Pipette Calibration

Calibry





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1 Introduction

1.1 Short description of Calibry

Calibry is an application for calibrating pipettes and other dispensing systems for liquids in the range from 0.1 µl to 100 ml. The application supports a large number of weighing systems from METTLER TOLEDO. Multiple weighing systems can be connected to Calibry. Calibry is optimized for operation with the **MCP** multichannel pipette calibration systems, the **XPE26PC** balance from METTLER TOLEDO and supports the special characteristics of these systems.

Calibry provides a convenient user interface for intuitive and efficient working.

Calibry Editions

Calibry is available in 3 different editions with various functions. The main functions of each edition are listed below:

Edition	Description
Calibry Network	Central database on a workstation.
	 Running Calibry on several workstations within the network.
	 Registration of unlimited customers.
	 Registration of up to 20 balances. (instrument license required)
	 User Management function to manage users and creating user groups with different editing rights.
	• 5 different calibration methods.
	Audit Trail function which records data-relevant operations. (option)
	Supporting MCP balances.
	Exporting of calibration reports.
	Customization of reports.
	 User-defined uncertainty and Z-Factor (K-Factor).
Calibry Workstation	Local installation of the database on a workstation.
	 Registration of up to five balances. (instrument license required)
	 Registration of unlimited customers.
	 5 different calibration methods
	Supporting MCP balances.
	Customization of reports
	 User management and exporting of calibration reports. (option)
	 Audit trail function which records data-relevant operations. (option)
	 User-defined uncertainty and Z-Factor (K-Factor)
Calibry Express	Local installation of the database on a workstation.
	 Registration of one customer.
	 Registration of up to three balances. (instrument license required)
	Quick-check and calibration method.
	 Exporting of calibration reports. (option)
	• User Management (option)

For a more detailed feature list of the editions, see [Edition specifications ▶ Page 89]

Note

For every balance, which is in use with Calibry, an instrument license is required.
 Example with Calibry Express: As in this edition up to three balances can be registered to use at the same time, three instrument licenses are required. To register another balance than the registered ones, a balance has to be removed from Calibry in order to release a license and assign it to the new balance.

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1.2 Delivery content

The Calibry software will be delivered in a box with the following content:

Amount	Item
1	USB flash drive with the Calibry Software
2	Calibry software license (amount of licenses may vary depending on the purchased edition and options.)
1	Installation Quick Guide

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2 How to install



The following options are available in the installation menu:

Install	Starts the installation wizard for Calibry.
System requirements	Shows the minimum and recommended system requirements to run Calibry.
	With a click on System requirements , the minimum and recommended system requirements to run Calibry are displayed. Calibry is not checking, whether the workstation meets the requirements. Only the Windows version installed on the workstation will be checked.
User guides	Shows the user guides for Calibry in PDF-format.
	With a click on User guides , the operational instructions for Calibry is displayed in the PDF-format.
Product website	Directs to the Product website of METTLER TOLEDO.
	With a click on Product website , the user will be directed to www.mt.com/calibry to get more information about the calibration process.

2.1 Installation of Calibry

- The workstation is switched on.
- All running applications are closed.
- 1 Connect the USB flash drive to a USB-port of the workstation.
 - The USB flash drive will be detected automatically from the workstation.
 - → The Calibry installation window opens.
- 2 Click on Install.
 - → The **Select the features to install** window opens.

Pipette Calibration How to install

- 3 Check or uncheck the boxes of the features to be installed with a click. For more information about the **Calibry DB Maintenance**, see [Installion of the Calibry Database Maintenance software ▶ Page 8].
- 4 Select the desired software language from the drop-down list with a click.
- 5 Click on Next.
 - → The Select existing or create new Calibry database window opens.
- To proceed with the installation of Calibry with Microsoft SQL Server Express, see [Installation of Microsoft SQL Server Express ▶ Page 8].
- To proceed with the installation of Calibry without Microsoft SQL Server Express, see [Connecting to an existing database ▶ Page 9].

Manual installation

In case the installation of Calibry does not start automatically, proceed as follows:

- Microsoft Windows 10/11
- 1 Click on **Start** > **File Explorer**
 - → The File Explorer window opens.
- 2 Click on This PC
 - → The **Computer** window opens.
- 3 Double-click on the 1 icon.
 - → The **Calibry** window opens.
- 4 Execute the **Setup.exe** with a double-click.
- → The Setup window opens.

2.1.1 Installion of the Calibry Database Maintenance software

Calibry DB Maintenance allows existing Calibry databases to be converted for use with **Calibry 6.2** and secures SQL databases among other functions:

- initialize an existing Calibry database, e.g. delete all existing data records.
- restore a backup copy of a Calibry database.
- create a backup copy of the Calibry database.
- update an older SQL database for use with Calibry.
- import a Microsoft® Access database from an earlier version of Calibry.

To install **Calibry DB Maintenance**, check the box with a click in the **Select the features to install** window of the install menu.

2.1.2 Installation of Microsoft SQL Server Express

Microsoft SQL Server Express is a database management system to store and access the information stored in different databases.

- Microsoft SQL Server Express box is checked.
- 1 Enter a SQL Server instance name.
- 2 Enter a database name.
- 3 Optionally, create a database username and password.
- 4 To discard the entries, click on **Back**.
 - → The Select existing or create new Calibry database window opens. The features to be installed can be edited.
- 5 To confirm the entries, click on **Next**.
 - → The **Summary** window opens. An overview of the chosen features to install are listed.
- 6 Check the box I accept the licence agreement with a click.
- 7 To edit the database settings or the features to be installed, click on **Back**.

How to install Pipette Calibration

- 8 To proceed with the installation, click on **Next**.
 - → The installation starts.
- 9 Complete the installation with a click on Close.
- → The installation is completed. Calibry is ready to use.

2.1.3 Connecting to an existing database

i Note

- During the installation process, Calibry detects and lists automatically all instances, which are accessible
 from the workstation, where Calibry is installed. If there is an existing SQL Server instance, which was not
 detected automatically, it has to be entered manually in this format:
 [ComputerName] \ [InstanceName].
- Microsoft SQL Server Express is already installed.
- The Microsoft SQL Server Express box is unchecked.
- 1 Click on Next.
 - → The Select existing or create new Calibry database window opens.
- 2 Select a SQL Server Instance name from the drop-down list.
- 3 Enter an individual name for the database.
- 4 To change the authentication for the administration mode, click on **Modify**.
 - → The Authentication window opens.
- 5 To change the authentication for the operative mode, click on **Modify**.
 - **Note:** Windows authentication: The login can be performed with the windows credentials to verify the identity of the user. By choosing this option the user is verified and there is no need to enter the credentials again to get access to the database.
 - **SQL Server authentication**: The user has to enter the SQL Server credentials to get access to the database.
- 6 To proceed with the installation, click on **Next**.
 - → The installation starts.
- 7 To discard the entries, click on **Back**.
 - The Select existing or create new Calibry database window opens. The features to be installed can be edited.
- 8 To confirm the entries, click on **Next**.
 - The **Summary** window opens. An overview of the chosen features to install are listed.
- 9 To view the license agreement. click on View licence agreement.
 - → The license agreement is displayed.
- 10 To close the **Licence agreement** window, click on **Close**.
 - → The Licence agreement window is closed.
- 11 Check the box I accept the licence agreement with a click.
- 12 To edit the database settings or the features to be installed, click on **Back**.
- 13 To proceed with the installation, click on Next.
 - → The installation starts.
- 14 Complete the installation with a click on **Close**.
- The installation is completed.

Pipette Calibration How to install

3 First steps

3.1 Starting Calibry

- 1 Turn on the workstation.
- 2 To start Calibry, double-click on the 1 icon on the desktop.
 - → The login window opens.
- 3 Enter the Windows® login credentials.
- Calibry starts.



Activating a trial version of Calibry

After installation, Calibry can be used with its full range of functions for a trial period of 45 days. After this period, Calibry is to be activated in order to continue using the software. To activate the software a license key is necessary.

- Calibry is not registered.
- 1 Start Calibry.
 - → The Welcome to Calibry 6.2 window opens.
- 2 To use a trial mode, select the desired edition.
- 3 Click on Next.
- 4 Click on Finish.
- The desired trial version has been activated for 45 days.
- i Note
- Ten days before the trial period expires, before starting Calibry a notification reminds the user to activate Calibry with a valid license key in order to continue using Calibry after the trial period.

Activating Calibry or an option with a license/option key

With purchasing Calibry, the user automatically receives a license key to activate Calibry. Licence keys are to activate additional options (e.g. **User Management** or **Audit Trail** function, depending on the purchased edition) and can also be activated.

- 1 Start Calibry.
 - → The Welcome to Calibry 6.2 window opens.
- 2 To enter a license or option key, select Enter a license key with a click.
- 3 Click on Next.
- 4 Enter a valid edition and/or option or instrument key on the foreseen fields.
- 5 Click on Finish.
- The edition or instrument has been activated.

3.2 Add pipette

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- Navigation: Home or Pipettes
- 1 To add a pipette, click on the 1/6 icon.
 - → The Add Pipette window opens.

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2 Enter the serial number of the pipette.

i Note

The serial number is mandatory and has to be unique.

The serial number cannot be changed, once it is registered.

If an already registered serial number is entered, the so icon shows up. A unique serial number has to be entered.

If an already assigned serial number of a pipette is entered, which was used before and deleted, the assistant suggests to reactivate the deleted pipette.

- 3 Optionally, enter an individual asset ID.
 - i Note: The Asset ID is optional as a second identification for the pipette. The same Asset ID can be assigned multiple times to several pipettes.
- 4 To cancel the registration, click on **Cancel**.
 - → The **Pipette Identification** window is closed.
- 5 To proceed with selecting the pipette model click on **Next**.
 - → The Pipette model window opens.
- 6 Optionally, perform a quick search by entering information in one of the empty fields under the column titles.
 - The entered information are filtered. All pipettes matching with the entered information are listed. The filter settings can be edited with a click on **Edit filter**. To get more information about editing the filter, see [Customizing the view ▶ Page 80].
- 7 Mark a pipette model from the list with a click.
 - **Note**: By clicking on **Manage**, other pipette models can be added, if the desired model is not listed. For more information, see [Manage pipette models ▶ Page 40]
 - → The chosen pipette model is marked blue.
- 8 To go back to the **Pipette model** window, click on **Back**.
- 9 To cancel the registration, click on **Cancel**.
 - → The **Pipette model** window is closed.
- 10 To proceed with selecting the customer, click on Next.
- 11 Mark a customer from the list with a click.
 - i Note: By clicking on New Customer other customers can be added, if the customer is not listed. For more information, see [New customer ▶ Page 55]
 - → The chosen customer is marked blue.
- 12 To cancel the registration, click on **Cancel**.
 - → The **Contact Information** window is closed.
- 13 To proceed with the registration of the pipette, click on Next.
- 14 To add the pipette, click on Finish.
- The pipette is added.

To get more information on how to edit pipettes, see [Edit pipette ▶ Page 43]. To get more information on how to remove pipettes, see [Remove pipette ▶ Page 43].

3.3 Setting up the climate sensors

The climate sensors can either be set up without a connection or with **LabClimate**. To set up the climate sensors without a connection, see [Setting up with "no connection" ▶ Page 12], or with **LabClimate**, see [Setting up with "LabClimate" ▶ Page 12].

LabClimate can be downloaded from the knowledge base:

Knowledge Base

https://activation.mt.com

Licences are required to activate **LabClimate**.

Pipette Calibration First steps

3.3.1 Setting up with "no connection"

■ Navigation: M Devices > Climate Sensors > M Add Climate Sensor

In order to get proper measurements, it is mandatory to set up one of each climate sensor. The following climate sensors are necessary:

- Temperature
- Humidity
- Pressure
- 1 To add a climate sensor, click on the 🔓 icon.
 - → The **Select the Connection Type** window opens.
- 2 Select **Not connected** from the drop-down list.
- 3 To cancel the registration, click on Cancel.
 - → The Select the Connection Type window is closed.
- 4 To proceed with entering the properties, click on **Next**.
 - → The **General Properties** window opens.
- 5 Enter a Serial number.
- 6 Enter a Name.
- 7 Enter a Manufacturer.
- 8 Enter on Asset ID.
- 9 Enter a **Model**.
- 10 Select a sensor type from the drop-down list.
- 11 To proceed with selecting the Entry type and Current value, click on Next.
 - The Define Channels window opens.
- 12 Select an Entry type from the drop-down list. Manual Constant: The value can only be modified in the sensor properties by an authorized user or Manual per Calibration: The value has to be provided during the calibration process by the user.
- 13 Enter a Current value.
- 14 To proceed with the registration, click on Next.
- 15 The user can directly assign the new sensor to the current workstation and then click on **Finish**.
- 16 To finish the registration, click on **Finish**.
- → The climate sensor is added. The window closes.

Assigning climate sensors

- Climate sensors need to be assigned to a workstation. Assign the climate sensors under Backstage
 view > Settings > Workstation settings. For more information, see [Workstation settings ▶ Page 28].
- → The sensors are assigned.

3.3.2 Setting up with "LabClimate"

■ Navigation: M Devices > Climate Sensors > M Add Climate Sensor

In order to get proper measurements, it is mandatory to set up one of each climate sensor. The following climate sensors are necessary:

- Temperature
- Humidity
- Pressure

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- 1 To add a climate sensor, click on the 🔏 icon.
 - → The Select the Connection Type window opens.
- 2 Select **LabClimate** from the drop-down list.

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- 3 To proceed with the **Connection Settings**, click on **Next**.
 - → The **Connection Settings** window opens.
- 4 Enter the IP-address.
- 5 Enter the Port number 50910.
- 6 Click on Next.
- 7 Select a sensor.
- 8 To proceed with entering the properties, click on **Next**.
 - → The **General Properties** window opens.
- 9 Optionally, enter a Location.
- 10 Optionally, enter a **Description**.
- 11 To go back to the **Select the Connection Type** window, click on **Back**.
- 12 To proceed with the registration, click on **Next**.
- 13 The user can directly assign the new sensor to the current workstation and then click on Finish.
- 14 To finish the registration, click on **Finish**.
- → The climate sensor is added. The window closes.

Assigning climate sensors

- Climate sensors need to be assigned to a workstation. Assign the climate sensors under Backstage
 view > Bestings > Workstation settings. For more information, see [Workstation settings ▶ Page 28].
- → The sensors are assigned.

3.4 Setting up balances

■ Navigation: M Devices > Balances > M Add Balance

Serial

- The balance is connected with the workstation.
- The balance is switched on.
- 1 To add a balance, click on the J. icon.
 - → The Add Balance Wizard window opens.
- 2 To close the registration of a balance, click on **Cancel**.
 - → The Add Balance Wizard is closed.
- 3 To proceed with the registration, click on **Next**.
 - → The **Select the Connection Type** window opens.
- 4 Select **Serial** from the drop-down list. Click on **Next**.
 - → The Add Balance Wizard searches for connected balances.
- 5 When the balance was found, select the balance from the list with a click.
- 6 To finish registration, click on Next.
- → The Balance is installed.

Network

- The balance is connected to the network.
- The balance is switched on.
- 1 To add a balance, click on the 🎩 icon.
 - → The Add Balance Wizard window opens.
- 2 To close the registration of a balance, click on **Cancel**.
 - → The Add Balance Wizard is closed.
- 3 To proceed with the registration, click on **Next**.

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- → The **Select the Connection Type** window opens.
- 4 Select **Ethernet** from the drop-down list.
- 5 To proceed with the **Connection Settings**, click on **Next**
 - → The **Connection Settings** window opens.
- 6 Enter the IP-address.
- 7 Enter the Port number as defined on the balance.
- 8 Enter the corresponding password when web service is defined on the balance (XPR balances only). Otherwise leave the field blank.
- 9 Click on Next.
 - → The **Add Balance Wizard** searches for the connected balance.
- 10 To finish registration, click on Next.
- → The Balance is installed.

To get information, which balances are compatible with the Calibry software, see [Setting up the hardware > Page 83].

i Note

Calibry automatically detects and recognizes most balances by METTLER TOLEDO. The balance has to be set up manually in case, Calibry cannot detect the connected balance. In this case, check the following to ensure, the balance is connected properly:

- · Check, if the balance is switched on.
- Check, if the latest driver of the balance is installed.
- Check the balances cable, whether it is properly connected with the workstation. Unplug the cable and plug it in again. Click on **Retry** to start a new search.

Manual Configuration of the balance

- 1 To configure the balance manually, click on **Manual Configuration**.
 - → The **Wizard** window opens.
- 2 Edit the settings.

To get information about the status of the balance, check the 🚾 icon on the bottom right of each menu. The balance can have the following status:

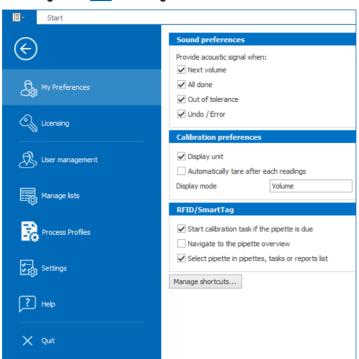
Status icon (colour)	Description
🤠 (blue)	Balance is connecting.
🡿 (green)	Balance is connected.
(blue)	Balance is busy.
(black)	Balance is disconnected.

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4 Overview of the Calibry menus

4.1 Backstage view

■ Navigation: 📴 Backstage view



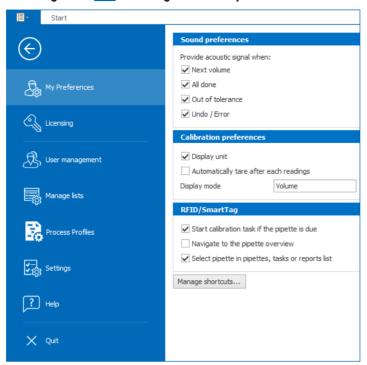
	Function	Description
■ -	Backstage view	To switch to the Backstage menu and back.
\bigcirc	Back	To go back to the main menu.
2	My Preferences	To open user's preferences menu.
	Licensing	To open the license menu.
<u></u>	User Management	To open the user and user group management menu.
	Manage lists	To open the lists management menu.
	Process Profile	To open the process profiles management menu.
	Settings	To open the settings menu.
?	Help	To open the online help.
×	Quit	To quit the Calibry software.

i Note

Some functions are not available in all editions or require additional option licenses.

4.1.1 My preferences

■ Navigation: 📴 Backstage view > My Preferences



Sound preferences

Parameter	Description	Values
Next volume	Activate/deactivate signal, when switching to the next volume.	Active I Inactive
All done	Activate/deactivate signal, when all measurements are completed.	Active I Inactive
Out of tolerance	Activate/deactivate signal, when a tolerance limit is exceeded.	Active I Inactive
Undo / Error	Activate/deactivate signal, when errors occur or when erroneous measured values are deleted.	Active I Inactive

Calibration preferences

Parameter	Description	Values
Display unit	Activated: the measured quantity is shown in a volumetric or mass unit.	Active I Inactive
Automatically tare after each readings	The balance is tared automatically after each reading.	Active I Inactive
Display mode	Volume: volume is shown during the calibration process.	Volume I Weight
	• Weight: net weight is shown during the calibration process.	

RFID/Smart Tag

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Parameter	Description	Values
Start calibration task if the pipette is due	Activated: starts calibration process, when the pipette is recognized and due for calibration.	Active I Inactive
Navigate to the pipette overview	Directs to the "Pipette" menu, when the pipette is recognized.	Active Inactive

Parameter	Description	Values
Select pipette in pipettes, tasks or reports list	Activated: If the user is in the Pipettes , Tasks menu or in the Reports list view and scans a pipette, the data of the pipette will be displayed in the list view.	Active I Inactive

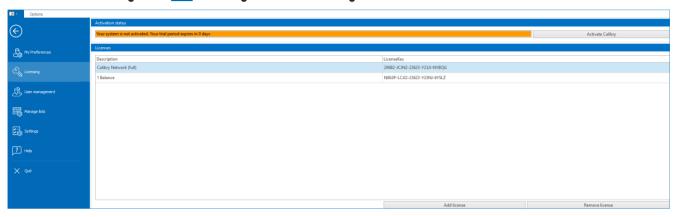
Shortcuts

Button to access the short cuts management view.

Shortcuts allow a user to have custom filters which are made available directly on the home screen and/or in the navigation menu. (for more details on creating shortcuts see [Customizing the view > Page 80].

4.1.2 Licensing

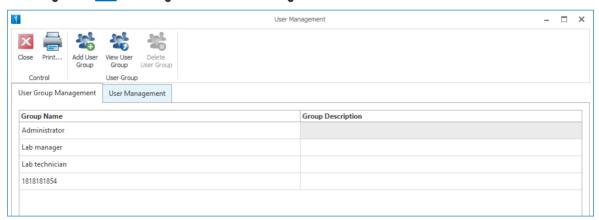
■ Navigation: ■ Backstage view > Licensing



- Activate Calibry: The Calibry software can be activated with a valid license key after the trial period has expired.
- Add license: additional licenses for options can be registered.
- Remove license: expired or invalid licenses can be removed.

4.1.3 User management

■ Navigation: 💷 Backstage view > User Management



- **User Group**: User groups can be added, viewed or deleted. The settings of the user groups "Administrator", "Lab manager" and "Lab technician" cannot be edited.
- User Management: Users can be added, edited, removed, enabled or disabled.

4.1.3.1 User group management

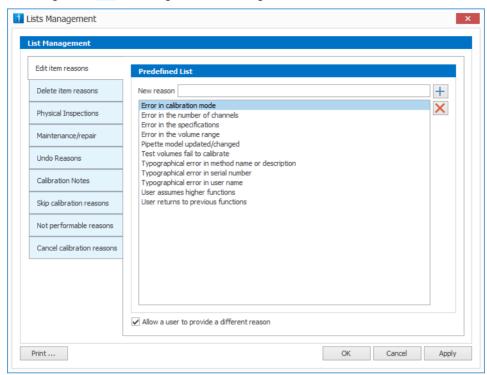
	Function	Description
2	User Management	To open the User Management menu.
X	Close	To close the User Management menu.
=	Print	To open the print preview, where the displayed list can be formatted and printed.
	Add User Group	To create a new user group and assigning various rights to this group.
	View User Group	To show the registered user groups and the assigned rights to this group.
100	Delete User Group	To delete a registered user group.

4.1.3.2 User management

User Management	To open the User Management menu.
Close	To close the User Management menu.
Print	To open the print preview, where the displayed list can be formatted and printed.
Add User	To add a new user, which can be assigned to a user group.
Edit User	To edit the user details.
Remove users	To remove registered users.
Disable User	To disable users.
Enable User	To enable a registered user.
	Print Add User Edit User Remove users Disable User

4.1.4 Manage lists

■ Navigation: ■ Backstage view > Manage lists



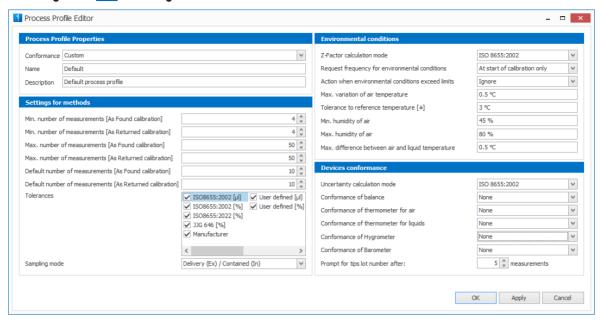
- Add or delete templates: Templates of common actions can be created or deleted in each tab, which can be used during the calibration process.
- Print: All entries of each tab are listed and can be printed in one document.

Parameter	Description
Edit Item Reasons	Displays a list of common reasons for editing/modifying items.*
Delete Item Reasons	Displays a list of common reasons for deleting/removing items.*
Physical Inspections	Displays a list of common physical faults.
Maintenance and repair	Displays a list of common maintenance and repair actions.
Undo Reasons	Displays a list of common reasons for deleting measurement values.
Calibration Notes	Displays a list of common notes for calibrations.
Skip calibration reasons	Displays a list of common reasons to skip calibrations.
Not performable reasons	Displays a list of common reasons the calibration could not be performed.
Cancel calibration reasons	Displays a list of common reasons for canceling a calibration.*

^{*}The option **Allow a user to provide a different reason** offers the user to select a reason from the list but also to enter another reason.

4.1.5 Process Profile

■ Navigation: ■ Backstage view > Process Profile



Process profile properties

Parameter	Description	Values
Conformance	Indicates which conformance the process is added to.	Custom I ISO 8655:2022
Name	The name of the process profile.	Default value
Description	Enter additional information about the process profile.	Default process profile

Settings for methods

20

Parameters	Description	Values
Min. number of measurements [As Found calibration]	The minimum number of "As Found" measurements Calibry accepts when defining a method.	Default setting: 4
Min. number of measurements [As Returned calibration]	The minimum number of "As Returned" measurements Calibry accepts when defining a method.	Default setting: 4
Default number of measurements [As Found calibration]	The number of "As Found" measurements Calibry suggests when defining a method.	Default setting: 10
Default number of measurements [As Returned calibration]	The number of "As Returned" measurements Calibry suggests when defining a method.	Default setting: 10
Max. number of measurements [As Found calibration]	The maximum number of "As Found" measurements Calibry accepts when defining a method.	Default setting: 50

Parameters	Description	Values
Max. number of measurements [As Returned calibration]	The maximum number of "As Returned" measurements Calibry accepts when defining a method.	Default setting: 50
Tolerance	Tolerance can be used when creating a method based on that process profile.	ISO 8655:2002 [µI] I ISO 8655:2002 [%] I ISO 8655:2022 [%] I JJG 646 [%] I Manufacturer I User defined [µI] I User defined [%]
Sampling mode	Sampling mode can be used with the process profile.	Delivery (Ex) Contained (In) Delivery (Ex) / Contained (In)

Environmental conditions

Parameters	Description	Values
Z-Factor calculation mode	ISO 8655:2002: Calculation of the Z-factor according to ISO 8655:2002 (factory setting).	ISO 8655:2002 ISO 8655:2022 ISO/TR 20461:2000 ISO/TR 20461:2022 JJG 646 Manual User defined
	ISO 8655:2022 : Calculation of the Z-factor according to ISO 8655:2022 (factory setting).	
	ISO/TR 20461:2000: Calculation of the Z-factor according to ISO/TR 20461:2000.	
	ISO/TR 20461:2022: Calculation of the Z-factor according to ISO/TR 20461:2022.	
	JJG 646 : Calculation of the K-factor according to JJG 646 .	
	Manual : The Z-factor can be entered directly. No calculation is carried out.	
	User defined : Creating the Z-factor individually.	
Request frequency for	At calibration start only : Climate sensor values can only be entered at calibration start.	At calibration start only I At calibration start and end I At calibration start and at end of each volume
environmental conditions	At calibration start and end : Climate sensor values can be entered at calibration start. Once the calibration is finished, the user will be asked to confirm the values.	
	At calibration start and at end of each volume : Climate sensor can be entered at the start of calibration and at the end of each volume.	
Action when environmental conditions exceed	The user can define what should happen, if the temperature variation does not comply to the ISO8655 limits (0.5°C): • Ignore: nothing happens	Ignore I Warn user I Cancel calibration
limits	 Warn user: The user is informed and can continue or cancel the calibration. An audit entry will be done, if it is continued. 	
	 Cancel calibration: The calibration is canceled and documented accordingly. 	
Max. variation of air temperature	The maximum temperature change during the calibration of a pipette.	Default setting: 0.5°C
Tolerance to reference temperature [±]	The allowed difference between the current temperature and current reference temperature.	Default setting: 3°C

Parameters	Description	Values
Min. humidity of air	The minimum humidity of air.	Default setting: 45%
Max. humidity of air	The maximum humidity of air.	Default setting: 80%
Max. difference between air and liquid temperature	The allowed difference between the current measured air and water temperature.	Default setting: 0.5°C

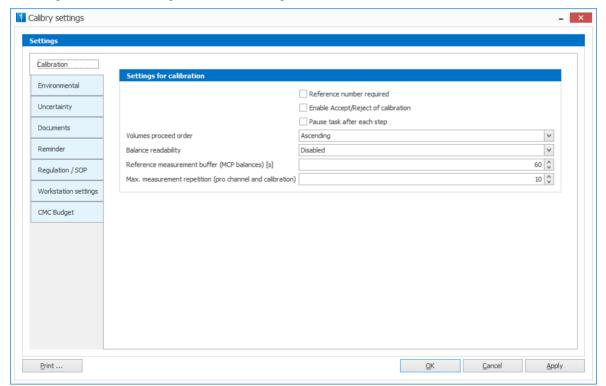
Device conformance

Parameters	Description	Values
Uncertainty calculation mode	Calculation of the measurement uncertainty according to ISO 8655 (default).	ISO 8655:2002 I User defined
	User defined: Creating the uncertainty individually.	
Conformance of balance	Indicates which conformance the balance must comply and how to handle a non-conformance.	None I ISO 8655:2022 (Warn) I ISO 8655:2022 (Blocks)
	None: No verification of balance specification is done.	0000:2022 (DIOCKS)
	 ISO 8655:2022 (Warn): The balance specification is verified against ISO 8655:2022 requirement and the user is warned if the balance does not conform. 	
	 ISO 8655:2022 (Blocks): The balance specification is verified against ISO 8655:2022 requirement and the calibration cannot be started if the balance does not conform. 	
Conformance of thermometer for air	Indicates which conformance the thermometer must comply and how to handle a non-conformance. • None: No verification of thermometer specification is done.	None I ISO 8655:2022 (Warn) I ISO 8655:2022 (Blocks)
	 ISO 8655:2022 (Warn): The thermometer specification is verified against ISO 8655:2022 requirement and the user is warned if the thermometer does not conform. 	
	 ISO 8655:2022 (Blocks): The thermometer specification is verified against ISO 8655:2022 requirement and the calibration cannot be started if the thermometer does not conform. 	
Conformance of thermometer for liquids	Indicates which conformance the thermometer must comply and how to handle a non-conformance. • None: No verification of thermometer specification is done.	None I ISO 8655:2022 (Warn) I ISO 8655:2022 (Blocks)
	• ISO 8655:2022 (Warn) : The thermometer specification is verified against ISO 8655:2022 requirement and the user is warned if the thermometer does not conform.	
	 ISO 8655:2022 (Blocks): The thermometer specification is verified against ISO 8655:2022 requirement and the calibration cannot be started if the thermometer does not conform. 	

Parameters	Description	Values
Conformance of Hygrometer	 Indicates which conformance the hygrometer must comply and how to handle a non-conformance. None: No verification of hygrometer specification is done. ISO 8655:2022 (Warn): The hygrometer specification is verified against ISO 8655:2022 requirement and the user is warned if the hygrometer does not conform. ISO 8655:2022 (Blocks): The hygrometer specification is verified against ISO 8655:2022 requirement and the calibration cannot be started if the hygrometer does not conform. 	None I ISO 8655:2022 (Warn) I ISO 8655:2022 (Blocks)
Conformance of Barometer	 Indicates which conformance the barometer must comply and how to handle a non-conformance. None: No verification of barometer specification is done. ISO 8655:2022 (Warn): The barometer specification is verified against ISO 8655:2022 requirement and the user is warned if the barometer does not conform. ISO 8655:2022 (Blocks): The barometer specification is verified against ISO 8655:2022 requirement and the calibration cannot be started if the barometer does not conform. 	None I ISO 8655:2022 (Warn) I ISO 8655:2022 (Blocks)
Prompt for tips lot number after:	Indicates the number of measurements that can be done by a user before changing the pipette tips.	Default setting: 5

4.1.6 Settings

■ Navigation: 💷 Backstage view > 🗟 Settings



Calibration

• Settings for calibration

Environmental • Z-Factor (K-Factor for Chinese JJG)

Evaporation Settings

Request frequency for environmental conditions

UncertaintyUncertainty Settings

Cubic expansion coefficient for pipettesCubic expansion coefficient for tips

Documents • Advanced options

XML Automation PDF Automation Reminder settings

Regulation / SOP • Compliance

Workstation settings • Climate sensors

Automation

CMC Budget (Calibration and measurement capability)

• minimum uncertainty which can be reported in a certificate

4.1.6.1 Calibration

Reminder

■ Navigation: 📭 Backstage view > 🗟 Settings > Calibration

Settings for calibration

Parameter	Description	Values
Reference number required	Active : reference number before calibration is mandatory. Calibration cannot be started without a reference number.	Active I Inactive
	Inactive: reference number is optional.	
Accept/reject calibration	Activated: After the calibration process, the user can decide to accept or decline the calibration results. If the user decides to decline the calibrations results, the calibration process can be repeated. Appropriate user rights are necessary to use this function.	Active I Inactive
	Deactivated: The calibration is automatically accepted from the system.	
Pause task after each step	If activated, Calibry does not navigate the user through the different steps (Physical Inspection, As Found calibration, Maintenance/Repair, As Returned calibration), but pauses the task after each step.	Active I Inactive
Volumes proceed order	Ascending: list of calibration volumes starts with the smallest volume.	Ascending I Descending
	Descending: list of calibration volumes starts with the largest volume.	
Balance	Disabled : Balance readability is not defined by Calibry.	Disabled I Based on test volume I Based on nominal volume
readability	Based on test volume : Depending from the test volume, Calibry adjusts the balance readability according to ISO 8655:2002 . Also the decimal places are adjusted just like measured and displayed on the balance.	
	Based on nominal volume : Depending from the nominal volume, Calibry adjusts the balance readability according to ISO 8655:2002 . Also the decimal places are adjusted just like measured and displayed on the balance.	

Parameter	Description	Values
Reference measurement buffer (MCP balances)	Setting a buffer to fix, how much time has to be left, to start a calibration. Otherwise a reference measurement will be started.	-
Max. measurement repetition (pro channel and calibration)	The maximum number of invalid measurement values which can be deleted during a calibration per channel.	010, Default setting: 10

4.1.6.2 Environmental

■ Navigation: 📭 Backstage view > 🗟 Settings > Environmental

Parameter	Description	Values
Custom Z-Factor formula	The Z-factor formula can be created individually. Once the Z-factor formula is created, it can be selected as User defined in the process profile.	ſ
Reference temperature	Define the reference temperature according to ISO 8655:2022 .	20°C 27°C

Evaporation Settings

Parameter	Description	Values
By default, enable the evaporation compensation at calibration start	Activated: Evaporation compensation is activated by default in the calibration dialog.	Active I Inactive
Allow user to enable/disable the evaporation compensation at calibration start	Activated: Evaporation compensation can be activated/deactivated in the calibration dialog.	Active I Inactive
Assign as water temperature sensor on this workstation	Activated: User can enter the evaporation rate. Deactivated: The evaporation rate cannot be edited.	Active I Inactive

4.1.6.3 Uncertainty

■ Navigation: ■ Backstage view > 🗟 Settings > Uncertainty

Uncertainty Settings

Parameter	Description	Values
Custom uncertainty calculation	The uncertainty formula can be created individually. Once the uncertainty formula is created, it can be selected as User defined in the process profile.	
Set uncertainty value for evaporation	Activated: displays an additional field for entering the measurement uncertainty of the evaporation value when defining the environmental conditions.	Active I Inactive

Cubic expansion coefficient for pipettes

Parameter	Description	Values
Show properties in pipette tip editor	Activated: properties are shown in the pipette model editor.	Active I Inactive
Default value	Default value can be set.	-

Cubic expansion coefficient for tips

Parameter	Description	Values
Show properties in pipette tip editor	Activated: properties are shown in the tip editor.	Active I Inactive
Default value	Default value can be set.	-

4.1.6.4 Documents

■ Navigation: 📭 Backstage view > 🗟 Settings > Documents

Advanced Options

Parameter	Description	Values
Enable Approve/ Reject of	Activated: User can release the certificate.	Active I Inactive
	The certificate has certain status modes:	
certificate	 Draft: The certificate has the Draft status until the task is completed. 	
	 In review: status changes to In review, once the task is finished. 	
	• Approved: The certificate is approved by the user.	
	Rejected: The user rejected the certificate.	
	i Note: Calibry will set the status automatically to Draft or In review . The user can only change the status of the report to Approved , when the status is In review .	
	Deactivated: Certificate will be approved automatically.	
Show certificate at the end of the calibration	Activated: the calibration report will be automatically displayed once the measurements are complete.	Active I Inactive
Print report at the	Disabled: Is not printed automatically	Active I Inactive
end of the calibration	 At task completion: Is printed automatically when As Returned calibration has been completed and accepted (if Accept/reject calibration is active). 	
	• At release/reject of certificate: Is printed automatically when the Certificate has been reviewed.	

XML Automation

Parameter	Description	Values
Prompt for file name on export	Activated: no need for a file name when exporting the report data. The default file name will be used.	Active I Inactive

Parameter	Description	Values
Default file name	The filename of the certificate can be entered manually (this would mean that every file has the same name) or by copying the predefined placeholders in the "XML reports filename" field. The filename will be generated automatically according to the placeholders. Example: {CalibrationDate}\{CertificateNumber}\{Pipette-SerialNumber} The file name would look like this: 2017\07\3526874662\24326478.xml	
Automatically	Disabled: Is not exported automatically	Active I Inactive
save report as PDF at the end of the calibration	 At task completion: Is exported automatically when As Returned calibration has been completed and accepted (if Accept/reject calibration is active). 	
	 At release/reject of certificate: Is exported automatically when the Certificate has been reviewed. 	

PDF Automation

Parameters	Description	Values
Automatically save report as PDF at the end of the calibration	 Disabled: Is not printed automatically At task completion: Is printed automatically when As Returned calibration has been completed and accepted (if Accept/reject calibration is active). 	Active I Inactive
	• At release/reject of certificate: Is printed automatically when the Certificate has been reviewed.	
PDF reports filename	The filename of the certificate can be entered manually (this would mean that every file has the same name) or by copying the predefined placeholders in the "PDF reports filename" field. The filename will be generated automatically according to the placeholders.	-
	Example: {CalibrationDate}\{CertificateNumber}\{PipetteSerial-Number}.pdf	
	The file name would look like this: 2017\07\3526874662\24326478.pdf	

4.1.6.5 Reminder

■ Navigation: 🔤 Backstage view > 🗟 Settings > Reminder

Reminder settings

Parameter	Description	Values
Automatically create tasks when pipette is due	Activated: a task will be created automatically when a calibration is due.	Active I Inactive
Before due period	A reminder is displayed before the calibration is due.	-
[days]	The status of a pipette will be displayed as "Warning" between the calibration due date and "X" days after $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	
	The status of a pipette will be displayed as "OK" up to the due date.	
Delay period	A reminder is displayed how many days the calibration is due.	-
	The status of a pipette will be displayed as "not OK" after this time.	

4.1.6.6 Regulation / SOP

■ Navigation: 📭 Backstage view > 🖾 Settings > Regulation / SOP

i Note

This tab is only displayed, when an additional audit trail license is purchased.

Compliance

Parameter	Description	Values
Request reason on edit/modify	Activated: reason is requested as soon any item will be edited or modified.	Active I Inactive
Reasons are mandatory	Activated: The user must select/enter a reason if requested.	Active I Inactive

4.1.6.7 Workstation settings

■ Navigation: 📴 Backstage view > 🗟 Settings > Workstation settings

All setting changes have to be applied to all workstations within the network. .

Climate Sensors

Parameter	Description	
Air temperature sensor	ture Lists the registered temperature sensors. Desired sensor can be chosen.	
Water temperature sensor	Lists the registered temperature sensors. Desired sensor can be chosen.	
Relative humidity sensor	ative humidity Lists the registered humidity sensors. Desired sensor can be chosen.	
Air pressure sensor	Lists the registered air pressure sensors. Desired sensor can be chosen.	

Automation

Parameter	Description	Values
Directory for Standard directory to save certificates can be set certificate [PDF]		-
Directory for certificate export [XML]	Standard directory to export certificates can be set.	-
Automatically start the following application after a certificate is exported [XML only]	•	Active I Inactive
Application path	The location path of the application can be set.	-
with parameters	Default name for the shell that will automatically open following the export of the report data. Shells allows to automatically process data or input data into other applications.	

4.1.6.8 CMC (Calibration and Measurement Capability) Budget

■ Navigation: ■ Backstage view > 🖪 Settings > CMC Budget

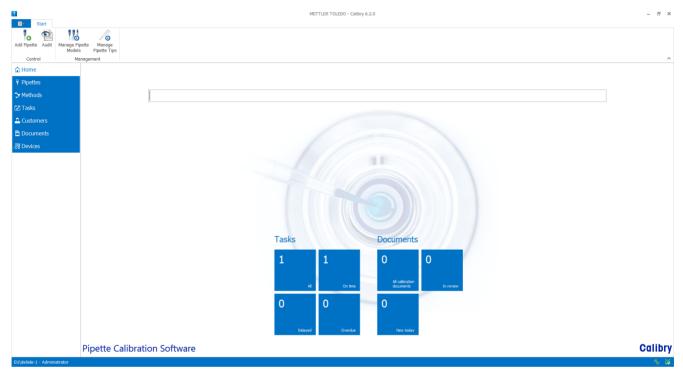
Parameter Description	
CMC Budget	Minimum uncertainty value that is applied, when the calculated uncertainty is below the
	predefined threshold. Can be set as absolute value (ul) or proportional (%).

4.1.7 Help

■ Navigation: 📭 Backstage view > 🗾 Help

With a click on the **Help** menu the operational instructions of the Calibry software opens.

4.2 Home menu



Control

- Adding new pipettes by assigning an unique serial number and optionally an Asset ID, model and customer. For more Information, see [Add pipette ▶ Page 10]
- Calibry records data-relevant operations in a so-called audit trail. This makes
 it possible to find out at any time which user worked with Calibry when, and
 what actions they performed. For more Information, see [Audit trail >
 Page 42]

Managing

- New pipette models can be added and registered models can be edited or deleted. For more Information, see [Manage pipette models ▶ Page 40]
- New pipette tips can be added and registered models can be edited or deleted.
 For more Information, see [Manage pipette tips ▶ Page 41]

Enter pipette serial number or asset ID

• Searching for registered pipettes by serial number or asset ID.

Statistics

Indicate for each short-cut the number of entries matching the criteria.

The following table explains the icons and their functions within this menu:

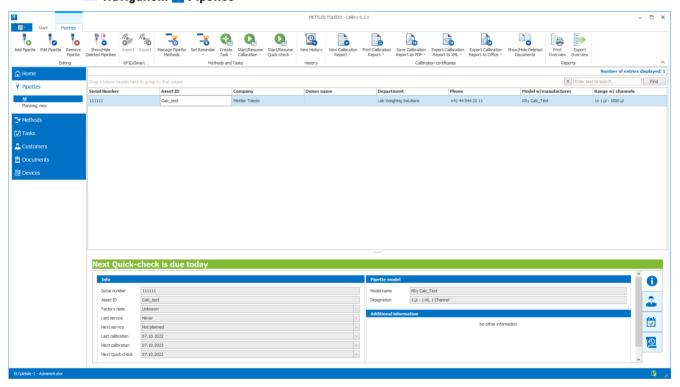
	Function	Description
o	Add Pipette	To add new pipettes.
•	Audit Trail	To display the history of all actions.
0	Manage Pipette Models	To add, edit or delete pipette models.
Po .	Manage Pipette Tips	To add, edit or delete pipette tips.
	Enter pipette serial number or asset ID	Search-bar for registered pipettes.

i Note

Some functions are not available in all editions or require additional option licenses.

4.3 Pipettes menu

■ Navigation: ▼ Pipettes



The following functions can be performed in the **Pipettes** menu:

Editing

- Pipettes can be added, edited or removed. For more Information, see [Pipettes menu ▶ Page 43]
- Deleted pipettes can be shown or hidden. For more Information, see [Show/ hide deleted pipettes ▶ Page 43]

RFID/Smart Tag

 Pipettes with an integrated RFID chip or a Smart Tag can be scanned with a RFID-reader. Pipette specific data, which is saved on the pipette can be imported to Calibry or exported to the pipette.

Methods and Tasks

- Methods can be created and assigned to a pipette. For more Information, see [Manage pipette methods > Page 45]
- A reminder for the next calibration can be set for each pipette. For more Information, see [Set reminder > Page 46]
- New tasks can be created with pipettes assigned to a method. For more Information, see [Create task > Page 47]
- The Calibration process can be started. For more Information, see [Starting the calibration ▶ Page 77]

History

A list of performed calibrations for each pipette can be viewed. For more Information, see [View history ▶ Page 48]

Calibration certificates

 Calibration reports can be viewed, printed, saved as a PDF or exported to XML or Office. For more Information, see [Documents menu > Page 56]

Reports

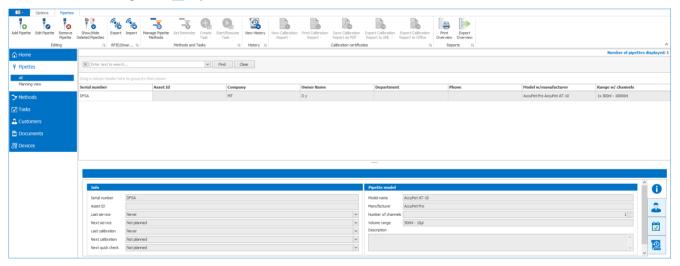
Overviews can be printed or exported. For more Information, see [Reporting > Page 70]

Detail View

Summarized information about the pipette, customer, planned tasks and the calibration history can be viewed in the **Pipettes** menu by clicking on the desired tab of the detail view. There is also an notification for the next calibration date or if the pipette is due.

4.3.1 All

■ Navigation: Pipettes > All



The following table explains the icons and their functions within this menu:

	Function	Description
0	Add Pipette	To add new pipettes.
	Edit Pipette	To edit registered pipettes.
8	Remove Pipette	To remove registered pipettes.
*	Show/Hide Deleted Pipettes	To display or hide deleted pipettes.
(***)	Import	To import data from the pipette to Calibry.
() () () () () () () () () ()	Export	To export data from Calibry to the pipette.

	Function	Description
-5	Manage Pipette Methods	To assign a pipette to a method.
-5	Set Reminder	To set a reminder for pipettes with an assigned method.
Q	Create Task	To create a new calibration task for a pipette with a method.
Q	Start/Resume Calibration	To start a calibration task.
	Start/Resume Quick- check	To start a quick-check with a balance or a pipette checker.
0	View History	To display a list of performed calibrations.
	View Calibration Report	To display calibration reports.
	Print Calibration Report	To print calibration reports.
<u></u>	Save Calibration Report as PDF	To save calibration reports as PDF.
√ _B	Export Calibration Report to XML	To export calibration reports to XML.
	Export Calibration Report to Office	To export calibration reports to Office.
	Show/Hide Deleted Documents	To display or hide deleted documents.
	Print Overview	To print overviews.
	Export Overview	To export overviews.
0	Info	To display information about the pipette.
2	Customer profile	To display information about the customer.
1 ■ 1	Tasks	To display tasks and assigned methods.
<u> </u>	Calibration History	To display finished calibrations of the pipette.

i Note

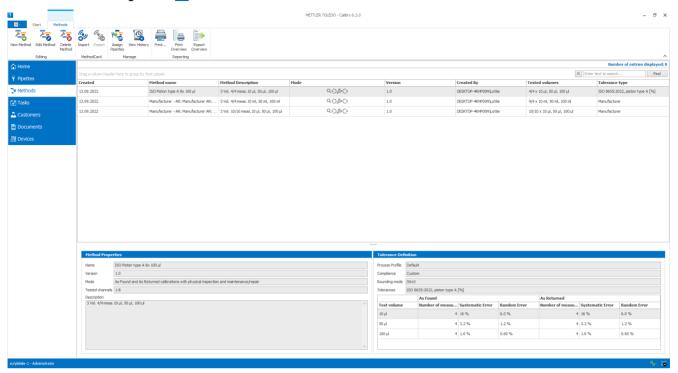
• Some functions are not available in all editions or require additional option licenses.

Detail view

Summarized information about the chosen pipette can be viewed in the **Pipettes** > **All** menu by clicking on the desired tab of the detail view. Furthermore the user can get information about the customer, assigned methods and calibration history by switching through the tabs.

4.4 Methods menu





The following functions can be performed in the **Methods** menu:

Editing

 Calibration methods can be created, edited or deleted. For more Information, see [Methods menu ▶ Page 49]

 Managing

 Pipettes can be assigned to the methods. For more Information, see [Assign pipettes ▶ Page 53]

Overviews can be previewed, printed or exported. For more Information, see [Reporting ▶ Page 70]

The following table explains the icons and their functions within this menu:

ods.
ibration method.
of the calibration report.
i

i Note

Reports

License requirement for additional functions

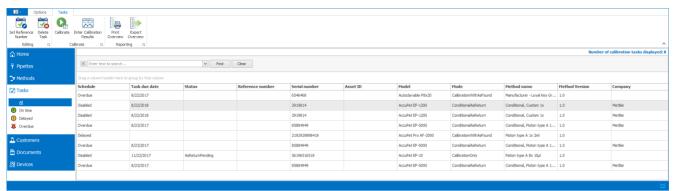
Some functions are not available in all editions or require additional option licenses.

Detail view

Summarized information about the chosen method properties and tolerance definitions can be viewed in the **Methods** menu by clicking on the desired tab of the detail view.

4.5 Tasks menu

■ Navigation: ™ Tasks



The following functions can be performed in the Tasks menu:

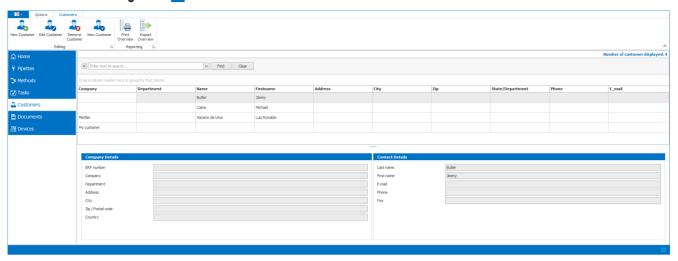
The following faholions can be performed in the rasks mond.		
Editing	•	Setting reference numbers to tasks. For more Information, see [Set reference number ▶ Page 54]
	•	Deleting calibration tasks.
Calibration	•	Starting the calibration. For more Information, see [Starting the calibration > Page 77]
Reports	•	Overviews can be printed or exported. For more Information, see [Reporting > Page 70].

The following table explains the icons and their functions within this menu:

	Function	Description
*	Set Reference Number	To set a reference numbers to tasks. Various tasks can have the same reference number.
√ 8	Delete Task	To delete a task.
	Start/Resume Task	To start a new calibration or task.
<u> </u>	Enter Calibration Results	To enter the calibration results manually.
	Print Overview	To print overviews.
	Export Overview	To export overviews.

4.6 Customers menu

■ Navigation: 🔼 Customers



The following functions can be performed in the **Customers** menu:

Editing

· Customers can be added, edited, viewed or removed

Reports

Overviews can be printed or exported.

The following table explains the icons and their functions within this menu:

	Function	Description
₽	New Customer	To add new customers.
2	Edit Customer	To edit registered customers.
28	Remove Customer	To remove registered customers.
2.	View Customer	To view registered customers.
	Print Overview	To print overviews.
	Export Overview	To export overviews.

i Note

License requirement for additional functions

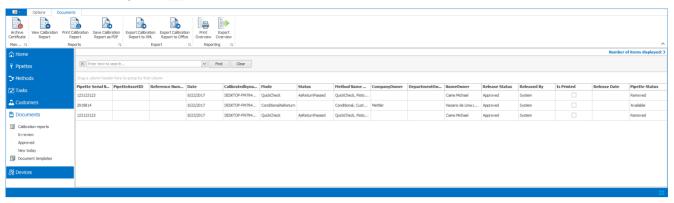
Some functions are not available in all editions or require additional option licenses.

Detail view

Summarized information about the chosen customer like company and contact details can be viewed in the **Customers** menu by clicking on the desired tab of the detail view.

4.7 Documents menu

■ Navigation: Documents



The following functions can be performed in the **Documents** menu:

Calibration certificates

Calibration reports can be viewed, printed and saved as a PDF.

Export Reports

Calibration reports can be exported to XML or Office.

Overviews can be printed or exported.

Calibration reports

- The reports can be filtered in the **Documents** menu by the following:
 - **In review**: Only documents with the status **In review** are displayed.
 - Approved: Only documents with the status Approved are displayed.
 - New today: Only documents which are created on this particular day are displayed.

Document templates

• Document templates can be created/edited or deleted.

4.7.1 Calibration reports

The following table explains the icons and their functions within this menu:

	Function	Description
a	Archive Certificate	To archive the certificate. It is not shown in the lists any longer.
	Show/Hide Documents	To display also archived documents or hide them.
	View Calibration Report	To display calibration reports.
	Print Calibration Report	To print calibration reports.
	Save Calibration Report as PDF	To save calibration reports as PDF.
	Export Calibration Report to XML	To export calibration reports to XML.
	Export Calibration Report to Office	To export calibration reports to Office.
	Print Overview	To print overviews.
	Export Overview	To export overviews.

i Note

License requirement for additional functions

Some functions are not available in all editions or require additional option licenses.

4.7.2 Document templates

The following table explains the icons and their functions within this menu:

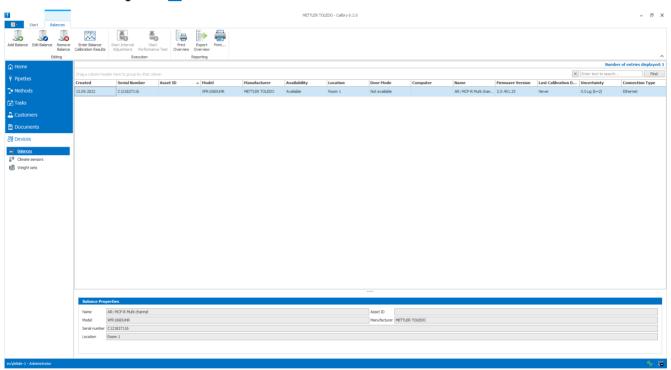
Function	Description
New Template	To create new templates.
Edit Template	To edit existing templates.
Delete Template	To delete templates.

i Note

The Document templates function is not available in the Calibry Express edition.

4.8 Devices menu

■ Navigation: M Devices



The following functions can be performed in the Devices Menu:

• Balances can be added, edited or removed.

• Climate Sensors on be added, edited or removed.

Weight Sets• Weight sets can be added, edited or removed.

Reports • Overviews can be previewed or printed.

4.8.1 Balances

	Function	Description
3	Add Balance	To add new balances.
	Edit Balance	To edit registered balances.

	Function	Description
8	Remove balances	To remove balances.
<u>~</u>	Enter Balance Calibration Results	To enter calibration information of the balance.
Ĭ,	Start Internal Adjustment	To execute an internal adjustment of the balance.
RP	Start performance test	To execute a performance test of the balance.
	Print Overview	To print overviews.
-	Export Overview	To export overviews.
	Print	To print a detailed report of the selected balance.

Detail view

Summarized information about the chosen balance can be viewed in the **Devices** > **Balances** menu by clicking on the desired tab of the detail view.

4.8.2 Climate sensors

	Function	Description
₽	Add Climate Sensor	Adds new climate sensors.
	Edit Climate Sensor	Edits registered climate sensors.
₽	Remove Climate Sensor	Removes climate sensors.
**	Enter Sensor Calibration Results	To enter calibration information of the climate sensor.
	Print Overview	Prints overviews.
	Export Overview	Exports overviews.
	Print	Prints a detailed report of the selected climate sensor.

Detail view

Summarized information about the chosen climate sensor can be viewed in the **Devices** > **Climate Sensors** menu by clicking on the desired tab of the detail view.

4.8.3 Weight sets

	Function	Description	
48	Add Weight Set	To add a new weight set.	
40	Edit Weight Set	To edit a weight set.	
	Remove weight sets	To remove a weight set.	
<u> </u>	Enter Weight set Calibration Results	To enter calibration information of the weight set.	

	Function	Description
	Print Overview	To print overviews.
-	Export Overview	To export overviews.
	Print	To print a detailed report of the selected weight set.

Detail view

Summarized information about the chosen weight set can be viewed in the **Devices** > **Weight Sets** menu by clicking on the desired tab of the detail view.

4.9 Calibration view

■ Navigation: Pipettes or 🗹 Tasks > Start/Resume Task

The left part of the window displays information about the pipette, test method, current test volume, environmental conditions and environmental parameters.

The following functions are available in the calibration view:

Parameter	Description
Volume	Select from the drop-down list the volume to start with.
Accept low values	Calibry automatically discards measured values which are below 65% of the expected volumes.
	Activated: The low values are accepted as well.
Note	A comment can be entered to each calibration. This text will appear on the calibration report. To add a comment, click on the Note button before terminating the calibration procedure with the Finish button.
	Note: Comments, which where defined in the Backstage view under Manage lists > Calibration Notes can be used as well. For more information, see [Manage lists ▶ Page 19]
Undo measurement	If there is a mistake in a measurement operation (implausible values), click on the tab of the respective volume and mark the column with the faulty measurement values. Click on the Undo measurement button. Select a reason for undoing the measurement from the drop-down list.
	To set the max. number of undo's within a calibration process, go to Backstage view > Settings > Calibration tab and set a number between 1 to 10.
Finish	Finishes the calibration, when all measurements are done. The data is saved, the pipette is deleted from the "Tasks" list, the calibration dialog is closed
	The results can be viewed under Documents > Calibration reports .
Cancel	Cancels the current calibration. The user will be asked, to repeat the calibration.

5 Configuration of Calibry

5.1 Home menu

■ Navigation: Home

5.1.1 Manage pipette models

- Navigation: 🔂 Home > 🚻 Manage Pipette Models
- 1 To display the pipette models, click on the 🚻 icon.
- 2 Mark a pipette model with a click.
 - Information about the pipette model are displayed in the detail view.
- 3 To close the **Pipette Models** window, click on the **☑** icon.
- → The **Pipette Models** window is closed.

Add Pipette Model

- Navigation: 🙆 Home > 🚻 Manage Pipette Models > 🚻 Add Pipette Model
- The **Pipette Models** window opens.
- 1 To add a pipette model, click on the 🚻 icon.
 - → The **Pipette Model Editor** window opens. The **Properties** tab is chosen.
- 2 Enter an individual name for the pipette model.
- 3 Optionally, enter an individual short name for the pipette model.
 - i Note: The entered short name will be saved on the Smart Tag.
- 4 Enter a Manufacturer.
- 5 Enter the **Volume range** of the pipette model.
- 6 Enter the number of channels of the pipette model.
- 7 Select the **Piston type** of the pipette model from the drop-down list.
- 8 Check/uncheck the box, whether the pipette model has RFID support.
- 9 Enter a Cubic expansion coefficient.
 - **Note**: The cubic expansion coefficient is a value to calculate the expansion of the pipette. This value can be considered in uncertainty calculations.
- 10 Enter an Uncertainty of cubic expansion coefficient.
 - **Note**: For Pipette Model as well as for Pipette Tip, Cubic expansion coefficient is shown, if activated in the [Settings ▶ Page 25].
- 11 Optionally, enter a description for the pipette model.
- 12 To set the Tolerance Specifications, switch to the Manufacturer tolerances tab with a click on the tab.
- 13 Select with a click, whether the tolerances are shown with absolute or relative values.
- 14 Click on each field to enter the **Test volume**, **Systematic Error** and **Random Error**.
- 15 To add a tolerance, click on the + icon.
- 16 To delete a tolerance, mark a **Test volume** with a click.
 - → The chosen tolerance is marked blue.
- 17 Delete the chosen tolerance with a click on the X icon.
 - → The tolerance is deleted.
- 18 To have additional **Manufacturer tolerances** for this pipette model, click on + icon next to **Tolerance**Specifications.
- 19 To delete a manufacturer tolerance, select the corresponding specification in the drop-down list and click on the \times icon.
- 20 To save the pipette model, click on **Save**.
 - The pipette model is registered.

- 21 To cancel adding a pipette model, click on Cancel.
 - → The pipette model is discarded. The **Pipette Model Editor** is closed.

Edit Pipette Model

- Navigation: 🙆 Home > 🚻 Manage Pipette Models > 🚻 Edit Pipette Model
- The **Pipette Models** window opens.
- 1 To edit a pipette model, mark a pipette model with a click.
 - → The chosen pipette model is marked blue.
- 2 Click on the Wicon.
 - → The Pipette Model Editor window opens. The Properties tab is chosen.
- 3 Edit the entries.
- 4 To edit the **Tolerance Specifications**, switch to the **Manufacturer tolerances** tab with a click on the tab.
- 5 Edit the entries.
- 6 To save the pipette model, click on **Save**.
- 7 To cancel editing the pipette model, click on **Cancel**.

Delete Pipette Model

- Navigation: 🙆 Home > 🚻 Manage Pipette Models > 🚻 Delete Pipette Model
- The **Pipette Models** window opens.
- 1 To delete a pipette model, mark a pipette model with a click.
 - The chosen pipette model is marked blue.
- 2 Click on the 🚻 icon.
 - → Delete Pipette Model window opens.
- 3 To delete the pipette model, click on **OK**.
 - → The pipette model is deleted.
- 4 To cancel deleting the pipette model, click on **Cancel**.
 - → The deletion is canceled. The **Delete Pipette Model** window is closed.

5.1.2 Manage pipette tips

- Navigation: 🔂 Home > 🔏 Manage Pipette Tips
- 1 To display the pipette tips, click on the 6 icon.
- 2 Mark a pipette tip with a click.
 - Properties about the pipette tip are displayed in the detail view.
- 3 To close the window, click on the

 icon.

Add Pipette tip

- Navigation: Home > // Manage Pipette Tips > // Add Pipette Tip
- The **Tips Management** window opens.
- 1 To add a pipette tip, click on the \sqrt{a} icon.
 - → The **Pipette Tip Editor** window opens.
- 2 Enter an individual name for the tip.
- 3 Enter a Cubic expansion coefficient.
 - **Note**: The **Cubic expansion coefficient** is a value to calculate the expansion of the tip. This value can be considered in uncertainty calculations.
- 4 Enter an Uncertainty of cubic expansion coefficient.
 - **Note**: The last two points above are shown only if configured in the [Settings ▶ Page 25].
- 5 To save the pipette tip, click on **OK**.

Pipette Calibration Configuration of Calibry

6 To cancel adding a pipette tip, click on Cancel.

Edit Pipette Tip

■ Navigation: 🖸 Home > 🔏 Manage Pipette Tips > 🔏 Edit Pipette Tip

- The **Tips Management** window opens.
- 1 To edit a pipette tip, mark a pipette tip with a click.
 - → The chosen pipette tip is marked blue.
- 2 Click on the / icon.
 - → The **Pipette Tip Editor** window opens.
- 3 Edit the entries.
- 4 To save the pipette tip, click on **OK**.
- 5 To cancel editing the pipette tip, click on **Cancel**.

Delete Pipette Tip

- Navigation: 🙆 Home > 🔏 Manage Pipette Tips > 🔏 Delete Pipette Tip
- The **Tips Management** window opens.
- 1 To delete a pipette tip, mark a pipette tip with a click.
 - → The chosen pipette tip is marked blue.
- 2 Click on the 6 icon.
 - → Delete Pipette Tip window opens.
- 3 To delete the pipette tip, click on **OK**.
 - → The pipette tip is deleted.
- 4 To cancel deleting the pipette tip, click on **Cancel**.
 - → The deletion is canceled. The **Delete Pipette Tip** window is closed.

5.1.3 Audit trail

■ Navigation: 🙆 Home > ≌ Audit Trail

i Note

- The Audit Trail option is only available with an additional license key for Calibry workstation and network.
- The comment section is only displayed in the editing or deleting settings, when an audit trail license is purchased. This option can be activated/deactivated under **Backstage view** > **Settings** > **Regulation / SOP**.
- If the user purchased the audit trail option with an additional license key, the user is able to enter a comment, e.g. the reason why the pipette was removed. This comment is saved in the audit trail.
- To get more detailed information about a single audit trail entry, mark an entry with a click. More information is provided in the details window.
- 1 To view the audit trail, click on the 1 icon.
 - → The "Audit trail" window opens.
- 2 To filter the entries, select a start date and an end date from the calendar, by clicking on the arrows.
 - → All entries within this period are displayed.
- 3 To print the audit trail, click on the 🖨 icon
 - The "Report preview" window opens. For more information about the ribbon functions, see [View calibration report ▶ Page 56]
- 4 To close the audit trail window, click on the **≥** icon.

5.2 Pipettes menu

■ Navigation: Pipettes

5.2.1 Edit pipette

■ Navigation: Pipettes > 5 Edit Pipette

- 1 Mark a pipette from the list with a click.
 - → The chosen pipette is marked blue.
- 2 To edit a pipette, click on the 🏅 icon.
 - → The **Edit Pipette** window opens.
- 3 Enter or edit an Asset ID.
- 4 Click on Next.
- 5 Mark a pipette model from the list with a click.
 - **Note**: By clicking on **Manage** other pipette models can be added, if the desired model is not listed. For more information, see [Manage pipette models ▶ Page 40]
 - → The chosen pipette model is marked blue.
- 6 Click on Next.
- 7 Mark a customer from the list with a click.
 - **Note**: By clicking on **New Customer** other new customers can be added, if the customer is not listed. For more information, see [New customer ▶ Page 55]
 - → The chosen pipette model is marked blue.
- 8 Click on Next.
- 9 To add the pipette, click on **Finish**.

5.2.2 Remove pipette

Navigation: Pipettes > Remove Pipette

- 1 Mark a pipette from the list with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the lo icon.
 - → The **Delete Pipette** window opens.
- 3 To remove a pipette, click on **OK**
 - → The pipette is removed.
- 4 To cancel removing the pipette, click on **Cancel**
 - The pipette assistant is closed.

5.2.3 Show/hide deleted pipettes

- Navigation: Pipettes > Show/Hide Deleted Pipettes
- To show or hide deleted pipettes, click on the ₹ icon.
- → Deleted pipettes, which were registered before, are shown or hidden.

5.2.4 Import information from a Smart Tag/RFID-chip to Calibry

Navigation: Pipettes > % Import

Smart Tags can be purchased separately and are delivered without any information and support the following features:

- Pipette information and the Quick-check method can be imported.
- One editable user field with header for description available

Pipette Calibration Configuration of Calibry

Pipettes, which are equipped with an RFID-chip support the following features:

- 4 user fields with header for description are available.
- The **EasyScan Flex [Connected]** reader is connected to the workstation.
- The pipette is registered in Calibry (only Smart Tags).
- 1 To start the import, click on the 🗞 icon.
 - → The Connect RFID/Smart Tag pipette window opens.
- 2 To cancel the import process, click on **Cancel**.
 - → The Connect RFID/Smart Tag pipette window is closed.
- 3 Hold the Smart Tag/RFID-chip on the **EasyScan Flex [Connected]** reader for 2-3 seconds.
 - → The pipette, which belongs to the Smart Tag/RFID chip, is recognized.
 - → The Connect RFID/Smart Tag pipette window opens. All the information to be imported from the Smart Tag/RFID-chip is displayed.
- 4 To scan another Smart Tag/RFID-chip, click on **Back**.
 - → The **Synchronize Data** window opens.
- 5 To cancel the import process, click on **Cancel**.
 - → The Synchronize Data window is closed.
- 6 To proceed with the import, click on **Next**.
 - → The Synchronize Quick-check method window opens.
- 7 Check/uncheck the box to import/not import the **Quick-check** method to Calibry.
 - Note: This option can only be checked/unchecked for import, if a Quick-check method is saved on the Smart Tag/RFID-chip.
- 8 To go back to the **Synchronize Data** window, click on **Back**.
- 9 To cancel the import process, click on **Cancel**.
- 10 To import all the information from the Smart Tag/RFID-chip, click on Import.
- All information from the Smart Tag/RFID-chip are imported to Calibry. The information is synchronized with Calibry.

5.2.5 Export information from Calibry to Smart Tag/RFID-chip

■ Navigation: 🔻 Pipettes > % Export

Smart Tags can be purchased separately and are delivered without any information and support the following features:

- Pipette information and the Quick-check method can be exported to the Smart Tag.
- One editable user field with header for description available.

Pipettes, which are equipped with an RFID-chip support the following features:

- Pipette information and the Quick-check method can be exported to the Smart Tag.
- 4 user fields with header for description are available.
- The **EasyScan Flex [Connected]** reader is connected to the workstation.
- The pipette is registered in Calibry.
- 1 Select the pipette information to be exported from the list view with a click.
 - → The chosen pipette information is marked blue.
- 2 Click on the % icon.
 - → The Connect RFID/Smart Tag pipette window opens.
- 3 To cancel the export process, click on **Cancel**.
 - → The Connect RFID/Smart Tag pipette window is closed.
- 4 Hold the Smart Tag/RFID-chip on the **EasyScan Flex [Connected]** reader for 2-3 seconds.
 - → The pipette information, which is to be exported to the Smart Tag/RFID chip, is recognized.

- → The Synchronize Data window opens. All the information to be exported to the Smart Tag/RFID-chip is displayed.
- 5 Check/uncheck the information to be exported.
 - **Note**: The checked and grey highlighted information cannot be excluded from the export, as these are unique information and reserved for the specific pipette.
- 6 To scan another Smart Tag/RFID-chip, click on Back.
 - → The Connect RFID/Smart Tag pipette window opens.
- 7 To cancel the export process, click on **Cancel**.
 - → The Synchronize Data window is closed.
- 8 To proceed with the export, click on **Next**.
 - → The Synchronize Quick-check method window opens.
- 9 Check/uncheck the information to be exported.
- 10 To go back to the **Synchronize Data** window, click on **Back**.
- 11 To cancel the export process, click on Cancel.
 - → The Synchronize Quick-check method window is closed.
- 12 To proceed with the export, click on Next.
 - → The Define Custom Fields window opens.
 - **Note**: When a Smart Tag is scanned, only one user field with an editable header is displayed. When a RFID/chip is scanned, four user fields with an editable header are displayed.
- 13 To edit the header, click on the / icon.
 - → The User Field Properties window opens.
- 14 Enter the desired header.
- 15 To cancel the editing, click on Cancel.
 - → The User Field Properties is closed.
- 16 To save the edited header, click on **OK**.
 - 1 Note: Changing the header text or type of content may create incompatibilities with other software.
- 17 To cancel the changes, click on Cancel.
- 18 To confirm the changes, click on **OK**.
- 19 Hold the Smart Tag/RFID-chip on the **EasyScan Flex [Connected]** reader for 2-3 seconds.
- 20 The **Synchronization Complete** window opens.
- 21 To finish the export of information, click on **Close**.
- → The export of information to the Smart Tag/RFID-chip is completed.

5.2.6 Manage pipette methods

- Navigation: Pipettes > 3 Manage Pipette Methods
- 1 Mark a pipette from the list with a click.
 - The chosen pipette is marked blue.
- 2 Click on the 3 icon.
 - → The Method Assignment for Pipette window opens.
 - If an assignable method for the pipette exists, it is shown in the **Assignable Methods** list.
- 3 To assign/unassign the pipette to a method, check/uncheck the box(es) in the **Selected** column.
- 4 Click on OK.
 - The pipette is assigned to a method.
- 5 To cancel assigning a pipette to a method, click on **Cancel**.
 - → The assigning is canceled. The window closes.

Pipette Calibration Configuration of Calibry

Creating a new Method

By clicking on **New Method**... Calibry automatically recognizes the pipette model and suggests a suitable method.

- The **Method Assignment for Pipette** window opens.
- 1 Click on New Method...
 - → The **Method Editor** window opens.
- 2 Set the method settings. For more information, see [New method ▶ Page 51]
- → The pipette is assigned to a method.

5.2.7 Set reminder

■ Navigation: 🔽 Pipettes > 🖥 Set Reminder

For calibration with a particular test method, a date and/or an interval can be defined. Three schedule modes are available:

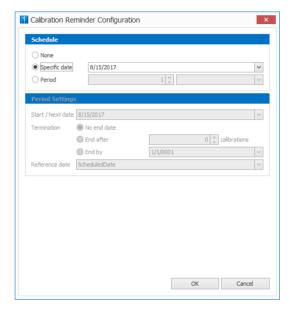
Parameter	Description	Values	
None	Schedule is deactivated.	None I Specific date I	
Specific date	Desired calibration date can be entered manually. By clicking on the arrow, a calendar opens and the desired dated can be chosen.	Period	
Period	The calibration can be set to be repeated in regular intervals:	Start / Next date	
	 Daily 	No end date I End after I	
	 Weekly 	End by	
	 Monthly 	Effective calibration date	
	 Quarterly 	I Scheduled Date	
	 Half-yearly 		
	Yearly		
	By choosing Period , the period settings are enabled. The following preferences can be set:		
	 Start / Next date: defines the first time the set interval starts. Desired calibration date can be entered manually. By clicking on the arrow, a calendar opens and the desired date can be chosen. 		
	 Termination 		
	 No end date: unrestricted validity 		
	 End after: the set interval will be deactivated after the desired number of calibrations 		
	 End by: an expiry date can be set for the interval. Desired calibration date can be entered manually. By clicking on the arrow, a calendar opens and the desired date can be chosen. 		
	Reference date		
	Establish the date from which the interval will be recalculated.		
	 Effective calibration date: uses the actual calibration date as a basis for setting the next calibration date. 		
	 Scheduled Date: uses the intended calibration date as a basis for setting the next calibration date. 		

- 1 Mark a pipette from the list with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the 🖥 icon.

- → A list with all assigned methods to the specific pipette opens.
- 3 Click on a method.
 - The Calibration Reminder Configuration window opens.



- 4 Set the schedule.
- The reminder is set.



5.2.8 Create task

■ Navigation: Pipettes > 🚱 Create Task

i Note

- If the chosen pipette is not assigned to a method, it is not possible to create a task. In this case the 🔩 icon turns arev.
- Assign a method to the pipette. For more information, see [Manage pipette methods ▶ Page 45]
- The 😪 icon is colored. A task can be created.
- 1 Mark a pipette from the list view with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the 🚱 icon.
 - → A list of assigned methods opens.
- 3 Click on a method.
- A task is created.



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Pipette Calibration Configuration of Calibry

5.2.9 Start/Resume Calibration

■ Navigation: Pipettes > 🖫 Start/Resume Calibration

i Note

- If the chosen pipette is not assigned to a method, it is not possible to start/resume a task. In this case the chosen pipette is not assigned to a method, it is not possible to start/resume a task. In this case the chosen pipette is not assigned to a method, it is not possible to start/resume a task. In this case the
- Assign a method to the pipette. For more information, see [Manage pipette methods ▶ Page 45]
- The icon is colored. A task can be started/resumed.
- 1 Mark a pipette from the list view with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the 😱 icon.
 - → A list of tasks opens.
- 3 Click on a task.
 - → The Calibration for pipette: window opens.

For more information about starting a task, see [Starting the calibration ▶ Page 77]



5.2.10 View history

■ Navigation: Pipettes > 🚇 View History

- 1 Mark a pipette from the list view with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the <a> icon.
 - → The View History window opens.

Set the filter for the calibration results

- 1 To set the dates to be displayed, open the calendar with a click on the arrow next to the **Date** field.
 - → The calendar is displayed.
- 2 Set the dates.
 - All calibration results within these dates are displayed.
- 3 To filter by the used methods for the pipette, click on the arrow next to the **Method** field.
 - → A drop-down list opens. Select the desired method.
- 4 To filter by the measured volumes, click on the arrow next to the **Volume** field.
 - → A drop-down list opens. Select the desired volume.
- 5 To filter by channels, click on the arrow next to the **Channel** field.
 - A drop-down list opens. Select the desired channel.
 - → The desired calibration result for the pipette is displayed in the detail view.
- 6 To print the calibration results click on **Print...**
 - The Report Preview window opens. To get more information how to print the report, see [View calibration report ▶ Page 56].
- 7 To export the calibration results click on **Export**.
- 8 To close the **View History** window click on **Close**.

5.3 Methods menu

■ Navigation: 📴 Methods > 🚟 New Method or 🍇 Edit Method

In order to perform a calibration of a pipette, a method has to be created.

The parameters and their functions are explained in the following tables:

Method Pre-configuration

Parameter	Description	Values
Volume range	The volume range of the pipette has to be set from minimum to maximum.	
Number of channels	The number of channels of the pipette has to be set.	112
Piston type	The piston type has to be chosen.	A I D1 I D2 I Hand- driven piston burettes I Motor-driven piston burettes I Unknown

Calibration Mode

Parameter	Description
© Quick-check	Quick-check without additional measures is suited to the daily testing of pipettes. The testing parameters (e.g., number of measurements) can be established in such a way that the calibration occurs quickly.
As Returned calibration	Calibration without additional measures.
Physical inspection, maintenance/ repair and As Returned calibration	Calibration with inspection of the pipette for faults and measures for fault correction. During a calibration information regarding inspection and fault correction can be entered. This information is included in the printed reports/certificates.
Physical inspection, As Found calibration with optional maintenance/ repair, As Returned calibration	Calibration with inspection for faults and measures for fault correction (see above) but with an additional status check ("As found") before the actual calibration. The status takes the form of an inspection on receipt and usually consists of a shortened measurement. The results of the status check, the inspection, and the fault correction measures performed are recorded.
As Found and As Returned calibrations with physical inspection and maintenance/ repair	Calibration with inspection of actual status ("As found"), that can be finished with reporting when the results are within tolerance. When results are out of tolerance an "As Return" for fault correction must be done to finish the procedure. The results of the status check, the inspection, and the fault correction measures performed are recorded.

Pipette Calibration Configuration of Calibry

Settings

Parameter	Description	Values
Process Profile	Define the process that must be followed when creating and executing the method.	
Rounding mode	Defines the rounding rules: Strict: the end results are shown with one more digit after the decimal point than the tolerances and are used for a "Pass/Fail"-decision.	Strict I USP
	 USP: the end results are based on the same number of positions as the tolerances, which decides, wether the calibration was successful. 	
Sampling mode	For certain pipettes, the suction volume has to be measured. To carry out the measurement there is a full measuring container on the balance. Remove liquid from the pipette and the loss in weight will be analyzed by Calibry.	Delivery (Ex) I Contained (In)
With pipette overall random error	Activated: The additional calculation of the Random errors for all pipette channels if required. Random errors defines the scatter of the measured values and is related to the standard deviation.	Active I Inactive
Verified channels	At the factory, Calibry is preconfigured to test all channels of a pipette. The channels can be selected individually to be checked. The user can click on the field to enter the required value. e.g. 1-12, 1;3;5;7;9;11, 2;4;6;8;10;12. i Note: This setting only applies to conventional balances. When using the MCP multi-channel calibration system from METTLER TOLEDO all channels are tested.	

Tolerance Specifications

Parameter	Description	Values
Tolerance	The following tolerance regulations can be set: • ISO 8655:2002 [µI] inserts the absolute limits in [µI] according to the ISO 8655:2002 standard.	ISO 8655:2002 [μΙ] I ISO 8655:2002 [%] I JJG 646 [%] I User
	 ISO 8655:2002 [%] inserts the relative limits [%] according to theISO 8655:2002 standard. 	defined [µl] User defined [%] ISO 8655:2022 [%]
	• JJG 646 [%]: inserts the relative limits [%] according to the JJG 646 standard.	
	• User defined [µI] user can define his own absolute limits.	
	• User defined [%] user can define his own relative limits.	
	• ISO 8655:2022 [%] inserts the relative limits [%] according to the ISO 8655:2022 standard.	
	Manufacturer	
Settings [As Returned] Settings [As	 ISO 8655:2002 Up to five test volumes can be defined. The Test volume and Number of measurements columns can be edited or removed. 	
Found]	 ISO 8655:2022 Up to five test volumes can be defined. The Test volume and Number of measurements columns can be edited or removed. 	
	 JJG 646 All three volumes are strictly defined and cannot be edited. 	
	 User defined Up to five test volumes can be defined. All columns can be edited. 	

5.3.1 New method

■ Navigation: 📴 Methods > 🚟 New Method

- 1 To create a new method, click on the 4 icon.
 - → The Method Editor opens.
- 2 Enter the Volume range.
- 3 Enter the **Number of channels**.
- 4 Select a **Piston type** from the drop-down list.
- 5 Click on OK.
 - → The main Method Editor opens.
- 6 Select a **Calibration mode**. For more information about the calibration mode, see [Methods menu > Page 49].
- 7 Select a **Rounding mode** from the drop-down list.
- 8 Check/uncheck the box to activate/deactivate Inverse sampling.
- 9 Check/uncheck the box to activate/deactivate With pipette overall random error.
- 10 Check/uncheck the required channels.
 - i Note

Channels can only be checked/unchecked when a multichannel pipette was chosen. Otherwise the option is set to one channel by default.

- 11 Select the **Tolerance Specifications** from the drop-down list.
- 12 Add or delete tolerances with the + or x icon.
 - **Note**: When the **JJG 646** standard is selected, the values in the **Test volume** column cannot be edited or deleted.
- 13 Click on Save.
 - → The **Save Calibration Method** window opens.
- 14 Enter the name of the method.
- 15 Optionally, enter the **Description** for the method.
- 16 To save the method, click on OK.
- → The method is created.

5.3.2 Edit method

■ Navigation: Methods > 4 Edit Method

- 1 Mark a method from the list with a click.
 - → The chosen method is marked blue.
- 2 To edit a method, click on the 45 icon.
 - → The main **Method Editor** window opens.
- 3 Select a calibration mode.
- 4 Select a **Rounding mode** from the drop-down list.
 - I Note: This setting is displayed only for multichannel pipette.
- 5 Select a **Sampling mode**.
 - **Note**: This setting is displayed only for multichannel pipette.
- 6 Check/uncheck the box to activate/deactivate With pipette overall random error.
- 7 Enter the range of channel to be verified.
- 8 Select the **Tolerance Specifications** from the drop-down list.
- 9 Add or delete test volumes with + or X.
- 10 Click on Save.
 - A notification opens.

Pipette Calibration Configuration of Calibry

- 11 To save the changes, click on Yes or No.
 - **Note**: By clicking **Yes**, changes also apply to defined but not started calibrations, which use these methods. By clicking on **No**, changes only apply for later defined calibrations.
 - The method properties are changed.
 - → The main method editor is closed.
- 12 To redefine the parameters, click on **Cancel**.

5.3.3 Delete method

■ Navigation: 🛂 Methods > 🥞 Delete Method

- 1 Mark a method from the list with a click.
 - → The chosen method is marked blue.
- 2 Click on the 4 icon.
 - → The **Delete Method** window opens.
- 3 To delete the method, click on Yes.
 - → The method is deleted.
- 4 To delete the method but keep the task, click on No.
 - → The method is deleted, the task is not affected.
- 5 To cancel the deletion, click on **Cancel**.
 - → The pipette assistant is closed.

5.3.4 Import information from a MethodCard to Calibry

■ Navigation: 🔁 Methods > 🗞 Import

Method Cards can be purchased separately and are delivered without any information and support the following features:

- The **MethodCard** always contains a new **Quick-check** method.
- The **EasyScan Flex** reader is connected to the workstation.
- 1 To start the import, click on the % icon.
 - → The Connect MethodCard window opens.
- 2 To cancel the import process, click on **Cancel**.
 - → The Connect MethodCard window is closed.
- 3 Hold the **MethodCard** on the **EasyScan Flex** reader for 2-3 seconds.
 - → The MethodCard is recognized.
 - The Import Quick-check method window opens. All the information to be imported from the MethodCard is displayed.
- 4 To scan another **MethodCard**, click on **Back**.
 - → The Connect MethodCard window opens.
- 5 To cancel the import process, click on **Cancel**.
 - → The Import Quick-check method window is closed.
- 6 To proceed with the import, click on **Next**.
 - → The **Synchronize Quick-check method** window opens.
- 7 To go back to the **Synchronize Quick-check method** window, click on **Back**.
- 8 To cancel the import process, click on Cancel.
- 9 To import all the information from the **MethodCard**, click on **Import**.
- → All information from the **MethodCard** are imported to Calibry. The information is synchronized with Calibry.

5.3.5 Export information from Calibry to a MethodCard

■ Navigation: 🛂 Methods > % Export

Method Cards can be purchased separately and are delivered without any information and support the following features:

- Only Quick-check methods can be exported.
- The **EasyScan Flex [Connected]** reader is connected to the workstation.
- 1 Select a pipette with an assigned Quick-check method to be exported from the list view with a click.
 - → The chosen method is marked blue.
- 2 Click on the % icon.
 - → The Connect MethodCard window opens.
- 3 To cancel the export process, click on **Cancel**.
 - → The Connect MethodCard window is closed.
- 4 Hold the **MethodCard** on the **EasyScan Flex [Connected]** reader for 2...3 seconds.
 - The method information, which is to be exported to the **MethodCard**, is recognized.
 - → The Export Quick-check Method window opens. All the information to be exported to the MethodCard is displayed.
- 5 Optionally, enter a new **Check interval** or modify the number with the arrow buttons.
- 6 Check/uncheck the box to set/not set an **Evaporation trap** with a click.
 - Note: An Evaporation trap ensures more precise results by reducing the level the evaporation of water to a minimum level.
- 7 To scan another **MethodCard**, click on **Back**.
 - → The Connect MethodCard window opens.
- 8 To cancel the export process, click on **Cancel**.
 - → The Connect MethodCard window is closed.
- 9 To proceed with the export, click on **Next**.
 - → The Export Quick-check Method window opens.
- 10 To complete the export, click on Close.
- → The export of information to the **MethodCard** is completed.

5.3.6 Assign pipettes

■ Navigation: 🔀 Methods > 😼 Assign Pipettes

In order to assign a pipette to a matching method, the following parameters have to be identical:

- same Volume range
- same Number of channels
- same Piston type

If all three parameters are matching, a list of pipettes are displayed in the **Pipette Assignment for Method** window.

- 1 Mark a method from the list view with a click.
 - The chosen method is marked blue.
- 2 To assign one or more pipettes to a method, click on the 😼 icon.
 - → The Pipette Assignment for Method window opens. A list of pipettes, which are compatible with the chosen method, are shown.
- 3 To assign one or more pipettes to a method, check/uncheck the box in the **Selected** column.
- 4 Click on OK.
 - → The Calibration Reminder Configuration window opens.
- 5 Set the schedule for the calibration. For more information, see [Set reminder ▶ Page 46]

Pipette Calibration Configuration of Calibry

- 6 To confirm the assignment, click on **OK**.
 - → The pipette(s) is/are assigned to the method.
- 7 To cancel the schedule setting, click on **Cancel**.
 - → The schedule window closes. Pipettes can be assigned again or the window can be closed by a click on **Cancel**. In this case, all changes are discarded.

5.4 Tasks menu

■ Navigation: ☑ Tasks

The **Tasks** menu is separated by default in four submenus:

- All Lists all planned tasks.
- On time Lists all task which are on time.
- Delayed Lists all tasks which are overdue by not more than two days.
- Overdue Lists all tasks which are overdue by at least two days.

Status

The **Status** column contains information in the form of symbols.

The symbols in the **Status** column indicate which calibration mode is used for the pipette and which steps were already completed. The **Status** column displays a combined symbol of all statuses, for instance like this:

QDBO. The colours of the symbols indicate the status of the procedure:

_	
Parameter	Description
Q	green: Inspection done.
	dark gray: Inspection not done.
	light gray: Inspection not required.
gs.	green: Correction done.
	dark gray: Correction not done.
	light gray: Correction not required.
\bigcirc	green: As returned passed.
	 dark gray: As returned not done.
	light gray: As returned not required.
	red: As returned failed.
S	green: As found passed.
	dark gray: As found not done.
	light gray: As found not required.
	 red: As found failed.

5.4.1 Set reference number

- Navigation: 🗹 Tasks > 🕏 Set Reference Number
- 1 Select a task from the list view with a click.
- 2 To set a reference number, click on the 🕏 icon.
 - → The **Edit Reference Number** window opens.
- 3 Enter the desired reference number.
- 4 To save the reference number, click on **OK**.
- 5 To cancel the operation, click on **Cancel**.

5.4.2 Delete task

- Navigation: 🗗 Tasks > 👼 Delete Task
- 1 Select a task from the list view with a click.
- 2 Click on the 👼 icon.
 - → The **Delete Calibration Task** window opens.
- 3 To delete the task, click on **OK**.
- 4 To cancel the operation, click on **Cancel**.
- i Note
- When deleting a task, the task will be deleted but the results of the tasks will not be deleted.

5.4.3 Start/Resume Task

- Navigation: 🗹 Tasks > 💽 Start/Resume Task
- For more information, see [Start/Resume Calibration ▶ Page 48] and [Starting the calibration ▶ Page 77].

5.4.4 Enter calibration results

- Navigation: 🗹 Tasks > 🖾 Enter Calibration Results
- 1 To enter the calibration results, click on the Micon.
 - → The External Pipette Calibration window opens.
- 2 Enter the **Date as on certificate** or select the date from the calender with a click on the drop-down list.
- 3 Enter a Certificate number.
- 4 Set the status of the result.
- 5 Optionally, enter a comment to the result and add a copy of the certificate as PDF.
- 6 Click on Save.
 - → If the status is **failed**, the user will be asked to remove the pipette from the inventory.
 - → If the status is **passed** the calibrations results can be saved.

5.5 Customers menu

■ Navigation: Customers

5.5.1 New customer

■ Navigation: Customers > New Customer

- i Note
- Company name, last name and first name of the client are mandatory to register a new contact.
- 1 To add a **New Customer**, click on the 🕹 icon.
 - → The **Add contact** window opens.
- 2 Enter the contact details.
 - **Note**: To add a customer with existing details but e.g. another name, click on the drop-down list and select a contact to copy the details.
- 3 Check/uncheck the boxes, if the owner address is also the delivery and/or billing address.
 - **Note**: If the delivery and/or billing address differs from customer's address, uncheck the box and click on **Next**. Enter the contact details and confirm with a click on **OK**.
- 4 To save the details, click on **OK**.
- 5 To discard the details, click on **Cancel**.

Pipette Calibration Configuration of Calibry

5.5.2 Edit customer

- ≡ Navigation: 🔼 Customers > 🕹 Edit Customer
- i Note
- Company name, last name and first name of the client are mandatory to register a new contact.
- 1 To edit a customer, click on the 🕹 icon.
 - → The **Edit Customer** window opens.
- 2 Edit the contact details.
 - **Note**: To add a customer with existing details but e.g. another name, click on the drop-down list and select a contact to copy the details.
- 3 Check/uncheck the boxes, if the owner address is also the delivery and/or billing address.
 - Note: If the delivery and/or billing address differs from customer's address, uncheck the box and click on Next. Enter the contact details and confirm with a click on OK.
- 4 To save the details, click on **OK**.
- 5 To discard the details, click on **Cancel**.

5.5.3 Remove customer

- Navigation: Customers > ♣ Remove Customer
- 1 Mark a customer from the list view with a click.
 - → The chosen customer is marked blue.
- 2 Click on the 🕹 icon.
 - The customer assistant opens.
- 3 To remove a customer, click on **OK**.
 - → The customer is removed.
- 4 To cancel the deletion, click on **Cancel**
 - → The customer assistant is closed.

5.6 Documents menu

■ Navigation: Documents

5.6.1 Archive certificate

■ Navigation: Documents > Calibration reports > 🗟 Archive Certificate

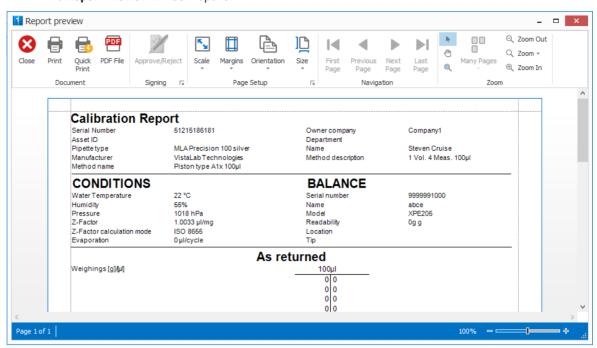
Calibration certificates can be archived and saved in the database. Archived certificates will not be shown in the list view. The information will not be considered in any document and statistics.

- 1 Mark a certificate from the list view with a click.
 - → The chosen certificate is marked blue.
- 2 Click on the -icon.
- 3 To cancel archiving the certificate, click on **Cancel**.
- 4 To archive the certificate, click on **OK**.
- The certificate is archived.

5.6.2 View calibration report

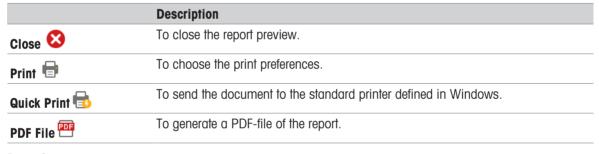
- Navigation: Documents > Calibration reports > 🗟 View Calibration Report
- 1 Mark a report from the list view with a click.
 - → The chosen report is marked blue.
- 2 Click on the 🗟 icon

→ The **Report Preview** window opens.

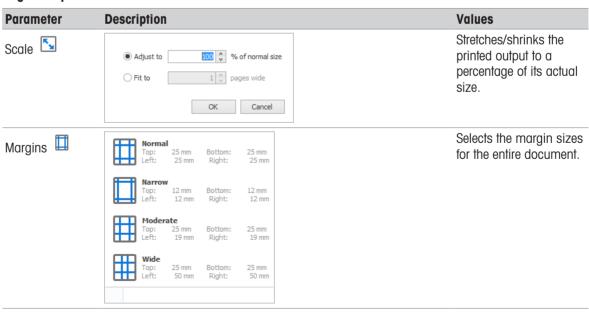


→ The report can be checked, formatted or printed.

Report preview options



Page Setup



Pipette Calibration Configuration of Calibry

Parameter	Description	Values
Orientation 🕒	Portrait	Switches the pages between portrait and
	Landscape	landscape layouts.
Size 🖺	Letter 215 mm x 279 mm	Selects the paper size of the document.
	Tabloid 279 mm x 431 mm	
	Legal 215 mm x 355 mm	
	Executive 184 mm x 266 mm	
	A3 296 mm x 420 mm	
	A4 210 mm x 296 mm	
	A5 148 mm x 210 mm	

Navigation

Parameter	Description	Values
First Page	To display the first page of the document	
Previous Page	To display the previous page of the document.	
Next page	To display the next page of the document.	
Last page	To display the last page of the document.	

Zoom

Parameter	Description
Mouse Pointer *	To display the mouse pointer.
Hand Tool 🖱	To enable scrolling manually through the pages.
Magnifier a	Entire single page is visible/ zooms the page to 100% of the normal size.
Many Pages	To display several pages at once. i Note: The number of displayed pages depends on the size of the preview window.
Zoom Out	To reduce the display size of the document.
Zoom	To change the zoom level of the document preview.
Zoom In	To enlarge the display size of the document.

Page Background

Parameter	Description
	For more information, see [Set watermark ▶ Page 60]

5.6.3 Print calibration report

- Navigation: Documents > Calibration reports > B Print Calibration Report
- 1 Mark a report from the list view with a click.
 - → The chosen report is marked blue.
- 2 Click on the 🗟 icon.
 - → The **Print** window opens.
- → The report can be printed.

5.6.4 Save calibration report as PDF

- Navigation: Documents > Calibration reports > 🖟 Save Calibration Report as PDF
- 1 Mark a report from the list view with a click.
 - The chosen report is marked blue.
- 2 Click on the la icon
 - → The **Save Calibration Report as PDF** window opens.
- 3 Enter a file name.
- 4 To save the file, click on Save.
- 5 To cancel saving the document, click on **Cancel**.

5.6.5 Export calibration report to XML

- Navigation: Documents > Calibration reports > Lack Export Calibration Report to XML
- 1 Mark a report from the list view with a click.
 - → The chosen report is marked blue.
- 2 Click on the la icon
 - → The Export Calibration Report to XML window opens.
- 3 Enter a file name.
- 4 To save the file, click on **Save**.
- 5 To cancel saving the document, click on **Cancel**.

5.6.6 Export calibration report to Microsoft® Office

- Navigation: Documents > Calibration reports > Export Calibration Report to Office
- i Note
- The list with field names can be downloaded from the Knowledge base:
 - http://www.activation.mt.com
- A template is created in .dotx-format for Microsoft Word® or .xltx-format for Microsoft Excel®.
- 1 Mark a report from the list view with a click.
 - The chosen report is marked blue.
- 2 Click on the 🗟 icon.
- 3 Select the path, where the template is saved.
- 4 Click on **Open**.
 - Excel or Word opens. The determined information will be exported to a new document based on the content of the selected template.
- 5 Select the desired path to save the [.docx or .xlsx]-file.
- 6 Name the [.docx or .xlsx]-file.
- → The created document is saved.

5.6.7 New template

- Navigation: Documents > Document templates > New Template
- 1 To create a new template, click on the 🖺 icon.
 - → The **New Document Template** window opens.
- 2 Mark a template from the list with a click.
- 3 The chosen template is marked blue.
- 4 Click on OK.

Pipette Calibration Configuration of Calibry

- The **Report Template Editor** window opens. A preview of the template is shown. For more information about the ribbon functions, see [View calibration report ▶ Page 56].
- 5 Set the desired preferences to create a template.

5.6.8 Edit template

■ Navigation: Documents > Document templates > Edit Template

- 1 Mark a report from the list with a click.
 - → The chosen report is marked blue.
- 2 Click on the 3 icon.
 - → The **Report Template Editor** window opens.
 - A preview of the template is shown. For more information about the ribbon functions, see [View calibration report ▶ Page 56].
- 3 Set the desired preferences to create a template.

5.6.9 Delete template

■ Navigation: Documents > Document templates > B Delete Template

- 1 Mark a document from the list with a click.
 - → The chosen document is marked blue.
- 2 Click on the 3 icon.
 - → The **Delete document template** window opens.
- 3 To delete the template, click on **OK**.
 - → The template is deleted.
- 4 To cancel the deletion, click on **Cancel**.
 - → The deletion is discarded. The **Delete document template** window closes.

5.6.10 Set watermark

■ Navigation: Documents > Document templates

- 1 To set a watermark, click on the 3 icon.
 - → The **New Document Template** window opens.
- 2 Mark a template from the list with a click.
- 3 The chosen template is marked blue.
- 4 Click on **OK**.
 - → The **Report Template Editor** window opens. A preview of the template is shown.
- 5 Click on the icon.
- The Watermark window opens. Watermark settings can be defined in the Text Watermark or Picture Watermark tab.
- → A Watermark can be set as a text or a picture.

Text Watermark

The watermark text can be defined individually or predefined texts can be chosen from the drop-down list. The following settings for a watermark are available in the **Text Watermark** tab:

Parameter	Description	Values
Text	The watermark text can be entered individually or predefined texts	-
	can be set from the drop-down list.	

Parameter	Description	Values
Direction	The direction of the watermark can be defined. The following directions are available:	Horizontal Vertical Backward Diagonal
	 Horizontal: Watermark is displayed horizontally. 	Forward Diagonal
	 Vertical: Watermark is displayed vertically. 	
	 Backward Diagonal: Watermark is displayed backward diagonal. 	
	• Forward Diagonal: Watermark is displayed forward diagonal.	
Font	Various font styles can be set from the drop-down list.	-
Color	Various colours for the watermark can be set from the drop-down list.	-
Size	The size of the watermark text can be entered individually or predefined font sizes can be set from the drop-down list.	-
Bold/Italic	Boxes can be checked/unchecked to set the watermark as "Bold" and/or "Italic".	Active I Inactive
Transparency	The transparency of the watermark can either be set by entering it manually (0-255) or by dragging the line.	0255
Position	Two positions for the watermarks are available:	In front I Behind
	 In front: the watermark is in front of the text. 	
	Behind: the watermark is behind the text.	
Page Range	Two page Ranges for the watermarks are available: • All: the watermark appears on all pages	All I Pages
	 Pages: the watermark appears only pages, which are entered manually. 	
	 Single page numbers can be entered by separating it with commas: e.g. 1,3,5 	
	 Page ranges can be entered with a hyphen: e.g. 7-12 	
Clear All	With a click on the Clear All , all settings will be discarded and set to default.	-

Picture Watermark

Parameter	Description	Values
Load image	A picture can be imported to use it as a watermark	-
Size mode	The following size modes are available:	Clip Stretch Zoom
	 Clip: The watermark can be set along the margin, header, footer or at the center of the page. 	
	Stretch: The watermark is covers the whole page.	
	• Zoom : The watermark is magnified.	
Tiling	The picture is tiled on the whole page.	
Horizontal	The following horizontal alignments are available:	Left Right Center
alignment	• Left : The picture is set at the left side of the page.	
	Right: The picture is set at the right side of the page.	
	• Center : The picture is set at the center of the page.	
Vertical alignment	The following vertical alignments are available:	Top Middle Bottom
	• Top : The picture is set at the top side of the page.	
	Middle: The picture is set at the middle of the page.	
	Bottom: The picture is set at the bottom of the page.	

Pipette Calibration Configuration of Calibry

Parameter	Description	Values
Transparency	The transparency of the watermark can either be set by entering it manually (0-255) or by dragging the line.	0255
Position	Two positions for the watermarks are available: • In front: the watermark is in front of the text.	In front I Behind
	 Behind: the watermark is behind the text. 	
Page Range	Two page Ranges for the watermarks are available: • All: the watermark appears on all pages	All I Pages
	• Pages : the watermark appears only pages, which are entered manually.	
	 Single page numbers can be entered by separating it with commas: e.g. 1,3,5 	
	 Page ranges can be entered with a hyphen: e.g. 7-12 	
Clear All	With a click on the Clear All , all settings will be discarded and set to default.	-

5.7 Devices menu

■ Navigation: 🖪 Devices

5.7.1 Edit balances

■ Navigation: M Devices > Balances > M Edit Balance

- 1 Mark a balance from the list with a click.
 - → The chosen balance is marked blue.
- 2 To edit a balance, click on the 💹 icon.
 - → The **Balance Properties** window opens.
- 3 Edit the settings.
- 4 To save the changes, click on **OK**.
 - → The changes are saved. The **Balance Properties** window closes.
- 5 To cancel the changes, click on **Cancel**.
 - → The changes are discarded. The **Balance Properties** window closes.

Editable balance properties

In the **Balance Properties** window the settings for a registered balance can be edited except the information, which are highlighted in grey. These information are unique balance specific information.

General

■ Navigation: 🖪 Devices > Balances > 🖫 Edit Balance > General

Parameter	Description	Values
Name	The name of the balance can be edited.	-
Asset ID	An Asset ID can be entered/edited.	-
Location	The environmental location, where the balance is used, can be entered/edited.	-

Parameter	Description	Values
Door Mode	A door mode can be chosen from the drop-down list to define, how to control the balance doors.	Disabled Timer Manual
	Disabled: The balance doors are not controlled by Calibry	
	 Timer: A timer can be set to define, when the doors close automatically. 	
	• Manual : The doors only open and close after a key stroke or sensor.	
Last calibration date	The last calibration date of the balance is for information only. It can be modified under Enter Balance Calibration Results in the menu. If there is no last calibration date, the parameter is set on Never by default.	
Next calibration date	The next calibration date of the balance is for information only. It center Balance Calibration Results in the menu. If there is no next parameter is set on Not planned by default.	
Certificate number	er The certificate number is for information only. It can be modified under Enter Balance Calibration Results in the menu.	

Uncertainties

Parameter	Description
Readability	Readability can be entered/edited.
Repeatability	Repeatability can be entered/edited.
Expanded uncertainty	Expanded uncertainty can be entered/edited.
K-Factor	K-Factor can be entered/edited.
Evaporation rate	Evaporation rate can be entered/edited.
Evaporation rate uncertainty (k=1)	Evaporation rate uncertainty (k=1) can be entered/edited.

Capacity

Parameter	Description
Max. capacity	Maximum capacity can be entered/edited.

Connection Settings

■ Navigation: 🛭 Devices > Balances > 🖫 Edit Balance > Connection Settings

The connection settings below are for information only. If you have to modify these settings, click on **Add Balance** in the menu. The balance can be recognized again and is reconfigured automatically.

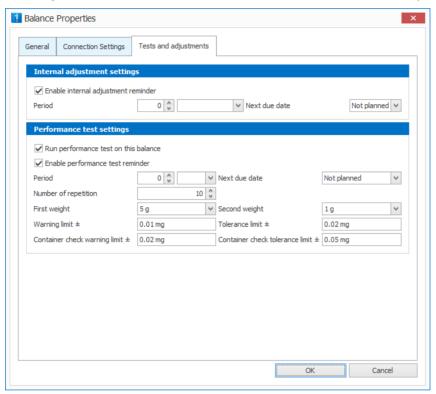
Parameter	Description	Values
Port name	Port name , where the balance is connected to, can be chosen from the drop-down list.	-
Baud rate	Baud rate is the rate at which information is transferred in a communication channel.	1200 2400 4800 9600 19200 28800
	Baud rate can be chosen from the drop-down list.	
	For more information, which baud rate fo which balance to set, see [Setting up the hardware > Page 83].	
Stop bits	Stop bits can be chosen from the drop-down list.	None I One I Two I One Point Five
Data bits	The number of data bits can be chosen from the drop-down list.	4 5 6 7 8
Parity	The parity can be chosen from the drop-down list.	None Odd Even Mark Space

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Parameter	Description	Values
Handshake	The handshake can be chosen from the drop-down list.	None XOn/XOff
		Request to send I
		Request to send and
		XOn/XOff

Tests and adjustments

■ Navigation: 🚾 Devices > Balances > 💹 Edit Balance > Tests and adjustments



Internal adjustment settings

Parameter	Description	Values
Enable internal adjustment reminder	When enabled, the user will be prompted to execute the internal adjustment before executing the calibration of a pipette.	Active I Inactive
Period	The calibration can be set to be repeated in regular intervals.	Daily I Weekly I Monthly
Next due date	The next calibration date of the pipette can be entered or chosen from the calendar. If there is no next calibration date, the parameter is set on Not planned by default.	List of selection

Performance test settings

Parameter	Description	Values
Run performance test on this balance	When enabled, the user will be indicated to run the performance test for this device.	Active I Inactive
Enable internal adjustment reminder	When enabled, the user will be prompted to execute the internal adjustment before executing the calibration of a pipette.	Active I Inactive
Period	The calibration can be set to be repeated in regular intervals.	Daily I Weekly I Monthly

Parameter	Description	Values
Next due date	The next calibration date of the pipette can be entered or chosen from the calendar. If there is no next calibration date, the parameter is set on Not planned by default.	List of selection
Number of repetition	The number of time the test weight has to be placed on the balance.	Number
First weight	The first weight that is used for the test.	Value
Second weight	The second weight that is used for the test. The second weight is optional.	Value
Warning limit ±	The limit above which a warning should be given.	Value
Tolerance limit ±	The limit above which the balance should not be used for the calibration of pipette.	Value
Container check warning limit ±	The limit above which a warning should be given (MCP-R only).	Value
Container check tolerance limit ±	The limit above which the balance should not be used for the calibration of pipette (MCP-R only).	Value

5.7.2 Remove balances

- Navigation: 💹 Devices > Balances > 🖫 > Remove balances
- 1 Mark a balance from the list with a click.
 - → The chosen balance is marked blue.
- 2 Click on the J icon.
 - → The **Remove balances** window opens.
- 3 To remove a balance, click on **OK**.
 - → The balance is removed.
- 4 To cancel the remove, click on **Cancel**.
 - → The Remove balances window is closed.

5.7.3 Edit climate sensor

■ Navigation: M Devices > Climate Sensors > N > Edit Climate Sensor

- 1 Mark a sensor from the list with a click.
 - → The chosen sensor is marked blue.
- 2 To edit a sensor, click on the 🔓 icon.
 - → The "Device Properties" window opens.
- 3 Edit the settings.
- 4 To save the changes, click on **OK**.
 - → The changes are saved. The **Device Properties** window closes.
- 5 The cancel the changes, click on **Cancel**.
 - → The changes are discarded. The **Device Properties** window closes.

Editable climate sensor properties

In the **Device Properties** window the settings for a registered climate sensor can be edited except the sensor type.

Parameter	Description
Name	The name of the climate sensor can be edited.
Serial number	The serial number of the climate sensor can be edited.
Asset ID	An Asset ID can be entered/edited.

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Parameter	Description
Model	The model name of the climate sensor can be entered/edited.
Manufacturer	The manufacturer of the climate sensor can be entered/edited.
Location	The environmental location, where the climate sensor is used, can be entered/edited.
Readability	The readability can be entered/edited.
Description	A brief description of the climate sensor.

Current Climate Parameters

Parameter	Description	Values
Update mode	 Manual Constant: For each calibration the same set temperature is taken. Only recommended when the room temperature is stable or accuracy of measurement is not relevant. Manual per Calibration: Before starting a calibration, the 	Manual Constant I Manual per Calibration
	actual room temperature must be entered. General recommendation to get the most accurate results.	
Current value	The current value of the climate sensor can be entered/edited. Enter the default value that shows up when starting a calibration or is automatically showed when using the LabClimate with according sensors.	

Connection Settings

Parameter	Description	Values
Connection Type	The connection type can be chosen from the drop-down list. Not connected LabClimate	Not connected I LabClimate

Calibration

Parameter	Description
Last calibration date	The last calibration date of the climate sensor is for information only. It can be modified under Enter Sensor Calibration Results in the menu. If there is no last calibration date, the parameter is set on Never by default.
Next calibration date	The next calibration date of the climate sensor is for information only. It can be modified under Enter Sensor Calibration Results in the menu. If there is no next calibration date, the parameter is set on Not planned by default.
Uncertainty	The uncertainty can be entered/edited. Take this value from the calibration certificate or manufacturer specifications.
K-Level	The K-Level can be entered/edited. Recommended K-Level values: • K1 = 67% • K2 = 95% • K3 = 99%
Certificate number	The certificate number is for information only. It can be modified under Enter Sensor Calibration Results in the menu

5.7.4 Remove climate sensor

 \equiv Navigation: $\[\[\] \]$ Devices > Climate Sensors > $\[\] \[\] \]$ > Remove Climate Sensor

i Note

• Removing a climate sensor has the consequence, that if the sensor is used on any workstation, the workstation has to be reconfigured in order to run the pipette calibrations.

- Removing a climate sensor can have the consequence that no calibration can be started if no other climate sensor is available.
- Removing a climate sensor can have the consequence that a calibration cannot be performed on another workstation using the same temperature sensor.
- 1 Mark a sensor from the list with a click.
 - → The chosen sensor is marked blue.
- 2 Click on the 🔏 icon.
 - → The **Remove Climate Sensor** window opens.
- 3 To remove a sensor, click on **OK**.
 - → The sensor is removed.
- 4 To cancel the remove, click on **Cancel**.
 - → The Remove Climate Sensor window is closed.

5.7.5 Add weight set

■ Navigation: M Devices > Weight Sets > M Add Weight Set

i Note

- In order to create a weight set, it is mandatory to enter at least a manufacturer and a serial number. The serial number cannot be changed after saving.
- 1 To add a weight set, click on the 🚻 icon.
 - → The New Weight Set window opens.
- 2 Enter a Serial number.
- 3 Enter a Manufacturer.
- 4 To save the weight set, click on the Ricon. The window is closed.
 - → The weight set is saved.
- 5 To discard the weight set, click on the **\(\sigma \)** icon.
- → The preferences are discarded.

5.7.5.1 Add Weight

- Navigation: M Devices > Weight Sets > M Add Weight Set > M Add Weight
- The **¼ Add Weight Set** menu is opened.
- Click on the sicon.
 - → The Add Weight window opens.
- 2 Enter a Nominal weight.
- 3 Optionally, enter a **Weight ID** (limited to symbols * and °).
- 4 Select a **Class** from the drop-down list.
- 5 Enter the Corrected weight.
- 6 To save the preferences, click on **Save**.
 - The weight is edited.
- 7 To cancel editing the weight, click on **Cancel**.
 - → The weight preferences are discarded.

5.7.6 Edit weight set

■ Navigation: ME Devices > Weight Sets > ME Edit Weight Set

- 1 To edit a weight set, click on the 📢 icon.
 - → The Edit Weight Set window opens.

Pipette Calibration Configuration of Calibry

- 2 Select a weight set from the list view with a click.
 - The chosen weight set is marked blue.
- 3 Click on the 📢 icon.
 - → The Edit Weight Set window opens.
- 4 Edit the weight set properties.
- 5 Click on the 🛗 icon to save the weight set and close the window.
 - → The weight set is saved.
- 6 To discard the weight set, click on the **\subseteq** icon.

Editable weight set properties

In the **Edit Weight Set** window the information for a registered weight set can be edited except the serial number.

Parameter	Description
Manufacturer	The manufacturer of the weight set can be entered/edited.
Last calibration date	The last calibration date of the weight set is for information only. It can be modified under Enter Weight set Calibration Results in the menu. If there is no last calibration date, the parameter is set on Never by default.
Certificate ID	A Certificate ID is for information only. It can be entered or edited under Enter Weight set Calibration Results in the menu. Refer to the original calibration data of the weight set.
Next calibration date	The next calibration date of the weight set is for information only. It can be modified under Enter Weight set Calibration Results in the menu. If there is no next calibration date, the parameter is set on Not planned by default.
Description	Enter additional information about the used weight set for exact identification and traceability.

5.7.6.1 Edit Weight

- Navigation: M Devices > Weight Sets > M Weight Sets > L Edit Weight
- The **Weight Sets** menu is opened.
- 1 Select a weight from the list view with a click.
 - → The chosen weight set is marked blue.
- 2 Click on the 🍶 icon.
 - → The **Edit Weight** window opens.
- 3 Enter a Nominal weight.
- 4 Optionally, enter a **Weight ID** (limited to symbols * and °).
- 5 Select a **Class** from the drop-down list.
- 6 Enter the Corrected weight.
- 7 To save the preferences, click on **Save**.
 - → The weight is edited.
- 8 To cancel editing the weight, click on **Cancel**.
 - → The weight preferences are discarded.

5.7.7 Remove weight set

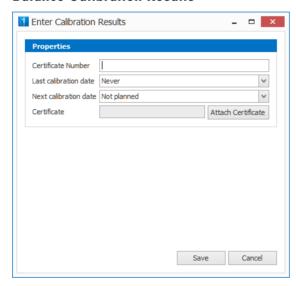
- Navigation: M Devices > Weight Sets > M Remove weight sets
- 1 Select a weight set to remove from the list view with a click.
 - → The chosen weight set is marked blue.
- 2 To remove a weight set, click on the 👫 icon.
 - → The **Remove weight sets** window opens.

- 3 To remove the chosen weight set, click on Yes.
 - → The weight set is removed.
- 4 To cancel removing the weight set, click on No.
 - → The **Remove weight sets** window closes. No weight set is removed.

5.7.7.1 Remove Weight

- Navigation: Mr Devices > Weight Sets > Mr Edit Weight Set > Mr Remove weights
- **Edit Weight Set** menu is opened.
- 1 Select a weight to remove from the list view with a click.
 - → The chosen weight is marked blue.
- 2 To remove a weight, click on the 👫 icon.
 - → The Remove weights window opens.
- 3 To remove the chosen weight, click on Yes.
 - → The weight is removed.
- 4 To cancel removing the weight, click on No.
 - → The **Remove weights** window closes. No weight is removed.

5.7.8 Balance Calibration Results



Enter Calibration Results: Is used for the entry of calibration information. There is the possibility to attach a certificate with **Attach Certificate**. The information can be found in the Balance Properties.

Properties

Parameter	Description
Certificate number	The certificate number is required and can be entered/edited.
Last calibration date	The last calibration date of the balance is required and can be entered or chosen from the calendar.
Next calibration date	The next calibration date of the balance can be entered or chosen from the calendar. If there is no next calibration date, the parameter is set to Not planned by default.
Certificate	Name of the attached certificate

Pipette Calibration Configuration of Calibry

5.7.9 Sensor Calibration Results

Enter Calibration Results: Is used for the entry of calibration information. There is the possibility to attach a certificate with **Attach Certificate**. The information can be found in the Sensor Properties.

Properties

Parameter	Description
Certificate number	The certificate number is required and can be entered/edited.
Last calibration date	The last calibration date of the sensor is required and can be entered or chosen from the calendar.
Next calibration date	The next calibration date of the sensor can be entered or chosen from the calendar. If there is no next calibration date, the parameter is set to Not planned by default.
Certificate	Name of the attached certificate

5.7.10 Weight set Calibration Results

Enter Calibration Results: Is used for the entry of calibration information. There is the possibility to attach a certificate with **Attach Certificate**. The information can be found in the Weight set Properties.

Properties

Parameter	Description
Certificate number	The certificate number is required and can be entered/edited.
Last calibration date	The last calibration date of the weight set is required and can be entered or chosen from the calendar.
Next calibration date	The next calibration date of the weight set can be entered or chosen from the calendar. If there is no next calibration date, the parameter is set to Not planned by default.
Certificate	Name of the attached certificate

5.8 Reporting

5.8.1 Print overview

- Overviews can be printed in all menus except the home menu.
- 1 To print an overview, click on the 🕒 icon.
 - → The Print window opens.
- 2 Set the properties.
- 3 Start printing with a click on **OK**.
- → An overview is printed.

5.8.2 Export overview

- Overviews can be exported in all menus except the home menu.
- 1 To export an overview in a CSV-Format, click on the icon.
 - → The Save As...window opens.
- 2 Select the desired path to save the CSV-file.
- 3 Name the CSV-file.
- 4 Confirm with a click on **OK**.
- → The CSV-file is saved.

5.8.3 Print...

- Navigation: 📴 Methods or 🝱 Devices
- 1 Mark a device or method from the list with a click.
 - → The chosen report is marked blue.
- 2 Click on the \(\big| \) icon.
 - → The Report Preview window opens.
 - → A preview of the report is shown. For more information about the ribbon functions, see [View calibration report ▶ Page 56]
- 3 Set the desired preferences to print the report.

5.9 Backstage view

■ Navigation: ■ Backstage view

5.9.1 Licensing

■ Navigation: 📭 Backstage view > 🔍 Licensing

Calibry can be activated on two ways:

- **Direct** (requires internet connection), where the export and import of the license key is done automatically
- Manual, where the export and import of the license key is done manually.

5.9.1.1 Add License

- Navigation: 💷 Backstage view > 🖳 Licensing
- A license key is required.
- 1 To open the backstage view, click on the **1** icon.
- 2 To open the licensing menu, click on the 4 icon.
 - → The **Licensing** menu opens.
- 3 To add a license, click on Add license.
 - → A license key can be entered in the **Licenses** list view.
- 4 Enter the license key.
- 5 Confirm with the **Enter** button.
- → VALID LICENSE KEY: an info box with "License successfully added. Please restart all Calibry clients to reflect the changes." opens. Confirm with a click on OK.
- INVALID LICENSE KEY: an info box with "License key is invalid or not the correct type" opens. Repeat the steps and enter a valid license key.

5.9.1.2 Remove License

- Navigation: 📴 Backstage view > 🕰 Licensing
- 1 To open the backstage view, click on the icon.
- 2 To open the licensing menu, click on the 4 icon.
 - → The **Licensing** menu opens.
- 3 Mark a license from the list with a click.
 - → The chosen license is marked blue.
- 4 Click on Remove license.
 - → The Calibry License Manager window opens.
- 5 To remove the license, click on **OK**.
 - → The license is removed.

Pipette Calibration Configuration of Calibry

- 6 To cancel removing the license, click on **Cancel**.
 - → The license key is not removed. The **Calibry License Manager** window closes.

5.9.1.3 Activate Calibry (Direct activation)

■ Navigation: 📭 Backstage view > 🔍 Licensing

- A license kev is required.
- To activate the system automatically, an internet connection is required.
- 1 To open the backstage view, click on the 💷 icon
- 2 To open the licensing menu, click on the 4 icon.
 - → The Licensing menu opens.
- 3 To activate Calibry, click on **Activate Calibry**.
 - → The **Activate Calibry** window opens.
- 4 Select the activation type **Direct**.
- 5 Click on Next.

Direct activation with an existing account

- 1 If a METTLER software portal account already exists, select Use an existing customer profile.
- 2 Click on Next.
- 3 Enter the account credentials.
- 4 Click on Next.
 - → The activation is performed automatically. Calibry is activated.
- 5 To finish the activation, click on **Finish**.
- → The activation is completed. The **Activate Calibry** window closes.

Direct activation and creating a new account

- 1 To create a new METTLER software portal account, select Create a new customer profile.
- 2 Click on Next.
- 3 Follow the instructions and create a new user account.
- 4 Click on Next.
 - The activation is performed automatically. Calibry is activated.
- 5 To finish the activation, click on **Finish**.
- → The activation is completed. The **Activate Calibry** window closes.

5.9.1.4 Activate Calibry (Manual Activation)

■ Navigation: 📭 Backstage view > 🔍 Licensing

- A license key is required.
- An internet connection for the license key upload process is required.
- 1 To open the backstage view, click on the 💷 icon
- 2 To open the licensing menu, click on the 4 icon.
 - → The **Licensing** menu opens.
- 3 To activate Calibry, click on **Activate Calibry**.
 - → The "Activate Calibry" window opens.
- 4 Select the activation type **Manual**.
- 5 Click on Next.
- 6 To save the license key, click on Save License Key file ...
 - → The **Save License File** window opens.

Configuration of Calibry Pipette Calibration

- 7 Select a path to save the license key file. Enter a name for the file.
- 8 To save the file, click on **Save**.
 - → The license key file is saved.
- 9 To cancel saving the license key file, click on **Cancel**.
 - The license key file is not created.
- 10 Click on Next.
- 11 Click on the link.
 - → The user is directed to the METTLER software portal page.
- 12 If an account for the portal exists, click on Sign-in. If the user has no account, create an account with a click on Register. Follow the instructions.



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- 13 Enter the credentials.
 - → The user is logged in the **METTLER software portal**.
- 14 Click on Activation.
 - → The "Activation" page opens.
- 15 To upload the license key file, click on **Browse...**
 - → The Open window opens.
- 16 Navigate to the path, where the license key file is saved.
- 17 Select the license key file.
- 18 Left click on Open.
 - → The Open window closes. The path is shown in the Save License File box
- 19 Click on Submit.
 - → The **Edit System** window opens.
- 20 Enter a system name.
- 21 Optionally, enter a server name and location.
- 22 Click on Save.
 - → The **License Overview** window opens.
- 23 Click on Save.
 - → The license key file is downloaded to the chosen path.
- 24 Switch back to Calibry.
- 25 Click on Import activation key file...
 - → The **Open** window opens.
- 26 Navigate to the path, where the activation key file is saved.
- 27 Select the activation key file.
- 28 Left click on Open.
 - Calibry is activated.
- 29 To finish the activation, click on **Finish**.
- → The activation is completed. The Activate Calibry window is closed.

5.9.2 Add/edit/view/delete user group

Add User Group

- Navigation: Backstage view > 🗷 User Management > User Group Management > 🕸 Add User Group
- 1 To open the user management menu, click on the 🚨 icon.
 - → The User Management window opens.
- 2 Click on the 45- icon.

Pipette Calibration Configuration of Calibry

- → The Add User Group window opens.
- 3 Enter a group name.
- 4 Optionally, enter a group description.
- 5 Assign at least one right to the group from the lists by checking/unchecking the boxes.
- 6 To save the settings and create the user group, click on **Save**.
- 7 To cancel the settings, click on **Cancel**.

Edit/View User Group

■ Navigation: ■ Backstage view > User Management > User Group Management > View User Group

- 1 To open the user management menu, click on the 🚨 icon.
 - → The **User Management** window opens.
- 2 Mark a user group from the list with a click.
 - → The chosen user group is marked blue.
- 3 Click on the \$\frac{1}{2}\$- icon.
- → The View User Group window opens. The set rights for this group show up.

Delete User Group

■ Navigation: ■ Backstage view > User Management > User Group Management > Delete User Group

i Note

- A user group can only be deleted, when all group members of the group are deleted.
- The predefined groups "Administrator", "Lab manager" and "Lab technician" cannot be deleted.
- 1 To open the user management menu, click on the 🚨 icon.
 - → The User Management window opens.
- 2 Switch to the **User Group Management** tab with a click.
- 3 Select a user group, which is to be deleted with a click.
- 4 Mark a user group from the list with a click.
 - → The chosen user group is marked blue.
- 5 Click on the *- icon.
 - → The **Remove user groups** window opens.
- 6 To remove the user group, click on **Yes**.
 - → The user group is removed.
- 7 To cancel the deletion of the user group, click on No.

5.9.3 Add/edit/remove/disable/enable user

Add User

■ Navigation: 🔤 Backstage view > 🚨 User Management > User Management > 🕹 Add User

i Note

- It is mandatory to enter a user name, first name, last name and a user group. Otherwise a user cannot be created.
- If there is no user name, first name, last name and a user group, the o icon shows up.
- Enter the relevant information where the a icon shows up.
- 1 To open the user management menu, click on the 🚨 icon.
 - → The **User Management** window opens.
- 2 Click on the 2- icon.

Configuration of Calibry Pipette Calibration

- → The Add User window opens.
- 3 Enter the Windows® user name.
- 4 Open the drop-down list with a click. Select a user group to assign the user.
- 5 Enter the first name.
- 6 Enter the last name.
- 7 Optionally, enter the Department name and E-mail address.
- 8 Optionally, add a signature with a click on **Browse...**.
 - → The **Select image file** window opens.
- 9 Enter the path, where the image file is saved.
- 10 Click on Open.
 - → The image file is imported. A preview of the image file is shown in the **Add User** window.
- 11 To save the user, click on Save.
 - → The user is added to the chosen group.
- 12 To cancel the user, click on **Cancel**.
- 13 The user is discarded.
- 14 To save the settings and create a user, click on Save.
- 15 To cancel the settings, click on Cancel.

Edit User

■ Navigation: 📭 Backstage view > 🚨 User Management > User Management > 🞝 Edit User

Note

- It is mandatory to enter a first name and a last name. If one of these boxes are empty, Calibry will automatically fill this box with the previous information.
- The user name and group are not editable.
- 1 To open the user management menu, click on the 🚨 icon.
 - → The **User Management** window opens.
- 2 Mark a user from the list with a click.
 - → The chosen user is marked blue.
- 3 Click on the 3- icon.
 - → The **Edit User** window opens.
- 4 Edit or add information to the user.
- 5 To save the user, click on **Save**.
 - → The user is edited.
- 6 To cancel the changes, click on **Cancel**.
- 7 The changes are discarded.

Remove User

- Navigation: 📭 Backstage view > 🚨 User Management > User Management > 🞝 Remove users
- Navigation: Backstage view > Settings > Calibration
- 1 To open the user management menu, click on the 🚨 icon.
 - → The User Management window opens.
- 2 Switch to the **User Management** tab with a click.
- 3 Mark a user from the list with a click.
 - → The chosen user is marked blue.
- 4 Click on the 🞝- icon.
 - → The Remove users window opens.

Pipette Calibration Configuration of Calibry

- 5 To remove the user, click on **Yes**.
 - → The user is removed.
- 6 To discard the deletion of the user, click on No.
 - → The user is not deleted.

After a user is deleted, a new user with the same username cannot be added.

Disable User

■ Navigation: 📭 Backstage view > 🚨 User Management > User Management > 🞝 Disable User

- 1 Switch to the **User Management** tab with a click.
- 2 Mark a user from the list with a click.
 - → The chosen user is marked blue.
- 3 Click on the 2- icon.
 - → The **Disable User** window opens.
- 4 To disable the user, click on Yes.
 - The user is disabled. The status of the user changes from Available to Disabled
- 5 To discard disabling the user, click on No.
 - → The user is not disabled.

Enable User

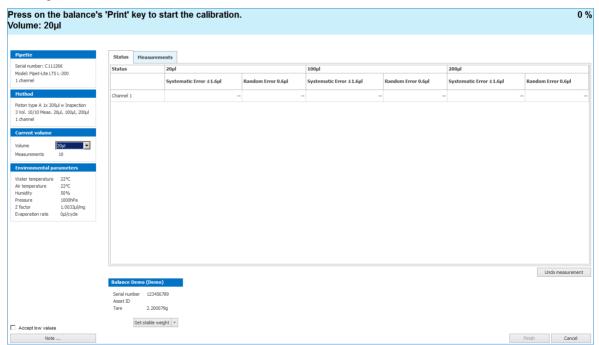
- Navigation: Backstage view > <a> User Management > User Management > <a> Enable User
- i Note
- Only disabled users can be enabled again. Check the "Availability" column, whether the user is disabled or enabled.
- 1 Switch to the **User Management** tab with a click.
- 2 Mark a user with a **Disabled** status from the list with a click.
 - → The chosen user is marked blue.
- 3 Click on the 2- icon.
- → The user is enabled.

Configuration of Calibry Pipette Calibration

6 Starting the calibration

- Navigation: 🔻 Pipettes or 🔯 Tasks > Start/Resume Task
- A pipette is added (to add a pipette, see [Add pipette > Page 10]).
- A method is created (to create a method, see [New method ▶ Page 51]).
- A method is assigned to a pipette (to assign a method to a pipette, see [Assign pipettes > Page 53] or [Manage pipette methods > Page 45]).
- 1 Mark a pipette from the list view with a click.
 - → The chosen pipette is marked blue.
- 2 Click on the licon. Select a method.
 - → Depending on which method is assigned to the pipette, a new window, e.g. Physical Inspections opens. In this case, select the items from the list found during the inspection.
- 3 Select a pipette tip from the drop-down list.
- 4 If the desired pipette tip is not listed, click on the ★ icon to add a new pipette tip. For more information, see [Manage pipette tips ▶ Page 41]
- 5 Select a balance from the list with a click. For more information about simulating a calibration, see [Demo mode ▶ Page 78]
- 6 Optionally, enter a reference number.
 - **Note**: The reference number appears on the report to identify the specific calibration.
- 7 If necessary, edit the environmental conditions, by clicking on the desired box. Enter the desired values.
 - **Note**: The environment conditions are detected automatically from Calibry.
- 8 Optionally, enter a lot number for the pipette tip.
- 9 Proceed with the calibration with a click on Continue with ...

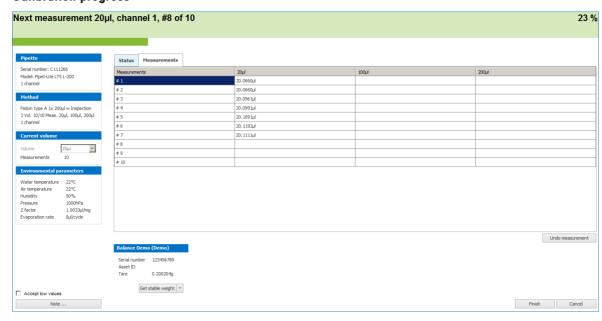
Starting the calibration



- The calibration view opens.
- To start the calibration, follow the instructions on the screen.
 - → The calibration starts.

Pipette Calibration Starting the calibration

Calibration progress



Provided that there are sufficient values (at least two measured values per pipette channel), the result of the calibration can be seen in the **Status** tab.

The values are highlighted with colors:

• green: The value is within the tolerance range.

Unsuccessful calibration

If the calibration was not successful (values outside the tolerances), the user will be asked to remove the pipette from Calibry:

- No: The pipette remains in Calibry and can be calibrated again later.
- Yes: The pipette is classified as being no longer capable of calibration (status Out of order) and is permanently removed from both the pipette list and the Tasks list of Calibry.

6.1 Demo mode

■ Navigation: Pipettes or Tasks > Start/Resume Task

The demo mode allows to simulate measurement values for calibration, e.g., to demonstrate the program, or for training or testing purposes. For these situations demo mode has the following advantages:

- No need for a balance to perform (simulated) calibrations.
- Input of random measurement values (e.g. for testing.)

To perform a calibration in demo mode, the procedure is the same.

- 1 Mark a pipette from the list view with a click.
 - → The chosen pipette is marked blue.
- 2 Select a pipette tip from the drop-down list.
- 3 If the desired pipette tip is not listed, click on the ± icon to add a new pipette tip. For more information, see [Manage pipette tips ▶ Page 41].
- 4 Select **DEMO** as a balance from the list.
- 5 Optionally, enter a reference number.
 - **Note**: The reference number appears on the report to identify the specific calibration.
- 6 If necessary, edit the environmental conditions, by clicking on the desired box. Enter the desired values.
 - **Note**: The environment conditions are detected automatically from Calibry.
- 7 Proceed to the calibration by a click on **Continue with ...**
 - The calibration window opens. Additionally the **Balance Simulator** window opens.

Starting the calibration Pipette Calibration

- 8 To start the calibration, click Add in the Balance Simulator. Click on Print.
- 9 Enter a weight value that is corresponding with the requested volume; e.g. $0.02 \text{ g} = 20 \,\mu\text{I}$
- 10 Click on Add followed by Print to confirm the virtual pipette volume.
- 11 Repeat step 10 with **Add** and **Print** to do all repetitions with the same volume.
- 12 Change the weight for the next volume.
- 13 Repeat until all steps are done and the calibration is finished.
- 14 To remove a weight, click on **Remove**.
- 15 To tare the balance, click on Tare.
- 16 To perform a zero, click on **0**.

Pipette Calibration Starting the calibration

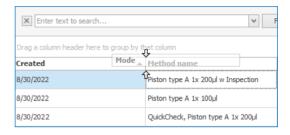
7 Customizing the view

Various options for customizing the view are available for the list view in each menu.

Changing the column position

The pre-set order of the columns can be changed per drag an drop.

- The list view of menu opens.
- Drag a column to another position: Point with the mouse pointer on the desired column, click and hold the
 left mouse button, move the column until two arrows are displayed and drop it at the desired position by
 releasing the left mouse button.
 - → The column is moved to the desired position.

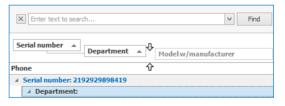


Group the list by one or more columns

The list view can be grouped by one or more column headers, in order to show and list only the information of the specific column header. If more than one column header is dropped on the **Drag a column header here to aroup by that column** field, the columns are sorted as nested sets.

- Point with the mouse pointer on the desired column, click and hold the left mouse button, move the column to the **Drag a column header here to group by that column** field until two arrows are displayed and drop it at the field by releasing the left mouse button.
 - Only the information of the specific column are displayed.
- 2 To group by an additional column, select another column and repeat step 1.
 - → The information is sorted as nested sets.
- 3 To display or hide the information of the column, expand or minimize the list with a click on the arrows.
- 4 Undo grouping Point with the mouse pointer on the grouped column header, click and hold the left mouse button, move the column header out of the Drag a column header here to group by that column field to the list view and release the left mouse button.
 - The list view is displayed.





Search bar

The search bar can be used within the list view to search and filter for specific information for instance the department name, customer etc..

- 1 Enter the desired information into the search bar.
- 2 Confirm with a click on Find.
 - → The search for the entered information starts. All relevant information, which match with the entered information are listed.
- 3 To display previously entered information, click on the drop-down list.
 - A history of all searched information are listed.
- 4 To delete the entered information, click on **Clear**.

Customizing the view Pipette Calibration

- → The entered information is deleted.
- 5 To hide the search bar, left click on the x-icon.
 - → The search is hidden.

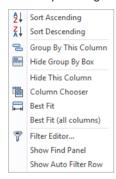
Filter lists

Specific information can be filtered by clicking on the **T**-icon. All information within this column are listed and can be chosen to be displayed. The following options to filter information are available:

Parameter	Description
All	This option is only displayed when an information was chosen. By choosing All , the filter will be reset and all information in the list view is displayed again.
Custom Autofilter	By choosing Custom the Custom Autofilter window opens.

- 1 Move the cursor to the desired column header.
 - → The T-icon is displayed.
- 2 To open the list, click on the **T** icon.
 - → All information within the chosen column header is listed.
- 3 Select the desired information with a click.
 - → The chosen information is displayed in the list view.

A window is displayed showing all the entries of the column. Select the required entry or enter a character string. Only entries that begin with this character string are then displayed in the list. To remove the filter, click on the symbol again and select **All**.



By performing a right-click on a column header a context menu appears, where the columns can be customized.

Parameter	Description
Sort Ascending	To sort the columns into ascending order.
Sort Descending	To sort the columns into descending order.
Clear all sorting	To undo the sorting operation.
Group by this column	To group the entries in the list by the selected column header.
Hide Group by Box / Show Group by Box	To hide/show the Drag a column header here to group by that column area at the top of the list.
Hide This Column	To hide the selected column from the list.
Column Chooser	To list all available columns which are hidden.
Best Fit	To automatically adjust the column size to the size of the content.
Best Fit (all columns)	To automatically adjust all column sizes to the size of the content.
Filter Editor	To set a filter which only displays the set information.
Hide find panel	To hides the Find Panel.

Pipette Calibration Customizing the view

Parameter	Description
Hide Auto Filter Row / Show Auto Filter Row	Displays/hides the auto filter column, where relevant information can be entered.

Filter editor

With the Filter editor the information to be displayed can be specified.

The column to which the filter is to be applied is displayed in square brackets and blue font. By default, Calibry displays the column from which the user started up the filter editor. When clicking the entry, a list of all available columns in the list appears and the desired column can be selected.

The mathematical operator is shown in green. Following operators are available:

Equals	Is less than	
Does not equal	Is less than or equal to	
Is like	ls null	
Is not like	Is not null	
Is greater than	ls blank	
Is greater than or equal to	Is not blank	

Creating a filter

Depending on the selected operator one, several, or no gray "<enter a value>" fields are displayed.

- 1 To open the filter editor, right-click on a column.
 - → The submenu is opened.
- 2 Click on Filter Editor....
 - → The **Filter Editor...** window opens.
- 3 Click on the field to enter the required value.
- 4 To add a condition to a group, click the + at the top left of the filter editor.
 - → A filter criteria is added.
- 5 To create a new filter group, click on **Add Group**.
 - → A new filter group is created.
- 6 To cancel creating a filter, click **Cancel**.
 - → The filter changes are discarded.
- 7 To apply the changes to the filter, click on **Apply**.
 - The changes are saved.
- 8 To save the filter, click on **OK**.
- The column is filtered and only entries which meet the defined criteria are displayed.

i Note

When quitting Calibry the filter settings will be maintained, e.g. the lists will still be filtered when launching
the application the next time. All printing and export functions relate to the contents of the current list. To
ensure that the whole list can be printed or exported, the filter has to be deleted.

Moving the "detail view" window

The detail view can be expanded or minimized per drag and drop.

- 1 To expand or minimize the detail view, move the cursor on the "....."-dots at the top of the detail view.
 - → The cursor changes. The detail view can be edited.
- 2 Click and hold the left mouse button and move the mouse up to expand or down to minimize the detail view.
- 3 To set the detail view, release the left mouse button the desired place.
 - → The desired view is set.

Customizing the view Pipette Calibration

8 Setting up the hardware

The Calibry software works in conjunction with the following balances:

Balance	Standard Interface	Cable type	Setting up the balance
XP/XPE26PC XP XPE XPR XS WXSS WXTS WXTP XA AX MX	RS232C	RS9-RS9 or other interfaces on request	 Set the Host interface to the following values: Baud rate: 9600 Baud Bit/Parity: 8 Bit/none Stop bits: 1 Handshake: XON/XOFF End of line character <cr><lf></lf></cr> Character set: ANSI/WINDOWS
MCP	RS232C	RS9-RS9 or other interfaces on request	 Verify, that the software version of the balance is V1.40 or higher. Install the V1.40 program cartridge (11138300) if necessary. The version number is displayed while switching on the balance. If the MCP single unit shows the "do Cal" message, proceed to container calibration (see the MCP operating instructions). Otherwise pipettes cannot be calibrated (balance symbol is red).
AT MT UMT	LocalCAN/ LC- RS9	-	Set the balance interface to the following values: Data transfer mode: S.Stb Baud rate: 2400 bd Parity: -E- Handshake: HS soft End of line character: crLF
AG SAG	Serial Data I/O Port	-	The communication parameters are not set up at the balance but at the converter box of the LC-RS9 cable. Set the dials as follows:

Before establishing the connection, ensure that the computer and the balance are switched off.

Note: The measured values are transmitted to Calibry when the respective key is pressed on the balance. The entire pipette calibration workflow is controlled by Calibry.

Pipette Calibration Setting up the hardware

To add a balance, see chapter [Setting up balances ▶ Page 13].

9 Appendix

Important additional information about Calibry can be found in the appendix.

9.1 Formulae used in Calibry

9.1.1 Formulae in accordance with ISO 8655

The following formulae in accordance with ISO 8655-6:2002 and ISO 8655-6:2022 are used in Calibry:

Mass of the pipetted water

$$m = m_2 - m_1$$

- **m** Mass of the pipetted water, measured by the balance [mg]
- **m**₁ Mass of the weighing vessel before pipetting, measured by the balance [mg]
- **m**₂ Mass of the weighing vessel after pipetting, measured by the balance [mg]

Measured volume

$$V_i = (m_i + m_e) \times Z$$

- **V**_i Measured volume [μΙ]
- **m**_i Mass of the pipetted water, measured by the balance [mg]
- **m**_e Mass lost through evaporation [mg]
- Z Mass to volume conversion factor (in accordance with ISO 8655-6:2002 Annex A) [µI/mg]

Average volume

$$\overline{V} = \frac{1}{n} \sum_{i=1}^{n} V_i$$

- **V** Average volume [μl]
- **V**_i Measured volume [μΙ]
- **n** No. of measurements

Absolute "Systematic Error"

$$e_s = \overline{V} - V_s$$

- es Absolute "Systematic Error" [µl]
- **V** Average volume [μΙ]
- **V**_s Selected test volume [μΙ]

Relative "Systematic Error"

$$e_{s.rel} = 100 \times (\overline{V} - V_s) / V_s$$

- **e**_{s,rel} Relative "Systematic Error" [%]
- V Average volume [µl]
- **V**_s Selected test volume [μΙ]

Absolute "Random Error"

$$s_r = \sqrt{\frac{\sum_{i=1}^n \left(V_i - \overline{V}\right)^2}{n-1}}$$

s, Absolute "Random Error" [μΙ]

V_i Measured volume [μΙ]

V Average volume [μΙ]

n No. of measurements

Relative "Random Error"

$$CV = 100 \times s_r / \overline{V}$$

CV Relative "Random Error", deviation coefficient [%]

s, Absolute "Random Error" [μΙ]

V Average volume [μΙ]

Absolute Uncertainty

$$u = |e_s| + 2s_r$$

u Uncertainty of the pipetted volume at 95% statistical confidence [µI], (ISO 8655-6:2002 Annex B)

e_s Absolute "Systematic Error" [μΙ]

s, Absolute "Random Error" [μΙ]

Relative Uncertainty

$$u_{rel} = \frac{100 \times u}{V_S}$$

u_{rel} Relative uncertainty

u Absolute uncertainty [μΙ]

V_s Selected test volume [μΙ]

9.1.2 Formulae in accordance with ISO/TR 20461:2000

In accordance with ISO/TR 20461:2000, Calibry allows the following calculations to be performed when configured appropriately:

Volume of the pipetted water

$$V_{20} = m \times Z \times Y$$

V₂₀ Volume of pipetted water at 20°C

m Mass of the pipetted water, measured by the balance [mg]

Z Mass to volume conversion factor [µl/mg]

Y Correction factor for thermal expansion of the dispensing apparatus (e.g., pipette)

Conversion factor (Z factor)

$$Z = \frac{1}{\rho_b} \times \frac{\rho_b - \rho_a}{\rho_w - \rho_a}$$

Z Mass to volume conversion factor [m³/kg]

 \mathbf{p}_{b} Density of the standard weight used to adjust the balance = 8000 kg/m³

 $\rho_{\rm o}$ Air density [kg/m³]

 $\rho_{\rm w}$ Water density [kg/m³]

Correction factor for thermal expansion

$$Y = 1 - \alpha_c \left(t_d - t_{d20} \right)$$

Y Correction factor for thermal expansion of the dispensing apparatus (e.g., pipette)

a_c Expansion coefficient of the dispensing apparatus [°C⁻¹]

t_d Temperature of the dispensing apparatus [°C]

td₂₀ 20

Water density

$$\rho_w = \sum_{i=0}^4 a_i t_w^i$$

 $\rho_{\rm w}$ Water density [kg/m³]

t_w Water temperature [°C]

a₀ 999.85308 kg/m³

a₁ 6.32693 • 10⁻² °C⁻¹ kg/m³

 $\mathbf{q}_2 = -8.523829 \bullet 10^{-3} \, ^{\circ}\text{C}^{-2}\text{kg/m}^3$

 \mathbf{q}_3 6.943248 • 10⁻⁵ °C⁻³kg/m³

 \mathbf{q}_4 -3.821216 • 10⁻⁷ °C⁻⁴kg/m³

Air density

$$\rho_{a} = \frac{k_{1}p_{a} + \varphi(k_{2}t_{a} + k_{3})}{t_{a} + t_{a0}}$$

 $\rho_{\rm o}$ Air density [kg/m³]

p_a Air pressure [hPa]

t_a Air temperature [°C]

t_{o0} 273.15°C

φ Relative humidity [%]

 \mathbf{k}_{1} = 0.34844 (kg/m³) °C/hPa

 $\mathbf{k}_2 - 0.00252 \text{ kg/m}^3$

=

 $\mathbf{k}_3 = 0.020582 \text{ (kg/m}^3) ^{\circ}\text{C}$

9.1.3 Formulae in accordance with ISO/TR 20461:2022

In accordance with ISO/TR 20461:2022, Calibry allows the following calculations to be performed when configured appropriately:

Volume of the pipetted water

$$V_{\text{ref}} = \left(m_{\text{L}} - m_{\text{E}} + m_{\text{evap}}\right) \times \frac{1}{\rho_{\text{W}} - \rho_{\text{A}}} \times \left(1 - \frac{\rho_{\text{A}}}{\rho_{\text{B}}}\right) \times \left[1 - \gamma(t_{\text{W}} - t_{\text{ref}})\right]$$

V_{ref} Volume of pipetted water at reference temperature [ml]

m_L Mass of the weighing vessel after water delivery [g]

m_F Mass of the weighing vessel before water delivery [g]

 $\mathbf{m}_{\mathrm{eva}}$ Estimated evaporated mass within a test cycle [g]

р

 $\rho_{\rm w}$ Density of water at the test temperature [g/ml]

 ρ_A Density of air at the temperature, humidity and atmospheric pressure of the test [g/ml]

 ρ_{B} Density of the reference weights (8 g/ml)

y Combined coefficient of cubic thermal expansion of the POVA under test [°C⁻¹]

tw Temperature of the POVA [°C]

t_{ref} Reference temperature of the POVA (20°C or 27°C)

Water density

$$\rho_{W} = a_{5} \left[1 - \frac{(t_{W} + a_{1})^{2} (t_{W} + a_{2})}{a_{3} (t_{W} + a_{4})} \right]$$

 $\rho_{\rm w}$ Water density [g/ml]

t_w Water temperature [°C]

 $\mathbf{q}_1 = -3.983035^{\circ}$ C

a₂ 301.797°C

 \mathbf{a}_3 522528.9°C²

a₄ 69.34881°C

a₅ 0.999974950 g/ml

Air density

$$\rho_{\rm A} = \frac{1}{1~000} \times \frac{0.348~48 \times p - 0.009 \times hr \times e^{(0.061 \times t_{\rm A})}}{t_{\rm A} + 273.15}$$

 ρ_{A} Air density [g/ml]

p Barometric pressure [hPa]

t_△ Ambient temperature [°C]

hr Relative air humidity [%]

9.2 Entering or calculating tolerances/specifications



NOTICE

Disclaimer

The specifications of those devices which are relevant for the use of Calibry are based on public accessible information and product specifications for each device at the time of the last update of Calibry. The database used for Calibry for the devices is based on those public accessible manufacturer information and METTLER TOLEDO conducted utmost care gathering the information. This does not however absolve you from personally verifying that the information (including but not limited to tolerances) are correct and up to date. Since the correctness of the manufacturer information and the change thereof is beyond METTLER TOLEDO's control, METTLER TOLEDO cannot accept any responsibility for the correctness of the information and the correctness of the calibration based on such manufacturer information.

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ISO 8655:2002 specifications

The formulae below were used to determine the relative **ISO 8655:2002** specifications for the following reasons:

- **ISO 8655:2002** applies its relative specifications exclusively to the nominal value and standardizes the measured results of the SE & RE, so that the same specification value applies to all selected volumes.
- In Calibry, different tolerance sets can be used for calibration (manufacturer tolerances or customer-specific tolerances). The relative SE & RE results cannot be standardized because different tolerances are possible for every volume selected.

In Calibry, standardization is carried out in line with ISO 8655:2002 for relative tolerance values:

$$\%Tol = \frac{absTol * 100}{Vn} * \left(\frac{Vn}{Vs}\right)$$

%Tol relative tolerance value (SE or RE) [%]

absTol absolute tolerance value (SE or RE) [µl or ml]

Vn Nominal volume [μl or ml]
Vs volume selected [μl or ml]

9.3 Using measurement values and rounding in Calibry

Measurement values

The weighing values are displayed and saved depending on the readability of the balance used. If a Dual Range or Delta Range balance is used, the weighing values are shortened to the higher readability value. The weighing values saved in the database are the net weights of the volumes dispensed.

For calculations (e.g., corrections for evaporation, mass-volume conversions), the results are saved with the maximum possible number of decimal places.

The volume values calculated from the weighing values are displayed to one more decimal place than the values displayed during the weighing process. This results in the following display method:

Readability [g]	Volume [ml]	Volume [µl]
>= 0.0001	0.00001	0.01
= 0.00001	0.000001	0.001
= 0.000001	0.000001	0.0001
<= 0.0000001	0.0000001	0.00001

Volumes of up to and including $1000 \mu l$ are measured in μl . Above this, the volume is shown in ml. If data are exported, they are not rounded up, and may need to be formatted in the application used.

Environmental conditions, determining the Z-Factor

The values for the environmental conditions are saved depending on the method used to acquire the measurements and used for further calculations:

- Manual entry: As many decimal places as have been entered are used.
- Using the capture tool: Two decimal places are currently transmitted and used.

To determine the Z factor in accordance with **ISO 8655**, the measurement values for the environmental conditions are rounded as follows:

- If temperature values are between 20.0 °C and 20.5 °C, values ≥ 20.25 °C are rounded up to 20.5 °C.
- Temperature values < 20.25 °C are rounded down to 20.0 °C.
- If air pressure values are between 900 hPa and 950 hPa, values ≥ 925 hPa are rounded up to 950 hPa.
- If air pressure values < 925 hPa are rounded down to 900 hPa.
- A similar procedure is followed for the standard pressure of 1013 hPa. Between 1000 and 1013 hPa, the mid point is 1006.50 hPa; between 1013 and 1050 hPa, this point is 1031.50 hPa.

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In addition, the following rules apply to the Z factor determined from the environmental conditions:

- ISO 8655: Four decimal places are used in accordance with the ISO 8655-6 conversion table.
- ISO/TR 20461: Five decimal places.
- JJG 646: Six decimal places.
- Calibry equation editor: five decimal places.
- Manual: As many decimal places as have been entered are used.

Rounding of results, conformity assessment

The determining values for the conformity assessment are the relative measurement or specification values. Calibry offers two rounding models. The conformity assessment is only carried out after values have been rounded:

- The results are shown to one more place than featured in the relevant specification (Strict) setting.
- The results are rounded in accordance with USP Section 4.7 to the same number of places as the specifications (USP setting).

The rounding model is chosen at the method Editor.

9.4 Calculating measurement uncertainty in accordance with ISO TR 20461

Through its advanced configuration options, Calibry can store all necessary parameters for calculating the expanded measurement uncertainty.

- The option Set cubic expansion coefficient for pipettes may be activated to assign a coefficient of thermal expansion to individual pipette types. If a global value needs to be used, this should be entered under Default cubic expansion coefficient for pipettes.
- 2 For all balances used, the measurement uncertainty parameters are entered under the selected balance. The following parameters can be used:
 - Guaranteed specifications
 - → Values typical to Mettler-Toledo GmbH (sd)
 - → Measurement uncertainty values from a data sheet
 - → Measurement uncertainty from the calibration certificate.
- Depending on the measurement instrument parameters, the conversion should be taken into account in the relevant standard deviation (GUM):
 - Guaranteed specifications: Rectangular distribution
 - Typical values: Standard deviation (no conversion necessary)
 - Measurement uncertainty from a data sheet: Rectangular distribution
 - Measurement uncertainty from calibration certificate: e.g., DKD (k=2), divided by 2

i Note

- If the calculated measurement uncertainty needs to be compared with another value, the functions "Min (x1, x2)" and "Max (x1, x2)" can be used.
- The user must ensure that the formulae used are correct and validate them.

9.5 Edition specifications

Calibry functionality version overview	Express	Workstation	Network
System			
Product Number, basic software license	11138423	11138419	11138420
Windows 10 and 11 compatible	Х	Х	Х

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Calibry functionality version overview	Express	Workstation	Network
Number of balance	1	1	1
licenses included	'	'	'
Number of maximum	3	5	20
balance supported			
MCP Multi Channel Balance Support	n/a	X	Х
Network connected balance support	n/a	Х	Х
Database			
Database for Pipettes, including ca. 3'500 models pre defined models	Х	Х	Х
Database for Check and Calibration Methods	X	Х	Х
Database for Customer data	n/a	Х	Х
Calibration process			
Calibration and Check task planning with reminder	Х	Х	Х
Method Quick Check	Х	Х	Х
Method As Return	Х	Х	Х
Method As Return with inspection and maintenance/repair	n/a	Х	Х
Method As Found, As Return, with Inspection and maintenance/repair	n/a	Х	Х
Method As Found and Conditional As Return, with inspection and maintenance/repair	n/a	Х	Х
Calculations			
ISO 8655 uncertainty	X	Х	X
Custom uncertainty	n/a	Х	Х
Relative uncertainty	n/a	Х	Х
ISO 8655 Z-Factor	Х	Х	X
ISO TR 20461 Z-Factor	n/a	Х	X
JJG 646 K-Factor	X	X	X
Manual Z-Factor	X	X	X
Custom Z-Factor	n/a	X	X
CMC (minimum uncertainty on certificate)	n/a	Х	X
Data Reporting & Management			
Calibration report	Х	X	X
Customization of report	n/a	X	Х
Signing of report	Х	X	Х

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Calibry functionality version overview	Express	Workstation	Network
Pipette history	X	Х	Х
User management	0	0	Х
Audit trail*	n/a	0	0
"Import/export (export to XML, Microsoft® Office)"	0	0	X
Device Support & Verification			
Initiate Balance Internal adjustment	n/a	X	X
Initiate performance test	X	Х	Х
Manage Test Weight Set	X	X	X
Balance calibration tracking	X	X	X
Environmental device support - manual data entry	Х	X	Х
Environmental devices calibration tracking	Х	Х	Х
Environmental device automated data with LabClimate**	0	0	0
Support RFID RAININ reader/writer	Х	Х	Х
Support RFID EasyScan Flex	Х	Х	Х
Support RFID format of RAININ, Smart Tag and MethodCard	Х	Х	Х
Supported Languages; EN, FR, DE, ES, CN	Х	Х	Х
Optional Licenses			
Instrument License 1 - to connect 1 additional balance	30415768	30415768	30415768
Instrument License 3 - to connect 3 additional balances	30417326	30417326	30417326
Instrument License 5 - to connect 5 additional balances	n/a	30417327	30417327
Instrument License 1 - to connect 1 other balance	30421382	30421382	30421382
User Management License - to manage user rights	30415770	30415770	Х
Audit Trail License - to document all system changes	n/a	30415771	30415771

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Calibry functionality version overview	Express	Workstation	Network
Export File license - to export in XML, automatic generate PDF	30417468	30417468	Х
Capture Tool license - to automatic integrate all environmental Data**	30415769	30415769	30415769

- X = Function included
- O = Optional function or license
- n/a = not available
- *) = needs User Management license
- **) = needs climate sensor as indicated in latest LabClimate release notes

Appendix Pipette Calibration

To protect your product's future:

METTLER TOLEDO Service assures the quality, measuring accuracy and preservation of value of this product for years to come.

Please request full details about our attractive terms of service.

www.mt.com/service

www.mt.com/calibry

For more information

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