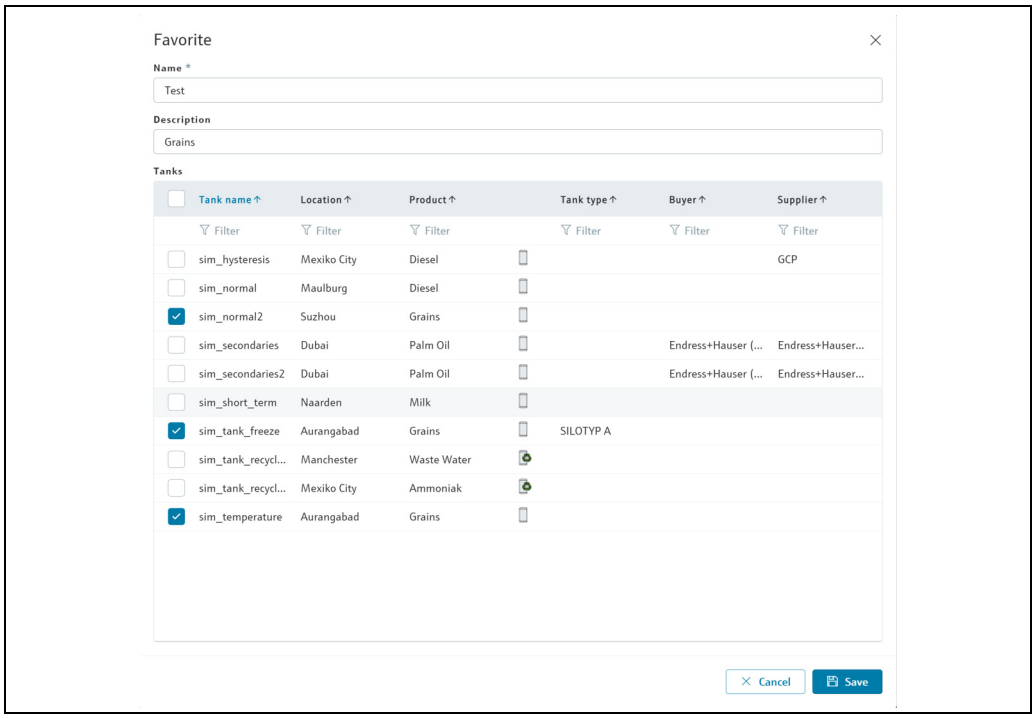
A tank can be included in multiple different favorites. There is no limit to the number of favorites that can be set.

1. Click on the button in the header (your username).
2. Click on the **Favorites** tab.
3. The following detail view is displayed in the application window:



BA00050SEN_Profil_Favoriten_V40

4. Click on the + **Add** button.
The **Favorite** dialog box appears on the screen.



BA00050SEN_Profil_Favoriten_anlegen_V40

4. Enter a unique name in the **Name** field.
You can also enter an optional description in the **Description** field.

5. Select the checkboxes of the tanks in the table that you want to add to this favorite. You can select any number of tanks, from just one tank to all the displayed tanks. By default, the maximum number of tanks that can be selected simultaneously is limited to 100. Different values can be defined for your respective contract.

The tank table can be searched and sorted using the filter functions → 28.

Selecting the checkbox in the column header will select (activate) all tanks in the table. Deselecting this checkbox will deselect (deactivate) all tanks.

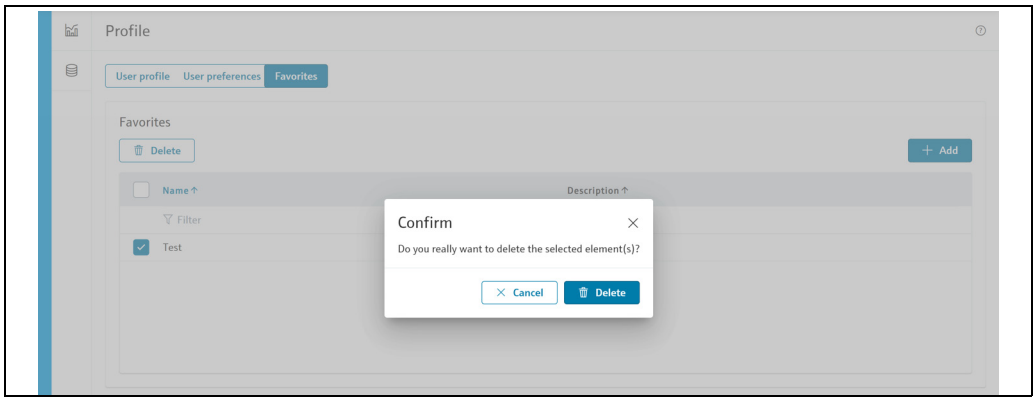
Users can only view and select the tanks that have been assigned to them.

6. Click on the **Save** button to save the favorite to the favorites list.
The favorite is saved and will then be displayed in the list.

7. To edit a favorite: Click on the favorite to be edited. The **Favorite** dialog box is opened. Modify the desired data.

8. Click on the **Save** button to save the favorite to the favorites list.
Click on **Cancel** to abort the process

9. To delete a favorite: Activate the checkbox next to the favorite to be deleted, click on the **Delete** button, then confirm the deletion process in the following confirmation prompt by clicking on the **Delete** button there (or, alternatively, cancel the process with **Cancel**).



BA00050SEN_Profil_Favoriten_loeschen_V40

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 users whose user role is configured as **Master data** can create, edit and delete users.

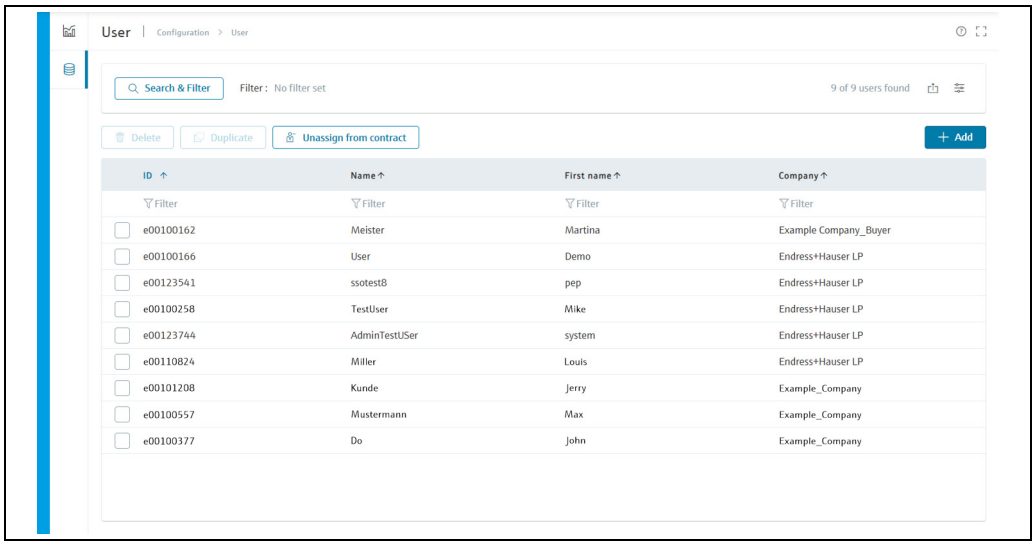
The **User** menu item is only available in the desktop version.

14.1.1 Creating a user

Creating a user using the user setup wizard

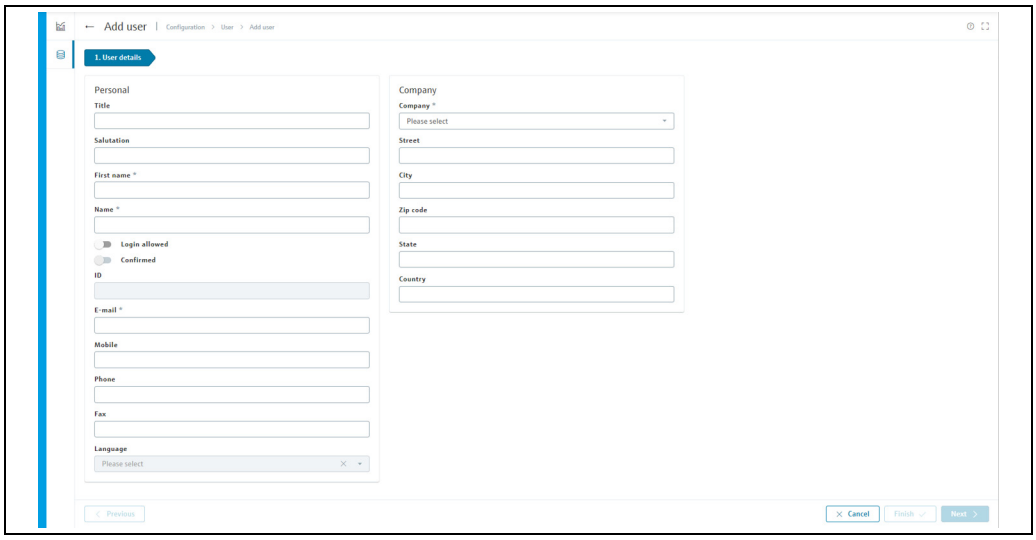
The settings for **User roles** and **Tank groups** can be subsequently changed via the tabs.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **User** menu item.
3. The following detail view is displayed in the application window:



BA00050SEN_Konfiguration_Benutzer_V40

4. Click on the **Add** button.
5. The **1. User details** view appears in the application window.



BA00050SEN_Konfiguration_Benutzer_Details_V40

6. Enter the data for the user:

- **Title**
- **Salutation**
- **Forename** (mandatory): Forename of the user
- **Surname** (mandatory): Surname of the user
- **Login allowed**: Once the user has been created and the **Login allowed** slider has been activated, Endress+Hauser checks whether the user is authorized for SupplyCare Hosting. If the user is authorized, the user receives their login data from Endress+Hauser via the e-mail address specified here.
  The **Login allowed** slider must be activated in order for a user role and tank group to be assigned to the user.
- **Confirmed** (for read-only access only): This slider is activated by Endress+Hauser.
- **ID** (login name) (for read-only access only): The **ID** is displayed once the user has been confirmed by Endress+Hauser for SupplyCare Hosting.
- **E-mail** (mandatory): The e-mail address must be unique. If an e-mail address is already registered in the SupplyCare database, this e-mail address cannot be assigned again for another user.
- **Cellular phone**
- **Phone**
- **Fax**
- **Language**: The user can be assigned a language to be used in notifications that are sent to them. A language can only be assigned once the **Login allowed** slider has been activated.
- **Company** (mandatory): Select the company from the list. Only companies that have already been created can be selected.
- **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.

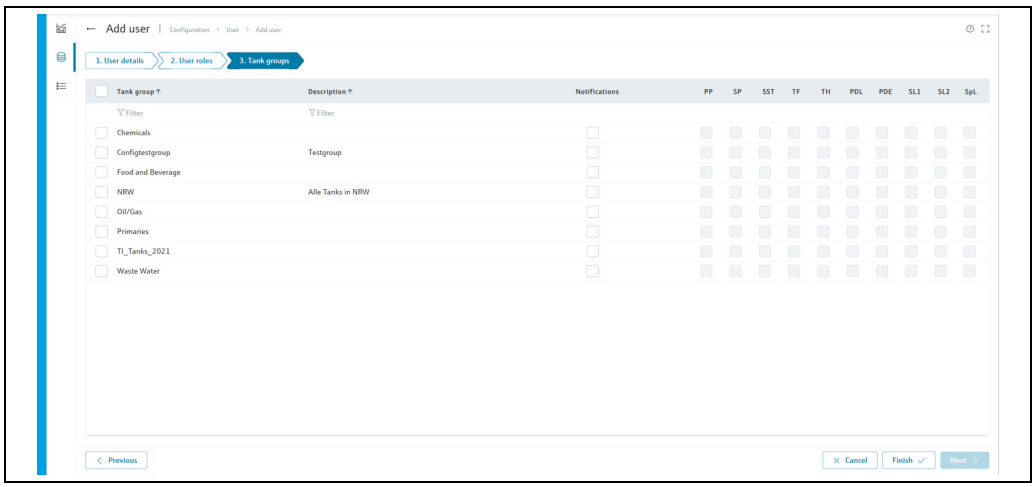
The data for **Street**, **City**, **Zip code**, **State** and **Country** can be adapted as required.

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

7. **2. User roles** (optional): Assign a user role to the user by activating the corresponding slider (→ 102). You can assign multiple user roles to a user at the same time.

BA00050SEN_Konfiguration_Benutzer_anlegen_2_V40

8. **3. Tank groups** (optional): Assign one or more tank groups to the user by activating the corresponding checkboxes (→ 102). The assigned tank groups are listed in the "Workplace – Tank" view.



BA00050SEN_Konfiguration_Benutzer_anlegen_3_V40

9. Click on the **Finish** ✓ button to confirm and complete the creation of the user.

Creating a user through duplication

Duplicating a user opens the setup wizard (→ 99).
The settings in the **1. User details**, **2. User roles** and **3. Tank groups** tabs are taken from the template.

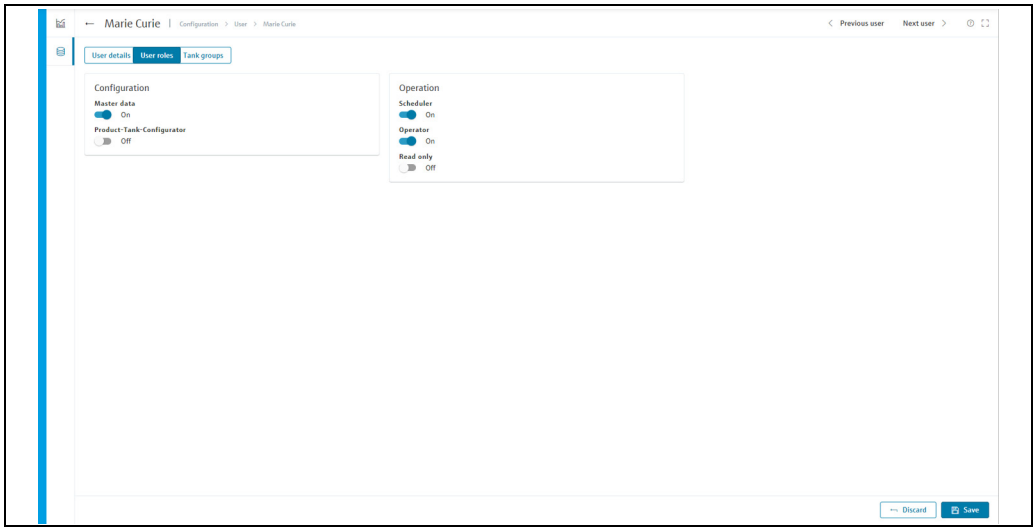
Each user must have a unique e-mail address. If the entered e-mail address already exists in the database, the following error message is shown: "The entered e-mail address has to be unique but is already used. Please choose another one."

More information on duplicating a data record → 36

14.1.2 Assigning user roles

One or more user roles can be assigned to a user in the **User roles** tab. The user receives different authorizations depending on the user role (→ 15 and → 168).

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **User** menu item.
3. In the table, click on the user for whom you want to assign user roles.
4. Select the **User roles** tab.



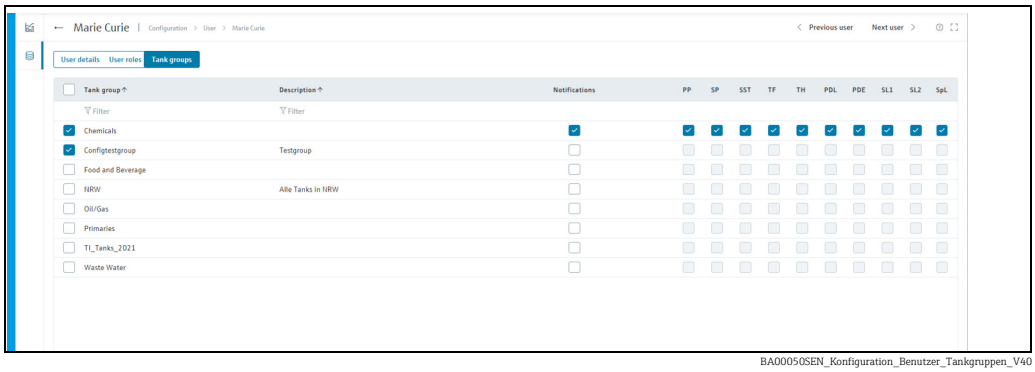
BA00050SEN_Konfiguration_Benutzer_Rollen_V40

5. To assign a user role to the user, activate the corresponding slider. You can assign multiple user roles to a user at the same time.
6. Click on the **Save** button to save your entries.
   If you want to discard your changes, click on the **Discard** button instead.

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

You can assign one or more tank groups to the user using the **Tank groups** tab. On this tab, you can also specify the tank events that the user should be informed about.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **User** menu item.
3. In the table, click on the user for whom you want to edit assignments.
4. Select the **Tank groups** tab.



BA00050SEN_Konfiguration_Benutzer_Tankgruppen_V40

5. You can assign one or more tank groups to the user by activating the corresponding checkboxes.
   To undo an assignment, deactivate the corresponding checkbox. The assigned tank groups are listed in the "Workplace – Tank" view.
6. Activate the **Notifications** checkbox if you want the user to also be informed about tank events by e-mail.
7. Select the checkboxes that correspond to the events for which the user should receive notification.

- **PP** (plan point)
- **SP** (ship point)
- **SST** (safety stock)
- **TF/SF/OF** (tank freeze/silo freeze/object freeze): Comprises all the information regarding tank freeze/silo freeze/object freeze events
- **TH/SH/OH** (tank holdup/silo holdup/object holdup): Comprises all the information regarding tank holdup/silo holdup/object holdup events
- **PDL** (planned delivery/disposal loop): Comprises all new deliveries/disposals which have been planned or deleted
- **PDE** (planned delivery/disposal events): Comprises all early, late, missed and completed deliveries/disposals
- **SL1/SL2** (secondary limit value 1/2)
- **SpL** (span limit)

8. Click on the **Save** button to save your entries.
   If you want to discard your changes, click on the **Discard** button instead.

14.1.4 Modifying a user

For further information, → 32

14.1.5 Deleting a user

For further information, → 33

A user can only be deleted if they are not assigned to any tank group, nor to any company as a contact person, nor as a recipient of reports. The user must not be logged in. The tank group assignment can be canceled in the **Tank groups** tab.

14.2 Managing tanks

Only users whose user role is configured as **Master data** and **Product-tank configurator** can create, modify and delete tanks.

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

14.2.1 Creating a tank

A tank must always be assigned to a tank group, since only tank groups can be assigned to a user.

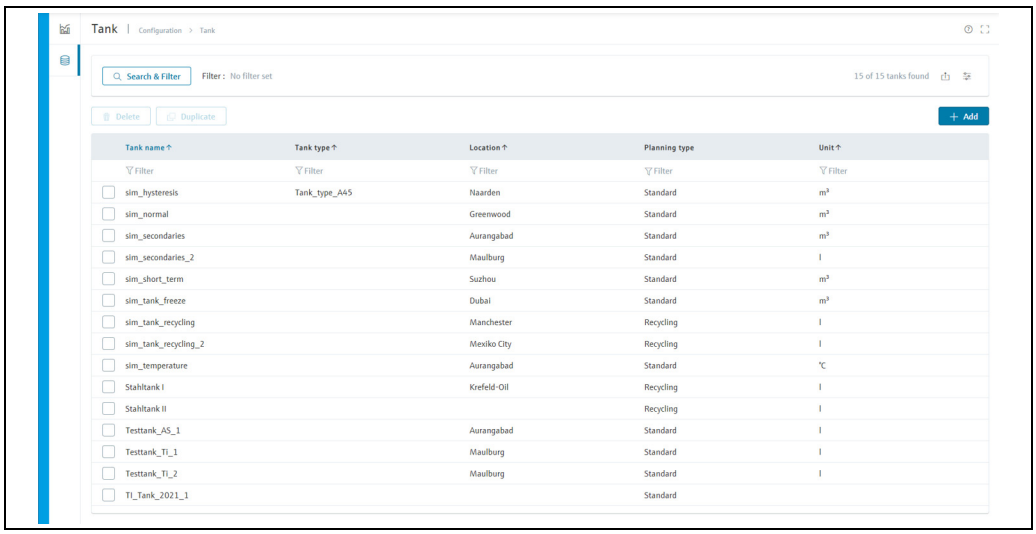
The **Location**, **Buyer**, **Supplier** and **Product** fields must first be created before you can select elements for these fields. The **Buyer** and **Supplier** are created as a Company (→ 142).

Creating a tank using the Tank setup wizard

The settings for **Tank details**, **Tank groups**, **Device mapping** and **Tank linearization** can be subsequently modified via the tabs.

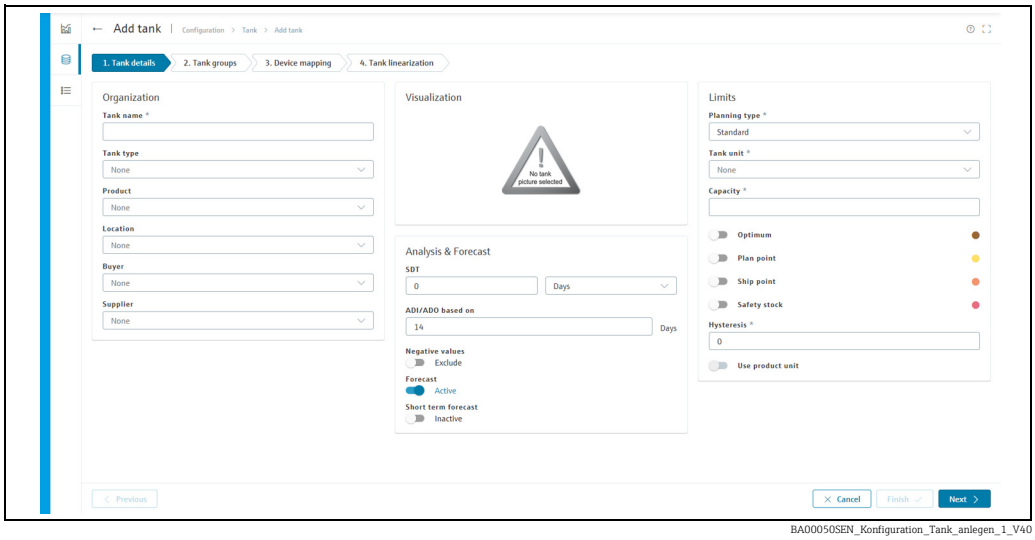
The tank setup wizard **cannot** be used to create aggregated tanks.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. The following detail view is displayed in the application window:



BA00050SEN_Konfiguration_Tank_V40

4. Click on the **Add** button.
5. The **1. Tank details** view is displayed in the application window:



BA00050SEN_Konfiguration_Tank_anlegen_1_V40

6. Enter the following mandatory data:

- **Tank name: The tank name must be unique.**
- **Scheduling type**: Select the scheduling type from the picklist. **Standard** indicates that a delivery is being scheduled; **Recycling** indicates that a disposal is being scheduled. The event messages and the way the inventory chart and levels are displayed are adapted to this scheduling type (→ 108).
- **Tank unit**: Unit that is used for the tank.
- **Capacity**: Maximum tank capacity for the selected tank unit.

Tanks that have been configured with a unit of volume, e.g. m^3, can also be displayed in the equivalent mass when using an assigned product with density. For information on how to correctly create a product, see → 143.

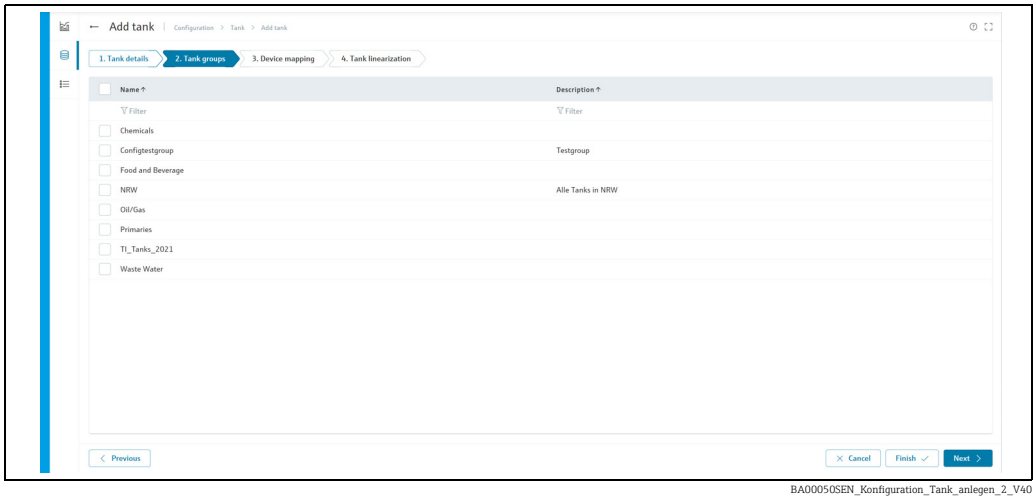
7. You can enter additional data for the tank, e.g.:

- **Tank type**: Select the tank type from the picklist.
- **Product**: Select a product from the picklist.
- **Location**: Select a location from the picklist.
- **Buyer**: Select a buyer (company) from the picklist.
- **Supplier**: Select a supplier (company) from the picklist.
- **Visualization**: Select a graphic depicting the appropriate tank shape (→ 110).
- **SDT**: Standard delivery time or standard disposal time. This value is taken into account in the **Event details** tab for the proposed resubmission date when the event is marked as **In progress** (→ 65).
- **ADI/ADO based on**: 14 days is the standard value specified here. This period is used for extrapolating in the inventory chart (→ 42).
- **Negative values**: If this option is enabled, negative measuring values are included in the ADI/ADO calculations.
- **Forecast**: If this option is enabled, a forecast of the inventory is displayed in the **Inventory chart** tab.
- **Short term forecast**: see → 57.
- **Optimum** (for standard tanks only)
- **Plan point**
- **Ship point** (for standard tanks only)
- **Safety stock**
- **Hysteresis**: The hysteresis serves to prevent constant event messages, e.g. due to a fluctuating level (→ 109).
- **Use product unit**: This option can only be activated if a product is assigned to the tank and the units of the product and the tank are compatible.

If this option is activated, the unit of the selected product is automatically used in the **Tank unit** field. The values in the fields **Capacity**, **Optimum**, **Plan point**, **Ship point**, **Safety stock** and **Hysteresis** are converted based on the density entered for the product.
To carry out processing and scheduling of tanks based on mass, the maximum capacity must be entered as a unit of volume, e.g. m^3. For information on how to correctly create a product, see → 143.

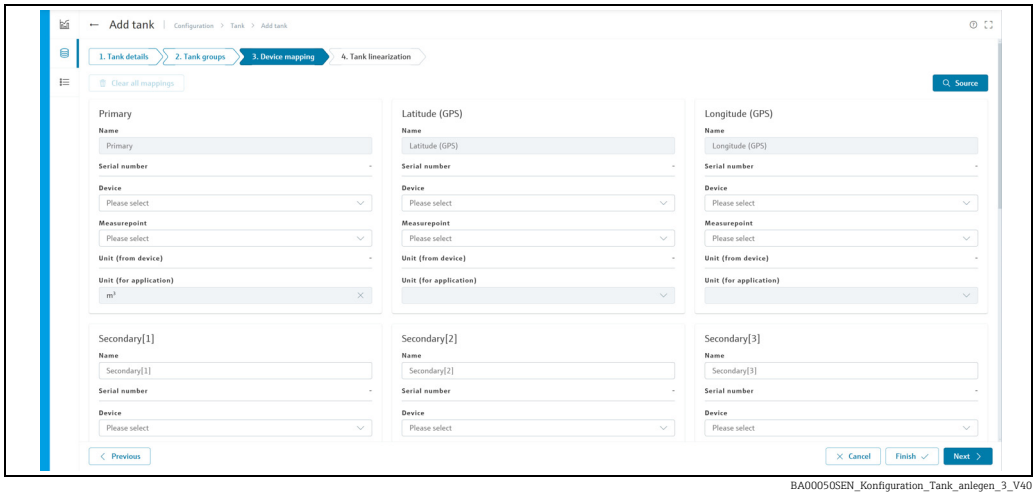
8. In the case of a standard tank, it is possible to activate the **Optimum**, **Plan point**, **Ship point** and **Safety stock** input fields individually; in the case of a recycling tank, the **Safety stock** and **Plan point** fields can be individually activated. To do so, activate the slider for the respective input field. This input field is then shown. You can deactivate these input fields again by deactivating the respective slider.

9. **2. Tank groups**: Assign the tank to an existing tank group by selecting the corresponding checkbox in the table; alternatively, create a new tank group if necessary. For information on how to create a new tank group, see → 135.



BA00050SEN_Konfiguration_Tank_anlegen_2_V40

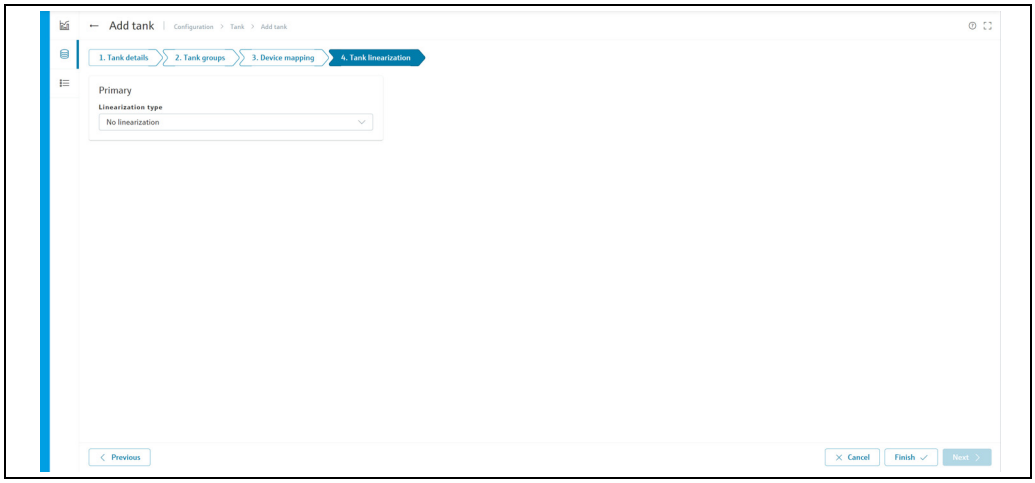
10. **3. Device mapping** (optional): Assign devices and measurement points to the tank parameters → 123.



BA00050SEN_Konfiguration_Tank_anlegen_3_V40

Device mapping is only available if the corresponding function has been activated in the selected SupplyCare contract. If **Device mapping** is unavailable and you need this to be activated, please contact Endress+Hauser: www.addresses.endress.com.

11. **4. Tank linearization** (optional): Select a linearization type → 125.



BA00050SEN_Konfiguration_Tank_anlegen_4_V40

12. Click on the **Finish** ✓ button to confirm and complete the creation of the tank.

Creating a tank through duplication

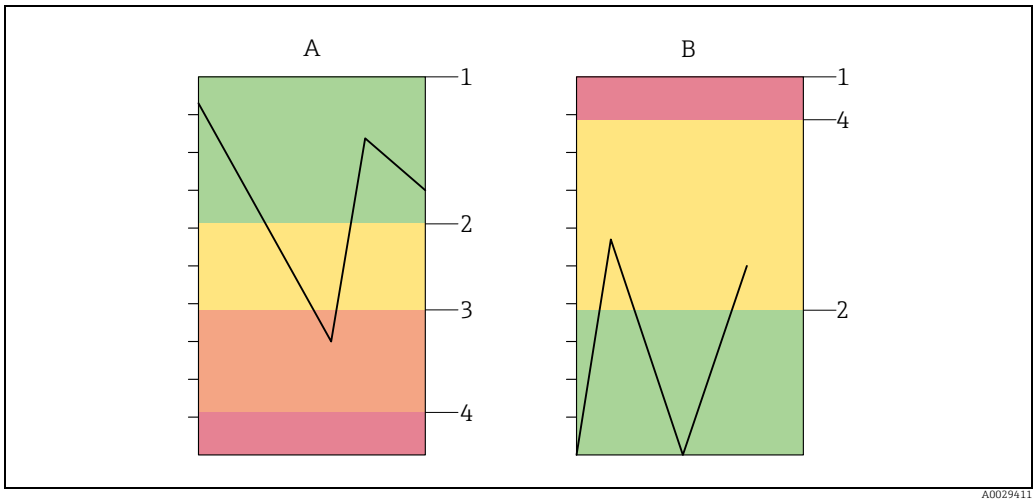
Duplicating a tank opens the setup wizard (→ 104).
The settings in the **Tank details**, **Tank groups** and **Tank linearization** tabs are taken from the template. The settings in the **Device mapping** tab are not taken from the template and must be newly created.

The tank name mist be unique. If the entered tank name is already present in the database, the following error message is shown: "The tank name already exists. Please enter a different name."

More information on duplicating a data record → 36

Standard tank and recycling tank

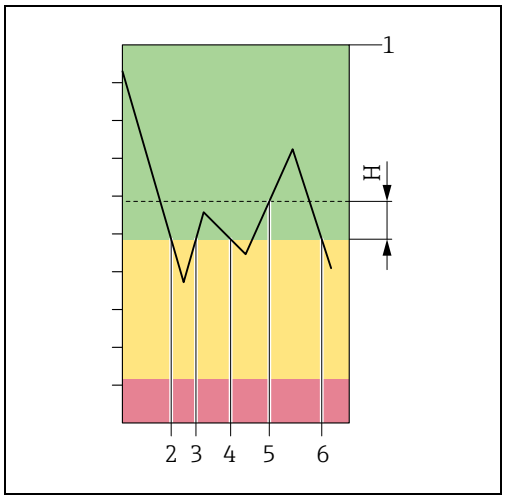
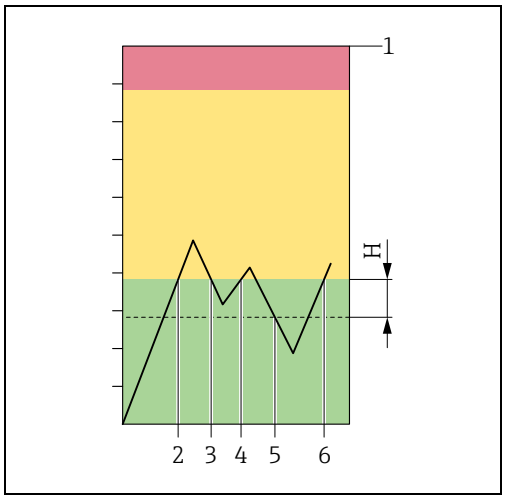
SupplyCare makes a distinction between standard tanks and recycling tanks. A standard tank is one from which a product is withdrawn. Conversely, a recycling tank is a tank that is filled with a product.
A standard tank can be changed to a recycling tank by selecting the **Recycling** option in the **Scheduling type** picklist. The display logic in the inventory chart and the notification logic are changed according to the following illustration.



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".

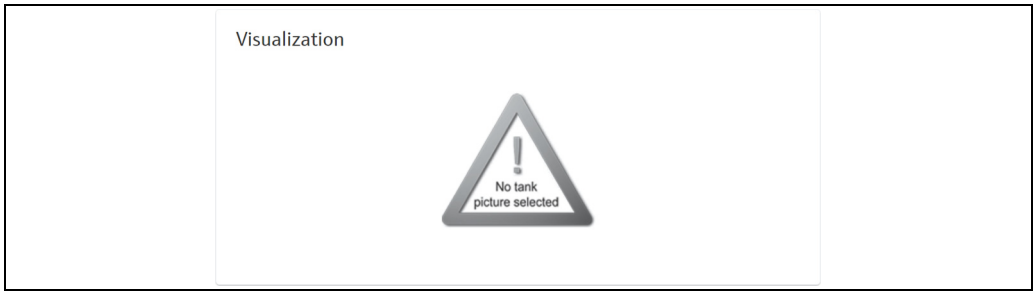
Standard tank	Recycling tank
 A0029409	 A0029410
1. Capacity 2. The level falls below the limit value for the plan point. The "Plan point reached" event is triggered. The status of the event is set to **Open**. 3. The level climbs back above the limit value for the plan point. The status for event 2 remains **Open**. The tank status switches to "OK" (green). 4. 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 climbed above the limit value for the plan point plus the hysteresis. 5. The level rises above the limit value for the plan point plus the hysteresis. Event 2 now assumes the status **Done**. 6. 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**.	1. Capacity 2. The level climbs 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. 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. The level climbs 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. The level falls below the limit value for the plan point minus the hysteresis. Event 2 now assumes the status **Done**. 6. The level climbs 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

Selecting a depicted tank shape

In the **Tank details** tab, you can select a graphic depicting the appropriate tank shape for the tank that has been created. The selected graphic is also displayed in the "Workplace – Tank" view in the **Tank details** tab.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to make changes.
4. Select the **Tank details** tab.
5. In the **Visualization** field, click on the placeholder image with the **No tank picture selected** warning sign:



BA00050SEN_Konfiguration_Tank_Bild_V40

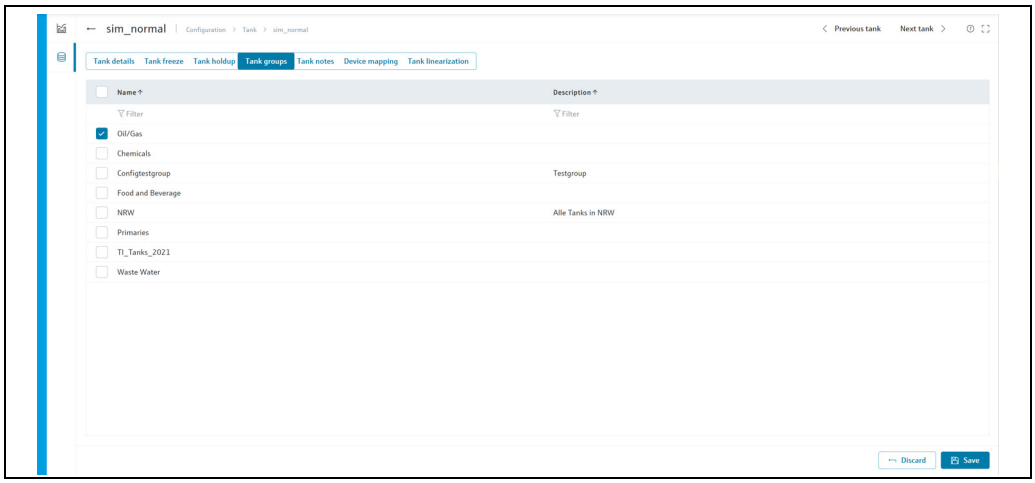
6. The **Select tank picture** dialog box is displayed.
7. Click on the picture of the tank shape that best corresponds to that of the created tank.
8. The selected picture is then displayed in the **Visualization** field.
9. Click on the **Save** button to save your selection.
   If you want to discard your changes, click on the **Discard** button instead.

Resetting a depicted tank shape

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to make changes.
4. Select the **Tank details** tab.
5. Click on the picture of the tank in the **Visualization** field. The **Select tank picture** dialog box is displayed.
6. Click on the placeholder image  .
7. The "No tank picture selected" warning sign will then be displayed in the**Visualization** field.
8. Click on the **Save** button to save your selection.
   If you want to discard your changes, click on the **Discard** button instead.

14.2.3 Changing tank group assignment of a tank

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to edit assignments.
4. Select the **Tank groups** tab.



BA00050SEN_Konfiguration_Tank_Gruppen_V40

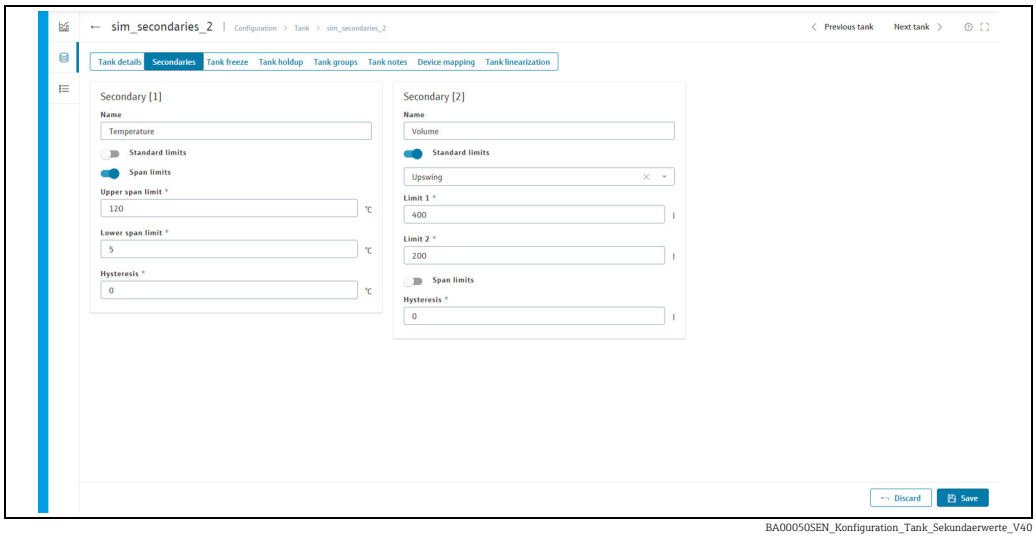
5. Assign the tank to a tank group by selecting the corresponding checkbox. Deactivate the check box to undo the assignment.
6. Click on the **Save** button to save your selection.
   If you want to discard your changes, click on the **Discard** button instead.

After saving, the table is re-sorted. Assigned tank groups are listed in the table before non-assigned tank groups, in alphabetical order.

14.2.4 Configuring secondary values

If secondary values have been assigned to the tank via the **Tank** menu item in the **Device mapping** tab, these secondary values are displayed in the **Secondaries** tab. This tab is not visible if no secondary value has been assigned to the currently selected tank.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to parameterize secondary values.
4. Select the **Secondaries** tab.



BA00050SEN_Konfiguration_Tank_Sekundaerwerte_V40

5. Activate the **Standard limits** slider if you want to monitor the secondary value using limits.
   Activate the **Span limits** slider if you want to monitor the secondary value using span limits.
6. You can enter additional information regarding the secondary values, e.g.:

- **Name**: The name is used in all views.
- Picklist: **Upswing** or **Downswing**. This selection appears when **Standard limits** has been activated and only influences **Limit 1** and **Limit 2**.
- **Limit 1**: See the following section: Display for "Downswing limits" and "Upswing limits".
- **Limit 2**: See the following section: Display for "Downswing limits" and "Upswing limits".
- **Hysteresis**: Is used for Limit 1 and Limit 2 as well as for the upper and lower span limit. The hysteresis is within these ranges.
- **Upper span limit**: Defines the monitoring range in which the secondary value is expected. The value is visible in the inventory chart.
- **Lower span limit**: Defines the monitoring range in which the secondary value is expected. The value is visible in the inventory chart.

7. Click on the **Save** button to save your selection.
   If you want to discard your changes, click on the **Discard** button instead.

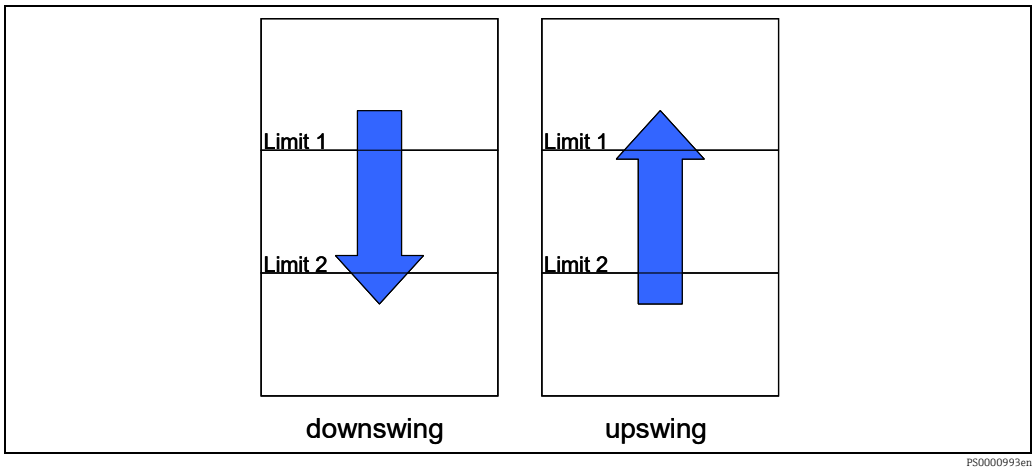
Recommendation: Monitor the secondary value either using standard limits **or** using span limits. It is not recommended that you use both methods at the same time. While this is possible, it may lead to confusion or misunderstandings.

With the span limits, a hysteresis applies for 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 changes and events are 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 "Downswing limits" and "Upswing limits"

Using the picklist, choose between the "Downswing limits" and "Upswing limits" display.

Selection	Description	Column in the "Workplace – Tank" view
Downswing	Limit 1	PP (Plan point)
	Limit 2	SST (Safety stock)
Upswing	Limit 2	PP (Plan point)
	Limit 1	SST (Safety stock)



14.2.5 Configuring tank freeze events

The **Tank freeze** tab is only available in the desktop version.

Tank freeze events are generated using an internal limit based on the latest measurement received for the tank within a defined time span, e.g. to recognize material theft, leakage or defects.

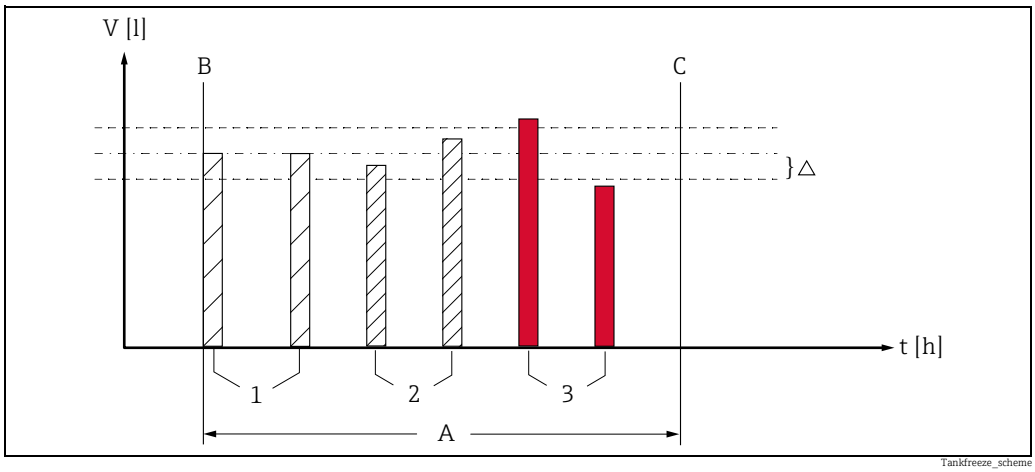
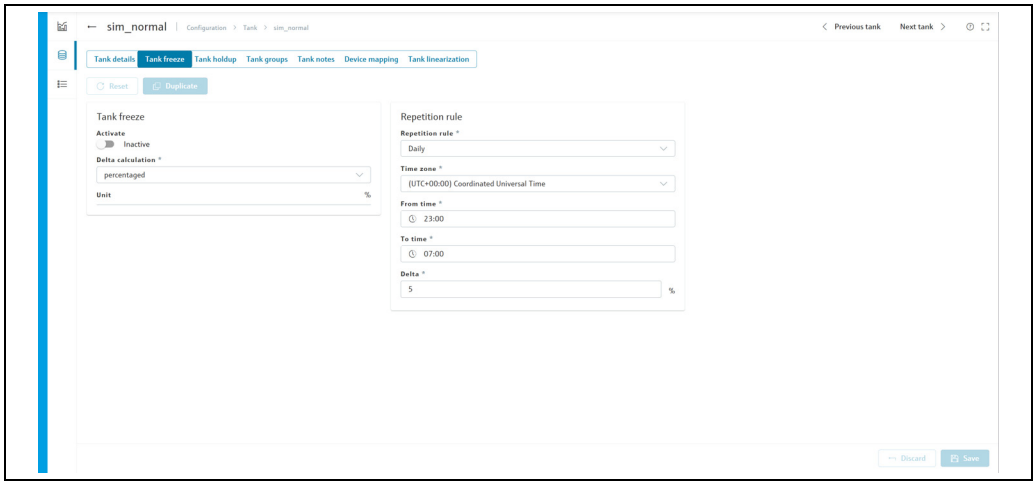


Fig. 1: Scheme for tank freeze events
A Set monitoring time
B Start of monitoring time
C End of monitoring time
1 Level at start, unchanged level
2 Level modified, but within the set freeze event delta. No tank freeze event is generated.
3 Level changed, outside of freeze event delta. A tank freeze event is created.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to configure freeze events.
4. Select the **Tank freeze** tab.



BA00050SEN_Konfiguration_Tank_Freeze_V40

5. Here, you can enter data to configure tank freeze events. This includes, for example:

- **Activate**: This option is deactivated by default. Click on the slider to activate the option.
- **Delta calculation** (mandatory): Select **absolute** to specify the **delta** (freeze event delta) as a fixed value in the selected unit for the tank. Select **percentaged** to specify the **delta** as a percentage of the configured tank capacity. The default setting for this option is **absolute**. You can switch between the absolute or relative (percentaged) setting at any time. If you change the calculation mode for the delta, the delta value for the associated monitoring period will become invalid and will need to be re-entered.
- **Unit**: Displays the unit configured for the tank capacity if **Delta calculation** has been set to "absolute". Displays "%" otherwise.
- **Repetition rule** (mandatory): Select a rule for the repetition of the monitoring period.

  Daily: Select the **From time** (start time) and **To time** (end time) for each monitoring period that is to occur daily.

  Weekly on every...: Configure monitoring periods for tank freeze events for each weekday individually.
  For more details on the configuration of the **Weekly on every...** repetition rule, refer to the following chapter "Configuring the "Weekly on every..." repetition rule" (→ 115).

You can only configure one type of repetition rule (Daily... **or** Weekly...) for a given tank. The repetition rule that was configured and saved last will always apply.

- **Time zone** (mandatory): Select the time zone to be used for the monitoring periods configured under **Repetition rule**.
- **Delta** (mandatory): Enter a positive numeric value.
  At the beginning of the monitoring period, the last measured tank value (e.g. the 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 exceeds the **Delta** (positive or negative), a tank freeze event is generated. The freeze event delta can be set separately for each monitoring period (only for the "Weekly on every..." repetition rule).

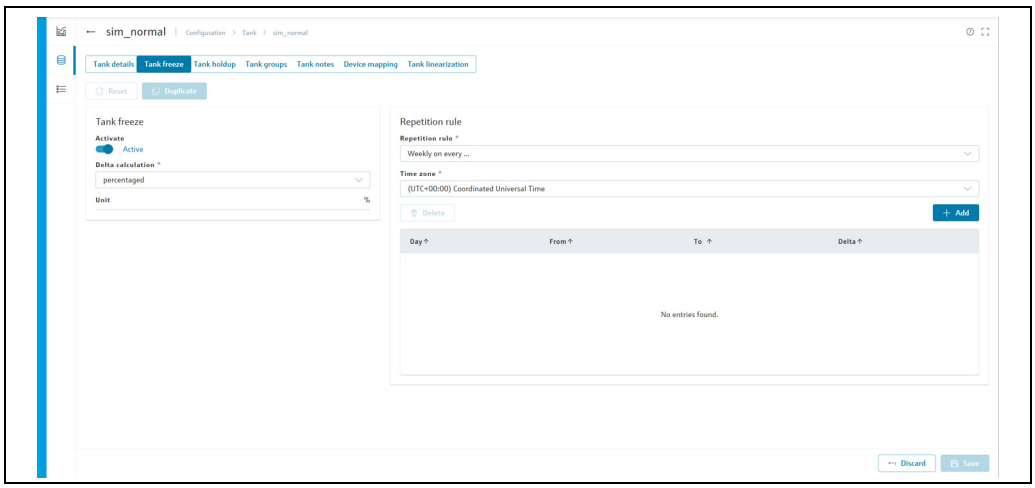
6. Click on the **Save** button to save your selection.
   If you want to discard your changes, click on the **Discard** button instead.

Use the **Duplicate** button to copy the **Tank freeze** configuration to other tanks. For more details, refer to the chapter "Copying the tank freeze configuration to other tanks" (→ 117).

Use the **Reset** button to reset the **Tank freeze** configuration to the default setting.

Configuring the "Weekly on every..." repetition rule

You can configure the monitoring times for tank freeze events for each weekday individually. Up to 25 monitoring periods per week can be configured.



BA00050SEN_Konfiguration_Tank_Freeze_weekly_V40

1. Click on the **Add** button, then select the weekday for which you want to configure the monitoring period in the pop-up window that appears.

- Select a **From time** (start time) and a **To time** (end time) for the monitoring of tank freeze events. The value for the **From time** must be less than the value for the **To time**.
- Select **all day** to set the monitoring period from 00:00 to 23:59, i.e. substituting the **From time** with 00:00 and the **To time** with 23:59.
  If **all day** is selected, the options for selecting the **From time** and **To time** are disabled and hidden.
- Select **until end of day** to set the end of the monitoring period to 23:59, i.e. substituting the **To time** with 23:59. If **until end of day** is selected, the option for selecting the **To time** is disabled and hidden.

If you want to enter a monitoring period that starts on one day and extends into the morning of the following day, proceed as follows: Select the **From time** and the **until end of day** option to set the end of the monitoring period for that specific day to 23:59. Save this configuration, then add an additional monitoring period for the following weekday that begins at 00:00, specifying the To time (end time) for this specific day as required. Select the same delta. The entire monitoring period will then relate to the measurement from the From time (start time) of the first day.

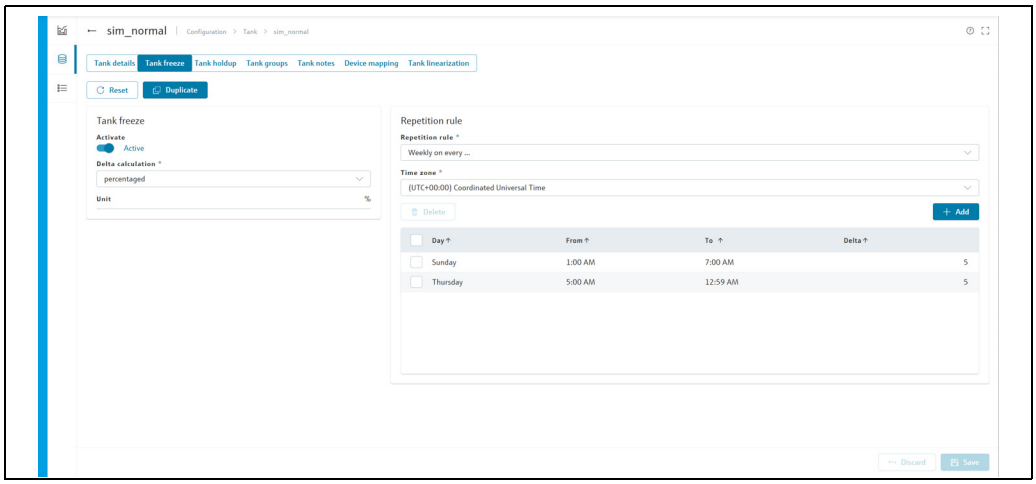
- Select a **Delta**.
- Click on the **Add** button, to add your configuration to the list of active monitoring periods.
  Alternatively, click on the Cancel button to abort the process.

2. Click on the **Save** button to save the configuration.
   Alternatively, click on the Discard button to abort the process.

Monitoring periods cannot overlap.

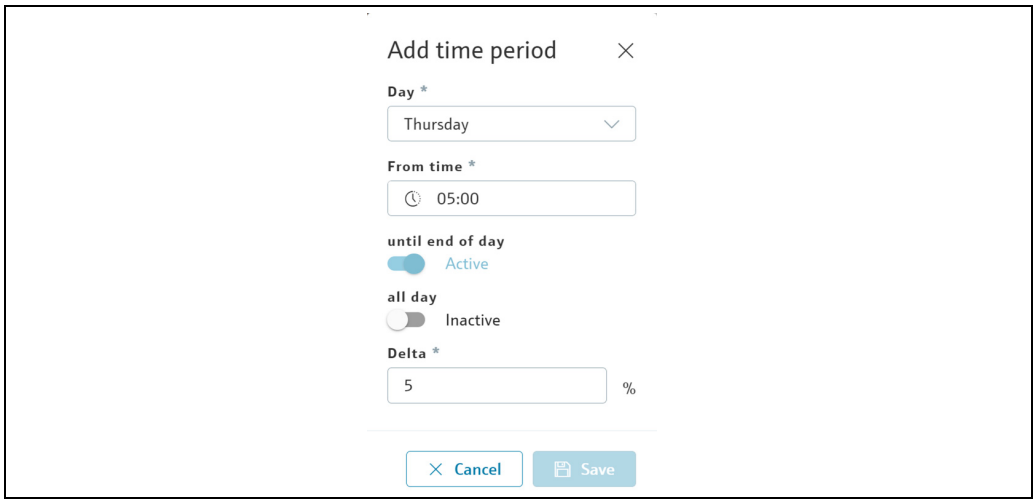
Modifying a monitoring period

1. Click on the necessary monitoring period in the list.



BA00050SEN_Konfiguration_Tank_Freeze_weekly_aendern_V40

2. The **Add time period** pop-up window appears.



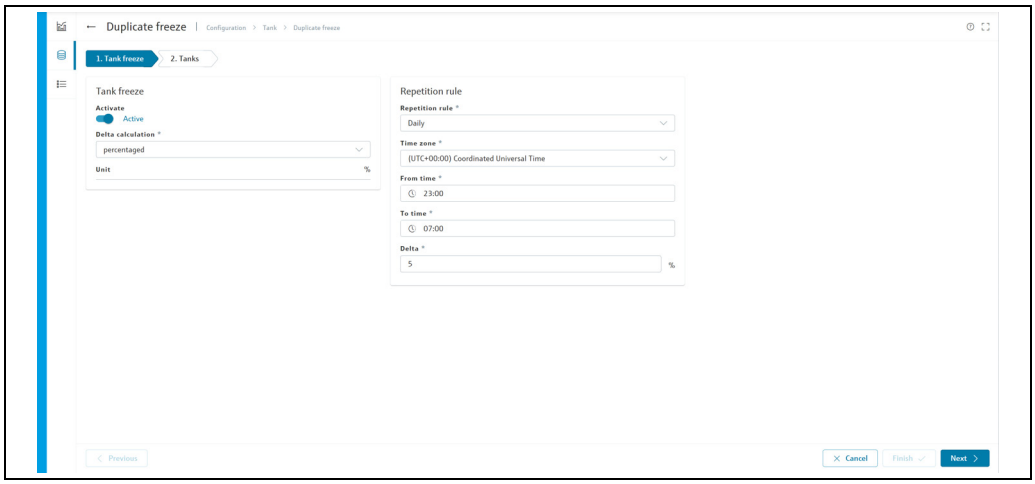
BA00050SEN_Konfiguration_Tank_Freeze_weekly_Popup_V40

3. This window displays the last saved tank freeze configuration. Modify the configuration as required.
4. Click on the **Save** button to save the new configuration; alternatively, click on **Cancel** to abort the process.
5. Click on the **Save** button of the **Tank freeze** tab to save the new configuration. Alternatively, click on the **Discard** button to abort the process.

Copying the tank freeze configuration to other tanks

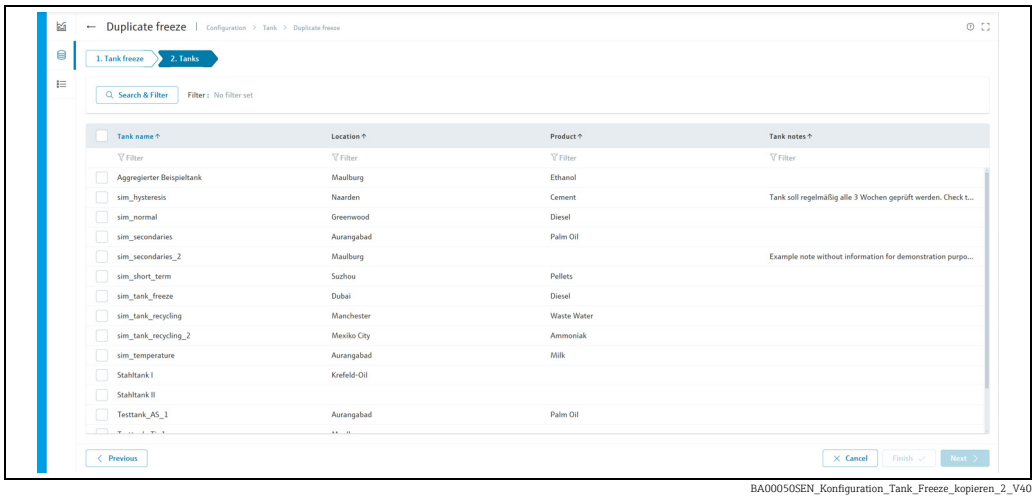
If you modify the tank freeze configuration for a tank, you can transfer the new configuration to other tanks. This means that you then don't have to adapt the configuration again for each additional tank.

1. In the **Tank freeze** tab, click on the **Duplicate** button.
2. The setup wizard opens and the **1. Tank freeze** view is displayed:



BA00050SEN_Konfiguration_Tank_Freeze_kopieren_1_V40

3. This window displays the last saved tank freeze configuration. Modify the configuration as required.
4. Clicking on **Next** > displays the **2. Tanks** view:



BA00050SEN_Konfiguration_Tank_Freeze_kopieren_2_V40

5. Select the tanks to which you want to copy the Tank freeze configuration by activating the checkboxes next to the required tanks.
   You can filter the displayed tanks by **Tank name**, **Location**, **Product**, **Tank notes** or **Tank group**.
6. Clicking **Finish** ✓ brings up the **Confirm saving configurations** dialog box with a prompt to confirm your changes.

7. Click on the ✓ **Ok** button to copy the tank freeze configuration to the selected tanks; alternatively, click on the ✕ **Cancel** button to abort the process.

14.2.6 Configuring tank holdup events

The **Tank holdup** tab is only available in the desktop version.

Like tank freeze events, tank holdup events are created using an internal limit that is based on the last measurement obtained for the tank within a defined time period.
The purpose of this monitoring function is to detect unused storage capacity, malfunctions or defects.

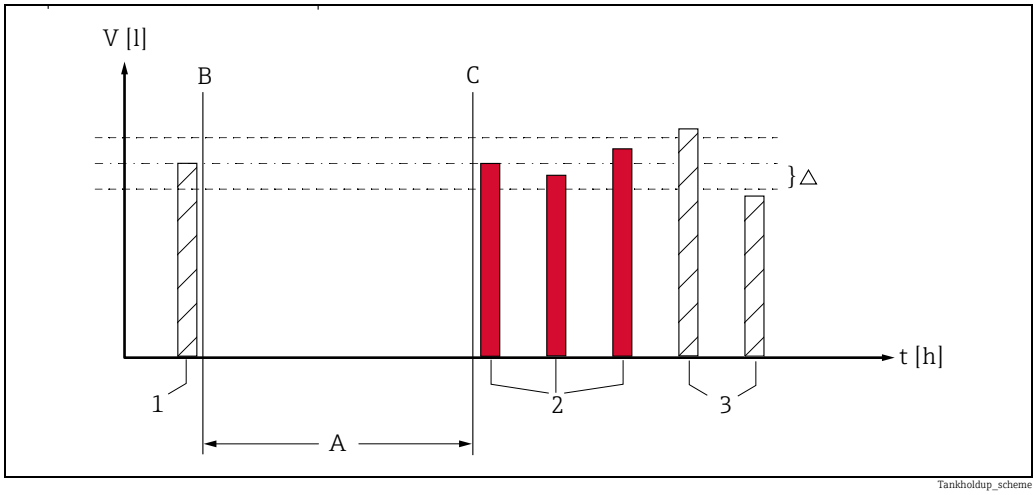
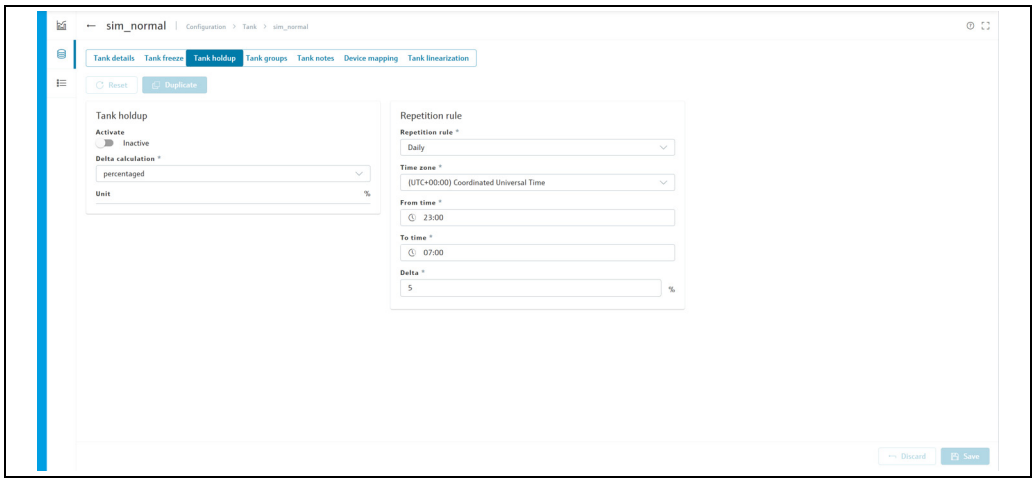


Fig. 2: Scheme for tank holdup events
A Set monitoring period
B Start of monitoring period
C End of monitoring period
1 Level at start
2 Level unchanged or level modified, but within the set event delta. A tank holdup event is created.
*3 Level changed, outside of event delta. A tank holdup event is **not** created.*

Concept

In contrast to tank freeze events, the expected state of a tank is that its contents are withdrawn or refilled, i.e. the level changes. In the period between two measurements, at least a certain amount (event delta) should be withdrawn, which corresponds to the normal, expected course. If the set delta is not reached, an event is then created. 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.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to configure holdup events.
4. Select the **Tank freeze** tab.



BA00050SEN_Konfiguration_Tank_Holdup_V40

5. Here, you can enter data to configure tank holdup events. This includes, for example:

- **Activate**: This option is deactivated by default. Click on the slider to activate the option.
- **Delta calculation (mandatory)**: Select **absolute** to specify the **delta** (event delta) as a fixed value in the selected unit for the tank. Select **percentaged** to specify the **delta** as a percentage of the configured tank capacity. The default setting for this option is **absolute**.
- **Unit**: Displays the unit configured for the tank capacity if the **Delta calculation** has been set to **absolute**. Displays "%" otherwise.
- **Repetition rule** (mandatory): Select a rule for the repetition of the monitoring period.

  Daily: Select a **From time** (start time) and a **To time** (end time) for the daily monitoring for tank holdup events.

  Weekly on every...: Configure monitoring periods for tank holdup events for each weekday individually.
  For more details on the configuration of the **Weekly on every...** repetition rule, refer to the following chapter "Configuring the "Weekly on every..." repetition rule" (→ 115).
  Proceed as described for the tank freeze events.

  No movement for...: Select the **Time period (in days)** that is to be used for the monitoring period. Enter a value greater than "0". The selected period must not be greater than the configured measurement duration. The default value is 7 days.

You can only configure one type of repetition rule (Daily... **or** Weekly...) for a given tank. The repetition rule that was configured and saved last will always apply.

- **Time zone**: Select the time zone to be used for the monitoring periods configured under **Repetition rule**.
- **Delta** (mandatory): Enter a value greater than "0".
  At the beginning of the monitoring period, the last measured tank value (e.g. the tank level) is saved ("frozen"). This "frozen" measurement is compared with the current measurement during the monitoring period. If the difference between the frozen measurement and the current measurement exceeds the event delta (positive or negative), a tank holdup event is generated.

6. Click on the **Save** button, to save your selection. If you want to discard your changes, click on the **Discard** button instead.

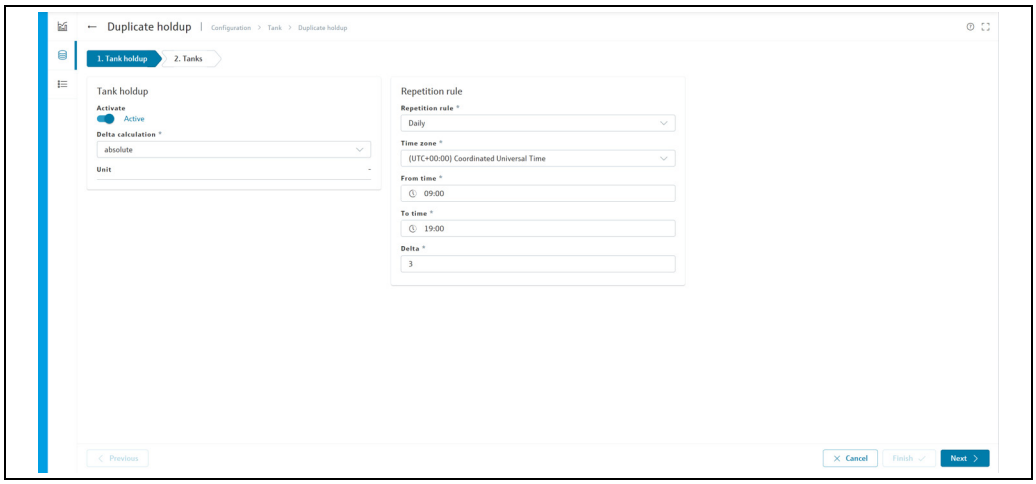
Use the **Duplicate** button to copy the **Tank holdup** configuration to other tanks. For more details, refer to the chapter "Copying the tank holdup configuration to other tanks" (→ 120).

Use the **Reset** button to reset the **Tank holdup** configuration to the default setting.

Copying the tank holdup configuration to other tanks

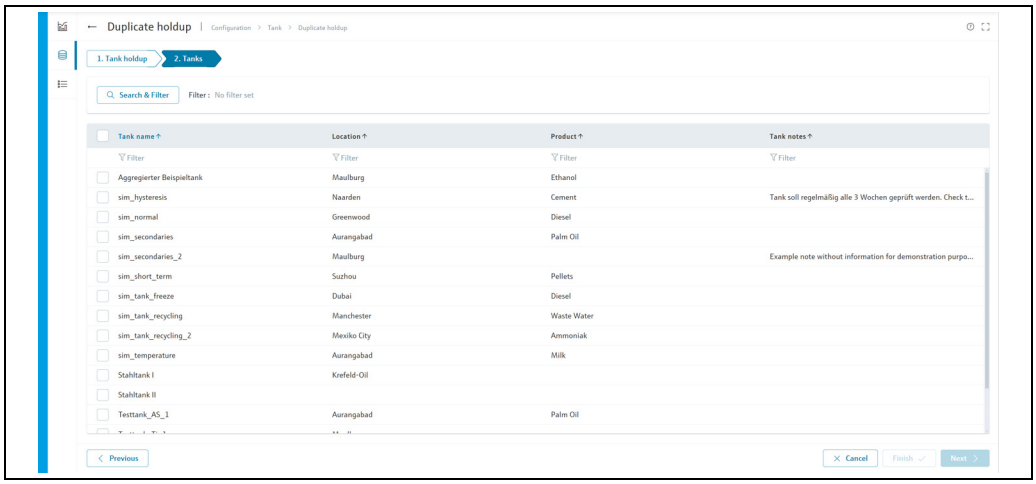
If you modify the tank holdup configuration for a tank, you can transfer the new configuration to other tanks. This means that you then don't have to adapt the configuration again for each additional tank.

1. In the **Tank holdup** tab, click on the **Duplicate** button.
2. The setup wizard opens and the **1. Tank holdup** view is displayed:



BA00050SEN_Konfiguration_Tank_Holdup_kopieren_1_V40

3. This window displays the last saved tank holdup configuration. Modify the configuration as required.
4. Clicking on **Next** ❯ displays the **2. Tanks** view:



BA00050SEN_Konfiguration_Tank_Holdup_kopieren_2_V40

5. Select the tanks to which you want to copy the Tank holdup configuration by activating the checkboxes next to the required tanks.
   You can filter the displayed tanks by **Tank name**, **Location**, **Product**, **Tank notes** or **Tank group**.
6. Clicking **Finish** ✓ brings up the **Confirm saving configurations** dialog box with a prompt to confirm your changes.

BA00050SEN_Konfiguration_Tank_Freeze_kopieren_3_V40

7. Click on the ✓ **Ok** button to copy the tank holdup configuration to the selected tanks; alternatively, click on the ✕ **Cancel** button to abort the process.

14.2.7 Adding, opening and deleting files and other information for a tank

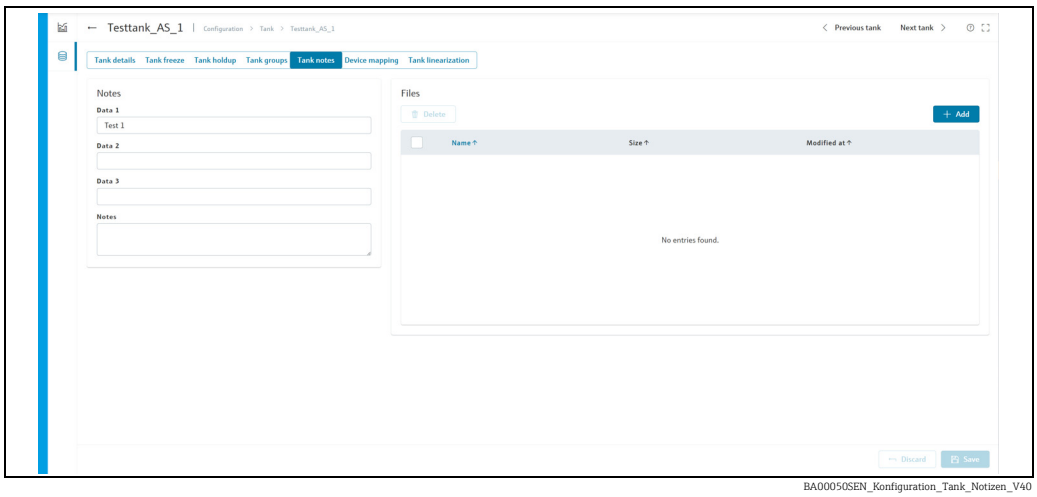
Using the **Tank notes** tab, you can add additional information for a tank and up to a maximum of five files. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

The number of files is limited to five files by default. If you require a different limit on the number of maximum files, please contact Endress+Hauser: www.addresses.endress.com.

The files must meet the following requirements:
- File formats supported: doc, docx, xls, xlsx, pdf, ppt, pptx, jpg, jpeg, gif, png, bmp oder txt.
- Maximum file size: 5 MB

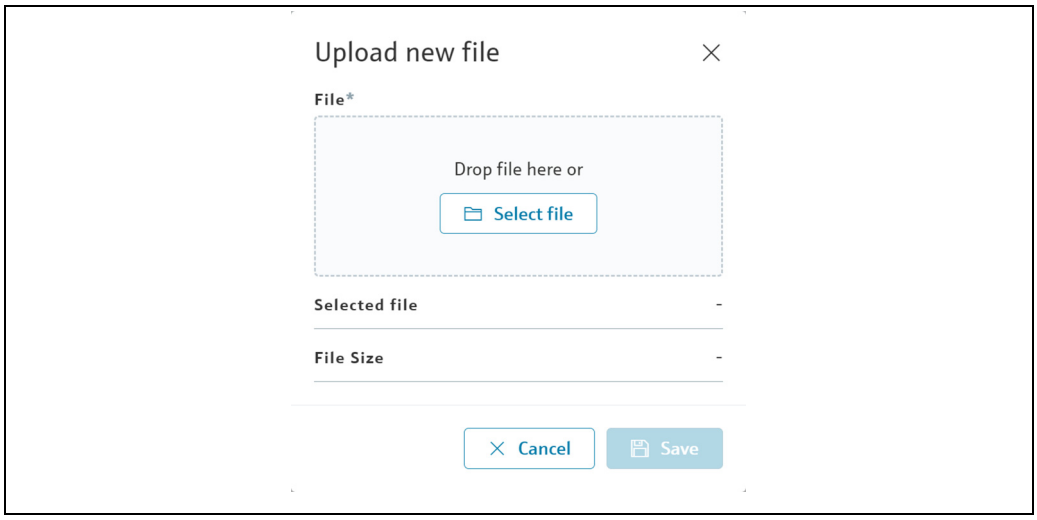
Adding a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to add a file.
4. Select the **Tank notes** tab.



BA00050SEN_Konfiguration_Tank_Notizen_V40

5. Enter a description for the **Data 1**, **Data 2**, **Data 3** and **Notes** fields.
6. In the **Files** field, click on the + **Add** button.
7. The **Upload new file** dialog box appears:



BA00050SEN_Konfiguration_Tank_Notizen_Hochladen_V40

8. Click on the **Select file** button.

Alternatively, you can add a file by dragging and dropping it into the **File** field.

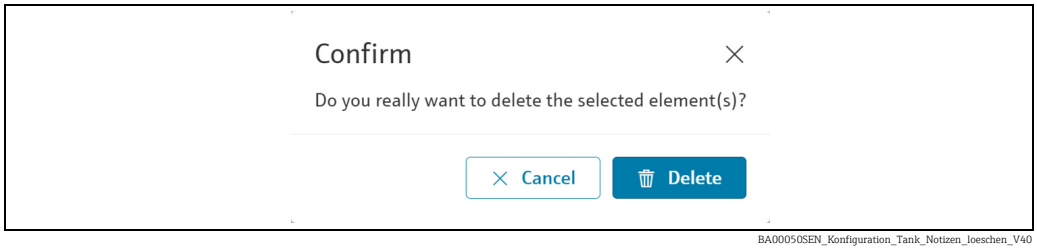
9. Select the **File** in your directory. The file name is displayed in the **Selected file** field.
10. Click on the **Save** button to upload the file. Click on the **Cancel** button to abort the process.
11. The file is listed in the table with information on the file format, file name, file size and the date on which the file was last changed.

Opening or saving a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. Select the **Tank notes** tab.
4. Click on the **File name** (hyperlink) in the **Name** column in the table.
5. The file is downloaded.

Deleting a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. Select the **Tank notes** tab.
4. In the table, activate the checkbox for the file that you want to delete.
5. Click on the **Delete** button.
6. The **Confirm** dialog box appears with a prompt to confirm this action.



BA00050SEN_Konfiguration_Tank_Notizen_loeschen_V40

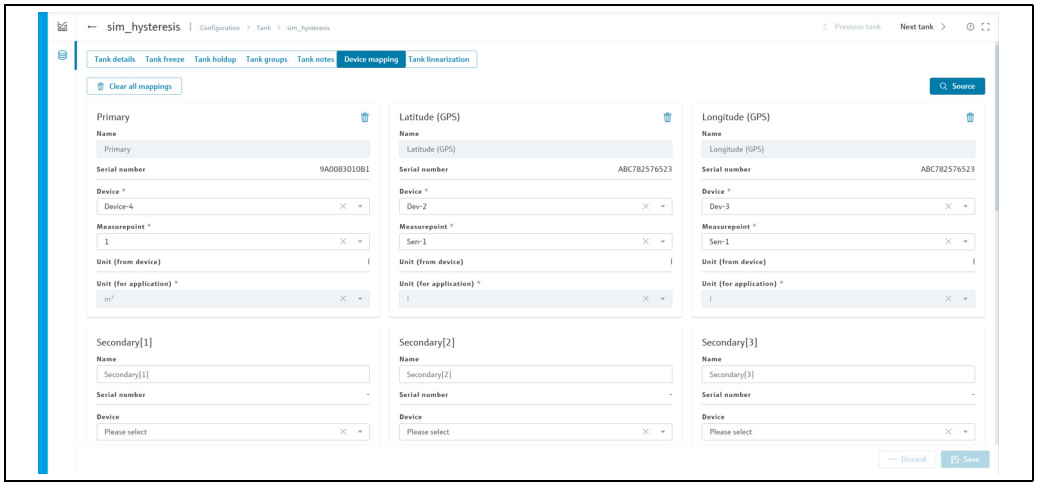
7. Click on the **Delete** button to delete the file. Click on the **Cancel** button to abort the process.

You can modify or reset the descriptions in the **Data 1**, **Data 2**, **Data 3** and **Notes** fields at any time. Click on the **Save** button to save your changes.

14.2.8 Device mapping

Using the **Device mapping** tab, you can assign devices to a tank and get an overview of how the tank parameters are linked to the gateways and the associated measuring points.

Device mapping is only available if the corresponding function has been activated in the selected SupplyCare contract. If **Device mapping** is unavailable and you need this to be activated, please contact Endress+Hauser: www.addresses.endress.com.



BA00050SEN_Konfiguration_Tank_Geraete_V40

The set units (from device and for application) are also displayed. With the exception of the tank parameters **Primary**, **Latitude (GPS)** and **Longitude (GPS)** and their associated names and units, all fields can be edited.

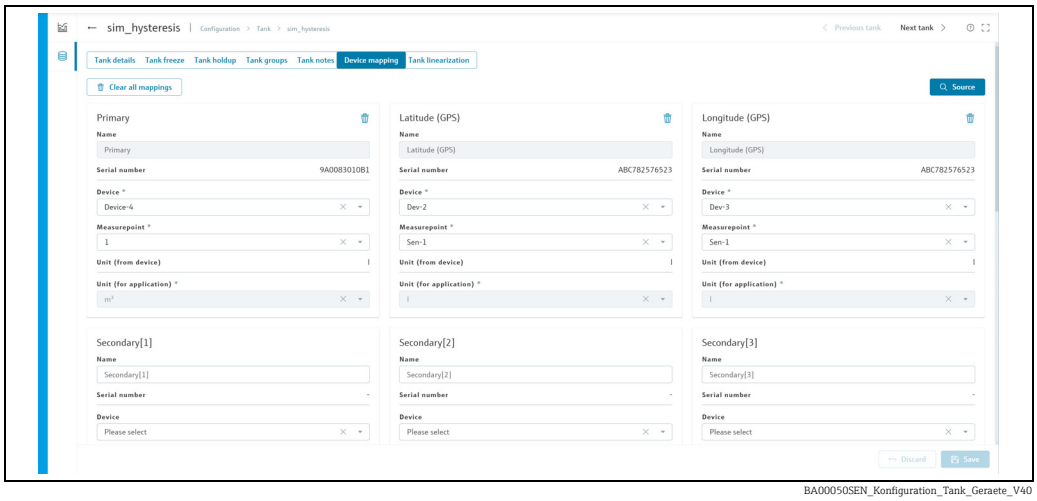
- **Name**: Contains the name of the tank parameter as a standard placeholder. Except for **Primary**, **Latitude (GPS)** and **Longitude (GPS)**, the name of a tank parameter can be freely chosen. In this case, the individual texts are reproduced in each language as they are filled out in the fields, and are therefore not translated.
- **Serial number**: Shows the assigned or selected serial number of the gateway.
- **Device**: The drop-down list in a data field shows the devices that belong to the gateway.
- **Measurepoint**: Once a device offered by the gateway has been selected, the corresponding measuring points can be selected from the drop-down list. Only devices and measuring points that have not yet been used are available to select from.
- **Unit (from device)**: If the device and measuring point are assigned to a tank parameter, the unit transferred from the device is displayed.
- **Unit (for application)**: The unit transferred from the device is automatically entered as the default value if no other unit has been set manually.. As a prerequisite, the unit transferred from the device must have been recognized by SupplyCare. The data field must be filled out when a measuring point is selected.
- button in the tank parameter field: Clicking on this button deletes the assignment for the measuring point.

Exceptions for the **Primary** tank parameter:
As soon as a measuring point is assigned to this tank parameter, the tank unit is adopted for this measuring point in the **Unit (for application)** field. If this assignment is rescinded, the measuring point again receives the unit transferred from the device. Units with the same physical size are not converted (e.g. mm and m or °C and °F).
The **Primary** tank parameter bears this name permanently, i.e. the text cannot be edited. If the language of the user interface is changed, the text is adapted accordingly.

The **Latitude (GPS)** and **Longitude (GPS)** tank parameters are exceptions:
These tank parameters have fixed names, i.e. the text cannot be edited.
The **Unit (for application)** field always contains the degree unit (°). If a measuring point is assigned here, it automatically receives this unit.

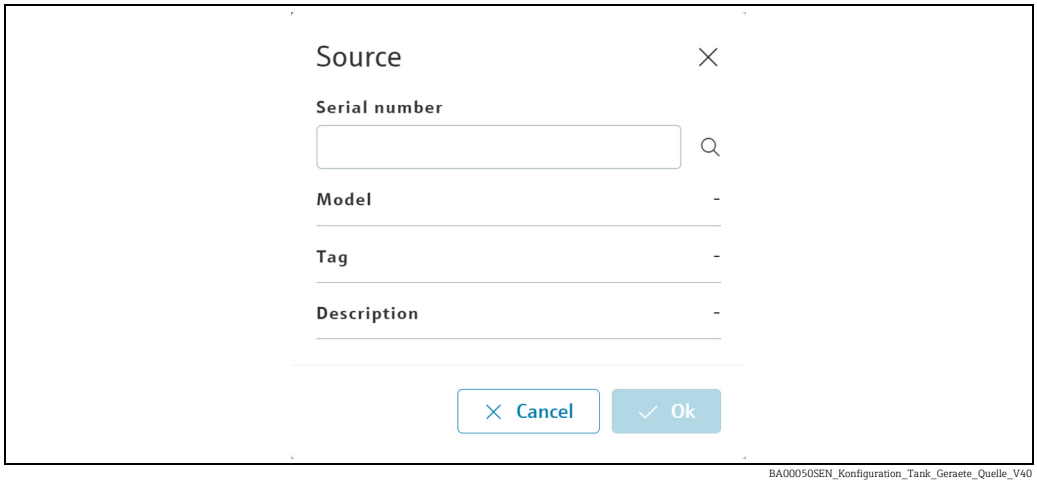
Displaying and modifying device mapping

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you to display or modify the device mapping.
4. Select the **Device mapping** tab.



BA00050SEN_Konfiguration_Tank_Geraete_V40

5. Click on the **Source** button.
6. The **Source** dialog box appears.



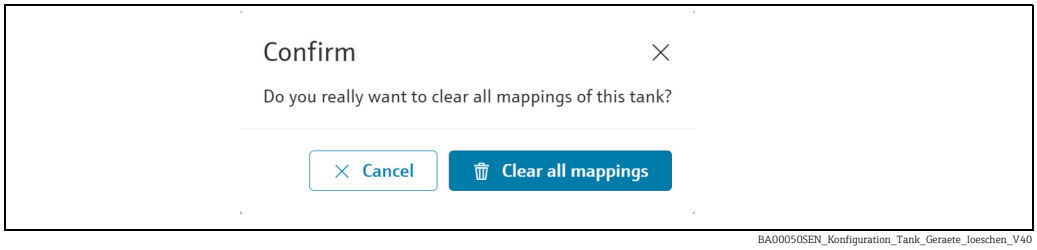
BA00050SEN_Konfiguration_Tank_Geraete_Quelle_V40

7. In the **Serial number** field, enter the serial number of a gateways and click , to begin the search.
   Model, **Tag** and **Description** are displayed if the data for a found gateway is known.
8. Click on the **OK** button to confirm the error message. Click on the **Cancel** button to abort the process.
9. Click into the fields of the tank parameters to enter changes or select from a list. For certain gateways, such as Micropilot FWR30, pre-filled fields are already provided.
10. Click on the **Save** button to save your changes.
    If you want to discard your changes, click on the **Discard** button instead.

To assign additional measuring points of a different gateway to the same tank, enter a new serial number via the **Source** button.

Deleting device mapping

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank for which you want to delete the device mapping.
4. Select the **Device mapping** tab.
5. Click on the **Clear all mappings** button if you want to delete all device mappings.
6. The **Confirm** dialog box appears with a prompt to confirm this action.



BA00050SEN_Konfiguration_Tank_Geraete_loeschen_V40

7. Click on the **Clear all mappings** button to delete the mappings. Click on the **Cancel** button to abort the process.

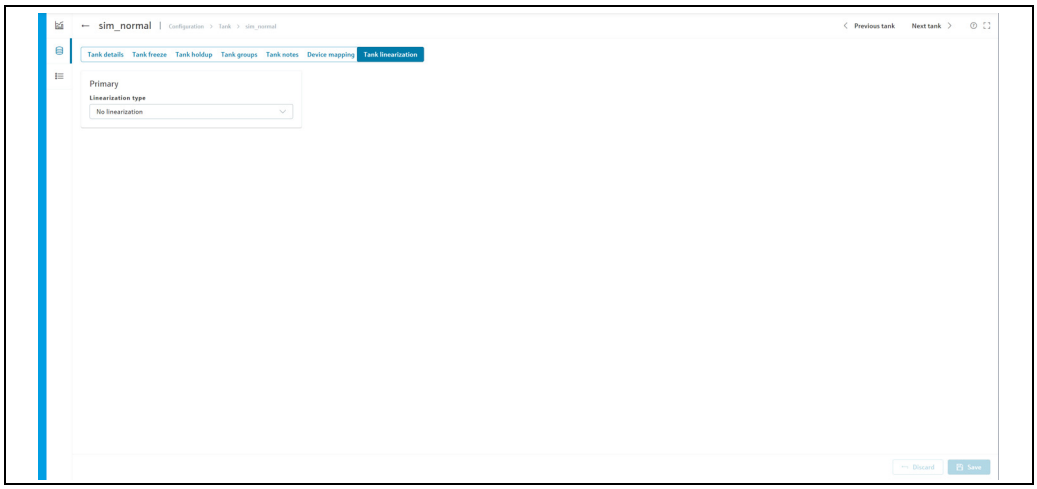
If you only want to delete an individual mapping, click on the button in the field of the tank parameter whose measuring point mapping you want to delete.

14.2.9 Assigning linearization to a tank

Using the tab, you can directly assign or delete an existing linearization to/from the primary value of a tank.

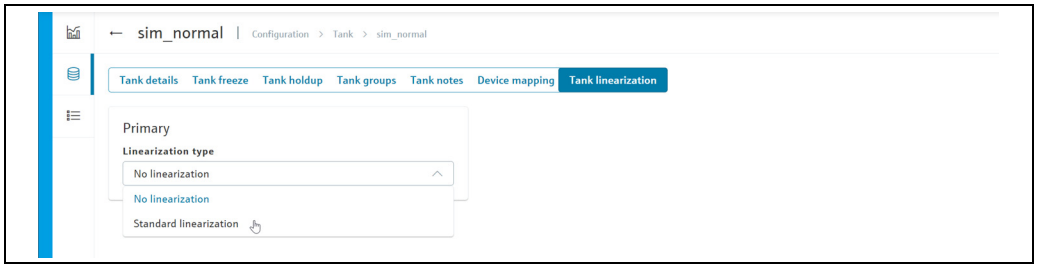
Assigning linearization

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank** menu item.
3. In the table, click on the tank to which you want to add a linearization.
4. Select the **Tank linearization** tab:



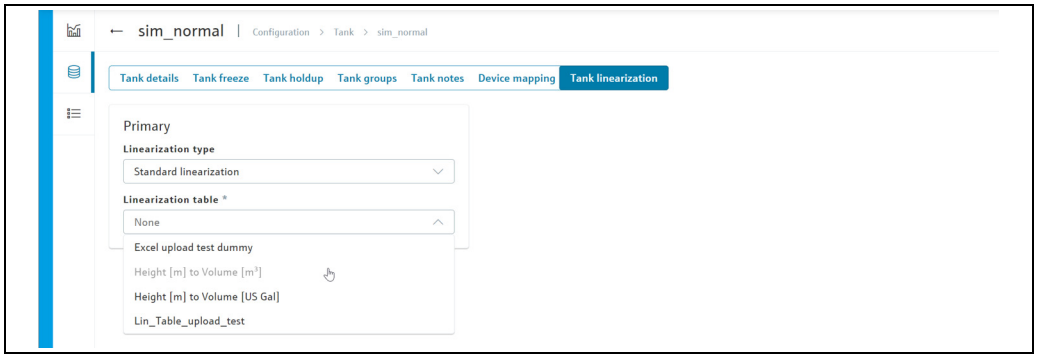
BA00050SEN_Konfiguration_Tank_Linearisierung_V40

5. Select the required **Linearization type** from the list:



BA00050SEN_Konfiguration_Tank_Linearisierung_waehlen_V40

6. The **Linearization table** list is displayed.



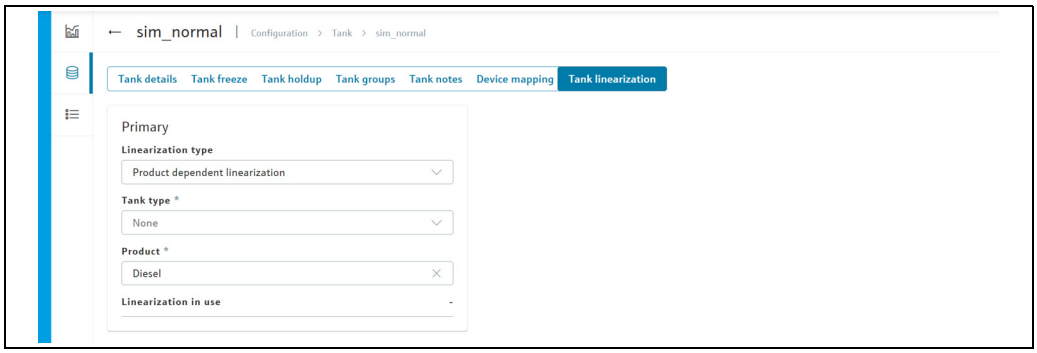
BA00050SEN_Konfiguration_Tank_Linearisierungstabelle_V40

7. Select the required table from the **Linearization table** list (mandatory). As a prerequisite, linearization tables must already be available. For more information on this, see "Managing linearization tables" (→ 145).

Depending on your contract: In addition to the standard linearization, another linearization type, **Product-dependent linearization**, can be activated for selection. This type of linearization provides the ability to automatically set linearization by selecting a product for a tank. If this is required, please contact Endress+Hauser.

You can view or enter the following data here:

- **Tank type**: (Mandatory) Picklist with all configured tank types that are saved in the contract.
- **Product**: (Mandatory) Picklist with all configured products that are saved in the contract.
- **Linearization in use**: Shows the currently selected linearization (depending on the linearization rules tab on the linearization page) for the selected product and tank type.

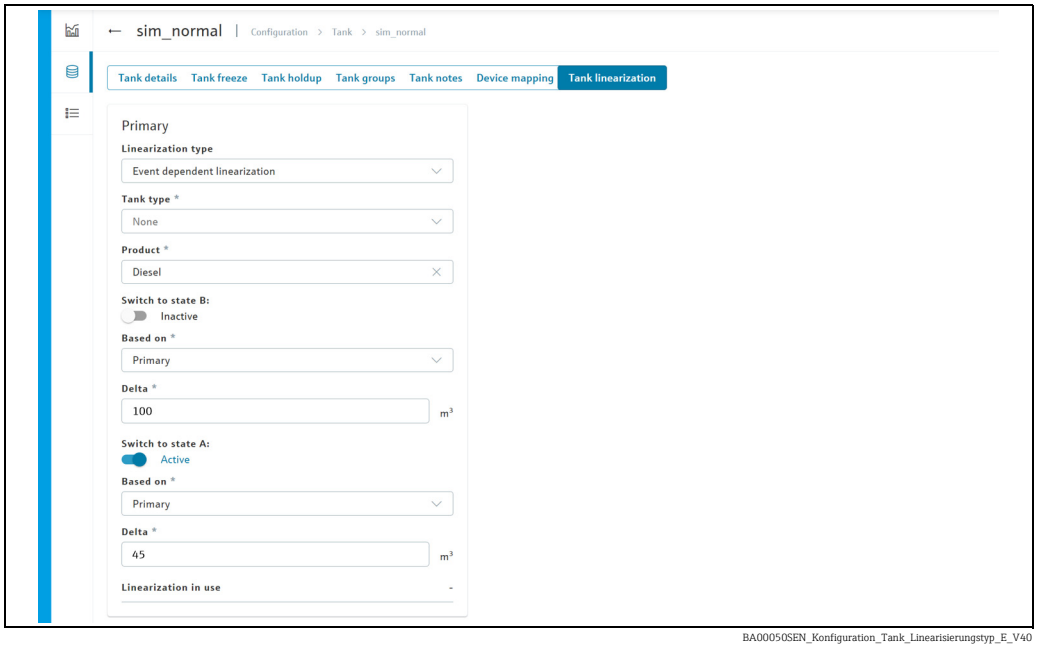


BA00050SEN_Konfiguration_Tank_Linearisierungstyp_P_V40

Depending on your contract: In addition to the standard linearization, another linearization type, **Event-dependent linearization**, can be activated for selection. Based on the desired primary or secondary values, including deltas, the linearization can switch between two different states. For each state, a different linearization table is then selected. If this is required, please contact Endress+Hauser.

Here, you can select or make entries for **Switch to state B:** and **Switch to state A:**

– The slider shows the current state: **Active** or **Inactive**. If the current state is changed (before: **Active**, after: **Inactive**), the setting for the respective other statue is adjusted automatically (before: **Inactive**, after: **Active**).
– **Based on** (mandatory): Select the value that the trigger is based on. Either the primary value or one of the secondary values can be selected.
– **Delta** (mandatory): The delta is the amount by which a selected value must be exceeded for the state to change. Enter a floating point value. To specify a negative value, enter the preceding minus symbol along with the value.



BA00050SEN_Konfiguration_Tank_Linearisierungstyp_E_V40

8. Click on the **Save** button to save your changes.
If you want to discard your changes, click on the **Discard** button instead.

14.2.10 Changing a tank

For further information, → 32

14.2.11 Deleting a tank

For further information, → 33

14.3 Managing aggregated tanks

Only users whose user role is configured as **Master data** can create, change and delete aggregated tanks.

Depending on the configuration, instead of **Aggregated objects**, **Aggregated tanks** or **silos** may be displayed.

The **Aggregated tank** menu item is only available in the desktop version.

14.3.1 Creating an aggregated tank

The **Location**, **Buyer**, **Supplier** and **Product** fields must first be created before you can select elements for these fields. The **Buyer** and **Supplier** are created as a Company → 142).

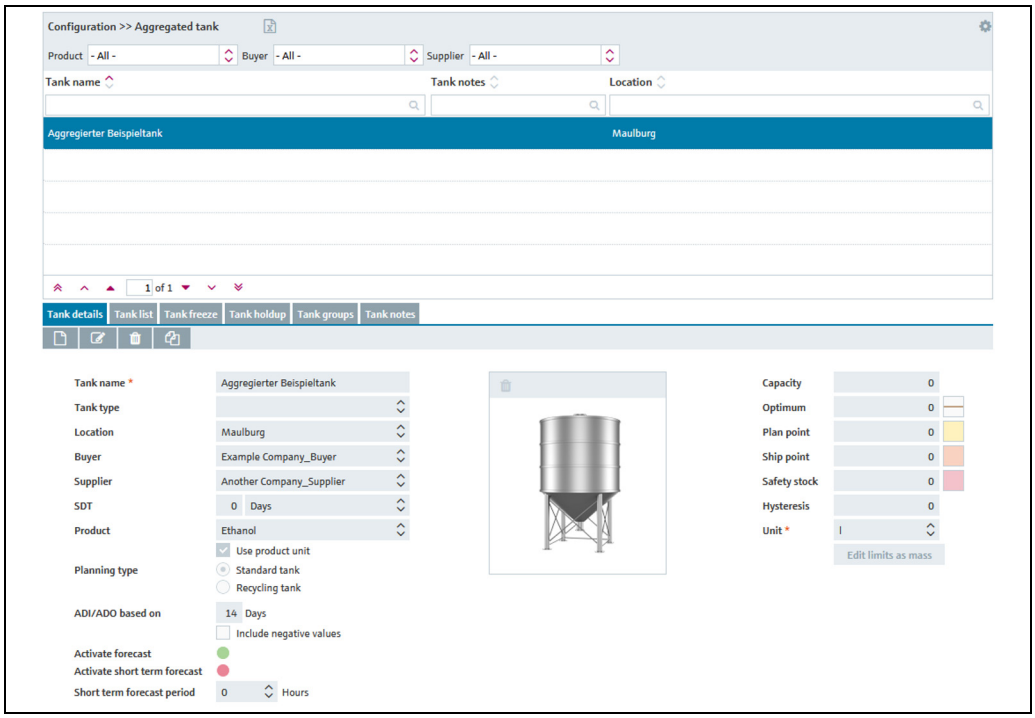
If you have assigned a tank to an aggregated tank, this tank is removed from the **Tank assignment** tabs under the **Tank**, **Tank group** and **Report** menu items.

If you want to make changes to a tank that is already assigned to an aggregated tank, you will first need to remove the tank from the tank list.

If you want to assign a tank that is already assigned to a tank group to an aggregated tank, this tank must first be removed from the tank group.

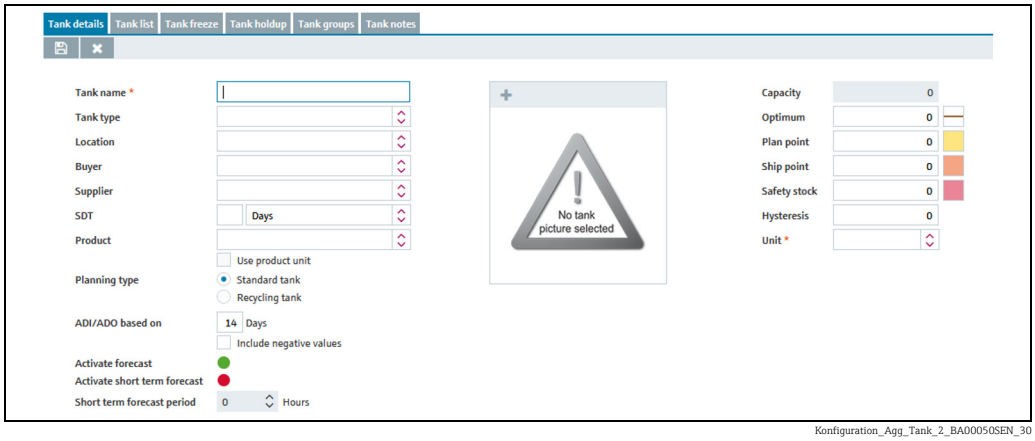
An aggregated tank must always be assigned to a tank group, since only tank groups can be assigned to a user.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Aggregated tank** menu item.
3. The following detail view is displayed in the application window:



Konfiguration_Agg_Tank_BA00050SEN_30

4. In the bottom part of the application window, select the **Tank details** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.



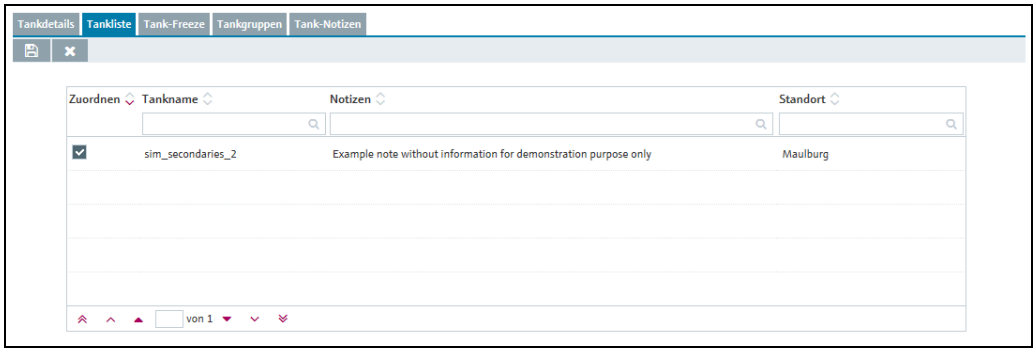
Konfiguration_Agg_Tank_2_BA00050SEN_30

7. Here, you can enter data on the aggregated tank such as:

- **Tank name** (mandatory)
- **Tank type**: Select the tank type from a picklist.
- **Location**: Select the location from the picklist.
- **Buyer**: Select a buyer (company) from the picklist.
- **Supplier**: Select a supplier (company) from the picklist.
- **SDT** (standard delivery time/standard disposal time)
- **Product**: Select a product from the picklist.
- **Use product unit**: If this option is activated, the unit of the selected product is automatically used in the **Unit** field.

- **Scheduling type**: Activate the **Standard tank** checkbox to specify that the aggregated tank is a standard tank, or activate the **Recycling tank** checkbox to specify that the aggregated tank is a recycling tank. The event messages and the way the inventory chart and levels are displayed are adapted to this scheduling type (→ 108).
- **ADI/ADO based on**: 14 days is the standard value specified here. This period is used for extrapolating in the inventory chart (→ 42).
- **Include negative values**: If this option is enabled, negative measuring values are included in the ADI/ADO calculations.
- **Activate forecast**: If this option is enabled, a forecast of the inventory is displayed in the **Inventory chart** tab.
  The enabled forecast is displayed with a green button; the disabled forecast is displayed with a red button. This option can be changed in edit mode by clicking the green or red button.
- **Capacity** (read-only access only)
- **Optimum**
- **Plan point**
- **Ship point**
- **Safety stock**
- **Hysteresis**: (→ 109)
- **Unit** (mandatory)

8. In the case of a standard tank, it is possible to deactivate the **Optimum**, **Plan point**, **Ship point** and **Safety stock** input fields individually; in the case of a recycling tank, the **Safety stock** and **Plan point** fields can be individually deactivated. To do so, click on the button to the right of the respective input field. This field then turns gray, just like the button. It is then no longer possible to enter information. These input fields can be reactivated by clicking the corresponding gray button.
9. Click on the button to save your entries. Click on the button to abort the process.
10. Select the **Tank list** tab.
11. Click on the button.
12. The tab is displayed in edit mode in the bottom part of the application window.

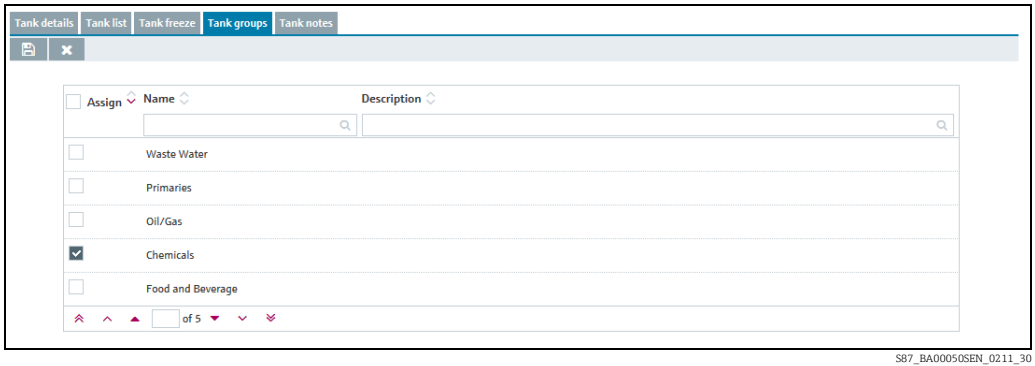


S85-2_BA00050SEN_0211_30

13. Activating the appropriate checkbox in the **Assign** column assigns the tanks to the aggregated tank.

Only tanks of the same scheduling type – i.e. standard tanks or recycling tanks – are displayed in the tank list. In the **Measuring point details** tab, these tanks must have first been assigned a measuring point and the same "Unit" (for application) that was assigned to the aggregated tank. Only these tanks can be added to the aggregated tank.

14. Click on the button to save your entries. Click on the button to abort the process.
15. Select the **Tank groups** tab.
16. Click on the button.
17. The tab is displayed in the edit mode.



18. Activating the **checkbox** in the **Assign** column assigns the tank to a tank group.
19. Click on the button to save your entries. Click on the button to abort the process.

14.3.2 Selecting and deleting a depicted tank shape

For further information, → 110

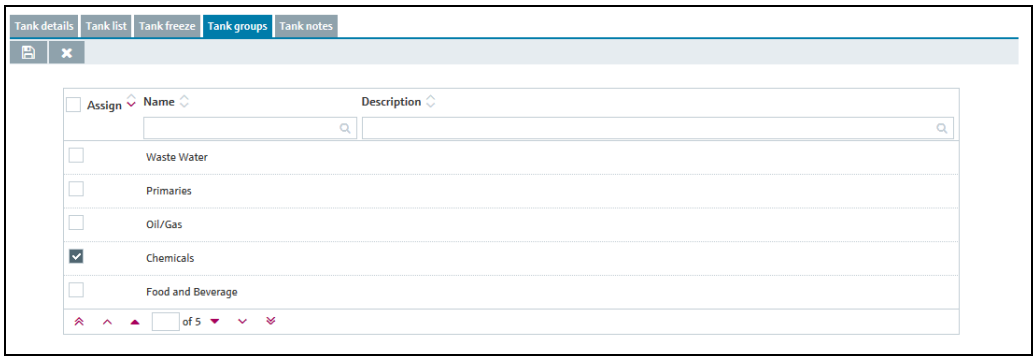
14.3.3 Adding, opening and deleting files and other information for an aggregated tank

Using the **Tank notes** tab, you can add additional information for an aggregated tank and up to a maximum of 5 files. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

For information on adding, opening, saving or deleting files, → 121.

14.3.4 Changing aggregated-tank-to-tank-group assignment

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Aggregated tank** menu item.
3. In the overview table, click on the aggregated tank for which you want to edit assignments.
4. Select the **Tank groups** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.



S87_BA00050SEN_0211_30

7. Activating the checkbox in the **Assign** column assigns the aggregated tank to a tank group. To undo an assignment, deactivate the corresponding checkbox.
8. Click on the button to save your entries. Click on the button to abort the process.

14.3.5 Configuring aggregated tank freeze events

For further information, → 113

14.3.6 Changing an aggregated tank

For further information, → 30

14.3.7 Deleting an aggregated tank

For further information, → 33

14.3.8 Copying an aggregated tank

For further information, → 36

14.4 Managing tank types

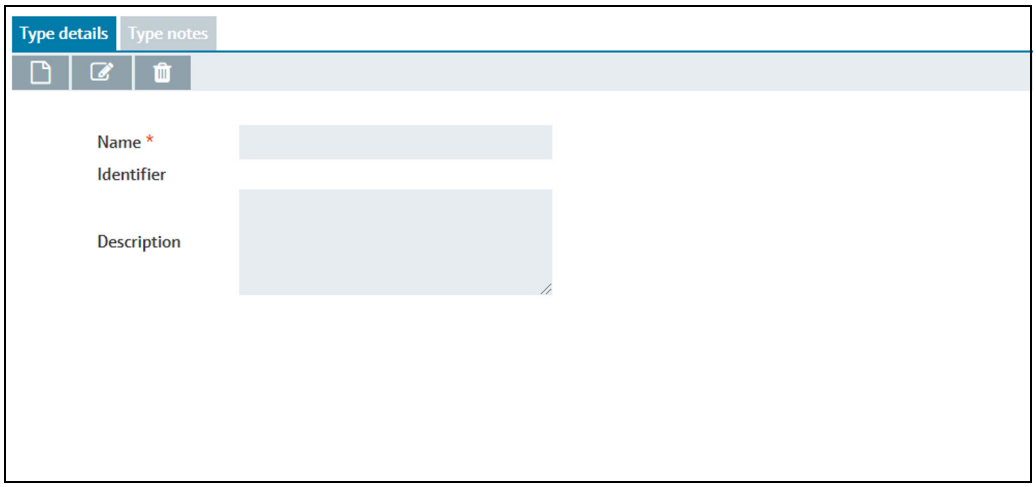
Only users whose user role is configured as **Master data** can create, edit and delete tank types.

The **Tank type** menu item is only available in the desktop version.

14.4.1 Creating, editing and deleting tank types

Creating a tank type

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank type** menu item.
3. A detail view is displayed in the application window.
4. In the lower section of the application window, select the **Type details** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.



Tank_Type_1_BA00050EN_30_2321_V3_4_3_EN

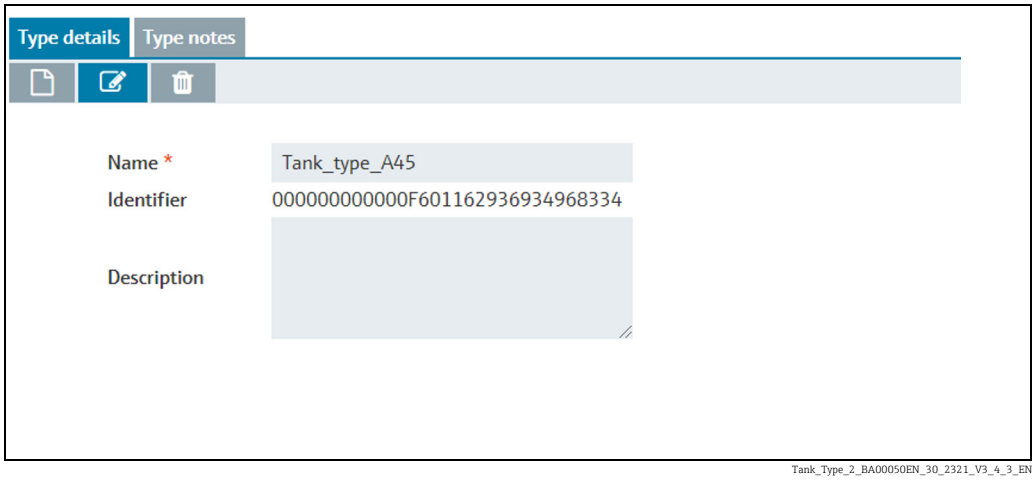
7. Here, you can enter data for the tank type, e.g.:

– **Name** (mandatory)
– **Identifier**: Automatically created unique number to identify a tank type
– **Description:** You can enter a multiline description here.

8. Click on the button to save the changes. Click on the button to abort the process.

Changing the tank type

1. In the menu bar, click on the menu for **Configuration**
2. Click on the **Tank type** menu item.
3. A detail view is displayed in the application window.
4. In the lower section of the application window, select the **Type details** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.



Tank_Type_2_BA00050EN_30_2321_V3_4_3_EN

7. Here, you can enter data for the tank type, e.g.:

– **Name** (mandatory)
– **Identifier**: Automatically created unique number to identify a tank type
– **Description:** You can enter a multiline description here.

8. Click on the button to save the changes. Click on the button to abort the process.

Deleting a tank type

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank type** menu item.
3. A detail view is displayed in the application window.
4. In the lower section of the application window, select the **Type details** tab.
5. Click on the button.
6. The prompt "Do you really want to delete?" is displayed.
7. Click on **OK** to delete the tank type. Click on the **Cancel** button to abort the process.

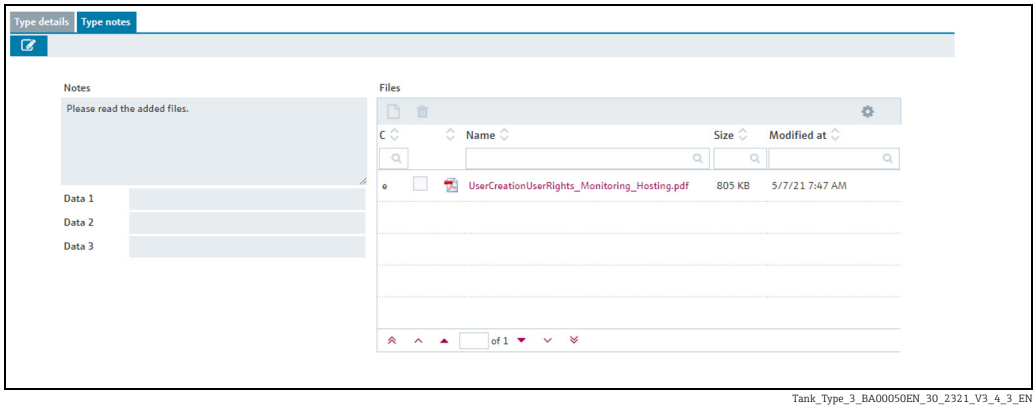
14.4.2 Adding, opening and deleting files and other information for a tank type

Using the **Tank type notes** tab, you can add additional information for a location and up to a maximum of 5 files.

The files must meet the following requirements:
- File formats supported: doc, xls, pdf, ppt, jpg, gif, png, bmp or txt.
- Maximum file size: 5 MB

Adding a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank type** menu item.
3. In the overview table, click on the tank type for which you want to add a file.
4. Select the **Tank type notes** tab.
5. Click on the button.



Tank_Type_3_BA00050EN_30_2321_V3_4_3_EN

6. The **Tank type notes** tab is displayed in the edit mode.
7. Enter a description in the **Notes**, **Data 1**, **Data 2**, **Data 3** fields.
8. Click on the button in the table.
9. The **Upload new file** dialog box is displayed.
10. Click on the **Search for file** button.

11. Select a file in your directory. The file name is displayed in the **Name** column in the table.

The **Classification** allows a distinction to be made between internal and external use.

12. Select the desired **Classification**.
13. Click on the **Upload new file** button.
14. The file is shown in the table with information on file size, file name and date of last modification.

Opening or saving a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank type** menu item.
3. Select the **Tank type notes** tab.
4. In the **Name** column of the table, click on the **File name** (hyperlink).
5. A dialog box opens. Here, you can choose whether you want to open the file or save it.
6. Click on the **OK** button to open or save the file. Click on the **Cancel** button to abort the process.

Deleting a file

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank type** menu item.
3. Select the **Tanktype notes** tab.
4. Click on the button.
5. The **Tank type notes** tab is displayed in the edit mode.
6. In the table, activate the checkbox for the file that you want to delete.
7. Click on the button.
8. The prompt "Do you really want to delete?" is displayed.
9. Click on **OK** to delete the file. Click on the **Cancel** button to abort the process.
10. Click on the button to save the changes. Click on the button to abort the process.

The file is only deleted if you save your changes by clicking on the button.

You can change or delete descriptions in the **Notes**, **Data 1**, **Data 2** and **Data 3** fields in the editing mode. Click on the button to save the changes.

14.5 Managing tank groups

Only users whose user role is configured as **Master data** can create, change and delete tank groups.

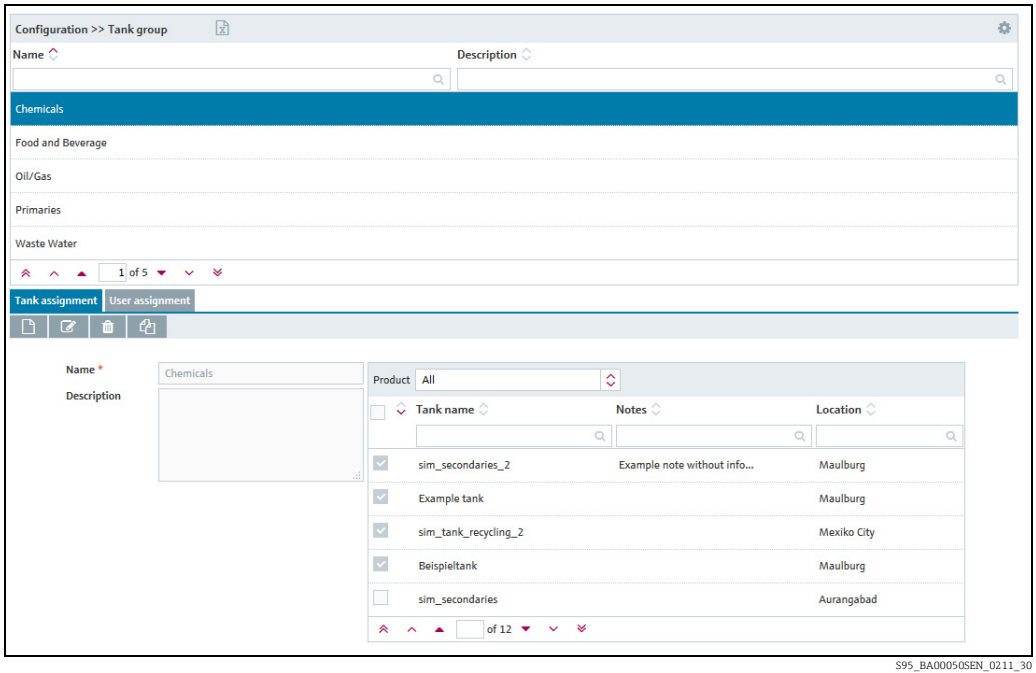
Depending on the configuration, instead of **Tank groups**, **Object groups** may be displayed.

The **Tank group** menu item is only available in the desktop version.

Tank groups are used to organize tanks and to assign authorized users to the tanks.
In the **Tank assignment** tab, you can create tank groups and assign tanks to these groups. You can assign one or more users to the tank group using the **User assignment** tab. In the **User assignment** tab, you can also specify the tank events that the users should receive notifications about.

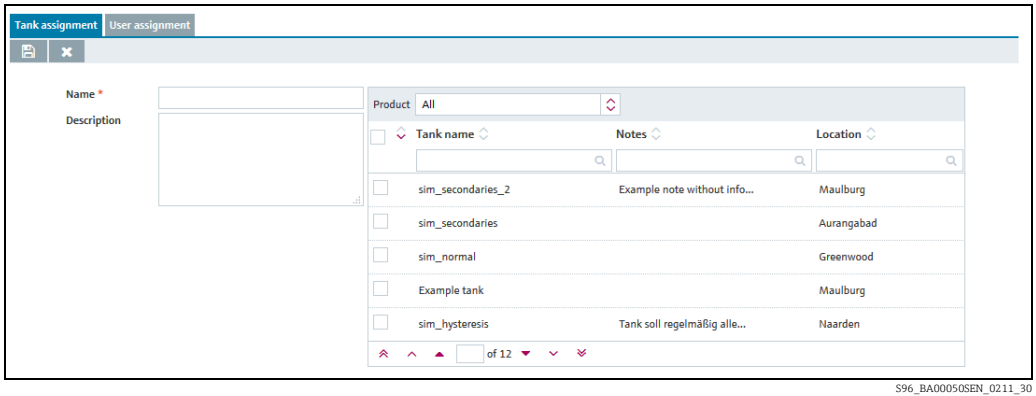
14.5.1 Creating tank groups

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank group** menu item.
3. The following detail view is displayed in the application window:



S95_BA00050SEN_0211_30

4. In the bottom part of the Application Window, select the **Tank assignment** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.



S96_BA00050SEN_0211_30

7. Here, you can enter data for the tank group, e.g.:

- **Name** (mandatory): Unique identifier for the tank group.
- **Description**: You can enter a multiline description here.
- **Assignment**: Activate the checkboxes in the table to assign the corresponding tanks to this tank group.

8. Click on the button to save your entries. Click on the button to abort the process.
9. Select the **User assignment** tab to assign the tank groups to a user (→ 137).

14.5.2 Assigning users to a tank group and setting up notifications for tank events

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank group** menu item.
3. Select the **User assignment** tab.
4. Click on the button.
5. The tab is displayed in the edit mode.

S96-2_BA00050SEN_0211_30

You can assign one or more users to the tank group using the **User assignment** tab. On this tab, you can also specify the tank events that the user should be informed about.

6. Activating the check box in the **Assign** column assigns a user to the tank group. To undo an assignment, deactivate the corresponding checkbox. The assigned tank groups are listed in the "Workplace – Tank" view.
7. Activate the **Notifications** checkbox if you want the user to also be informed about tank events by e-mail.
8. Select the **checkboxes** that correspond to the events for which the user should receive notification:

- **PP** (plan point)
- **SP** (ship point)
- **SST** (safety stock)
- **TF/SF/OF** (tank freeze/silo freeze/object freeze): Comprises all the information regarding tank freeze/silo freeze/object freeze events.
- **PDL** (planned delivery/disposal loop): Comprises all new deliveries/disposals which have been planned or deleted.
- **PDE** (planned delivery/disposal events): Comprises all early, late, missed and completed deliveries/disposals.
- **S. Lim 1/S. Lim 2** (secondary limit 1/2)

9. Click on the button to save your entries. Click on the button to abort the process.

Notifications can also be set up and administered via the **User** menu→ 102.

14.5.3 Changing tank groups

For further information, → 30

14.5.4 Deleting tank groups

For further information, → 33

14.5.5 Copying tank groups

For further information, → 36

14.6 Managing locations

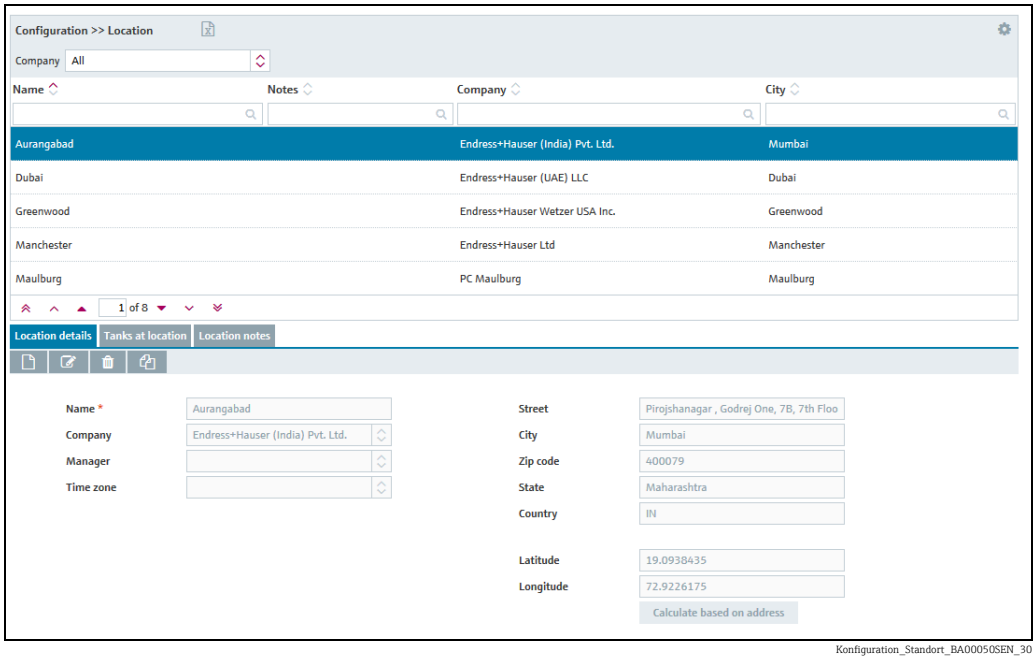
Only users whose user role is configured as **Master data** can create, change and delete locations.

The **Location** menu item is only available in the desktop version.

14.6.1 Creating a location

A tank must first be created before it can be assigned to a location. However, you can create a location independently and then assign tanks to the location at a later date.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Location** menu item.
3. The following detail view is displayed in the application window:



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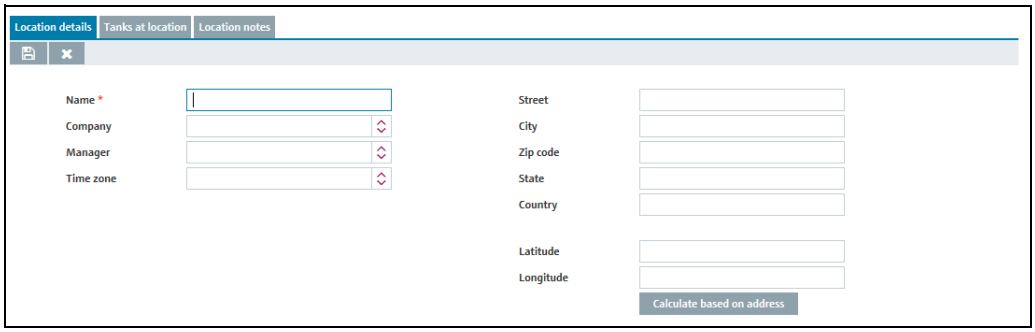
4. In the bottom part of the Application Window, select the **Location details** tab.
5. Click on the button.
6. The tab is displayed in the edit mode.

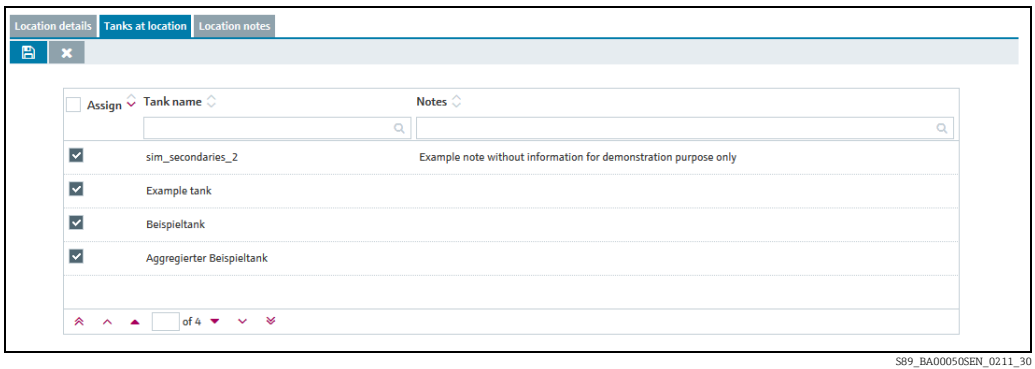


S88-2_BA00050SEN_0211_30

7. Here, you can enter data for the location, e.g.:

- **Name** (mandatory): Unique identifier for the location.
- **Company**: Select the company from the picklist.
- **Manager**
- **Time zone**: Select the time zone for the location from the picklist.
  All time data is then displayed in this time zone – in particular, the time stamps for measurements for tanks at this location. There is also the user's preferred time zone, which is used for time information for events.
- **Street**
- **City**
- **Zip code**
- **State**
- **Country**
- **Longitude** and **Latitude**: You can save the geographical information for this location here (→ 140).
  These coordinates are used to display the location on the overview map (→ 89).
- **Calculate based on address**: The longitude and latitude are calculated automatically. (→ 141).
  These coordinates are used to display the location on the overview map (→ 89).

8. Click on the button to save the changes. Click on the button to abort the process.
9. Select the **Tanks at location** tab.
10. Click on the button.
11. The tab is displayed in the edit mode.



S89_BA00050SEN_0211_30

12. Activating the **checkbox** in the **Assign** column assigns the tank to the location.
    The table shows the tanks that are already assigned to the location, or those that are not yet assigned to a location.
13. Click on the button to save the changes. Click on the button to abort the process.

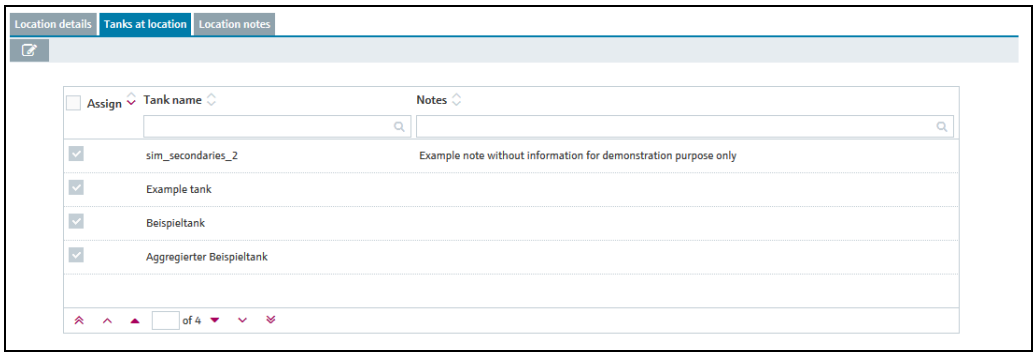
14.6.2 Adding, opening and deleting files and other information for a location

Using the **Location notes** tab, you can add additional information for a location and a maximum of five files. The information entered here and the attached files are also displayed in the "Workplace – Tank" view, **Notes and files** tab.

For information on adding, opening, saving or deleting files, → 121.

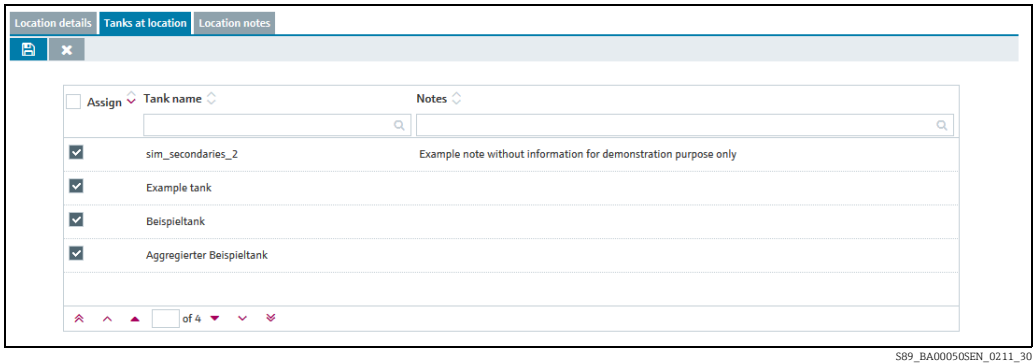
14.6.3 Changing location-to-tank assignment

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Location** menu item.
3. In the overview table, click on the location for which you want to edit assignments.
4. Select the **Tanks at location** tab.



S90_BA00050SEN_0211_30

5. Click on the button.
6. The tab is displayed in the edit mode.



S89_BA00050SEN_0211_30

7. Activating the appropriate checkbox in the **Assign** column assigns the tanks to the selected location. To undo an assignment, deactivate the corresponding checkbox.
8. Click on the button to save your entries. Click on the button to abort the process.

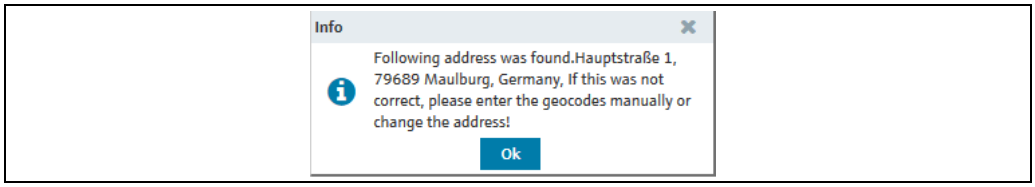
14.6.4 Computing the location automatically or entering it manually

If you change the address data, you must also update the longitude and latitude information.

You can either have the system compute the longitude and latitude automatically based on the address entered, or you can enter this information manually.

Computing the location automatically

1. In the bottom part of the application window, select the **Location details** tab.
2. Click on the button.
3. The tab is displayed in the edit mode.
4. Click on the **Calculate based on address** button.
5. The automatically computed information for the longitude and latitude is displayed in a window.



6. Click **OK** to confirm the longitude and latitude.

If the longitude and latitude cannot be computed, e.g. because not enough address information is available, the following message appears: "Unknown or bad address. Please enter manually."

Entering the location manually

Enter the longitude and latitude in the corresponding fields.

The latitude must be between −85 and 85, and the longitude must be between −180 and 180. You can enter a number with up to 16 decimal places.

14.6.5 Displaying the location on the map

For further information, → 89

14.6.6 Changing a location

For further information, → 30

14.6.7 Deleting a location

For further information, → 33

You can only delete a location if no tanks are assigned to the location.

14.6.8 Copying a location

For further information, → 36

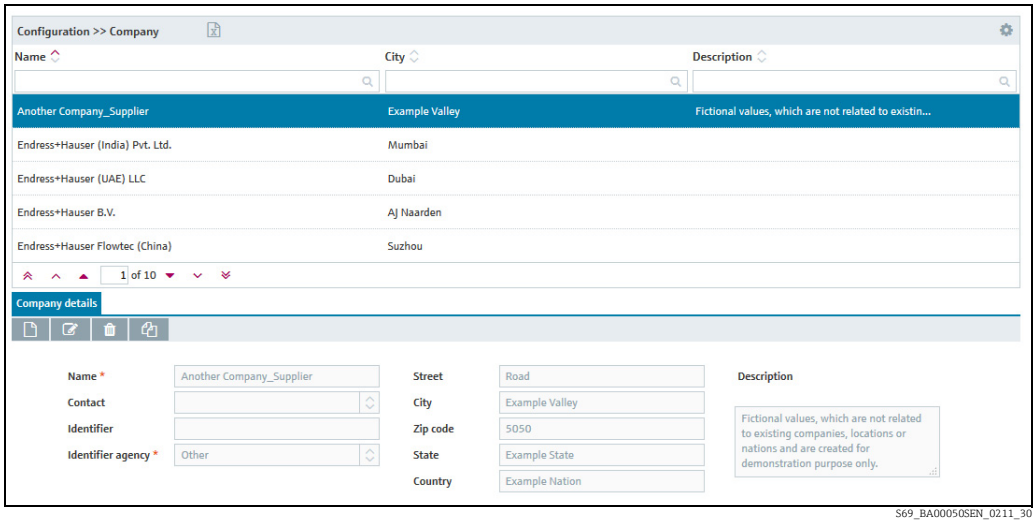
14.7 Managing companies

Only users whose user role is configured as **Master data** can create, change and delete companies.

The **Company** menu item is only available in the desktop version.

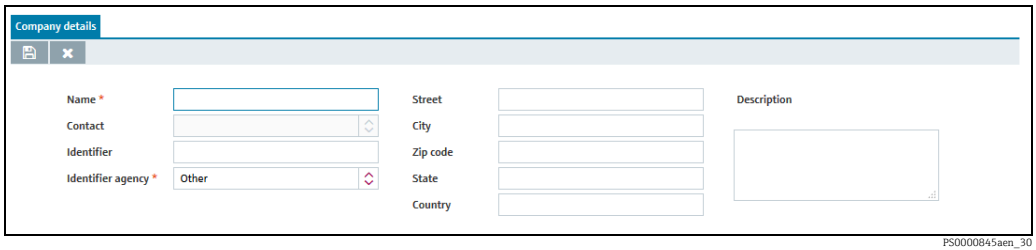
14.7.1 Creating a company

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Company** menu item.
3. The following detail view is displayed in the application window:



S69_BA00050SEN_0211_30

4. Click on the button on the **Company details** tab.
5. The tab is displayed in the edit mode.



PS0000845aen_30

6. Here, you can enter company data, e.g.:

- **Name** (mandatory): Name of the company.
- **Contact**: Select a contact person from the picklist.
  The contact person must have been added beforehand via the **User** menu item and assigned to the **Company**.
- **Identifier**: Company ID to be used in the CIDX reports.
- **Identifier agency**: Selection of 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.
- **Street**
- **City**
- **Zip code**
- **State**
- **Country**
- **Description**: You can enter a multiline description here.

7. Click on the button to save your entries. Click on the button to abort the process.

14.7.2 Changing a company

For further information, → 30

14.7.3 Deleting a company

For further information, → 33

A company can only be deleted if no more users are assigned to this company. If you still want to delete the company, you will first need to delete the users assigned to this company. The button is only displayed for a company which can be deleted.

14.7.4 Copying a company

For further information, → 36

14.8 Managing products

Only users whose user role is configured as **Master data** and **Product-tank configurator** can create, modify and delete products.

The **Product** menu item is only available in the desktop version.

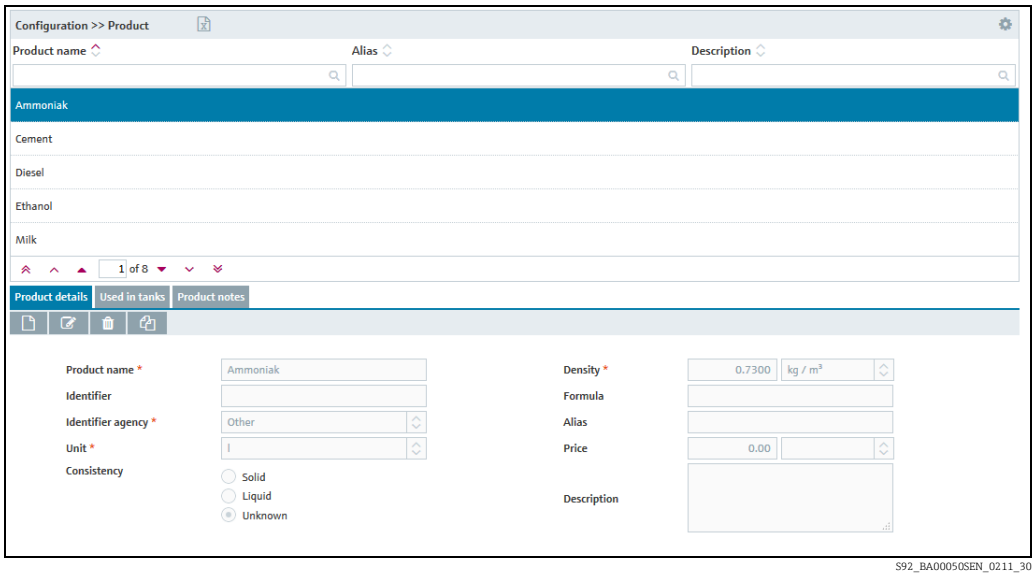
14.8.1 Creating a product

A tank must first be created before it can have a product assigned to it.

However, you can create a product independently and then assign tanks to the product at a later date.

The **Product name** and the combination of the fields **Identifier** and **Identifier agency** are only permitted to be used once in the system.

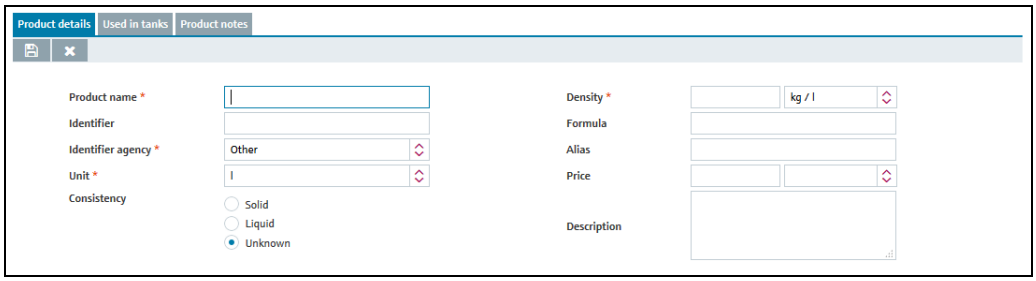
1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Product** menu item.
3. The following detail view is displayed in the application window:



S92_BA00050SEN_0211_30

4. In the bottom part of the application window, select the **Product details** tab.

5. Click on the button.
6. The tab is displayed in the edit mode.



S92-2_BA00050SEN_0211_30

7. Here, you can enter data on the product, e.g.:

- **Product name** (mandatory): Unique identifier for a product.
- **Identifier**: Unique product ID to be used in the CIDX reports.
- **Identifier agency** (mandatory): Selection of 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.
- **Unit** (mandatory)
- **Consistency**
- **Density**: A mass can be configured for a product (mandatory entry). This is useful if the customer wants to process and plan tanks/products based on mass (total weight = net standard volume x reference density). The density must be entered by the operator and the product unit must be configured as a mass, e.g. kg or metric ton.
- **Formula**: Chemical formula of the product.
- **Alias**: Another name for the product, e.g. tradename etc.
- **Price**: Price of the product
  Important: If the unit in the price per unit (e.g. l in €/l) is a unit of volume, the tank content must also be measured in a unit of volume. Example: Price in €/l, tank content measured in m^3. The same applies to units of mass: Price in €/kg, tank capacity measured in t.
- **Description**: You can enter a multiline description here.

8. Click on the button to save your entries. Click on the button to abort the process.

14.8.2 Changing a product

For further information, → 32

14.8.3 Deleting a product

For further information, → 33

You can only delete a product if the product is not assigned to a tank. The symbol is only displayed for products that can be deleted.

14.8.4 Copying a product

For further information, → 36

14.9 Managing linearization tables

Only users whose user role is configured as **Master data** can create, change and delete linearization tables.

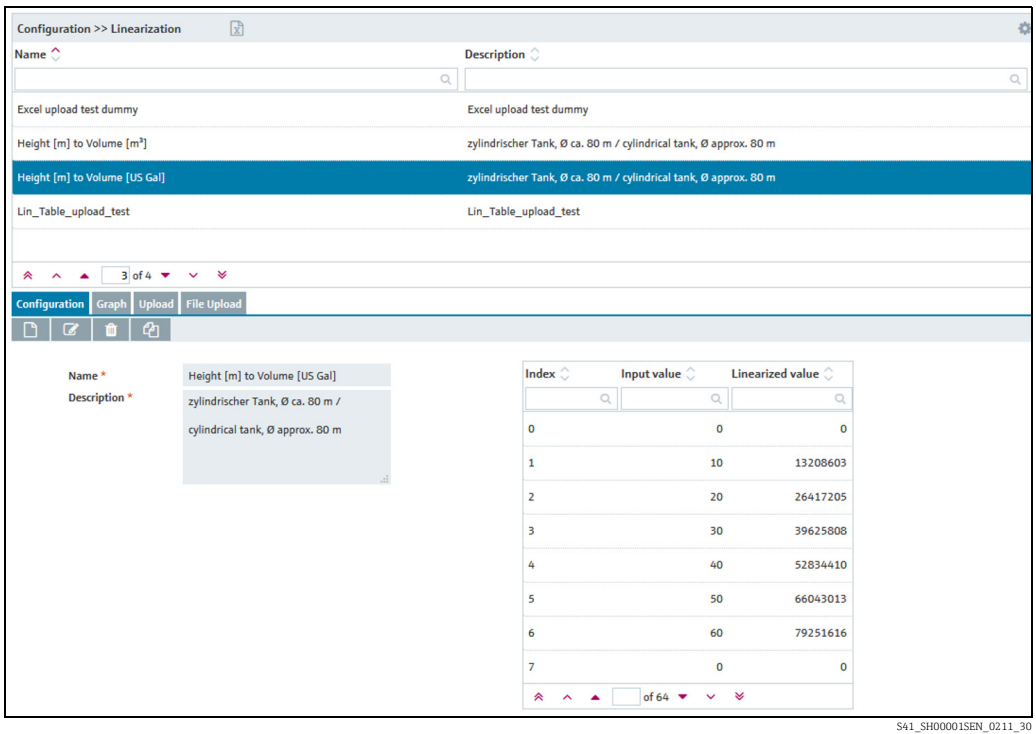
The **Linearization** menu item is only available in the desktop version.

A linearization table is assigned to a device in the "Gateway configuration" menu. For more information on this, see the details in the applicable service manual.

No extrapolation is performed during 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 corresponding Y-value (e.g. a volume value). A linearization table must have at least 2 points and can have up to a maximum of 64 points. A point consists of an index, an input level (X-value) and an input volume (Y-value).

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Linearization** menu item.
3. The following detail view is displayed in the application window:



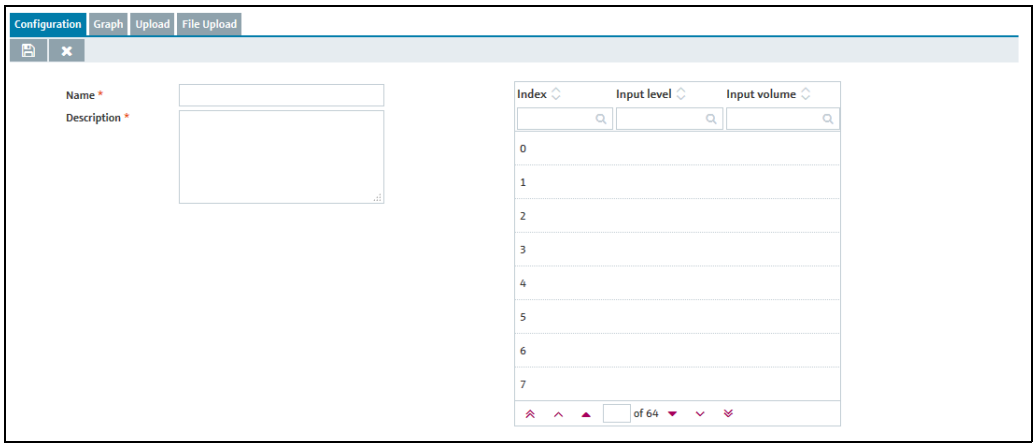
S41_SH00001SEN_0211_30

4. In the lower section of the application window, select the **Configuration** tab.

14.9.1 Creating, changing and deleting a linearization table

Creating a linearization table

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Linearization** menu item.
3. Click on the button.
4. The tab is displayed in edit mode in the lower section of the application window:



S42_SH00001SEN_0211_30

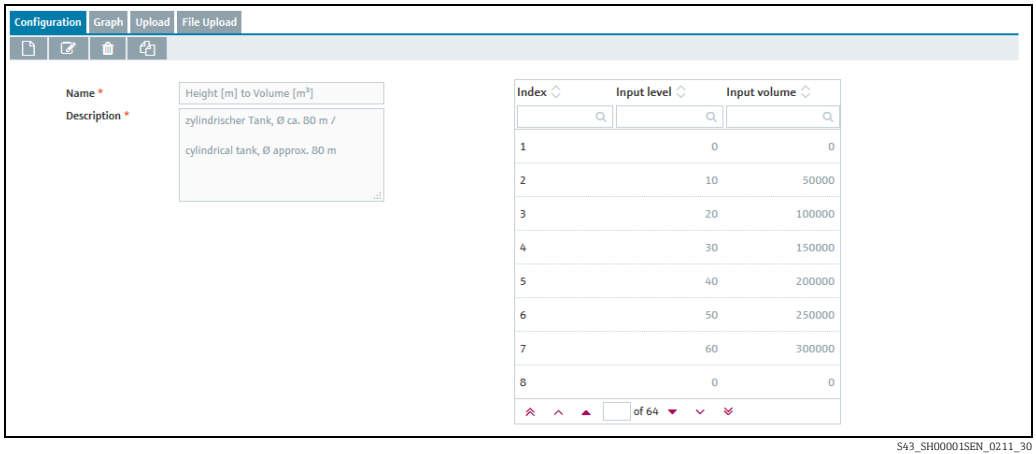
5. Here, you can enter data for the linearization table:

- **Name** (mandatory)
- **Description** (mandatory): You can enter a multiline description here.
- **Index**: Specifies the index in the table.
- **Input level**: Enter the level value.
- **Input volume**: Specify the volume value belonging to the level value.

6. Click on the button to save your entries. Click on the button to abort the process.
7. Select the **Graph** tab to view the linearization table you entered as a graph.

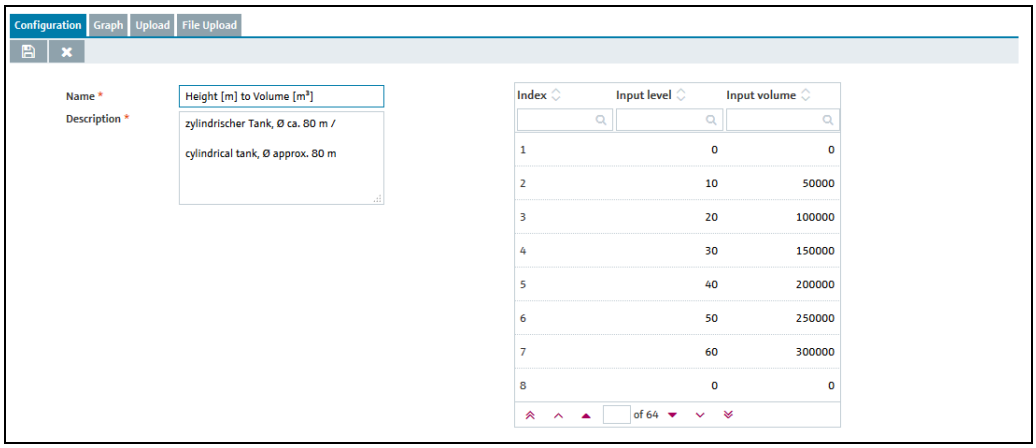
Changing a linearization table

1. In the overview table, click on the linearization table you wish to change.
2. The related tab is displayed in the lower section of the Application window.



S43_SH00001SEN_0211_30

3. Click on the button.
4. The tab is displayed in the edit mode.



S43-2_SH00001SEN_0211_30

5. In the table, click on the value (input level or input volume) that you want to change. You can overwrite multiple values in succession or add additional value pairs to the table.

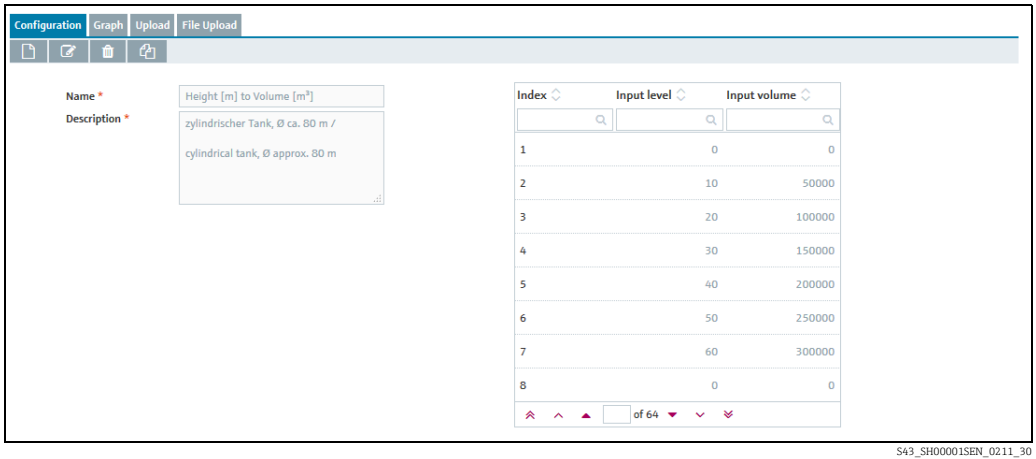
You cannot enter or delete lines in the table, or change the order of the value pairs.

6. Make the necessary changes.
7. Click on the button to save your entries. Click on the button to abort the process.

Deleting a linearization table

You can only delete a linearization table if the linearization table is not assigned to a measuring instrument.

1. In the overview table, click on the linearization table that you want to delete.
2. The related tab is displayed in the lower section of the Application window.

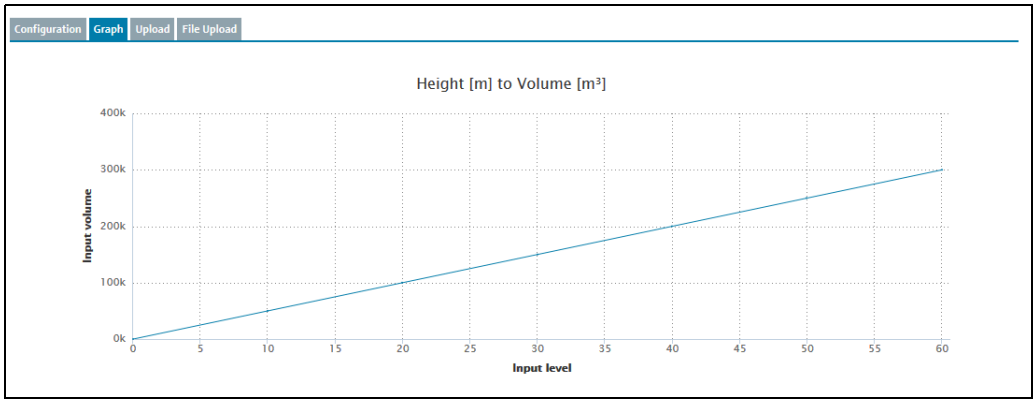


S43_SH00001SEN_0211_30

3. Click on the button.
4. The prompt "Do you really want to delete?" is displayed.
5. Click on the **OK** button to delete the linearization table. Click on the **Cancel** button to abort the process.

14.9.2 Displaying a linearization table as a graph

1. In the overview table, click on the linearization table that you want to view as a graph.
2. Select the **Graph** tab.
3. The selected linearization table is now displayed as a graph:

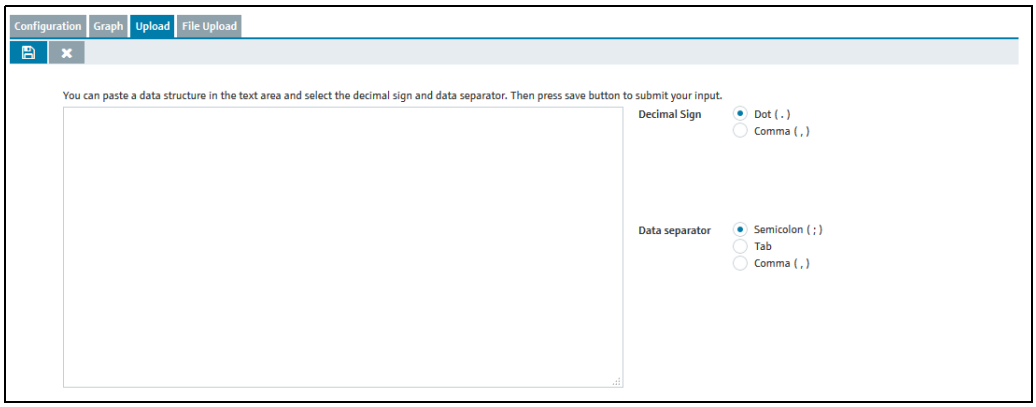


S44-2_SH00001SEN_0211_30

14.9.3 Uploading a linearization table

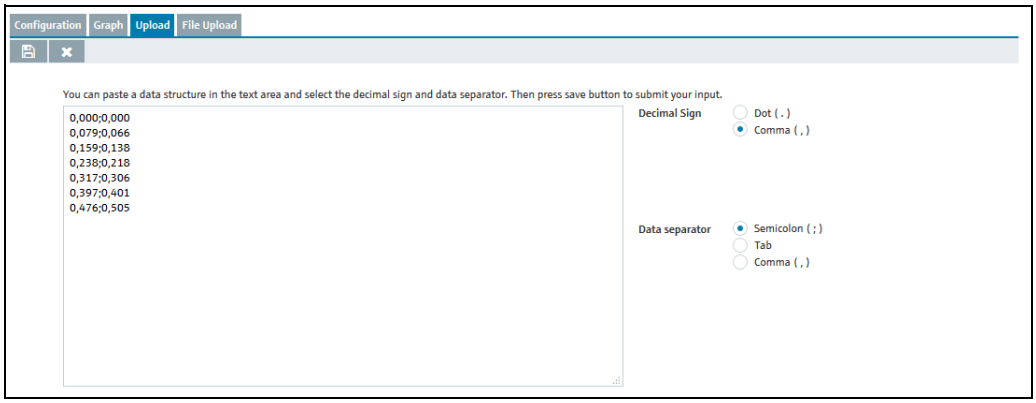
1. Select the **Configuration** tab.
2. Click on the button.
3. The **Configuration** tab is displayed in edit mode.
4. Enter data for the following fields:

   –**Name**: Unique name for the linearization table
   –**Designation**
5. Click on the button to save your entries. Click on the button to abort the process.
6. Select the **Upload** tab.
7. Click on the button.
8. The tab is displayed in the edit mode.



S45_SH00001SEN_0211_30

9. Copy a data structure into the text input area.
10. Specify the **Decimal sign** and the **Data separator**.



S45-2_SH00001SEN_0211_30

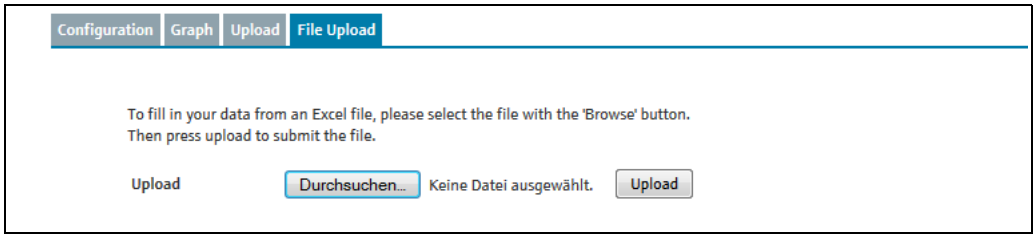
11. Click on the button to save your entries. Click on the button to abort the process.
12. Upon saving your entries, the following message will appear to confirm the process: Linearization data saved successfully.
13. Select the **Configuration** tab if you want to view the uploaded values as a linearization table. Select the **Graph** tab if you want to view the uploaded values as a graph.

14.9.4 Uploading a linearization table as an Excel file

1. Select the **Configuration** tab.
2. Click on the button.
3. The **Configuration** tab is displayed in edit mode.
4. Enter data for the following fields:

– **Name**: Unique name for the linearization table
– **Designation**

5. Click on the button to save your entries. Click on the button to abort the process.
6. Select the **Upload file** tab.
7. The tab is displayed in the lower section of the application window:



S46_SH00001SEN_0211_30

8. Click on the **Browse** button.
9. Select the required Excel file from your directory.
The Excel file must meet the following criteria and is read as follows:

	A	B	C
1	%	short tons	
2	0	0	
3	10	5.2	
4	20	10.3	
5	30	15.6	
6	40	20.8	
7	50	30.1	
8	60	40.3	
9	70	50.4	
10	80	59.8	
11	90	70.1	
12	100	80.2	
13			

SC-de-628

- The first line is used as a header. The data in this line is not read.
- The Excel file must only consist of 2 columns. The values in the first column are read as X-values and the values in the second column are read as Y-values.
- There must be a numerical value in each cell. Text in a cell will result in an error message.
- A pair of values consists of an X-value and a Y-value. An empty cell will result in an error message.
- The Excel file may consist of a maximum of 64 value pairs.

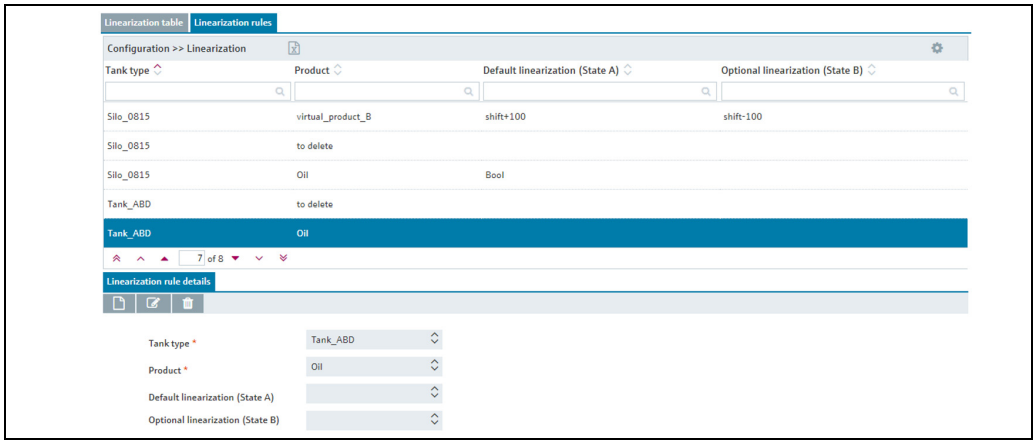
10. Click on the **Upload** button.
11. Select the **Configuration** tab if you want to view the uploaded values as a linearization table. Select the **Graph** tab if you want to view the uploaded values as a graph.

14.10 Managing linearization rules

Depending on your contract: The additional function **Linearization rules** is available. If this is required, please contact Endress+Hauser.

Only users whose user role is configured as **Master data** can create, change and delete linearization rules.

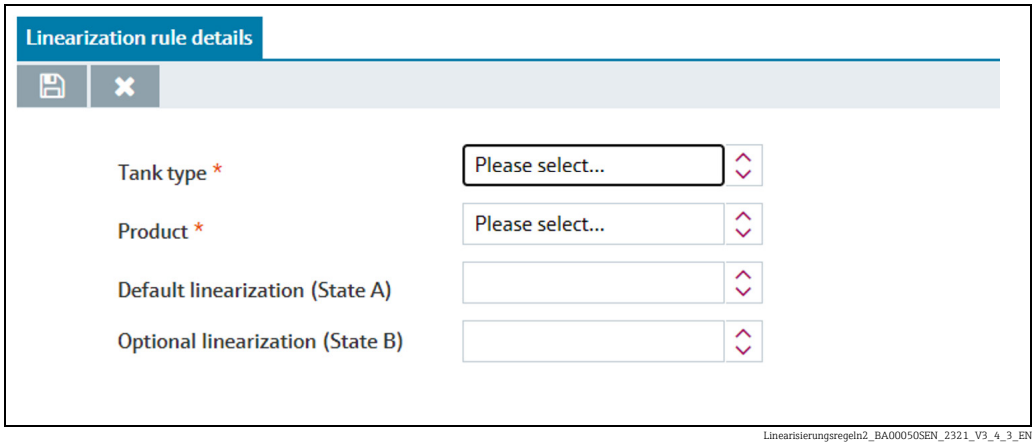
1. In the menu bar, click on the Configuration menu.
2. Click on the **Linearization** menu item.
3. Select the **Linearization rules** tab.
4. The following detail view is displayed in the application window:



Linearisierungsregeln1_BA00050SEN_2321_V3_4_3_EN

14.10.1 Creating a new linearization rule

1. Click on the button
2. The tab is displayed in edit mode in the bottom part of the screen.



Linearisierungsregeln2_BA00050SEN_2321_V3_4_3_EN

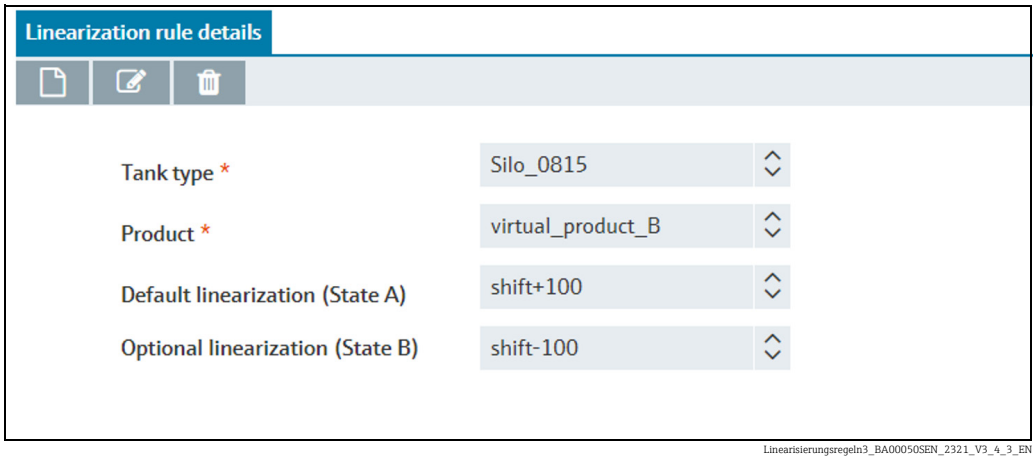
Here, you can view and enter the following data:

- **Tank type**: (Mandatory) picklist with all configured tank types that are saved in the contract.
- **Product**: (Mandatory) picklist with all configured tank types that are saved in the contract.
- **Default linearization (state A)**: Picklist with all the defined linearizations that are saved in the contract.
- **Optional linearization (state B)**: Picklist with all the defined linearizations that are saved in the contract.

3. Click on the button to save the changes. Click on the button to abort the process.

14.10.2 Changing a linearization rule

1. Click on the button
2. The tab is displayed in edit mode in the bottom part of the screen.



Linearisierungsregeln3_BA00050SEN_2321_V3_4_3_EN

Here, you can view and enter the following data:

- **Tank type**: (Mandatory) picklist with all configured tank types that are saved in the contract.
- **Product**: (Mandatory) picklist with all configured tank types that are saved in the contract.

– **Default linearization (state A)**: Picklist with all the defined linearizations that are saved in the contract.
– **Optional linearization (state B)**: Picklist with all the defined linearizations that are saved in the contract.

3. Click on the button to save the changes. Click on the button to abort the process.

14.10.3 Deleting a linearization rule

1. Click on the button.
2. The "Do you really want to delete?" dialog box is displayed.
3. Click on the **OK** button to delete the linearization rule. Click on **Cancel** to abort the process.

14.11 Managing units

Only users whose user role is configured as **Master data** can change the number of places after the decimal point for the units.

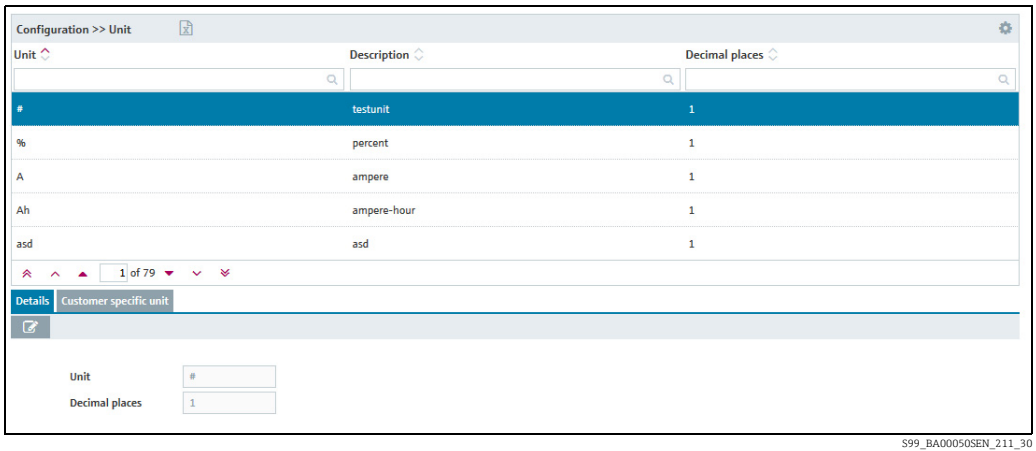
The **Unit** menu item is only available in the desktop version.

In the **Unit** menu item, you can specify the number of places after the decimal point for the various units.

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.

The button in the table header opens a context menu. Via this context menu, you can show and hide the **Unit type** column in the overview table.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Unit** menu item.
3. The following detail view is displayed in the application window:



S99_BA00050SEN_211_30

The table displays all units along with their description and number of places after the decimal point.

4. Select the unit in the table for which you want to change the number of places after the decimal point.

5. Click on the button.
6. The tab is displayed in edit mode in the lower part of the window.
7. Enter the desired number in the **Decimal places** field.
8. Click on the button to save your entries. Click on the button to abort the process.

14.12 Manging a report (using CIDX and CSV reports)

Only users whose user role is configured as **Master data** can set up reports.

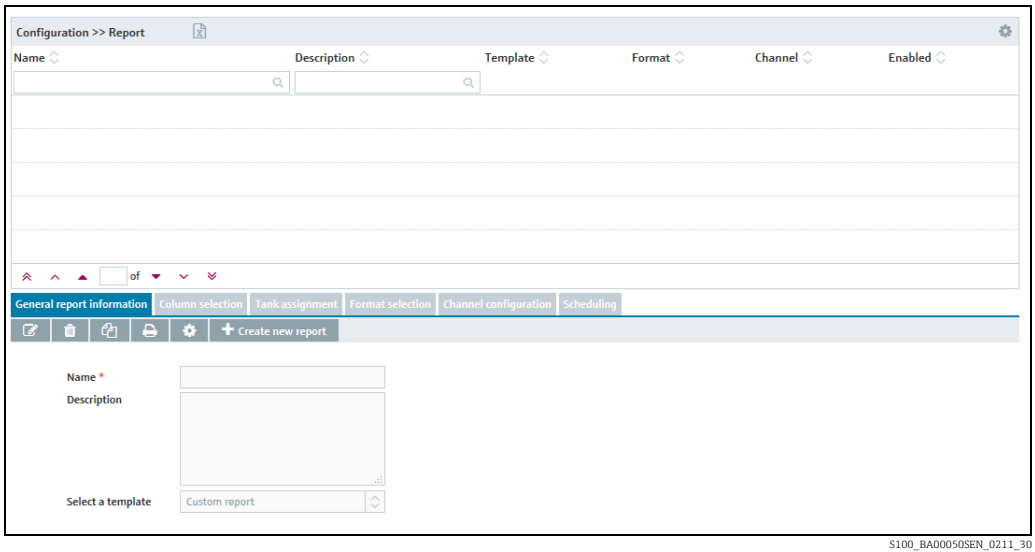
The **Report** menu item is only available in the desktop version.

To use automatic data exchange in CIDX format, a server to receive the files must have been set up on the receiver side. The URL, user name and password of the receiver side must be known.

You can schedule up to five reports.

Manual values are always marked with the suffix **MAN**.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Report** menu item.
3. The following detail view is displayed in the application window:



S100_BA00050SEN_0211_30

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 have the following structure:

Tank name	Time stamp	Value	Unit	Optimum	Plan point	Ship point	Safety stock
Tank 1	12.06.2009 17:20	920.0	l	1000	100	80	50

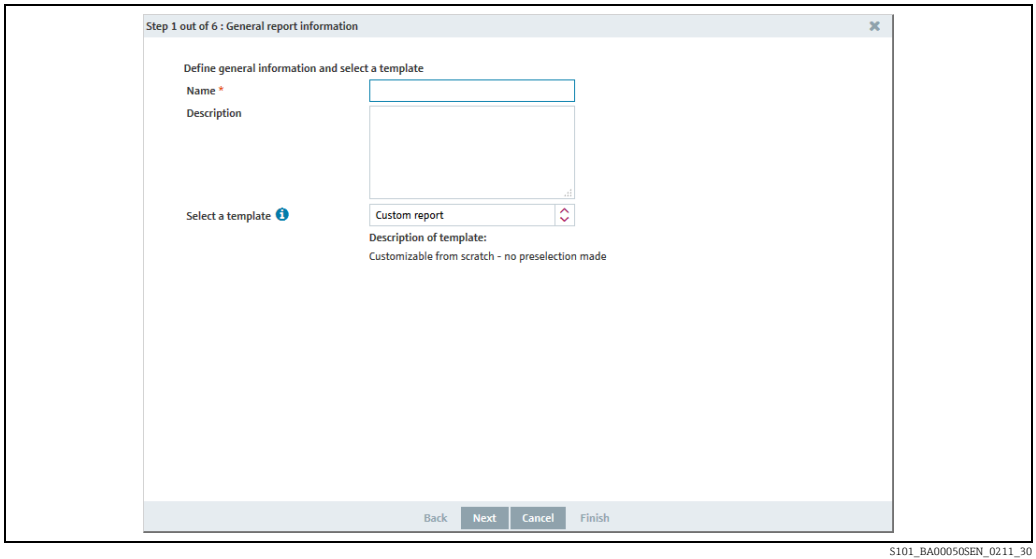
CIDX validation

Once you have assigned the tanks to the report group, 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?
- Is an identifier and identifier agency set for the product?
- Is an identifier and identifier agency set for the company of the location?
- Is a measuring point assigned to the tank?

14.12.1 Creating a report

You can create a report with the report wizard. You can use different report templates for this.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Report** menu item.
3. In the lower section of the Application window, select the **General report** tab.
4. Click on the **Create new report** button. The **General report information** dialog box appears:



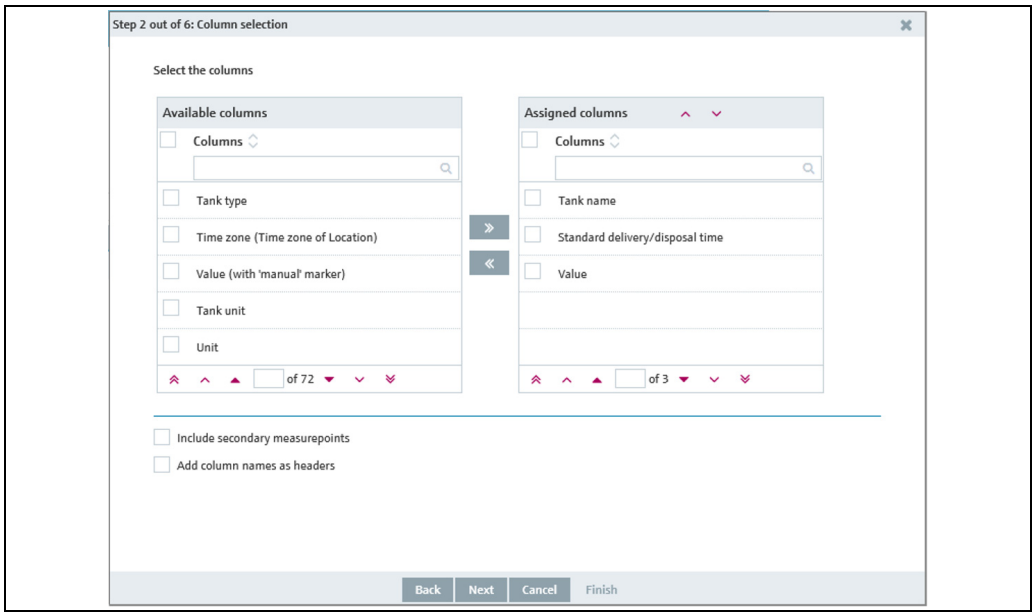
S101_BA00050SEN_0211_30

5. Here, you can enter general data on the report, e.g.:

– **Name** (mandatory): Unique identifier.
– **Description**: You can enter a multiline description here.
– **Select a template**: Select the template for the report here.

The **Secondary value report** has been specially configured for secondary values. You can compile secondary values for a report here. In this template, all parameters that correspond to a secondary value are pre-selected, as well as all secondary values and the primary value. The primary value can also be excluded from the report. The desired configuration of primary value, secondary values and parameters is saved and can be used again.

6. Click on the **Next** button. The **Column selection** dialog box opens.



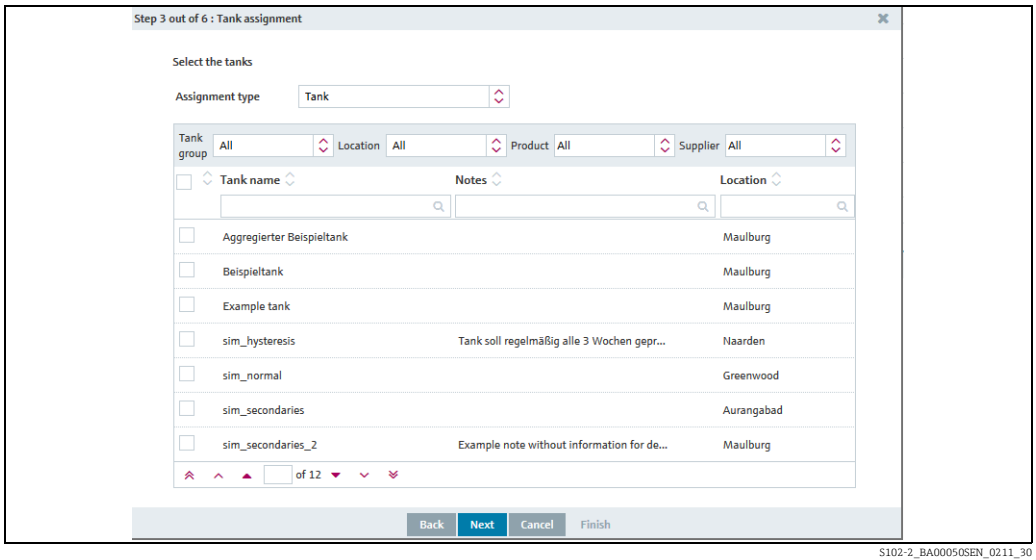
S102_BA00050SEN_0211_30

7. Here, you can select the information (columns) that should be analyzed in the report.

If **Manual values** should also be displayed in the report, the column **Value (with 'manual' marker)** must be additionally selected.

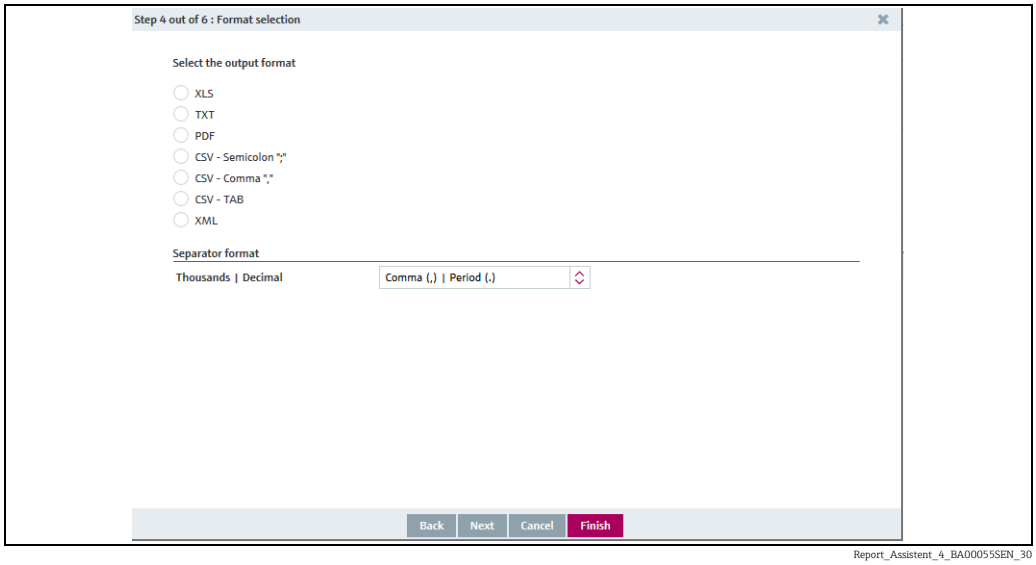
- **Available columns**: This lists all the columns that can be analyzed in the report. If you want to add a column, simply select the checkbox for the corresponding column and click on the » button. If you want to select all the columns, activate the uppermost checkbox beside the columns.
- **Assigned columns**: This lists all the columns that are analyzed in the report. If you want to remove a column, simply select the checkbox for the corresponding column and click on the « button. If you want to select all the columns, activate the uppermost checkbox beside the columns.
  If you want to change the order of the columns, select the corresponding column and click on the ▼ or ▲ button.
- **Include secondary measurepoints**: The secondary values are also displayed. If this option is selected, no secondary values can be excluded from the report. If you want to select only specific secondary values, select the **Secondary value report** template in step 1.
- **Add column names as headers**: The column names are used as headers.
- **Header language**: Choice of language for the column names in the header of the report. The language from your user preferences is used as the default language. If no language is selected in the user preferences, the column names are displayed in English.

8. Click on the **Next** button. The **Tank assignment** dialog box opens:



S102-2_BA00050SEN_0211_30

9. Using the table, you can activate the checkboxes to assign the corresponding tanks to this report.
10. Click on the **Next** button. For CIDX and CSV reports, validation is performed to check that the configuration complies with the specifications. The **Format selection** dialog box is displayed:

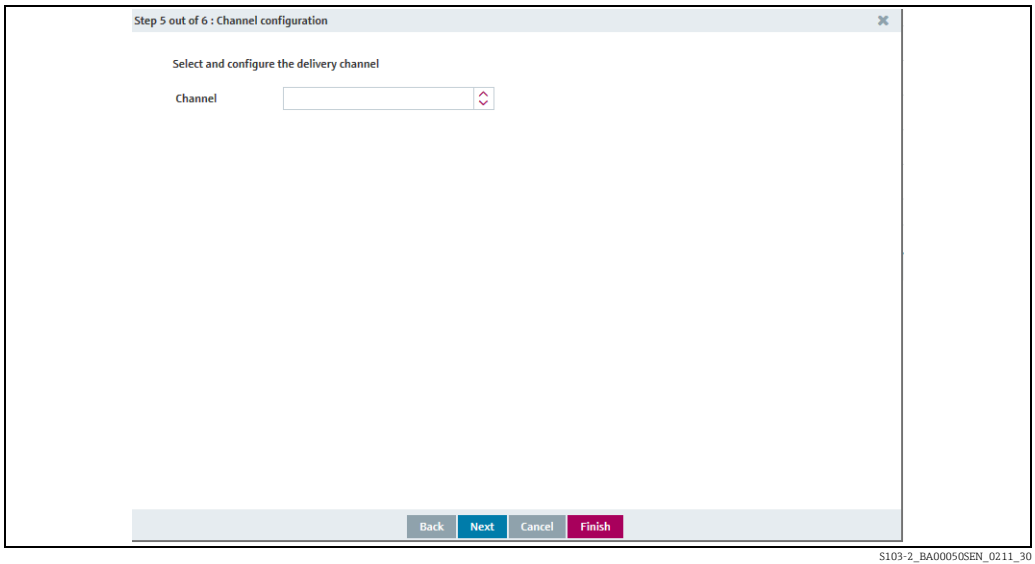


Report_Assistent_4_BA00055SEN_30

11. You can select the format that the report is output in here:

- **XLS**: Excel file
- **TXT**: Text file
- **PDF**: PDF file
- **CSV – Semicolon ";"**: CSV file (values separated by semicolons)
- **CSV – Comma","**: CSV file (values separated by commas)
- **CSV – TAB**: CSV file (values separated by tabulators)
- **XML**: XML file

12. Click on the **Finish** button to finish the report.
13. Click on the **Next** button to go to the channel configuration. The **Channel configuration** dialog box opens:

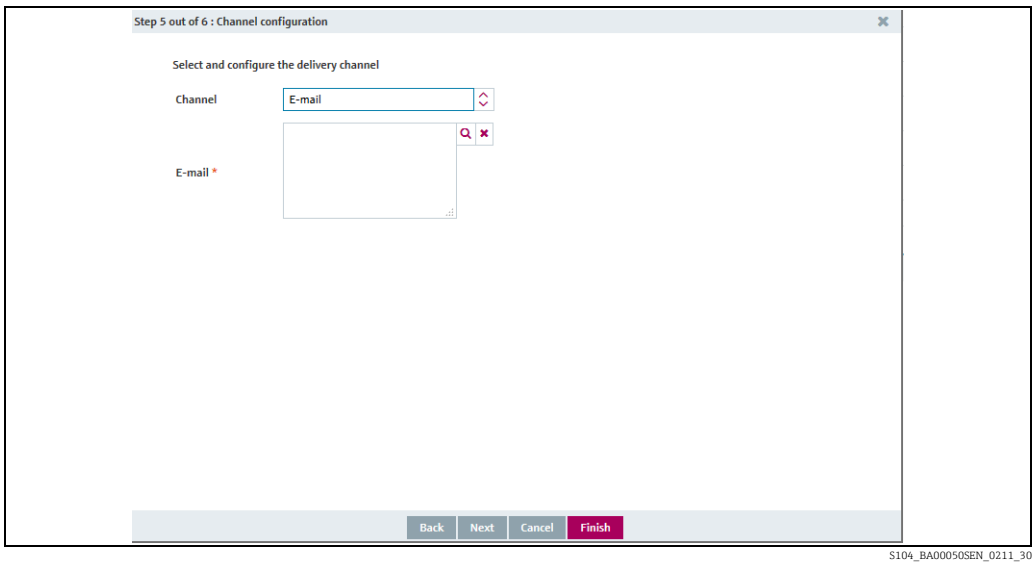


S103-2_BA00050SEN_0211_30

14. Select the distribution channel for the **Channel** field.
15. Depending on the distribution channel selected, additional fields may be displayed in the tab.

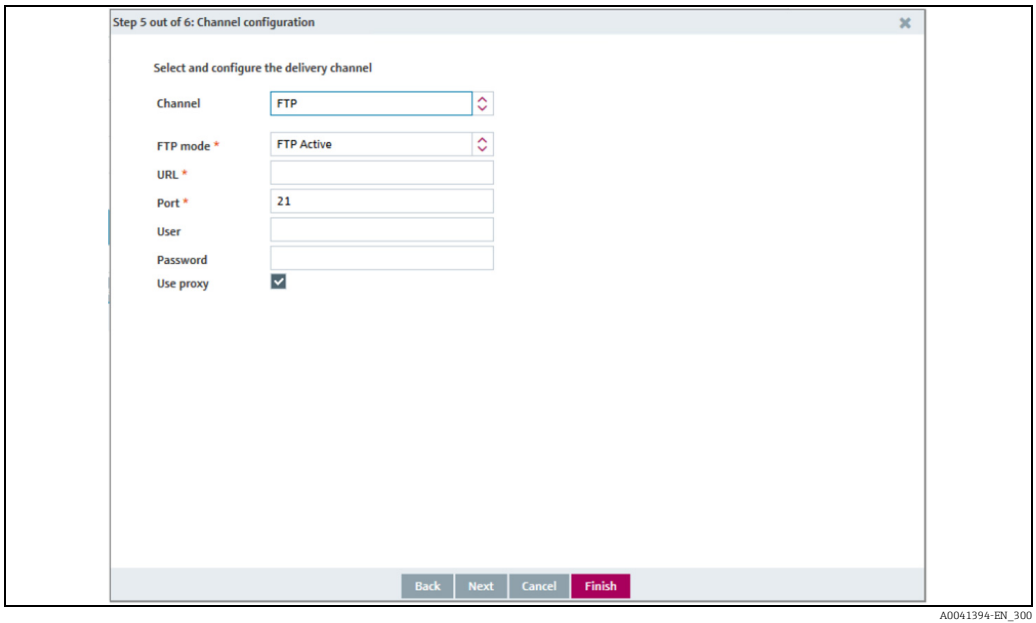
a) Distributed by e-mail

Click on the 🔍 button to select a user. Click on the ✖ button to remove a user who has been selected.



S104_BA00050SEN_0211_30

b) Distributed by FTP



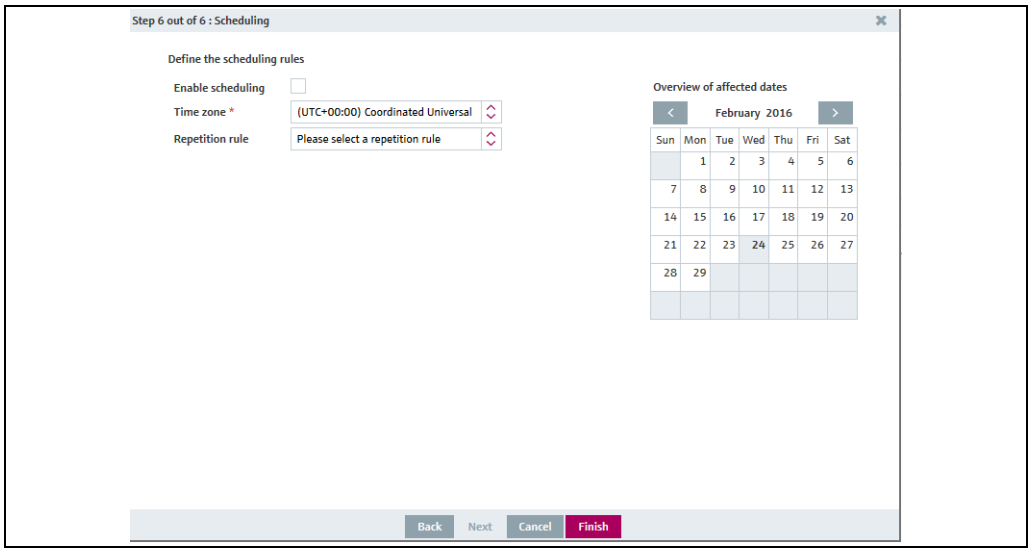
A0041394-EN_300

Enter the following data here:
- **FTP mode**: If necessary, select another FTP mode. Default value: FTP Active. Options: FTP Passive, FTPS Passive.
- **URL** (mandatory): Website of the selected channel
- **Port**: If necessary, select another port. Default value: 21
- **User**
- **Password**
- **Use proxy**

FTP Active: When FTP is active, the FTP server initiates the establishment of the data channel after the client and server have agreed on it using the control channel.
FTP Passive: With passive FTP, however, the client initiates the data connection, since a firewall or router connection often prevents the connection from being established from the server.
FTPS Passive: Passive FTPS (explicit) functions like passive FTP, but uses **TLS encryption** when establishing the connection.

When establishing a connection from the client, port 21 is used in **explicit** mode with passive FTPS.
The server must use a port between 10000 and 11000 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.

16. Click on the **Finish** button to finish the report. Click on the **Next** button to go to the scheduling. The **Scheduling** dialog box is displayed:

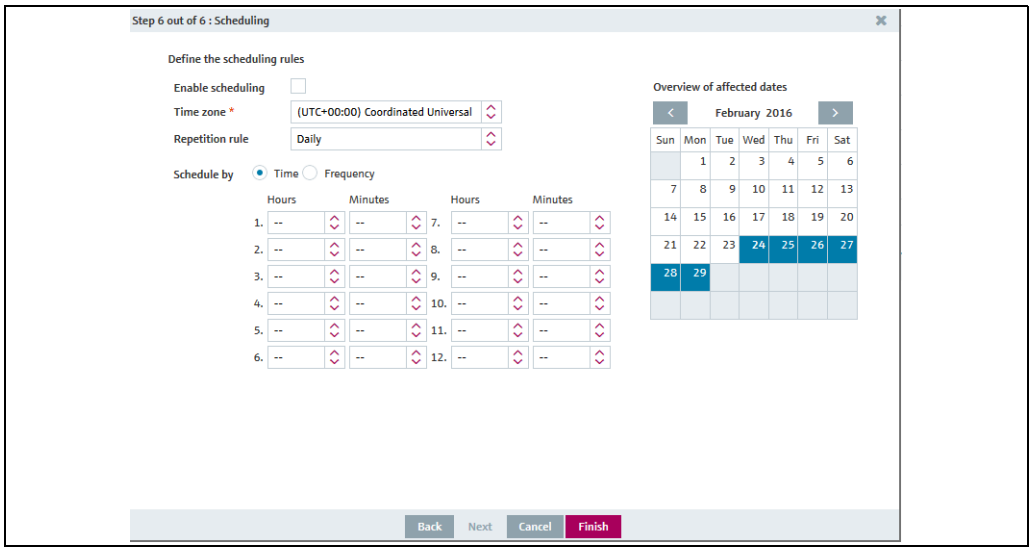


S105_BA00050SEN_0211_30

17. Here, you can enter data for the scheduling, e.g.:

- **Enable scheduling**: The scheduling rule is enabled immediately as soon as the report has been completed.
- **Time zone**
- **Repetition rule**: You can select a rule here.
  Daily: Possible to schedule by time or frequency.
  Weekly on every...: Possible to select the specific days and schedule by time or frequency.
  Monthly on specified date: Possible to schedule the start date and time for creating the report every month.
  Monthly on last day of month: Performed on the last day of the month. Possible to schedule the time for creating the report every month.

The days on which a scheduling rule is executed are highlighted in color in the calendar. You can scroll through the calendar on a month-by-month basis.



S105-2_BA00050SEN_0211_30

18. Click on the **Finish** button to finish the report.

14.12.2 Downloading the report as a PDF file

You can download a report as a PDF file and save it in your file system.

Mobile devices: Before downloading a report in PDF format, make sure to deactivate the ad blocker in the browser. If the ad blocker remains active, it may be the case that the report cannot be closed again. Should this occur, please reload the browser tab or exit SupplyCare Hosting and log in again.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Report** menu.
3. Select the report in the upper section of the application window.
4. In the lower section of the Application window, select the **General report** tab.
5. Click on the button.
6. As soon as the report is finished, the **File** dialog box is displayed.
7. Click on the **Open** button to view the report immediately. Click on the **Save** button to save the report in your file system. Click on the **Cancel** button to abort the process.

14.12.3 Creating reports and sending them immediately

Irrespective of the scheduling rules, you can create a report at any time and send the report to the recipients as defined in the channel configuration. The scheduling rules remain unchanged.

Only measured values with the status 0 are taken into account in reports in **CDIX** and **CSV** format.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Report** menu.
3. Select the report in the upper section of the application window.
4. In the lower section of the Application window, select the **General report** tab.
5. Click on the button.
6. The report is created in the background and then sent to the recipients. You receive a notification message to confirm this.
7. Click **Ok** to confirm the notification message.

14.12.4 Modifying a report

For further information, → 32

14.12.5 Deleting a report

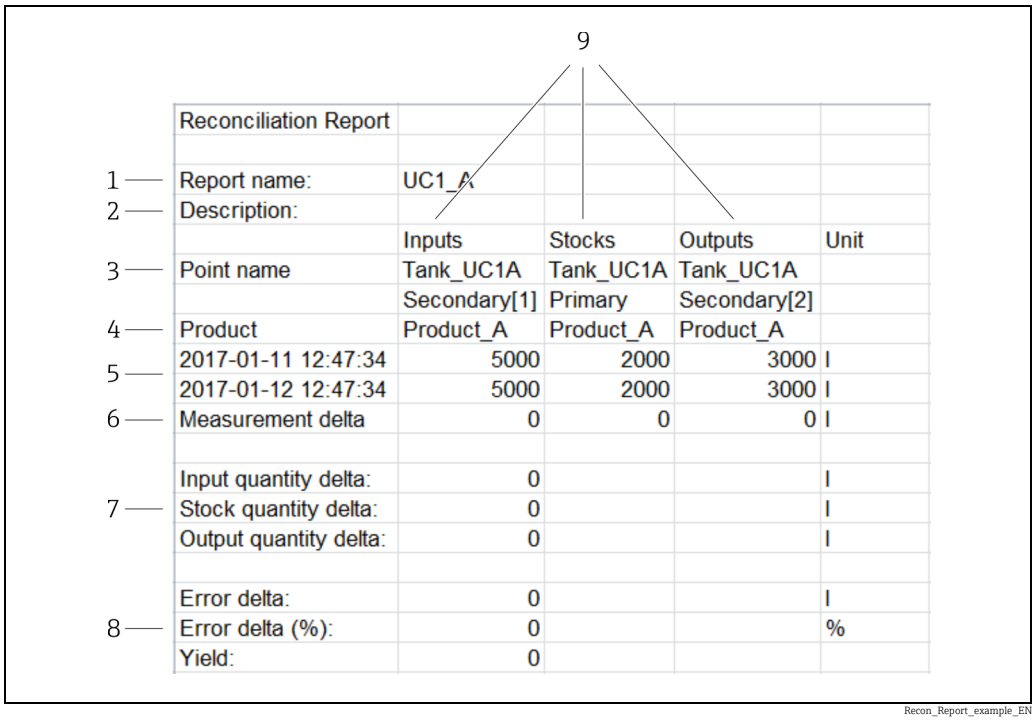
For further information, → 33

14.12.6 Copying a report

For further information, → 36

14.13 Inventory reconciliation report

14.13.1 Description



	Reconciliation Report				
1	Report name:	UC1_A			
2	Description:				
		Inputs	Stocks	Outputs	Unit
3	Point name	Tank_UC1A	Tank_UC1A	Tank_UC1A	
		Secondary[1]	Primary	Secondary[2]	
4	Product	Product_A	Product_A	Product_A	
5	2017-01-11 12:47:34	5000	2000	3000	l
	2017-01-12 12:47:34	5000	2000	3000	l
6	Measurement delta	0	0	0	l
	Input quantity delta:	0			l
7	Stock quantity delta:	0			l
	Output quantity delta:	0			l
	Error delta:	0			l
8	Error delta (%):	0			%
	Yield:	0			

Fig. 3: Example of an inventory reconciliation report in .xls format. This report provides data on three measuring points: Inputs, Stocks and Outputs.

1 Name of the report
2 Description
3 Point name: Names of the measuring points
4 Product
5 Measuring times (start time/end time)
6 Measured difference at each measuring point
7 Sum of the differences between the measured values of all measuring points of a type
8 Error delta: Measured product loss in units; Error delta (%): Measured product loss in %; Yield: Factor for the efficiency of a process (ideal value: 1)
9 Column headings for the Inputs, Stocks and Outputs measuring points

The inventory reconciliation report allows the creation of reports that show the development of the inventory in one or more tanks to an extremely precise degree.
The increased accuracy compared to the level measurement alone is achieved by adding the measured values of the flowmeters for the inflow to a tank (inputs) and the outflow from a tank (outputs) to the level measurements.
The inventory reconciliation report relates these three values to each other and compares them with one other, making it possible to visualize discrepancies.

The inventory 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 inventory reconciliation report and the values in the Analysis workplace.

For each measuring point of type **Input** (inflow), **Stock** (inventory) and **Output** (outflow), the difference between the start time and end time of the measurement is calculated.
An inventory reconciliation report can also be created if only two measuring points are available. One of these measuring points must be **Stock** (inventory).

To create the report, the last measurement prior to the entered start or end time of a measuring point is used.

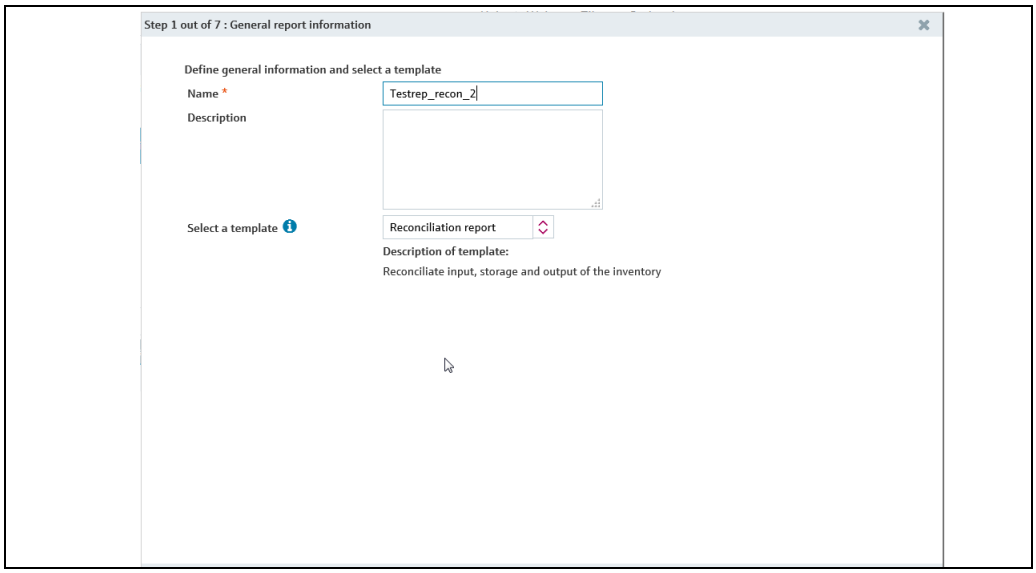
An inventory reconciliation report can be generated in different ways and at different times.
- Ad hoc, on the request of a SupplyCare user → 91
- Regularly, on the basis of variably definable time intervals

14.13.2 Configure inventory reconciliation report

Creating a report

You can create a report with the report wizard.

1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Report** menu item.
3. In the lower section of the Application window, select the **General report** tab.
4. Click on the **Create new report** button. The **General report information** dialog box appears:



Konfig_Rep_Reco_1_BA00050SEN_31

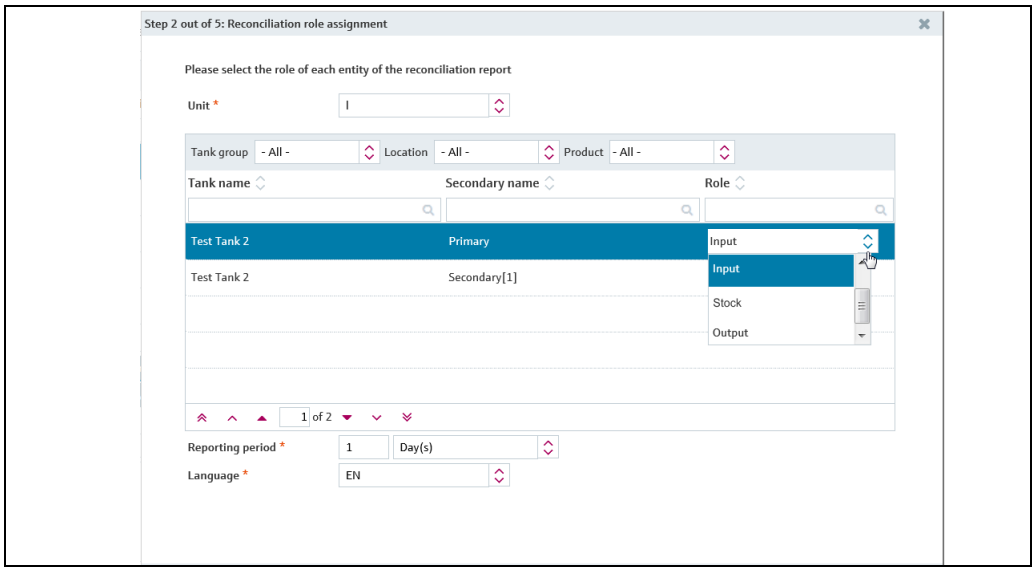
5. Here, you can enter general data on the report, e.g.:

– **Name** (mandatory): Unique identifier.
– **Description**: You can enter a multiline description here.
– **Select a template**: Select the template for the **Inventory reconciliation report** here.

6. Click on the **Next** button. The **Reconciliation role assignment** dialog box opens.

Here, you can assign a role (Input, Stock or Output) to each of the existing measuring points. Typically, primary values and secondary values are assigned to the individual roles. These measured values are then used for data comparison.

If a measuring point is not assigned to any role, it has a value of 0 (default).

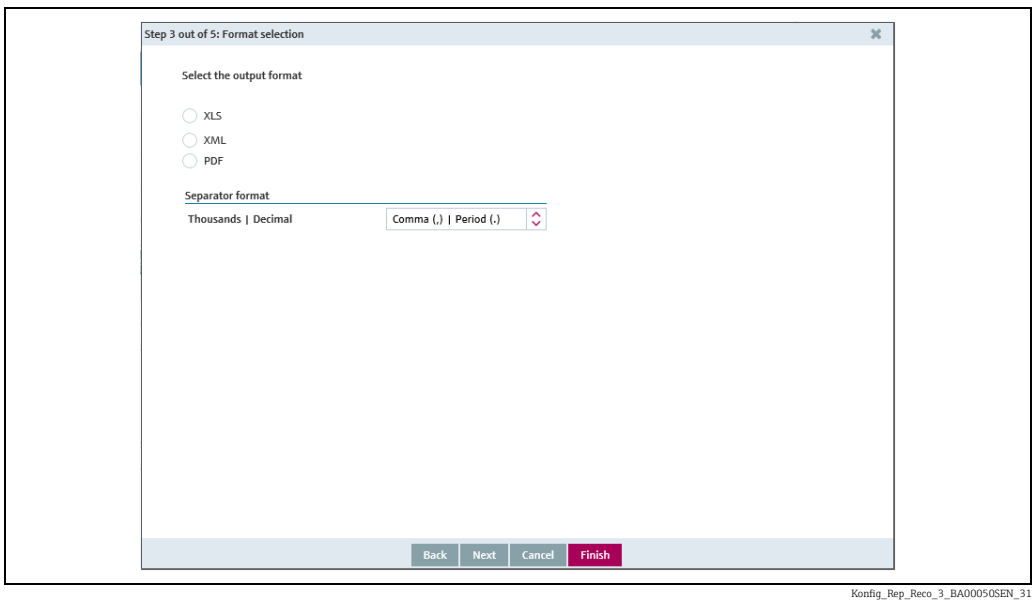


Konfig_Rep_Reco_2_BA00050SEN_31

7. The tanks can be filtered by **Tank group**, **Location** and **Product**. Enter the following information and parameters:

- **Unit** (mandatory): The default unit used is cubic meters. Only primary and secondary values can be evaluated for which the selected unit is compatible with the unit that was selected when configuring the tank. Units of volume or units of mass are compatible among each other in each case.
- Select the measuring points of a tank. At least two measuring points are required for a report. One of these measuring points must be **Stock** (inventory). A row is displayed for each measuring point. Click on each row to select a role for the respective measuring point.
- **Reporting period** (mandatory): Select the time interval for the inventory reconciliation report.
- **Language** (mandatory): Select the language for the inventory reconciliation report.

8. Click on the **Next** button. The **Format selection** dialog box is displayed:

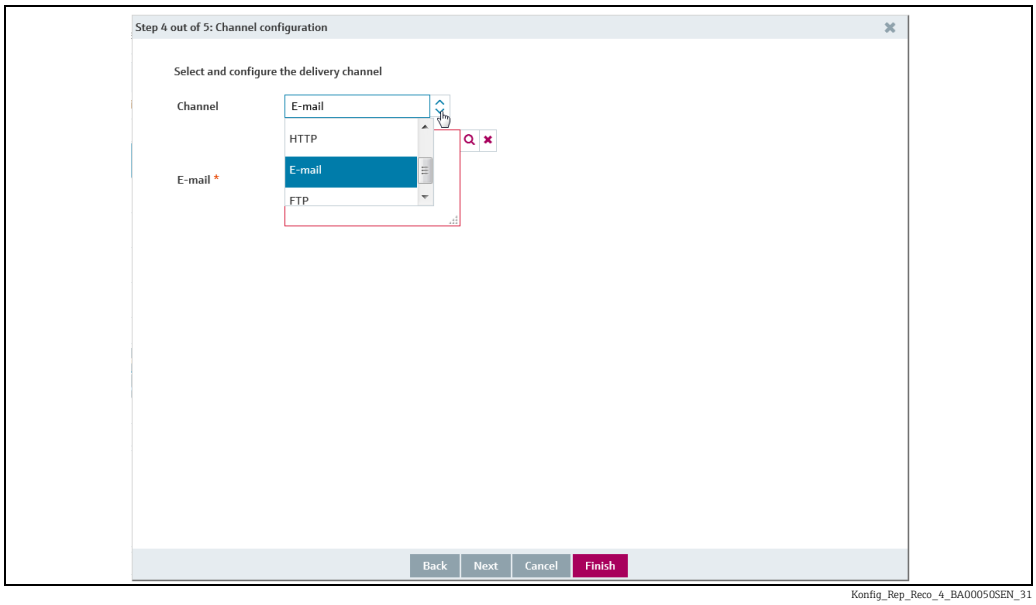


Konfig_Rep_Reco_3_BA00050SEN_31

9. You can select the format that the report is output in here:

– **XLS**: Excel file
– **XML**: XML file
– **PDF**: PDF file

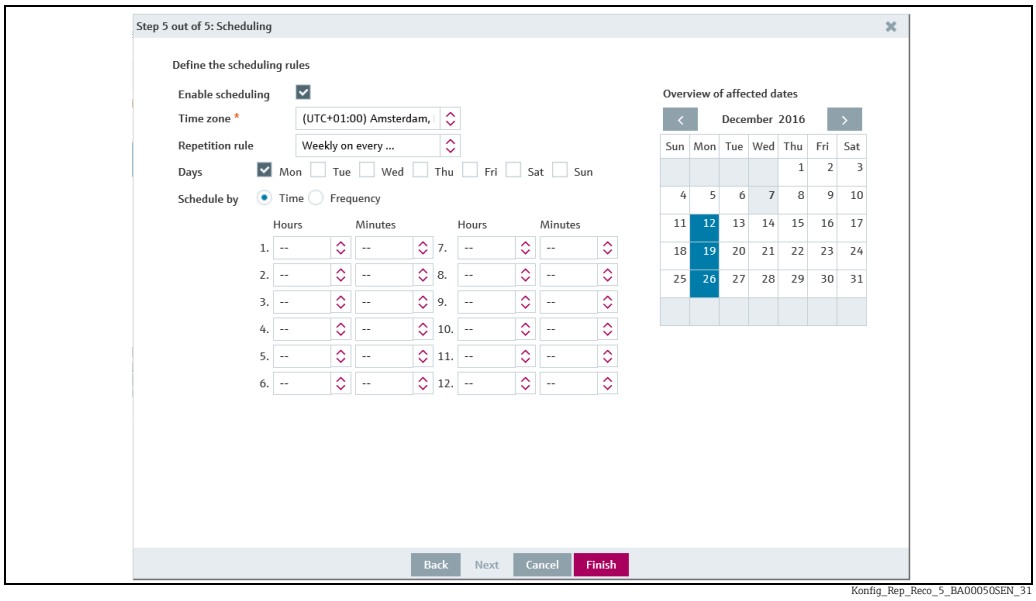
10. Click on the **Next** button. The **Channel configuration** dialog box is displayed:



Konfig_Rep_Reco_4_BA00050SEN_31

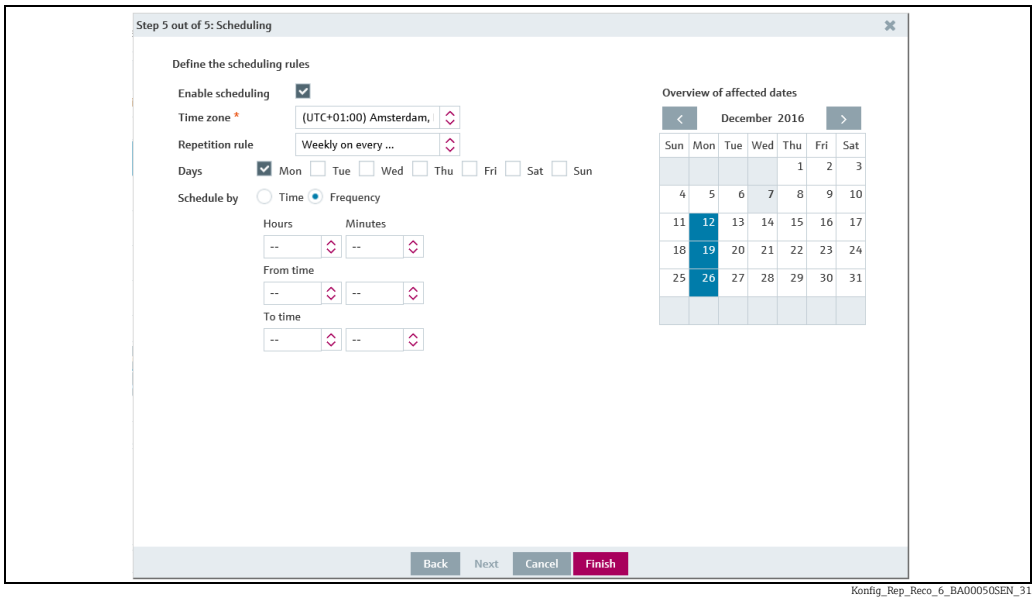
11. Select the distribution channel for the **Channel** field. Depending on the distribution channel selected, additional fields may be displayed in the tab. The details of the different distribution channels are described here: → 154.

12. Click on the **Next** button to go to scheduling. The **Scheduling** dialog box is displayed:



Konfig_Rep_Reco_5_BA00050SEN_31

– Schedule by **Time**: Here, you can specify a time or multiple times at which an inventory reconciliation report will be created on each of the selected days.



Konfig_Rep_Reco_6_BA00050SEN_31

– Schedule by **Frequency**: Here, a time window is defined (start time/end time) within which multiple inventory reconciliation reports are created. The number of reports depends on the length of the time window and the selected frequency.

13. Here, you can enter data for the scheduling, e.g.:

– **Enable scheduling**: The scheduling rule is enabled immediately as soon as the report has been completed.
– **Time zone** (mandatory)
– **Repetition rule**: You can select a rule here.
Daily: Possible to schedule by time or frequency.
Weekly on every...: Possible to select the specific days and schedule by time or frequency.
Monthly on specified date: Possible to schedule the start date and time for creating the report every month.
Monthly on last day of month: Performed on the last day of the month. Possible to schedule the time for creating the report every month.

The days on which a scheduling rule is executed are highlighted in color in the calendar. You can scroll through the calendar on a month-by-month basis.

14. Click on the **Finish** button to finish the report.

14.14 Setting up messaging

SupplyCare Hosting can actively inform users of events by e-mail. 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.

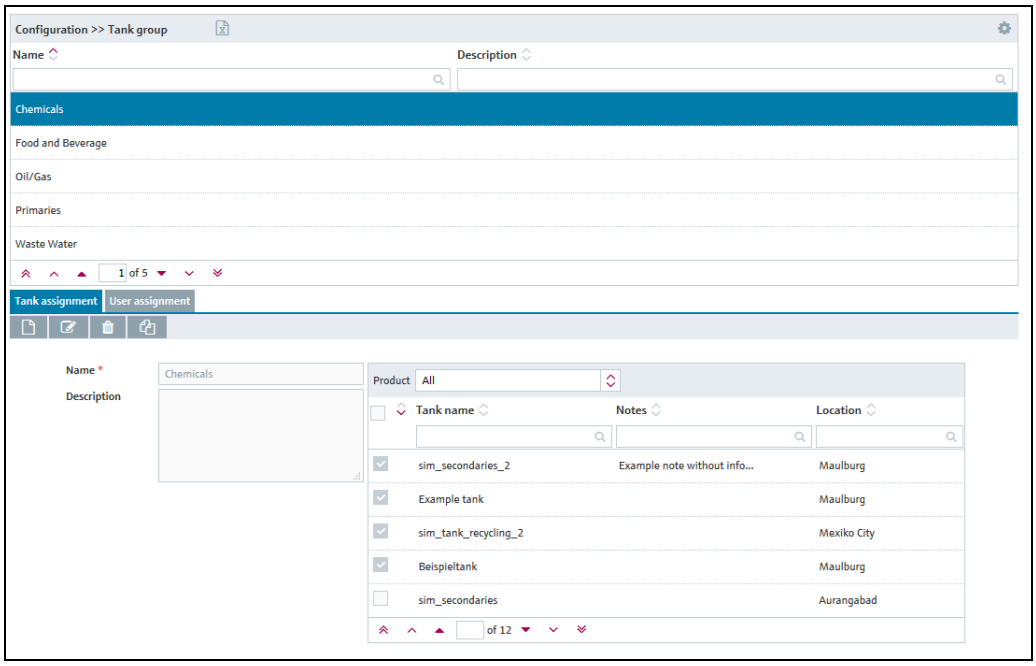
Message notifications can only be set up for users with **Read only**, **Scheduler** or **Operator** configured as their user role.

The e-mail connection must be set up for SupplyCare before the user can be notified by e-mail.

14.14.1 Setting up messaging

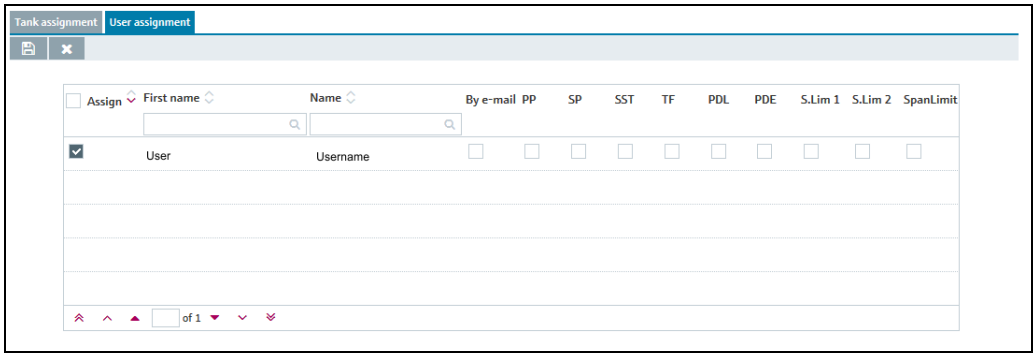
1. In the menu bar, click on the **Configuration** menu.
2. Click on the **Tank group** menu.

3. The following detail view is displayed in the application window:



S107_BA00050SEN_0211_30

4. In the overview table, select the tank group to which you want to assign a user.
5. In the lower section of the application window, select the **User assignment** tab.
6. Click on the button.
7. The tab appears in the edit mode:



S108_BA00050SEN_0211_30

All users with **Read only**, **Scheduler** and **Operator** user roles are listed in the table. You can only assign these users to a tank group, and thus to a tank.

8. You can assign one or more tank groups to the user using the **Assign** column. These tank groups are listed in the "Workplace – Tank" view.
   You can also specify what events the user should be notified of, and whether this notification should be sent by e-mail.
9. Click on the button to save your entries. Click on the button to abort the process.

Notifications can also be set up and administered via the **User** menu→ 102.

15 Separators in export and report formats

This chapter explains the correct thousand and decimal seperator formatting used in all the Export or Reporting possibilities in SupplyCare.

- **Excel Downloads** – The download is performed with Excel format (standard). When opened in Excel, the report will be shown in the local Excel format system.
- **Download history** – The character which the download uses as the thousand/decimal seperator depends on the language setting selected in the browser.
- **Notifications** – The character which the notification uses as the thousand/decimal seperator depends on the language setting selected in **User preferences**.
- **Reports** – The character which the report uses as the thousand/decimal seperator can be selected from a drop-down list in the **Report configuration** window.

16 User roles and authorization

Multiple user roles can be assigned to one person at the same time.

Master data

A user with **Master data** configured as their user role is authorized to perform the following:
- Create, change and delete a user
- Assign a user role to a user
- Assign a tank group to a user
- Assign notifications to a user
- Change their own user profile
- Create, change and delete a tank
- Assign a tank to a tank group
- Create, change and delete an aggregated tank
- Assign an aggregated tank to a tank group
- Create, change and delete a tank type
- Create, change and delete a location
- Assign a tank to a location
- Create, change and delete a company
- Create, change and delete a product
- Upload an existing linearization table
- Create, change and delete a linearization table
- Create, change and delete a tank group
- Assign a product to a tank
- Create, change and delete a report
- Change the number of decimal places for a unit type

Product-tank configurator

A user with **Product-tank configurator** configured as their user role is authorized to perform the following:
- Create, change and delete a tank
- Assign a tank to a tank group
- Create, change and delete a product
- Assign a product to a tank

Read-only

A user with **Read only** configured as their user role is authorized to perform the following:
- View tanks (measured values)
- View personalized tank view
- View tanks on a map (Google Maps)
- View and save measured value history
- View tank details
- View location details
- View tank service status
- View events
- Perform totaling
- Change their own user profile
- Adjust user preferences

Operator

An **Operator** is authorized to perform the following:
- View tanks (measured values)
- View personalized tank view
- View tanks on a map (Google Maps)
- View and save measured value history
- Analyze the history of existing measured values

- View tank details
- View location details
- Change tank service status
- View and edit events
- View event history
- Perform totaling
- Change their own user profile
- Adjust user preferences

Scheduler

A **Scheduler** is authorized to perform the following:
- View tanks (measured values)
- View personalized tank view
- View tanks on a map (Google Maps)
- View and save measured value history
- View notifications and status displays on planned disposals and deliveries
- View tank details
- View location details
- View tank service status
- View and edit events
- Setting the resubmission date
- View event history
- Plan deliveries and disposals
- Perform totaling
- Change their own user profile
- Adjust user preferences

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