

EasyDirect™ Balance

Easy and Reliable Data Management v1.2



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1 Introduction

This guide will help you to get started with EasyDirect™ Balance v1.2 and explains the main features and functionalities of the software.

Easy and Reliable Data Management

Connect your laboratory balances (ME, ME-T, ML, ML-T, MS Semi-Micro, MS-L, MS-S, MS-TS, PL-E, XP, XS, XPE, XSE) and Jewelry balances (JET, JE, JL-GE, JP, JS) to EasyDirect™ Balance software and improve your data management. Data collection starts at your PC, results are received even if the EasyDirect application is not open.

The EasyDirect Balance software directly collects results and measured values of up to ten instruments. Easily retrieve, manage, and filter results for each connected instrument.

Create statistics and control charts based on results collected in EasyDirect Balance, and print results on your local or network printer. Export your data manually or automatically in various formats to wherever you need them.

Your measurement results are stored and easily accessed using EasyDirect Balance software. If you have any additional questions, METTLER TOLEDO is always available to assist you. Visit us on:


▶▶ <https://www.mt.com/EasyDirectBalance>

2 Design and Function

2.1 EasyDirect™ Balance Software

EasyDirect Balance software consists of two parts:

- Background application
- Main user application

The background application runs automatically when the PC is running. The status will be indicated with an  icon in the Windows taskbar.

EasyDirect Balance allows you to connect up to 3 or 10 balances (based on the software license) via Ethernet, RS232*, or Bluetooth (based on balance support).

30539323 EasyDirect Balance (License for up to 3 instruments)

30540473 EasyDirect Balance (License for up to 10 instruments)

The background application runs and logs results received from the connected instrument(s) regardless of whether you have EasyDirect Balance open in a window or not. To view the results stored in the database, the main application has to be started.

*RS232 – Connect your balance to the PC using a standard RS232 or RS232 to USB converter cable from METTLER TOLEDO (Material Number 64088427) with RS232 connected on balance side.

2.2 Functions

The applications supported by EasyDirect Balance depend on the balance line and the connection type:

Supported Instruments	MS-TS, ML-T ¹⁾	MS, ML, ME-T, ME, PL-E, JP, JS, JE, JET, JL-GE, XP, XPE, XS, XSE
Connectivity	Ethernet, RS232	RS232
Data Collection		
Balance Information		
Basic balance information	•	•
Level, adjustment, test and service status	•	
Balance usage	•	
Weighing Data		
Supported applications	Weighing, counting, percent weighing, factor weighing	•
	Check weighing, dynamic weighing, formulation, totaling, back weighing, differential weighing, density	•
Weight, unit, date/time, sample and task IDs	•	•
Target and tolerances	•	
User name	•	
Application-specific results and parameter	•	
Maximum Number of Instruments	Up to 10 balances	
Report Formats	XML, CSV, XLSX, PDF	
Protection	Password protection of settings and results	
EasyDirect Balance Menu Languages ²⁾	English, German, French, Spanish, Italian, Russian, Polish, Czech, Hungarian, Dutch, Portuguese, Turkish, Japanese, Chinese, Korean	

1) Full functionality only via Ethernet

2) Except for MS-TS and ML-T balances with software version 4.20 or higher: the language of the balance menu always needs to be in English, when transmitting data.

The following represents a list of functions that can be performed using EasyDirect Balance:

- Manually adding the instrument through [Ethernet ▶ Page 14], [RS232 ▶ Page 14], or [Bluetooth ▶ Page 15].
- Discover MS-TS /ML-T balance in your network using [Discover option ▶ Page 14]
- Viewing instrument information [Instrument information ▶ Page 18]
- Viewing weighing results [Weighing results ▶ Page 26]
- Viewing tests and adjustment results [Tests and adjustment results ▶ Page 22]
- Printing weighing results [Printing weighing results ▶ Page 29]
- Exporting (manually/automatically) weighing results [Exporting (manually/automatically) weighing results ▶ Page 30]
- Remove instruments [Remove instruments ▶ Page 20]
- Change Protection [Change Protection ▶ Page 33]
- View control charts and statistics charts [Control charts and statistics charts ▶ Page 31]
- Automatic check for software updates [Automatic check for software updates ▶ Page 16]

3 Getting Started

3.1 Introduction

To use EasyDirect Balance with your laboratory balances you need to do the following steps:

- 1 Install EasyDirect Balance on your PC and activate it via the activation portal.
- 2 Configure your balance(s), so that EasyDirect Balance can communicate with them.
- 3 Add the balances to EasyDirect balance to transfer data from the balance.
- 4 Configure EasyDirect Balance.

3.2 EasyDirect Balance Installation and Activation

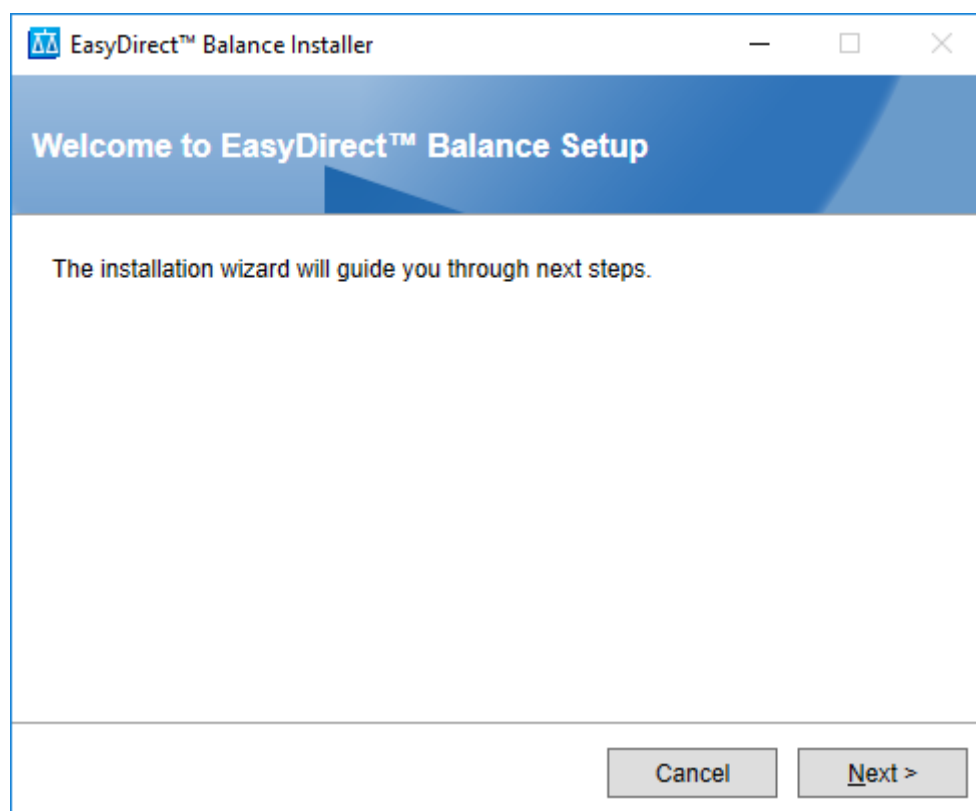
3.2.1 Installing EasyDirect™ Balance

To install EasyDirect Balance, a minimum of the PC requirements below should be satisfied:

PC requirements

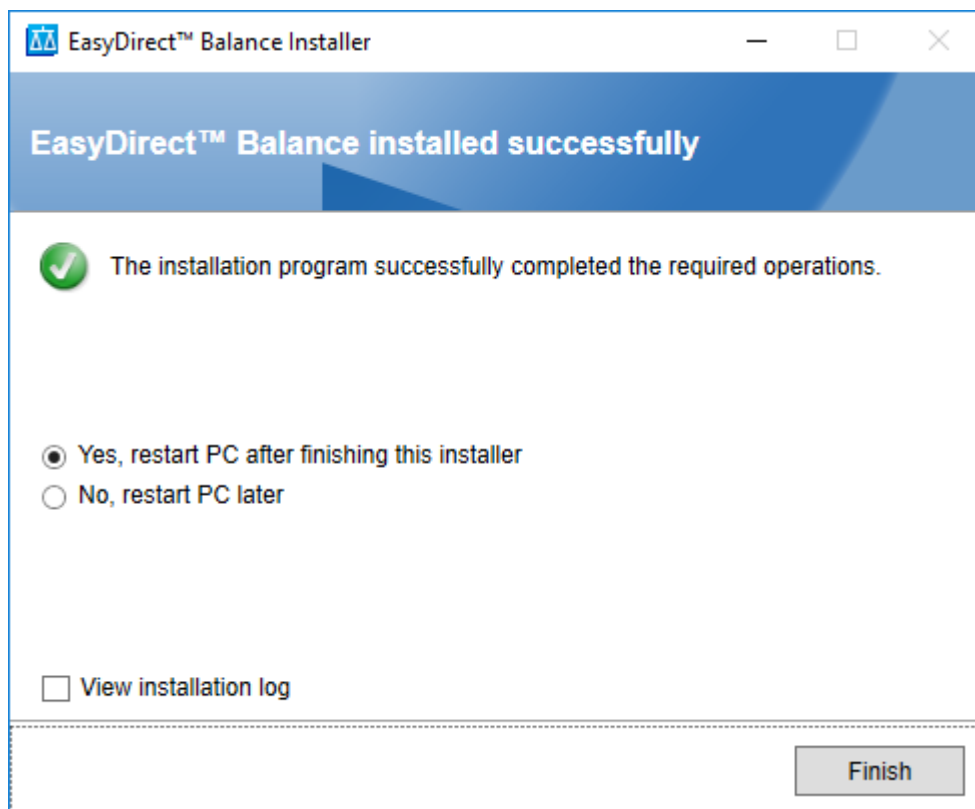
Computer	Minimum	Optimum
RAM	4 GB	8 GB
Display Resolution	1024 × 768	1920 × 1080
Storage	5 GB free space	10 GB free space
Operating system	Windows 7 SP1	Windows 10

- 1 Download and run **Setup** for EasyDirect Balance.
 - ➔ The Setup installs the Microsoft .Net framework version 4.7.2 as a pre-requisite before installing the application. If the .Net framework of V4.7.2 or later already installed, this step will be skipped.
- 2 After successful installation of .Net Framework, restart the PC.
- 3 Select **Next** in the Welcome screen.



- 4 Read and accept the End-user License Agreement by clicking the corresponding checkbox.
- 5 Select **Next**.
 - ➔ The setup checks whether there is an instance already of name 'EasyDirect' with SQL server version 2012 or greater. If there is none, then SQL server 2012 is installed.

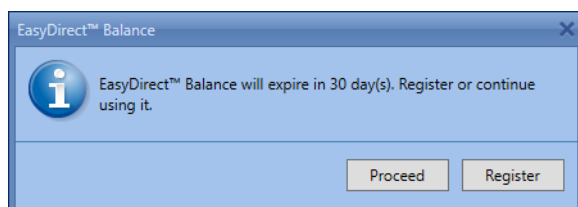
- 6 In the install set up files wizard, click **Install**.
- ➔ On successful installation, the screen below will be displayed.



3.2.2 Activating EasyDirect™ Balance

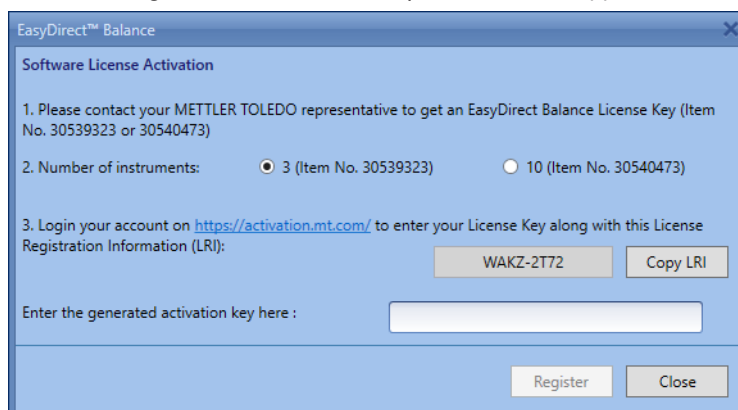
The trial version of EasyDirect Balance can be used for 45 days and up to 3 instruments without a license. After this, a license is required for continued use of the software. A license can be purchased through your METTLER TOLEDO salesperson.

▶▶ <http://www.mt.com/contacts>

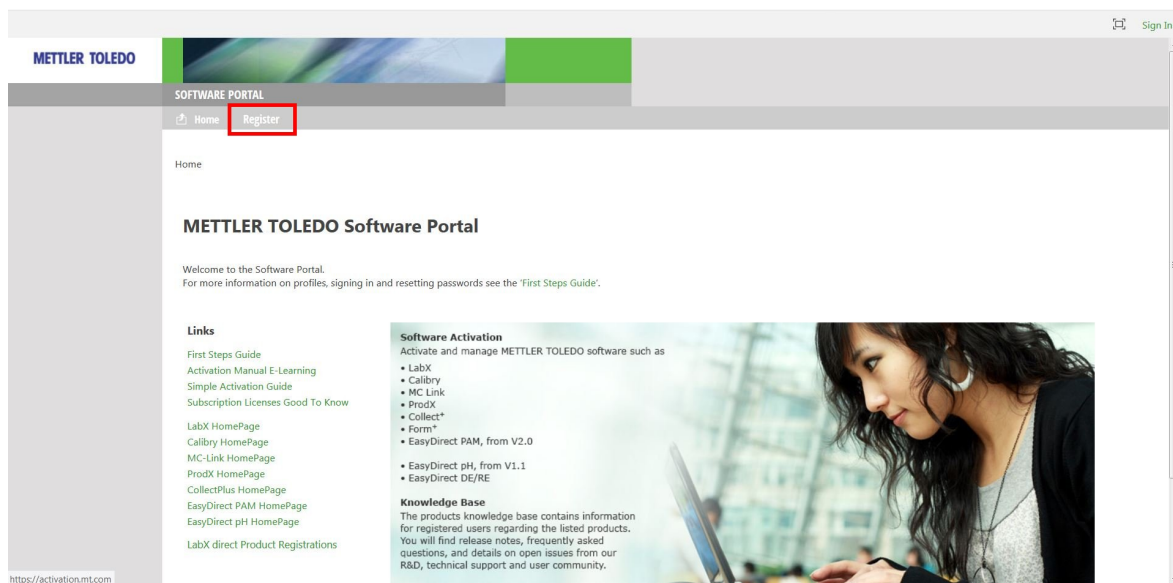


Once you have received your license key, please follow the steps below to activate EasyDirect Balance

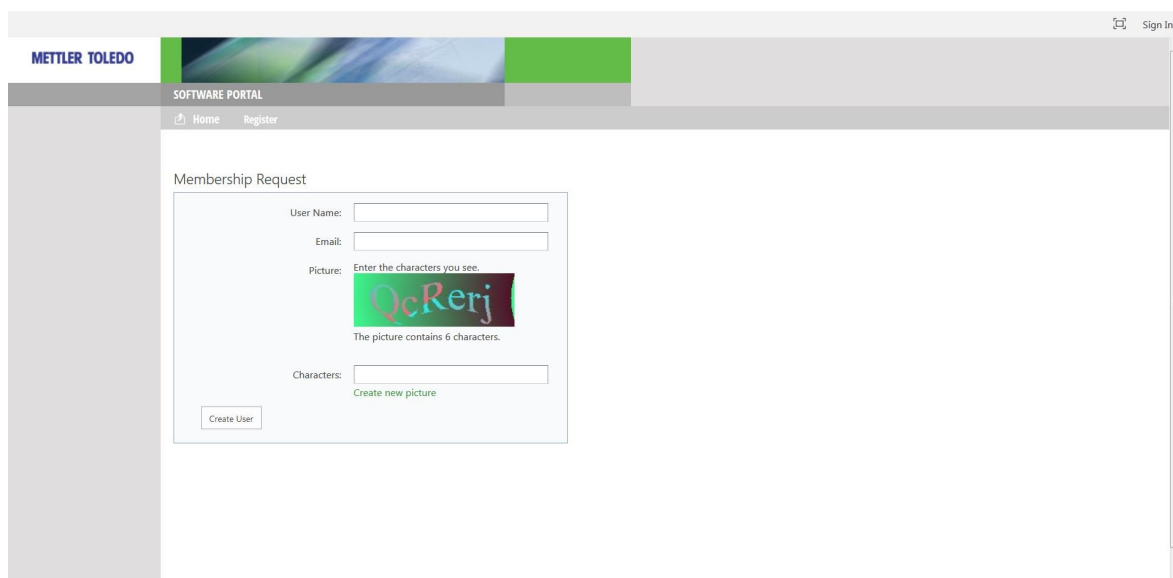
- 1 Click **Register**.
- ➔ The registration window of EasyDirect Balance appears.



- 2 In the web browser's address bar, enter <https://activation.mt.com> to go to the METTLER TOLEDO Software Portal.

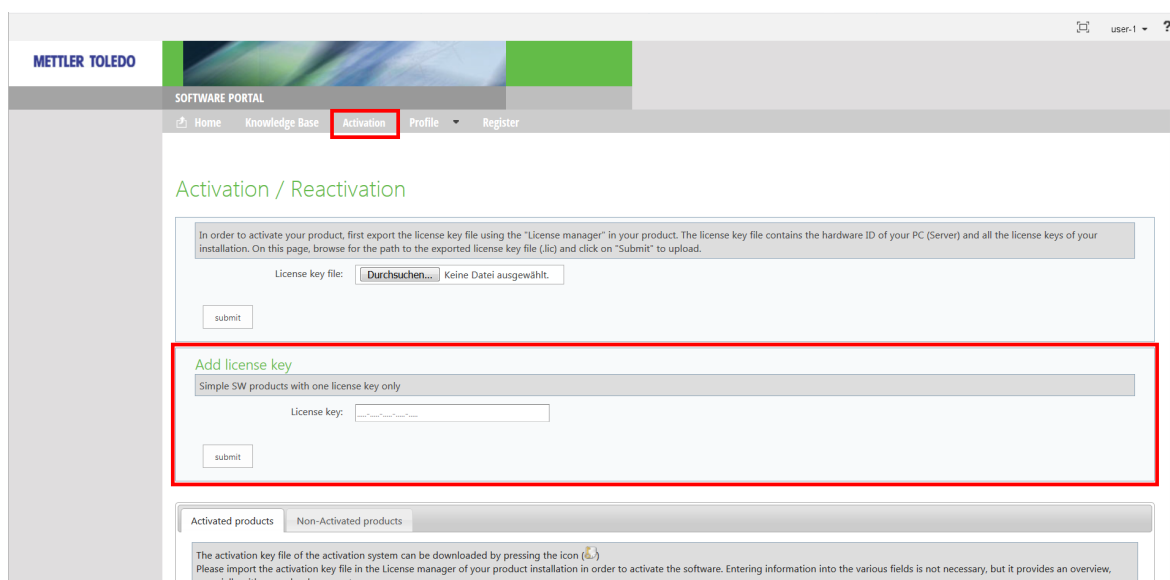


- 3 Click **Register** in the menu bar.
➔ The window **Membership request** will appear.



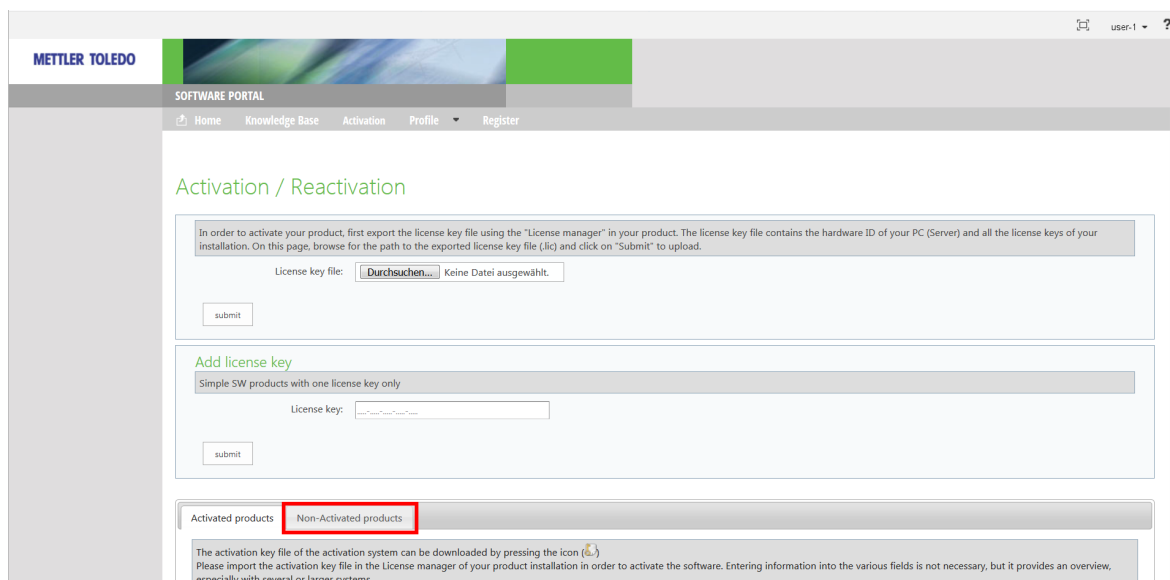
- 4 Enter a user name, your e-mail address and enter the text from the picture. Click **Create user** to submit the data.
➔ You will then receive your login information and a generated password via e-mail.
- 5 Click on the link in the e-mail you received.
➔ The window **Sign In** will appear.
- 6 Enter the user name and the generated password and click on **Sign In**.
➔ The window **Manage Customer Profile** will appear.
- 7 Complete your profile data and click **Save**.

8 Click on the **Activation** tab.



9 In the **Add License Key** section, enter the license key (received from METTLER TOLEDO) and click on **Submit**.

10 After the successful validation of the License Key, click on **Non-Activated Products** in the section below.



11 Enter the **LRI Key** displayed in EasyDirect Balance register window (from the screenshot in Step 1). You can copy the LRI key by clicking on **Copy LRI**.

➔ An activation key will be generated.

12 Enter (or) Copy paste the short activation Key from the activation portal into the EasyDirect Balance **Register** window and click **Register**.

➔ EasyDirect Balance is now activated.

3.3 Configuring your Balance

Depending on the balance model, its software version and the interface used to connect the balance and the PC, on which EasyDirect Balance is running, the balance needs to be configured in a different way. Please follow the configuration steps of your specific balance very carefully as otherwise the data cannot be transmitted correctly.

The balance can be connected to the EasyDirect Balance via Ethernet, RS232, RS232 to USB converter cable (available from Mettler-Toledo, 64088427), RS232 to Ethernet converter or Bluetooth. It is not possible to use a standard USB cable to transmit the data from the balance to EasyDirect Balance.

To obtain the complete functionality of EasyDirect Balance in the most convenient way, we recommend connecting an MS-TS or ML-T scale via Ethernet. For MS-TS and ML-T with software version 4.20 or above there is a specific EasyDirect Balance service available in the balance settings menu. For all other balance models and software versions, the data is transmitted to EasyDirect Balance as a print stream, like a standard printer would be connected to the balance.

Please be aware that when connecting the balance via any interface except Ethernet the balance language settings must be English.

See also

 Automatic Export ▶ Page 24

3.3.1 Configuring MS-TS and ML-T Advanced Level Balance models via Ethernet

Configure the connection of ML-T and MS-TS (V4.20 or higher) via Ethernet as per the table below.

Balance	Settings
MS-TS and ML-T (v4.20 or higher)	<ul style="list-style-type: none"> The balance is connected with an Ethernet cable to the LAN. Activate LAN: General configuration and data -> Network and Bluetooth. General configuration and data -> Devices and Services. -> add EasyDirect Balance as a new service via LAN General configuration and data -> Publishing -> Send data -> select transmission mode <p>Please be aware that the report configuration does not apply to EasyDirect Balance. Please be also aware that the statistic option must not be activated on the balance.</p> <p>For more information, please refer to the reference manual of the balance: ▶ http://www.mt.com/ms-ts-RM ▶ http://www.mt.com/ml-t-RM</p>

3.3.2 Configuring Standard and Advanced Level Balance models via RS232

Configure your Standard and Advanced Level balance as per the table below. Please use a RS232 to USB converter cable (64088427) or a standard RS232 cable.

Balance	Settings
MS-TS and ML-T (v4.20 or higher)	<p>General Configuration and Data</p> <ul style="list-style-type: none"> General configuration and Data -> Device and Services -> Add EasyDirect™ Balance as a new service via RS232 General configuration and data -> Publishing -> Send data -> select transmission mode <p>The names for ID1, ID2, ID3, and ID4 have to be ID1, ID2, ID3, and ID4 or Sample ID for parsing. If the ID Names are different, EasyDirect Balance will not recognize them.</p>
MS-TS (V4.10)	<p>General Configuration and Data</p> <ul style="list-style-type: none"> General configuration and Data -> Device and Services -> Add P-20/P-52/P-56/58/Printer -> RS232: General configuration and Data -> Publishing -> Print and Export report -> Single values reports -> Manual*, stable ** <p>*Can be 'Automatic' as well, in case of 'manual' print not needed. **In case, both Stable and Dynamic values need to be captured in EasyDirect Balance, keep it as "all values".</p> <p>Quick settings</p> <ul style="list-style-type: none"> Quick settings/Preferences -> Language -> English <p>Application settings - Main Configuration</p> <ul style="list-style-type: none"> Application settings -> Main configuration <ul style="list-style-type: none"> Statistics : off Target and tolerances : off

Balance	Settings
	<ul style="list-style-type: none"> - Accuracy information : off - Secondary information -> on, Select 'Additional unit' for stability and additional unit information <p>Application settings - Reports Configuration</p> <p>For Weighing</p> <ul style="list-style-type: none"> • Report title • Date, time • Balance type • Balance identification • Serial number (SNR) • ID1 • ID2 • ID3 • ID4 • Gross/Tare weight • Additional unit • Signature line <p>For Counting</p> <ul style="list-style-type: none"> • Report title • Date, time • Balance type • Balance identification • Serial number (SNR) • ID1 • ID2 • ID3 • ID4 • Additional unit • Signature line <p>For Percent weighing</p> <ul style="list-style-type: none"> • Report title • Date, time • Balance type • Balance identification • Serial number (SNR) • ID1 • ID2 • ID3 • ID4 • Additional unit • Signature line <p>For Factor weighing</p> <ul style="list-style-type: none"> • Report title • Date, time • Balance type • Balance identification • Serial number (SNR) • ID1 • ID2 • ID3 • ID4 • Additional unit • Signature line • Print series: Off <p>The names for ID1, ID2, ID3, and ID4 have to be ID1, ID2, ID3, and ID4 or Sample ID for parsing. If the ID Names are different, they will not be recognized by EasyDirect Balance.</p>
ME-T, JET, ML-T, MS-TS (V4.01 or below)	<p>General configuration</p> <ul style="list-style-type: none"> • General configuration -> Device and Connectivity -> RS232 (Serial) -> Device Type -> Select P-20 • General configuration -> Publishing -> Print -> Printer -> Serial Printer • General configuration -> Publishing -> Print -> Single values reports -> Manual*, Stable** <p>*Can be 'Automatic' as well, in case of 'manual' print not needed. **In case, both Stable and Dynamic values need to be captured in EasyDirect Balance, keep it as "all values"</p> <p>Quick settings</p> <ul style="list-style-type: none"> • Quick settings -> Language -> English

Balance	Settings
	<p>Application settings - Main configuration</p> <ul style="list-style-type: none"> • Target and tolerances -> off • Accuracy information -> off (for counting only) • Secondary information -> on Select 'Additional unit' for stability and additional unit information <p>Application settings - Report configuration</p> <ul style="list-style-type: none"> • Header, select the items below <ul style="list-style-type: none"> – Date, time – Balance type – Serial number (SNR) – Balance ID (If available) – ID1, ID2, ID3, ID4 if required* • Sample <ul style="list-style-type: none"> – Select all the items in this section • Footer <ul style="list-style-type: none"> – Select Signature line <p>Application settings - Statistics</p> <ul style="list-style-type: none"> • Statistics -> off <p>*The names for ID1, ID2, ID3, and ID4 have to be ID1, ID2, ID3, and ID4 or Sample ID for parsing. If the ID Names are different, they will not be recognized by EasyDirect Balance.</p>
ME, ML, MS-L, MS-S, MS- Semi Micro, PL-E, JE, JL-GE, JP-C, JP-G, JP Semi-micro, JS-C, JS-G	<p>Advanced Settings:</p> <ul style="list-style-type: none"> • Settings -> Advance -> Language -> English <p>Interface Settings:</p> <ul style="list-style-type: none"> • Settings -> Interface -> RS232 <ul style="list-style-type: none"> – Printer value: Stable – Header: D/T/BAL – Single: G/T/N – Signature line: On

3.3.3 Configuring Excellence Level Balance models via RS232

To configure the connection of Excellence balances (XP.XS, XPE,XSE) via RS232:

- 1 Switch on the balance.
- 2 Choose **System** settings, select **Peripherals**.
- 3 In **Host**, choose **RS232 built-in**.
- 4 Define RS232 parameters.
- 5 After adding the balance to EasyDirect™ Balance (see [Adding Balance ▶ Page 13]), go to **Peripherals** and choose **Printer**.
- 6 Define the same parameters of RS232 connection as **Host** mode.
- 7 Configure the **Print** option in the instrument as per table below:

Balance	Settings
XP, XS, XPE, XSE	<p>Protocol Definition</p> <p>Settings -> Protocol -> Define</p> <ul style="list-style-type: none"> • Header <ol style="list-style-type: none"> 1. Appl. Name (Must be at the first) 2. Date/Time (Must be at the Second) 3. Balance Type 4. SNR 5. Balance ID

Balance	Settings
	<ul style="list-style-type: none"> • Single Value <ol style="list-style-type: none"> 1. Header (Must be at the first) 2. ID1 3. ID2 4. ID3 5. ID4 6. PcsWgt (For counting only) 7. NetPcs (For counting only) 8. Tare 9. Net 10. Gross 11. Info Unit 12. Footer (Must be just before last)* 13. Signature* 14. Dash Line (Must be at the last) <p>*Configure either 'Footer' or 'Signature' based on availability in 'Single value' options.</p> <ul style="list-style-type: none"> • Footer** <ol style="list-style-type: none"> 1. Signature <p>**Configure Footer section only if it is enabled in 'Single Value'.</p> <p>Settings</p> <ul style="list-style-type: none"> • Settings -> Print Key -> Stable *. <p>*In case, Dynamic values need to be captured in EasyDirect Balance, keep it as Dynamic</p> <p>User settings</p> <ul style="list-style-type: none"> • User settings -> User -> Language -> English. <p>* The names for ID1, ID2, ID3, ID4 should not be changed and kept default for parsing. If the ID Names are different, they will not be recognized by EasyDirect Balance.</p> <p>Function Keys:</p> <ul style="list-style-type: none"> • The function key lot number or lot counter must not be enabled. (Only for Weighing) • The function key Max n must not be set and M+ should not be given (Only for PCS counting) • Statistics (CL Result, CL last, Result) should not be enabled (Only for PCS counting)

XPR and XSR balance models are not supported by EasyDirect Balance software. Please ask your METTLER TOLEDO sales representative for LabX Laboratory software or go to <http://www.mt.com/labx>

3.4 Adding a Balance in EasyDirect Balance

After having your balance correctly configured and connected to the PC or Network, you are ready to add the balance to EasyDirect Balance in the software.

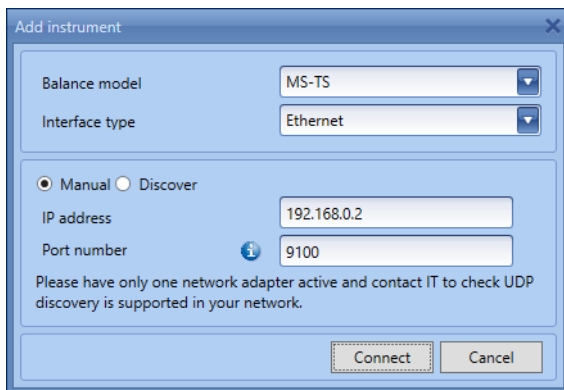
3.4.1 Modes of Connection

A Balance can be added to EasyDirect either via

- Ethernet
- RS232
- RS232 to USB converter cable
- RS232 to Ethernet converter
- Bluetooth


3.4.1.1 Connection via Ethernet (only for MS-TS and ML-T of Version 4.20 or above)

1 Select **Add instrument**.



2 In the **Add Instrument** window, choose the **Balance model** (MS-TS or ML-T) and choose **Ethernet**.

3 By default, you can provide the **IP address** and **Port number** manually (**Manual**). The port number to be provided is available on navigating to Devices -> EasyDirect Balance service in the balance.

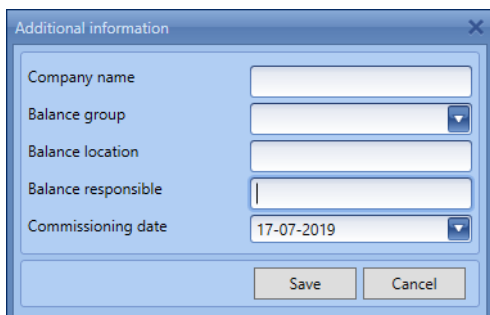
4 Choosing **Discover** will start searching for balances connected in your network, where the EasyDirect Balance service is active. Click on  to initiate discovery again.

➔ The PC with EasyDirect Balance and the balances must be connected to the same LAN, e.g., 168.125.x.xxx.

Note

- The balance already added may also be listed during discovery.

Once the balance is added, you can update the **Company name**, assign a pre-created **Balance group** (as defined in [Section 4.1.1 ▶ Page 19]), **Balance location** and the user who is **Responsible** for the instrument and **Commissioning date** in the Instrument data popup.

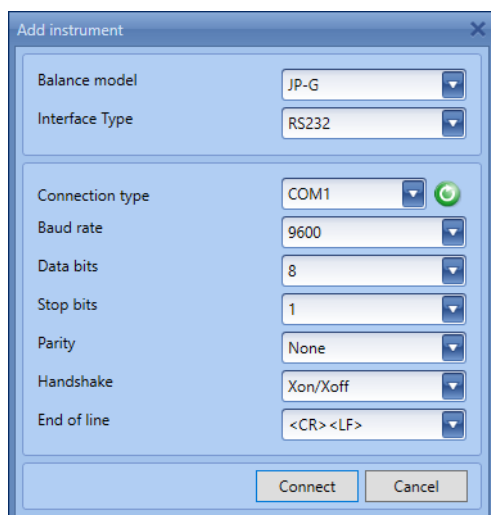


3.4.1.2 Connection via RS232

For the instruments connected through the RS232 port, you have to manually add the instrument by selecting the correct COM port for the connection.

If you are using the RS232 port to connect to the balance, use the **Add Instrument** window to add the instrument manually:

- 1 Select **Add instrument**.

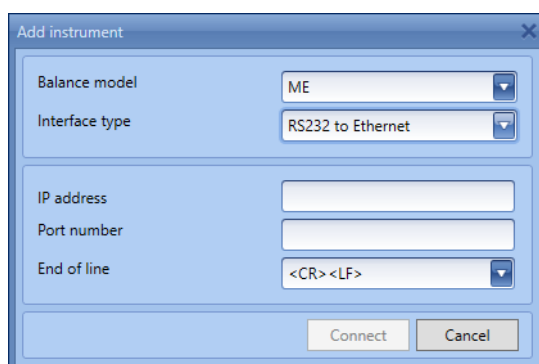


- 2 In the **Add Instrument** window, choose the **Balance model** and choose the **RS232** COM port.
- 3 Configure the balance as per the instructions in table defined in the section [Configuring your Balance ▶ Page 9]
- 4 Choose **Host** Mode in the balance
- 5 Ensure the connection settings are the same as selected in EasyDirect Balance.
- 6 Click **Connect** in EasyDirect Balance.
- 7 Wait until the connection is established and EasyDirect Balance is ready to receive data.
- 8 Once the adding of the instrument is successful, switch the balance into **Print** mode. Now EasyDirect Balance is ready to receive data from the balance connected via RS232.

If you are using RS232 to USB converter cable from METTLER TOLEDO (Material Number 64088427), ensure you have to plug the RS232 side of the cable to the balance and the USB side of the cable to your PC.

3.4.1.3 Connection via RS232 to Ethernet

- 1 Select **Add instrument**

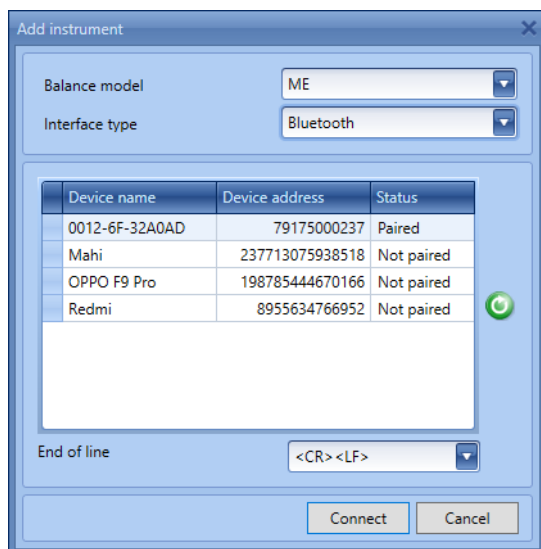


- 2 In the Add Instrument window, choose the instrument type and choose **RS232 to Ethernet** if you are using any converters for connecting with the balance
- 3 Provide **IP address** and **Port number** and click **Connect**.

3.4.1.4 Connection via Bluetooth

- To connect the instruments via Bluetooth, the Bluetooth dongle v2.0 RS232 single (material number: 30086494) needs to be installed on the balance.
- 1 Enable Bluetooth in the PC if it is not already done.
 - 2 Search for the BT device and pair it with the PC.

3 Select **Add instrument**



4 In the **Add Instrument** window, choose the instrument type and choose **Bluetooth**.

5 Select the balance you want to add from the list, pair it and then click **Connect**.

Note

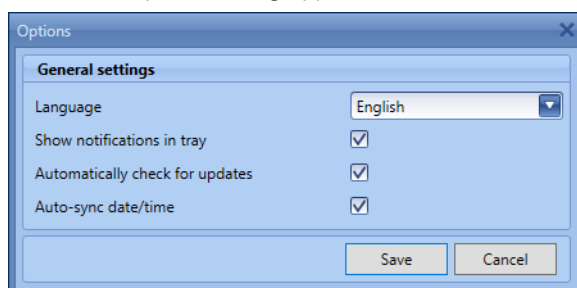
- If the BT dongle had not been paired to PC already, then a PIN will be prompted. Enter the PIN from the BT dongle box before connecting.
- The Bluetooth dongle v2.0 RS232 single (30086494) uses automatically set communication parameters in the balance. Make sure that these settings are not changed:
Baud Rate: 9600
Data bits : 8
Stop bits: 1
Parity : None
Handshake: Xon/Xoff

3.5 Configuring EasyDirect Balance

3.5.1 General Settings

1 Select  **Options** from the ribbon.

➔ The Options dialog appears:



2 Select the desired **Language** from the drop-down list. The default language is set to English. EasyDirect Balance supports the following languages: English, German, French, Spanish, Italian, Russian, Polish, Czech, Hungarian, Dutch, Portuguese, Turkish, Chinese simplified, Japanese, and Korean.


3 By unchecking **Show notifications in tray**, you will not receive tray notifications from EasyDirect Balance.

4 If you do not want EasyDirect Balance to check for software updates automatically, you can uncheck **Automatically check for updates**.

5 If you do not want to set the date/time of the PC to the balance whenever the balance establishes connection with EasyDirect Balance, you can uncheck **Auto-sync date/time**.

6 **Save** the settings to reflect the changes.

3.5.2 Check for Updates manually

The application automatically checks for new updates every day when this option is selected in **General settings** and downloads the latest version of the application. You can also manually check for updates from the  **About** window.

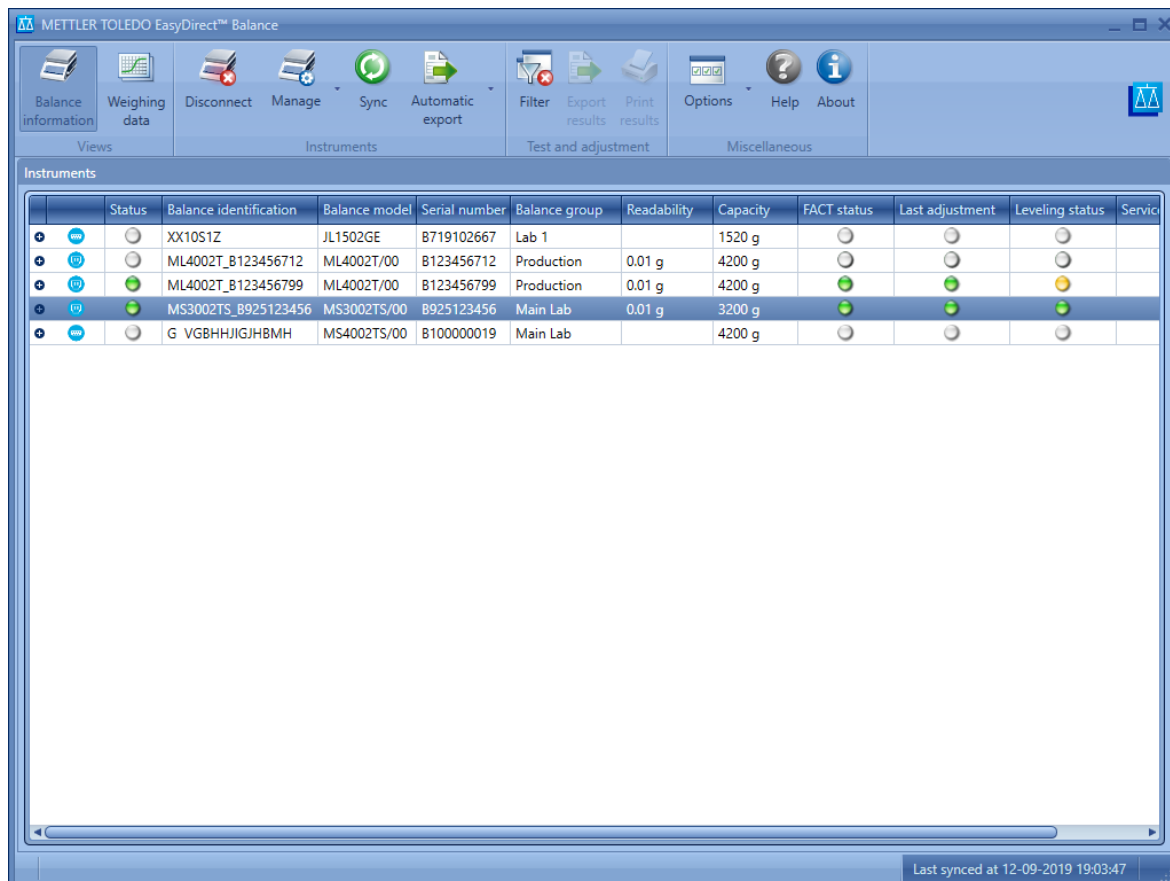
4 Instrument Management

4.1 The Instrument View Window

Navigation: Instrument View

For instrument requirements see [Configuring your Balance ▶ Page 9].

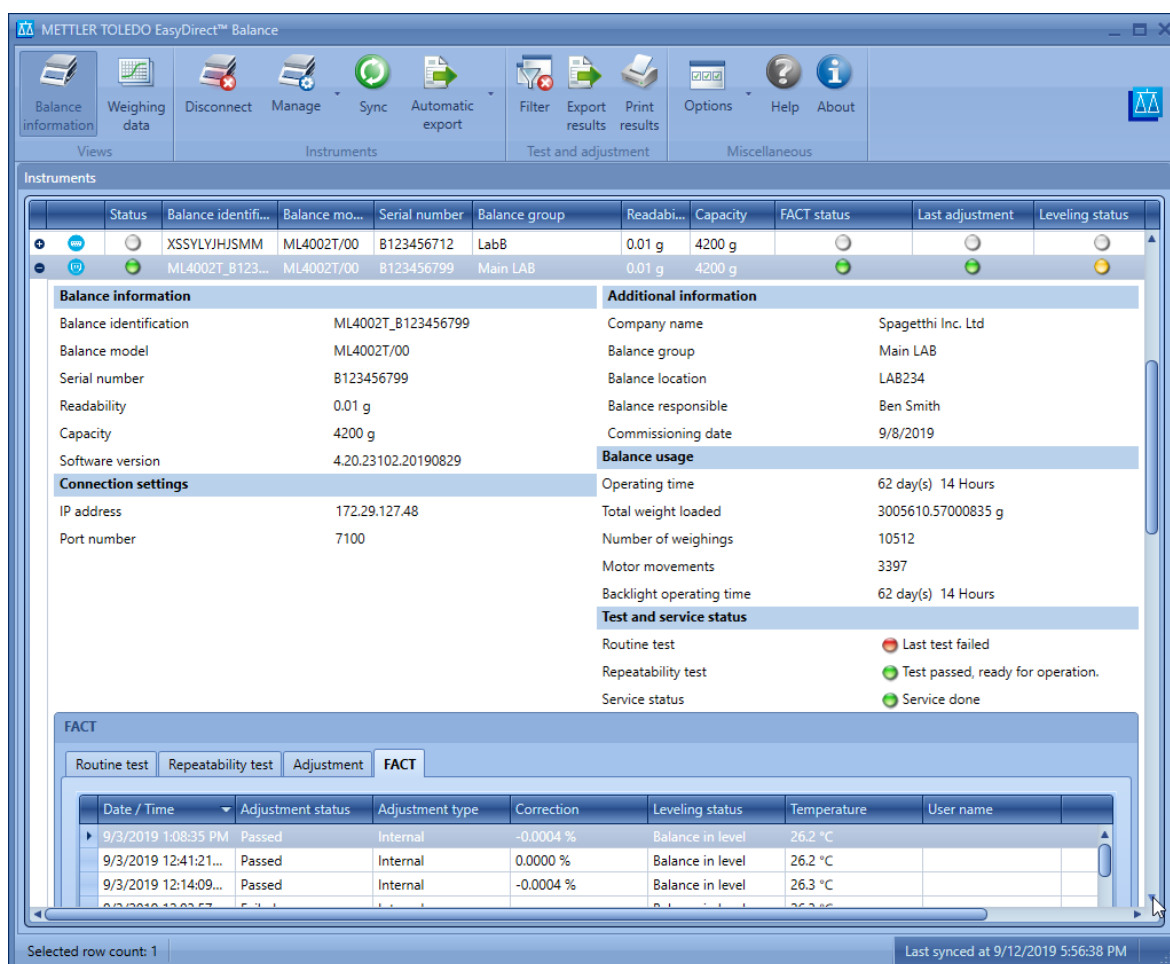
The Balance info view provides an overview of instrument details such as test and service status. For balances connected via RS232 only the connection status is available.



Connection Status indication

	green	The instrument has been successfully connected and is monitored.
	grey	The instrument has been added but is currently disconnected.
	red	Error in connection

Expand an instrument by clicking  or by double clicking the row to view the instrument details.



Expanded view displays details about the instrument including, Connection settings, Balance Hours usage, Additional Information like company name, Commissioning date and Test and Service status.

The section **Additional information** shows information, which is maintained in EasyDirect Balance only. All other information is provided by the balance.

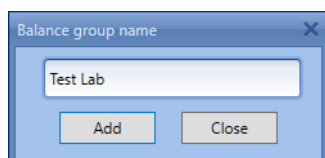
The **Test and Adjustment results** (Routine test, Repeatability test Adjustment and FACT) can be viewed here and shown only for MS-TS/ML-T with V4.20 or higher connected over LAN.

4.1.1 Balance groups

You can create new balance groups while in the **Instrument View** screen by clicking **Manage > Balance groups**. A window will be launched enabling you to create balance groups:

Add balance group

- 1 Click on **Add**

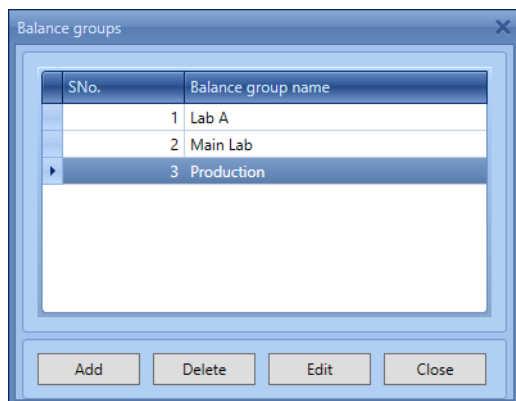


- 2 Enter the group name you desire.

A group name can contain special characters and is limited to 20 characters.

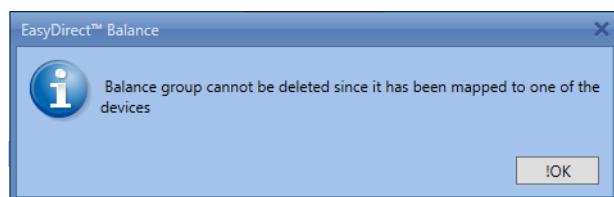
Edit balance group

To edit an existing balance group name, click **Edit**.



Delete balance group

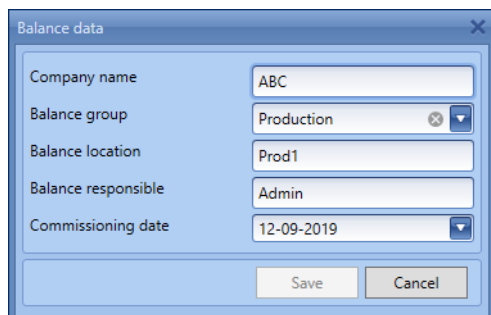
For deleting an existing group, click **Delete**. Ensure that no balances are assigned to the group before deletion. Else, the group cannot be deleted.



4.2 Edit Instrument data and connection settings

Navigation: Manage



You can edit the company name, assign/re-assign any pre-created balance group, edit the location and the user who is responsible for the instrument by selecting **Edit selected instrument data** in the **Manage** menu.



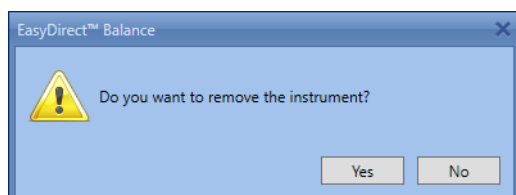
To change the RS232 COM port and connection settings, select **Edit selected instrument connection settings** in the **Manage** menu.

4.3 Remove an Instrument

Navigation: Manage

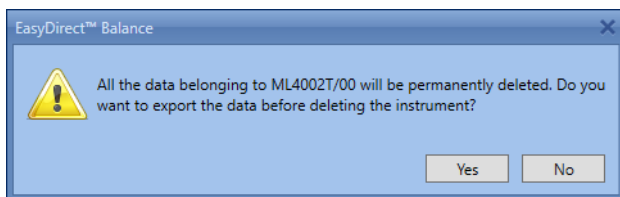
- 1 Select the instrument to be removed from the application.
- 2 Disconnect the instrument by selecting  **Disconnect** from the ribbon.
- 3 Select  **Manage** from the ribbon.
- 4 Click **Remove instrument**.

➔ The following message appears:



5 Click **Yes**.

➔ The following message appears:



6 Click **Yes** and choose a folder to where the measurement results, test results and instrument backups will be exported in CSV format. Once exported the instrument will be removed.

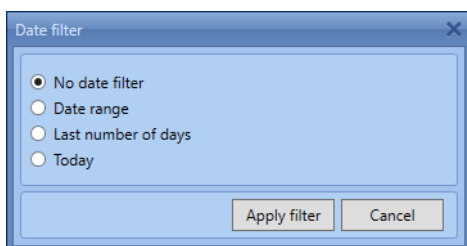
-Or-

Click **No** to remove the selected instrument without exporting data.

4.4 Date Filter

Navigation:  **Filter**

To filter Tests and adjustments by date range, select  **Filter option** in the ribbon.



The following Date filters can be applied on the **Tests and Adjustments** results displayed in the expanded instrument view:

- **No date filter** – displays all the Test and Adjustment results without filtering
- **Date range** – Filter results based on Date range
- **Last number of days** – Filter results based on the last number of days
- **Today** – Filter and display only today's Tests and Adjustments

5 Test and service status

Test and service status of the connected instruments can be observed in the expanded view of the instrument.

The screenshot displays the METTLER TOLEDO EasyDirect™ Balance software interface. The main window shows a table of instruments with columns for Status, Balance identification, Balance model, Serial number, Balance group, Readability, Capacity, FACT status, Last adjustment, and Leveling status. Below the table, the expanded view for a specific instrument (ML4002T/00) is shown, detailing Balance information, Additional information, Connection settings, Balance usage, and Test and service status. The Test and service status section is highlighted with a red box, showing: Routine test (Last test failed), Repeatability test (Test passed, ready for operation), and Service status (Service done). Below this, the FACT (Factory Acceptance Test) results are displayed in a table with columns for Date / Time, Adjustment status, Adjustment type, Correction, Leveling status, Temperature, and User name.

Date / Time	Adjustment status	Adjustment type	Correction	Leveling status	Temperature	User name
9/3/2019 1:08:35 PM	Passed	Internal	-0.0004 %	Balance in level	26.2 °C	
9/3/2019 12:41:21...	Passed	Internal	0.0000 %	Balance in level	26.2 °C	
9/3/2019 12:14:09...	Passed	Internal	-0.0004 %	Balance in level	26.3 °C	

Test status indication

	Grey	Last test not received
	Green	Test Passed
	Yellow	Last test Warning
	Red	Last test Failed


Service status indication

	Grey	Next service date not received
	Green	Service done or due today
	Red	Service overdue

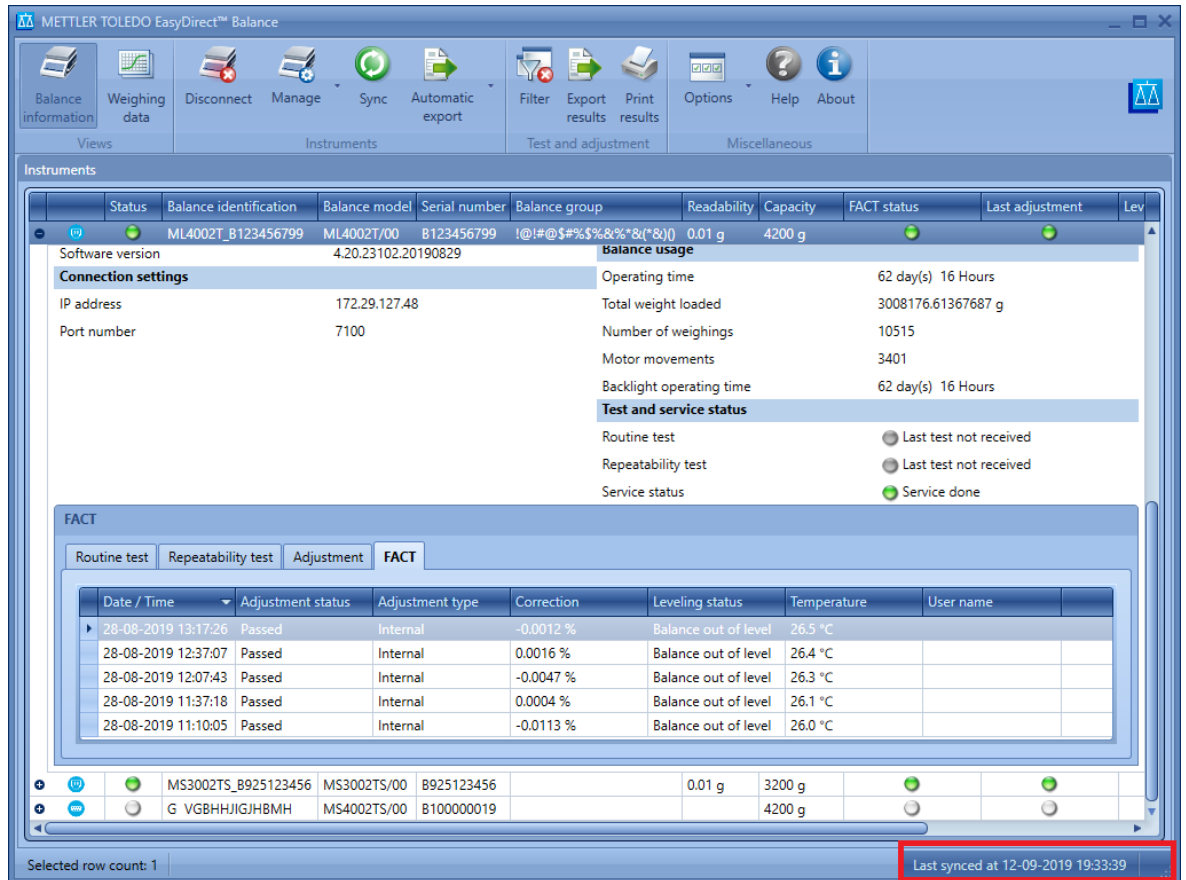
Hovering over the Status indicator will show the last and next service details of the balance.

6 Date/Time Synchronization

Navigation: Sync

To synchronize the date/time of the connected balance(s) to that of the PC date/time, click  **Sync** in the ribbon. You can see the last synchronized time in the bottom right of the application.

In addition to Date/Time, other balance information like Balance ID, Serial number, usage information, operating time are also synchronized, if applicable.



The screenshot displays the METTLER TOLEDO EasyDirect™ Balance software interface. The ribbon at the top includes buttons for Balance information, Weighing data, Disconnect, Manage, Sync, Automatic export, Filter, Export results, Print results, Options, Help, and About. The 'Sync' button is highlighted. Below the ribbon, the 'Instruments' section shows a table of instrument details. The selected instrument is ML4002T_B123456799. The interface also displays connection settings, balance usage statistics, and test results. A red box highlights the text 'Last synced at 12-09-2019 19:33:39' in the bottom right corner of the application window.

Status	Balance identification	Balance model	Serial number	Balance group	Readability	Capacity	FACT status	Last adjustment	Lev
	ML4002T_B123456799	ML4002T/00	B123456799	!@!#\$%&%'&(*&)\	0.01 g	4200 g			

Date / Time	Adjustment status	Adjustment type	Correction	Leveling status	Temperature	User name
28-08-2019 13:17:26	Passed	Internal	-0.0012 %	Balance out of level	26.5 °C	
28-08-2019 12:37:07	Passed	Internal	0.0016 %	Balance out of level	26.4 °C	
28-08-2019 12:07:43	Passed	Internal	-0.0047 %	Balance out of level	26.3 °C	
28-08-2019 11:37:18	Passed	Internal	0.0004 %	Balance out of level	26.1 °C	
28-08-2019 11:10:05	Passed	Internal	-0.0113 %	Balance out of level	26.0 °C	

Balance ID	Balance model	Serial number	Readability	Capacity	FACT status	Last adjustment	Lev
MS3002TS_B925123456	MS3002TS/00	B925123456	0.01 g	3200 g			
G VGBHHJGJHBMH	MS4002TS/00	B100000019		4200 g			

Ensure that the Ethernet cable, RS232 cable or Bluetooth dongle are connected properly and the connection status is green for proper synchronization.

7 Automatic Export

- 1 To schedule automatic export across all the connected balances, select **Global auto Export**. For Balance specific export, choose **Selected balance auto export**.

Automatic export

Export Off

Last configured start time
Last exported time

Export by
 Immediate
 Every 1 Hour(s) Start time 7/17/2019 4:22:08 PM

Application Weighing

Export file type Csv

One result in a file
 Application result of balance in a file

Target folder C:\Users\Public\METTLER TOLE ...

The maximum number of records that can be exported to a single file is 20(for formulation ,totalling,differential and back weighing applications) and 2000(for other applications).After that the records will be exported to another file.

Save Cancel

- 2 Switch **Export** on
- 3 If already configured, last configured start time and last exported time will be displayed.
- 4 If you want to export as soon as the data is received, choose **Immediate**
- 5 If the export should happen in certain frequency, choose **Every – hour** and set the hour frequency and start time. If you want to export once a day, please set the hour frequency to 24 hours.
- 6 You can choose the application(s) including test and adjustments to export.

Global auto export

Export On

Export by
 Immediate
 Every 1 Hour(s) Start time 8/21/2019 3:37:31 PM

Last configured start time
Last exported time

Application Weighing

Export file type Csv

Target folder C:\Users\Public\METTLER TOLE ...

One result in a file
 Application results of balance in a file

Please note that the maximum number of records for PDF format , the (for formulation ,totalling, differential and back weighing applications) After that the records will be exported to another file.

(Select All)
 Weighing
 Counting
 Check weighing
 Dynamic weighing
 Percent weighing
 Factor weighing
 Formulation
 Totalling
 Back-weighing
 Differential weighing
 Density
 Adjustment
 FACT
 Routine test
 Repeatability test

Save Cancel

- 7 Export can be done in CSV, Excel XLSX, PDF or XML formats.
- 8 Each measurement will be exported to separate file if 'One result in a file' option is chosen.
- 9 All measurement of one balance will exported to a single file if **Application results of balance in a file** is chosen.

10 Choose the folder for the exported file to be saved in **Target folder**. Ensure to choose public folders to avoid access errors.

Note

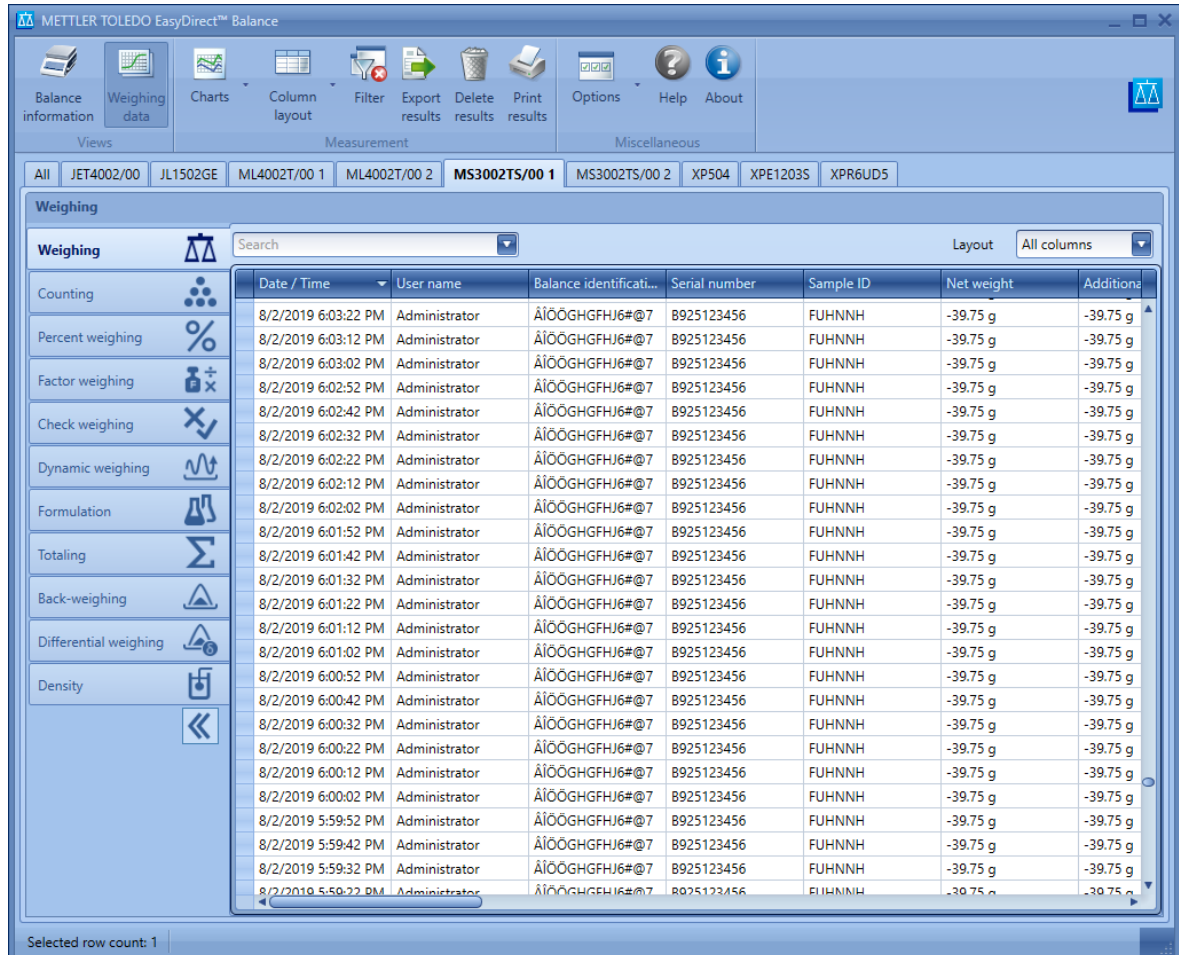
- The maximum number of records for PDF format that can be exported to a single file is 20 (for formulation, totaling, differential and back weighing applications) and 2000 (for other applications). After that the records will be exported to another file.

8 Measurement View

Navigation: Measurement view


The **Measurement view** lists the measurement results received from all the connected instruments.

- To view the weighing data, you must start the EasyDirect Balance application. The application displays all the weighing data logged from the connected instrument:
 - On the main screen, select the tab of the desired instrument.
- ➔ The logged weighing data of the instrument appears.



The screenshot shows the METTLER TOLEDO EasyDirect™ Balance software interface. The ribbon menu includes sections for Views (Balance information, Weighing data, Charts, Column layout), Measurement (Filter, Export results, Delete results, Print results), and Miscellaneous (Options, Help, About). The instrument tabs are: All, JET4002/00, JL1502GE, ML4002T/00 1, ML4002T/00 2, MS3002TS/00 1, MS3002TS/00 2, XP504, XPE1203S, and XPR6UD5. The Weighing section is active, showing a table of measurement results. The table has columns for Date / Time, User name, Balance identific..., Serial number, Sample ID, Net weight, and Additional. The data shows multiple rows for the MS3002TS/00 1 instrument, all with a net weight of -39.75 g. A search bar and a layout dropdown are also visible above the table.

The supported applications depend on the balance line and the connection type

- Each instrument is displayed in a separate tab. The tab heading contains the instrument model.
- Additionally the **All** tab contains measurement data of all balances per application
- In the column header bar, you can change the column width. When you click on the **Date/Time** column header, the column is sorted. If you click on the **Date/Time** column header again, the sort order is reversed.
- To filter results based on certain parameters, click on  **Filter**.
- To filter by date range, change the filter type in the ribbon.
- If you enter a search term in **Search**, available in top of the table view, the rows will be filtered to those containing the search term.
- You can select multiple objects at a time. To do this, hold the **Shift** key and click on an object to select a range of objects, or hold the **Ctrl** key and click on the individual objects you wish to select. This is useful for printing and exporting weighing data.
- Use the **Column Chooser** (right click on the header row) for customizing the table layout.
- The customized layout can be saved for later using **Column Layout** in the ribbon menu which includes columns chosen, column widths and column filters.
- Best fit for individual columns /all columns, column chooser are available as context menu on right clicking on column header.

Note

- The pre-tare is considered as tare for excellence balance series.
- The balance ID , ID1.. ID4 may show invalid characters when Unicode characters are set for them in the balance.
- The recommended auto publish interval (for MS-TS/ML-T V4.2) is 3 seconds or higher to avoid data loss.
- Ensure no other operations like synchronize are performed when the Auto data transfer is in process to avoid data loss when the balance is connected via RS232.

8.1 Measurement Results

The data will vary depending on the measurement type. There is a separate measurement list for each instrument and measurement type. To select the displayed instrument, click on the respective tab above the measurement list. To switch between the application types, click on the tabs in the left pane.

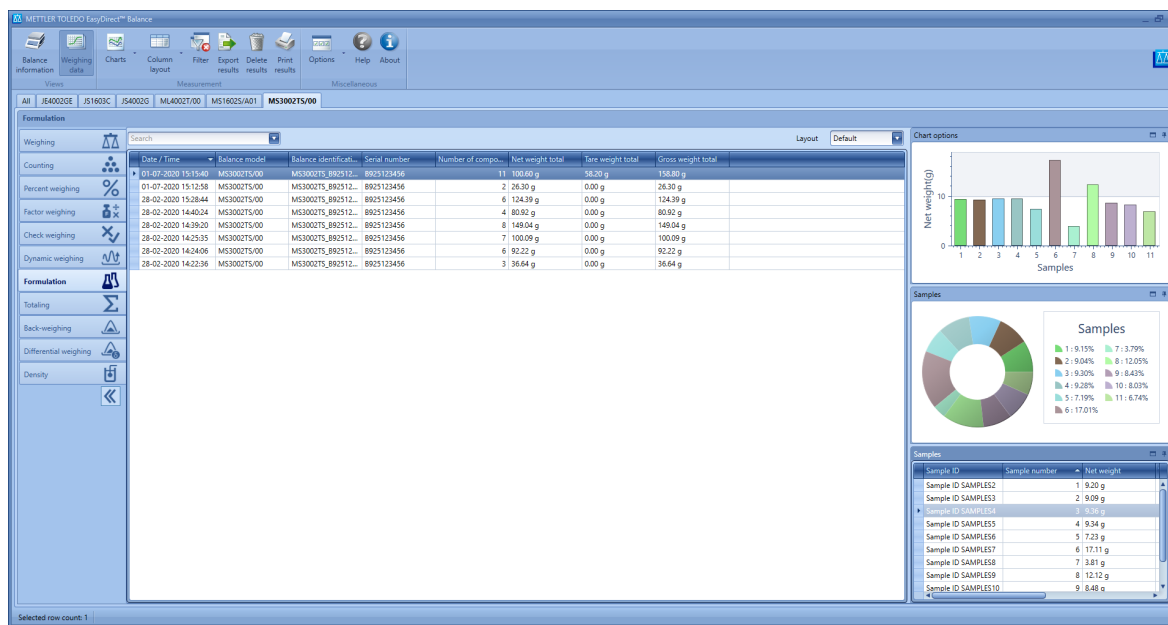
For unsupported applications, the application tab header will be greyed out, but allowed to navigate.

The screenshot shows the METTLER TOLEDO EasyDirect™ Balance software interface. The main window displays a table of weighing results under the 'Weighing' tab. The table has columns for Date / Time, Balance identification, Serial number, Net weight, Tare weight, and Gross weight. The data is filtered to show results for the instrument 'XPE1203S'. The table contains 20 rows of data, with the first row selected. The interface also includes a menu bar with options like 'Balance information', 'Weighing data', 'Charts', 'Column layout', 'Filter', 'Export results', 'Delete results', 'Print results', 'Options', 'Help', and 'About'. A search bar and a layout dropdown are also visible above the table.

Date / Time	Balance identification	Serial number	Net weight	Tare weight	Gross weight
8/23/2019 5:13:00...	8955ifeba(ftj)	PROTO	52.605 g	0.000 g	52.605 g
8/23/2019 5:12:00...	8955ifeba(ftj)	PROTO	52.606 g	0.000 g	52.606 g
8/23/2019 5:09:00...	8955ifeba(ftj)	PROTO	52.600 g	0.000 g	52.600 g
8/23/2019 3:57:00...	8955ifeba(ftj)	PROTO	47.780 g	306.042 g	353.822 g
8/23/2019 3:55:00...	8955ifeba(ftj)	PROTO	47.782 g	306.042 g	353.824 g
8/23/2019 3:55:00...	8955ifeba(ftj)	PROTO	47.782 g	306.042 g	353.824 g
8/23/2019 3:55:00...	8955ifeba(ftj)	PROTO	47.774 g	306.042 g	353.816 g
8/23/2019 3:54:00...	8955ifeba(ftj)	PROTO	1.53610 ozt	9.83945 ozt	11.37555 ozt
8/23/2019 3:54:00...	8955ifeba(ftj)	PROTO	9.76370 ozt	0.07575 ozt	9.83945 ozt
8/23/2019 3:47:00...	8955ifeba(ftj)	PROTO	303.676 g	2.356 g	306.032 g
8/23/2019 3:45:00...	8955ifeba(ftj)	PROTO	301.219 g	4.820 g	306.039 g
8/23/2019 3:39:00...	8955ifeba(ftj)	PROTO	100.739 g	4.820 g	105.559 g
8/23/2019 3:36:00...	8955ifeba(ftj)	PROTO	100.738 g	4.820 g	105.558 g
8/23/2019 3:35:00...	8955ifeba(ftj)	PROTO	1.643 g	0.000 g	1.643 g
8/23/2019 3:34:00...	8955ifeba(ftj)	PROTO	1.643 g	0.000 g	1.643 g
8/23/2019 3:34:00...	8955ifeba(ftj)	PROTO	1.638 g	0.000 g	1.638 g
8/23/2019 3:30:00...	8955ifeba(ftj)	PROTO	1.631 g	0.000 g	1.631 g
8/23/2019 3:29:00...	8955ifeba(ftj)	PROTO	54.247 g	0.000 g	54.247 g
8/23/2019 3:27:00...	8955ifeba(ftj)	PROTO	6.465 g	0.000 g	6.465 g
8/23/2019 3:17:00...	8955ifeba(ftj)	PROTO	6.462 g	0.000 g	6.462 g
8/21/2019 12:04:00...	8955ifeba(ftj)	PROTO	-0.04 GN	74.34 GN	74.30 GN
8/21/2019 12:02:00...	8955ifeba(ftj)	PROTO	150.54 GN	74.34 GN	224.88 GN
8/21/2019 12:01:00...	8955ifeba(ftj)	PROTO	150.40 GN	74.34 GN	224.74 GN
8/21/2019 12:00:00...	8955ifeba(ftj)	PROTO	150.46 GN	74.34 GN	224.80 GN
8/21/2019 12:00:00...	8955ifeba(ftj)	PROTO	150.40 GN	74.34 GN	224.74 GN

8.2 Additional Areas

The additional areas are applicable for certain applications like Formulation, Totaling, Back weighing and Differential weighing. The windows can be maximized by clicking on the maximize icon in the top right corner of the window



Definitions

Type	Description
Chart options	Plots net weight / difference against the samples
Samples (applicable for Formulation / Totaling only)	A pie chart shows the contribution of the samples to the overall result.
Sample details	Shows relevant data of the samples used

The displayed areas depend on the analysis type: see table below.


Application type	Chart options	Sample chart	Sample details
Formulation	●	●	●
Totaling	●	●	●
Back weighing	●		●
Differential weighing	●		●

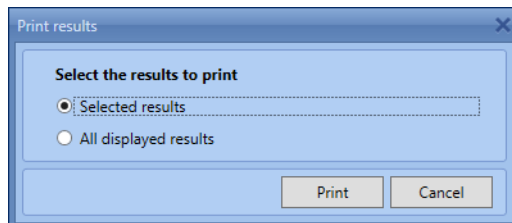
9 Managing Results

9.1 Printing Results

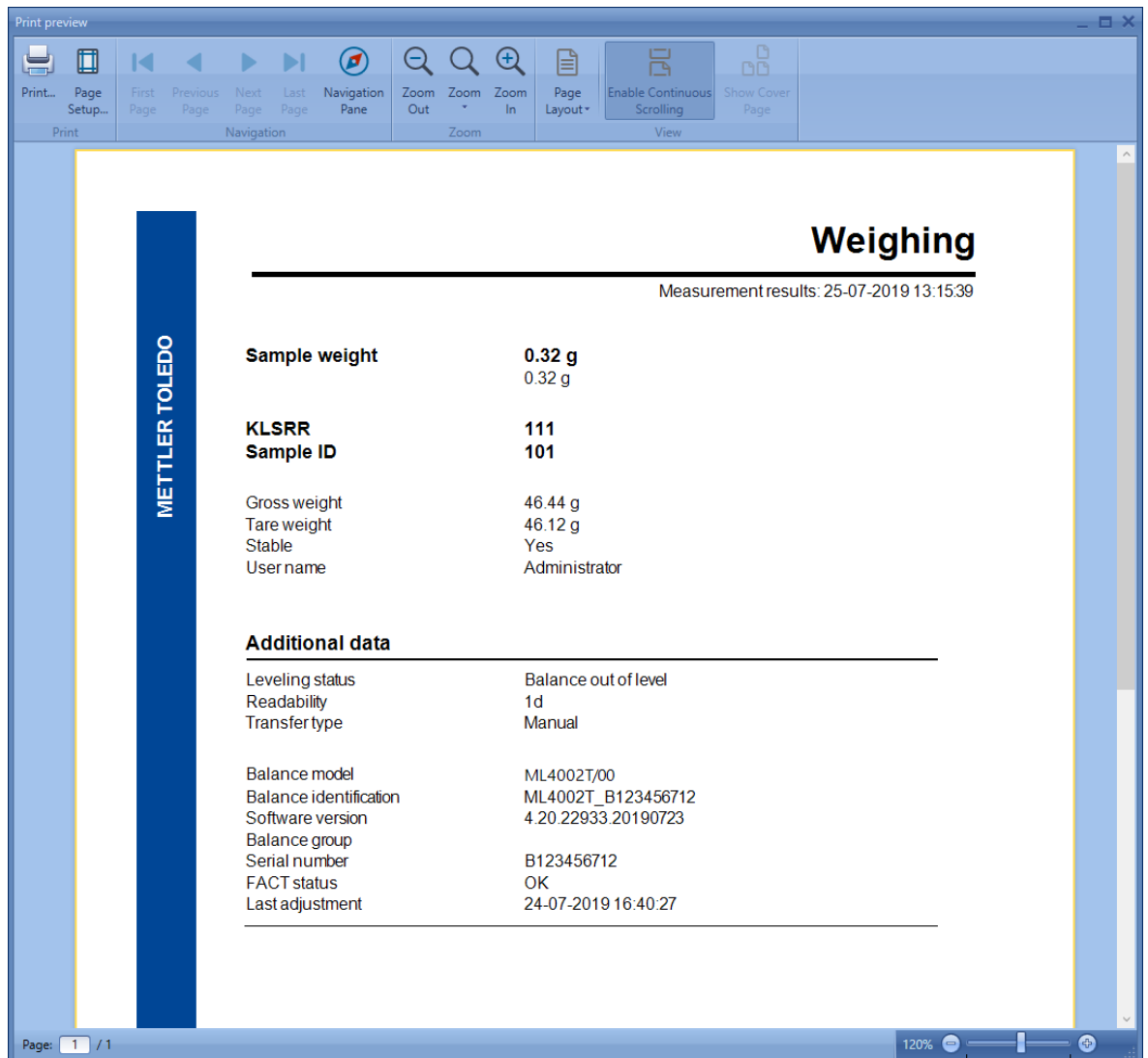
Navigation: **Print results**

Measurement results from Measurement view and Test and Adjustment results from Instrument view can be printed to a connected printer using the **Print results** option. Up to 150 results can be printed at once by EasyDirect Balance.

- 1 Select the results you want to print.
- 2 Click  **Print results**.
 - ➔ **The Print results dialog opens.**



- 3 Select any one of the options.
- 4 Click **Print**.
 - ➔ A print preview is displayed




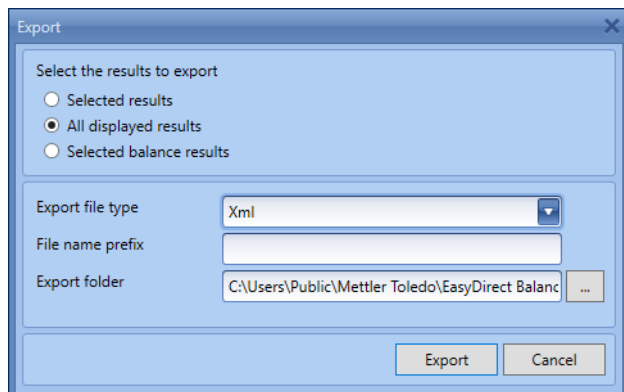
- 5 Select **Print** to get the results printed.

9.2 Exporting Results

Navigation: **Export results**

Measurement results from Measurement view and Test and Adjustment results from Instrument view can be exported using the **Export results** option. You can export the results as CSV, PDF or XML format.

- 1 Select the results you want to export.
- 2 Click  **Export results**.
 - ➔ The **Export results** dialog opens.




- 3 Select the **Export file type** as CSV, PDF, XML, or XLSX.
- 4 Enter the **File name prefix**, if you want a prefix for the exported file names.
- 5 Select the destination folder in **Export folder**.
- 6 Click **Export**.
 - ➔ The results are exported and saved as .csv, .pdf, .xml, or .xlsx files (based on the file type selected) in the specified folder. Each result is exported as a separate file.

9.3 Deleting Measurement Results

Navigation: **Delete results**

Only measurement results can be deleted, while the Test and Adjustment results in the Instrument view cannot be deleted.

- 1 Select the rows you want to delete from the Measurement view.
- 2 Click  **Delete** results from measurement view window.
 - ➔ The selected measurement results are deleted after confirmation.

9.4 Charts

Navigation: Charts

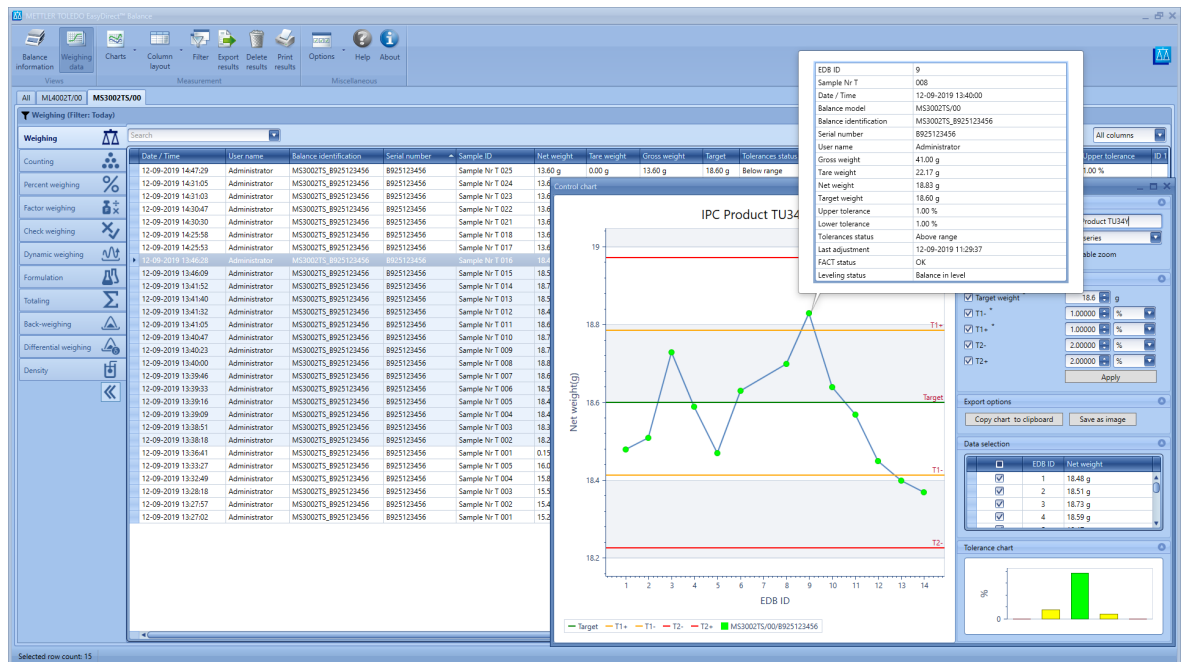
Weighing results of a balance (from Balance specific tab) or across balances (from All balance Tab) can be visualized graphically. Two types of charts can be plotted with the results in EasyDirect Balance:

- Control Charts
- Statistics Charts

9.4.1 Control Chart

The **Control Chart** is used to visualize the results over time with control limits defined in the view.

You can plot Control charts by selecting the **Control chart** option from the **Charts** menu.



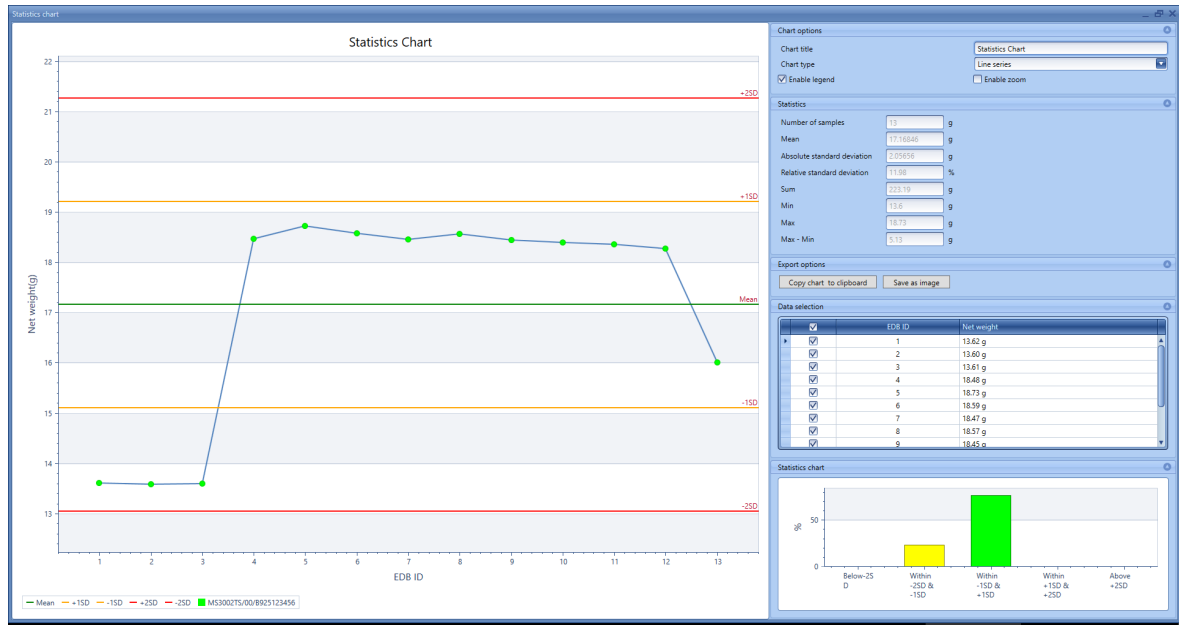
- Charts are prepared using the filtered records from the grid. Filter the results to get a single unit for the chart to be represented. Otherwise the error message **Selected data contain more than one unit for the "ResultUnit"** appears. Please filter the data to have a unique value for unit.
 - 1 Provide a title for the chart and choose chart type Line/Bar
 - 2 Define target and tolerances (T1 and T2). The target and tolerances are carry forwarded if they are available in the measurement results and are indicated with a * in the labels. Configure target and tolerance and click **Apply** to reflect in the chart.
 - 3 Copy the chart to the clipboard and print it later or save it directly as an image in a specified directory.
 - 4 Results can be excluded from being plotted by unchecking them in **Data Selection**.
 - 5 Tolerance chart shows the outlook of how many samples are in and above tolerances.
 - 6 You can always collapse other areas to get a bigger view of the tolerance chart

There are automated IDs generated by EasyDirect Balance to identify each sample with EDB-ID.

9.4.2 Statistics Chart

The **Statistics Chart** is used to visualize the results over time including visualization of mean and standard deviation of the selected results. You can plot statistics charts by selecting the **Statistics chart** option from the **Charts** menu

- A minimum of three records are needed to plot statistical charts.
- Results can be excluded from being plotted by unchecking them.
 - ➔ Test Measurement results and Aborted measurement results will be excluded in the chart.
- ➔ Mean and standard deviation of the selected results are displayed:



10 Change Protection

Navigation: Options

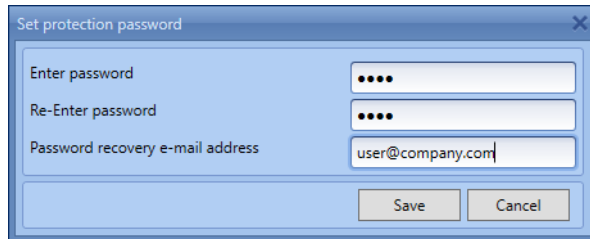
Change protection feature enables you to configure permissions for the protected mode. This feature provides you options to allow or deny access to:

- Delete measurement results
- Add or remove instruments

Initially, **Change protection** will be disabled and you can access all the features. You have to enable change protection to limit access in the protected mode.

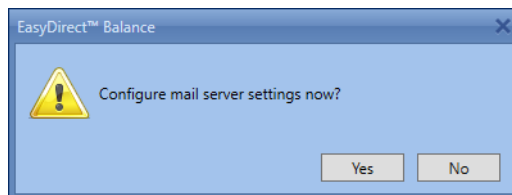
To enable protection, follow the steps below:

- 1 Select the **Set Protection Password** option from the **Options** menu.
 - ➔ Set Protection Password window will appear



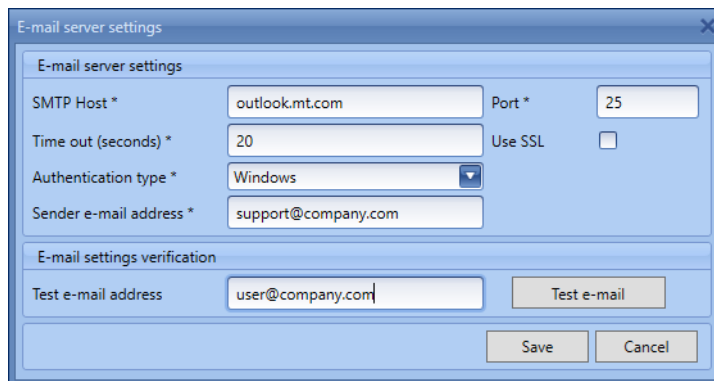
The 'Set protection password' dialog box contains three input fields: 'Enter password' with masked characters, 'Re-Enter password' with masked characters, and 'Password recovery e-mail address' with the text 'user@company.com'. At the bottom are 'Save' and 'Cancel' buttons.

- 2 Enter a password and confirm the password.
- 3 Enter a valid e-mail address to recover the password later if forgotten in the **Password recovery e-mail address** field.
- 4 **Save** the password.
 - ➔ A window prompting to configure Mail server Settings will appear.



The 'EasyDirect™ Balance' dialog box features a yellow warning icon and the text 'Configure mail server settings now?'. It has 'Yes' and 'No' buttons at the bottom.

- 5 Click **Yes** to configure **Mail server Settings**
- 6 Click **No** to configure later by selecting Mail server Settings from the options menu.



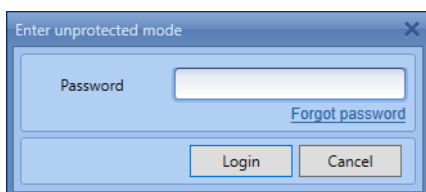
The 'E-mail server settings' dialog box has several fields: 'SMTP Host *' (outlook.mt.com), 'Port *' (25), 'Time out (seconds) *' (20), 'Use SSL' (checkbox), 'Authentication type *' (Windows), and 'Sender e-mail address *' (support@company.com). It also includes an 'E-mail settings verification' section with a 'Test e-mail address' field (user@company.com) and a 'Test e-mail' button. 'Save' and 'Cancel' buttons are at the bottom.

- 7 Fill in the **E-mail server settings** window. If you are not sure what to fill in, please contact your local IT.
- 8 To test the Mail server settings, enter a valid e-mail id in the **Test e-mail address** field and use the **Test e-mail** button to verify if a test e-mail is received.
- 9 **Save** the settings.
 - ➔ Now, you have enabled protection.

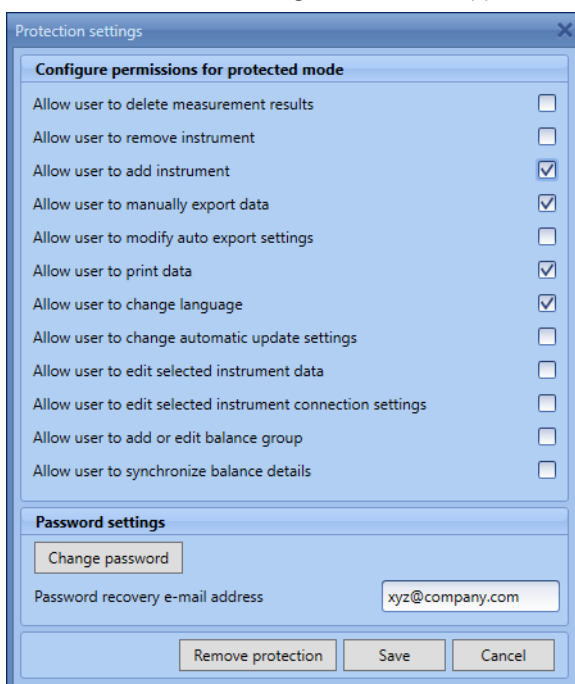
To limit the features you have to enter the unprotected mode.

- 1 Select the **Enter Unprotected Mode** from the **Options** menu.

➔ Enter Unprotected Mode window will appear.



- 2 Enter the protection password in the **Password** field and **Log in**.
 - ➔ Application enters Unprotected Mode on successful login.
- 3 In case you forgot the password, use the **Forgot Password** link.
 - ➔ The protection password will be sent to the **Password recovery e-mail address** set while enabling protection.
 - ➔ After successful login, you are in unprotected mode. Now, you can define permissions for the protected mode.
- 4 Select the **Protection Settings** from the **Options** menu.
 - ➔ The Protection settings window will appear.



You can choose the permissions for various features by checking them. Unchecked features will be hidden for the user and are not accessible in the protected mode.

Change password enables to change the protection password

You can also change the **Password recovery e-mail address**

Clicking **Remove Protection** will remove the password and protection settings and you will have unlimited access to all the features. Mail server settings will not be removed on removing protection. But you can always reconfigure them from **Options > Mail server settings**.

After configuring the permissions, you can return to the protected mode.

- Select **Leave unprotected mode** from **Options** menu.
- ➔ Permissions selected in the protection settings will be applied.

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.

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For more information

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