



radwag.com

Scan the QR code to view additional scientific material that may be of interest to you. There you will find more useful information in an accessible format!

User manual

ITKU-104-01-04-18-EN

E2R Weighings

Modular Software for Cooperation
with Weighing Instruments

Contents

1. GENERAL INFORMATION	5
1.1. Main Functions	5
1.2. Compatible Weighing Instruments	6
2. RUNNING THE SOFTWARE.....	7
2.1. Adding the First Operator	7
2.2. Logging in Procedure.....	8
3. HOME SCREEN	8
3.1. Work Pane.....	10
3.1.1. Data Sorting	10
3.1.2. Data Filtering.....	11
3.1.3. Filter Editor.....	12
4. SOFTWARE SETTINGS	16
4.1. Database	16
4.1.1. Setting up Connection.....	17
4.2. User Settings	22
4.3. Modes	24
4.3.1. Mode Activation	25
4.4. Users Groups - Rights	28
4.5. Language	31
4.6. Update	31
4.6.1. Check Updates	32
4.6.2. Restoring Previous Software Version	33
4.7. Service Settings.....	33
4.7.1. Translations	34
4.7.2. Mode Setup.....	35
4.7.3. Additional Units	35
4.8. Logout Procedure	36
4.9. Exit Operation	36
5. DATABASES.....	37
5.1. Products.....	37
5.1.1. Adding/Editing Product	38
5.1.2. Editing Ingredients	41
5.1.3. Deleting Products.....	41
5.1.4. Product Searching and Filtering.....	42
5.1.5. Products Reports	42
5.1.6. Production Line Editor.....	43
5.2. Operators	45
5.2.1. Adding/Editing Operator.....	46
5.2.2. Deleting Operator.....	47
5.2.3. Product Searching and Filtering.....	48
5.2.4. Operators Reports	48

6. REPORTS	49
6.1. Weighing FG.....	49
7. PRODUCTION.....	51
7.1. Weighing Orders.....	52
7.1.1. Adding/Editing Weighing Orders.....	52
7.1.2. Execution of the Weighings Order on the Production Line	53
7.1.3. Weighing Order Stop	56
7.1.4. Order Searching and Filtering.....	57
7.1.5. Order Details.....	58
7.1.6. Subcontract details	58
7.1.7. Orders Update	59
7.2. Monitor.....	59
7.2.1. Working Time Report.....	60
7.2.2. Working Time Monitor.....	62
7.2.3. Monitor.....	63
7.3. Production Lines	64
7.3.1. Production Line Home Screen	65
7.3.2. Weighing Instruments Assigned to the Production Line	66
7.3.3. Production Order Initiation	67
7.3.4. Efficiency.....	68
7.3.5. Checkweighing Thresholds.....	69
8. TOOLS	70
8.1. E2R MANAGER	70
8.1.1. Setting Connection with E2R SYNCHRONIZER	72
8.1.2. Scales Layout	74
8.1.3. Connecting/Disconnecting E2R SYNCHRONIZER.....	74
8.1.4. Scales Configuration.....	75
8.1.5. Synchronizer	92
8.1.6. E2R Manager: Scales Status	94
8.1.7. Scale Panel.....	94

1. GENERAL INFORMATION

1.1. Main Functions

E2R Weighings enables record of weighings carried out using weighing indicators which are intended to perform quick "+/-" control. With this, operator's role is limited to the minimum. The module is used in plants with multi-workstation production lines where acquiring large quantity of weighings carried out on many scales over short period of time is required.

The network may contain one or many types of weighing instruments.

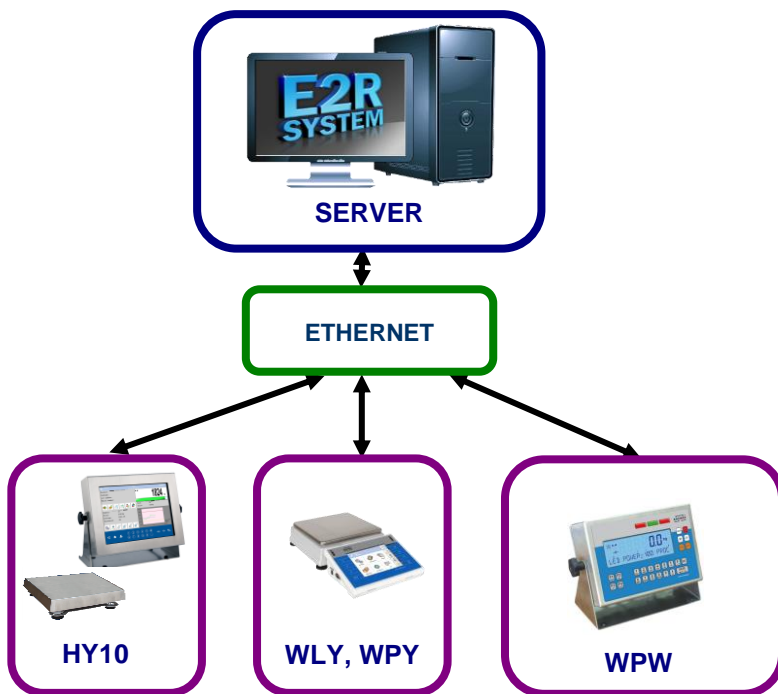


Diagram of E2R WEIGHINGS system in Ethernet network

Caution:

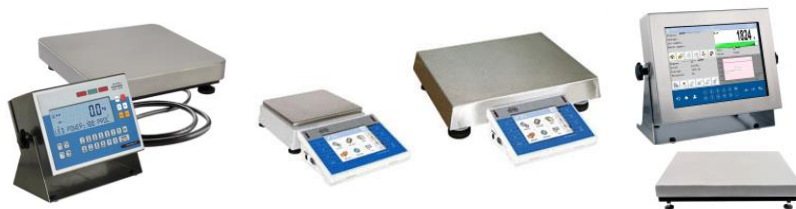
1. Due to the software update, some discrepancies may occur between this user manual's content and the actual state.
2. RADWAG does not bear responsibility for:
 - potential errors being a result of inappropriate use,
 - safety and potential data loss caused by the inappropriate use of

either software or computer, or lack of backup copy.

3. *Mind that in case of loss of purchased medium, **RADWAG** will not provide you with archive software versions. You will be required to use the latest **E2R SYSTEM** update.*

1.2. Compatible Weighing Instruments

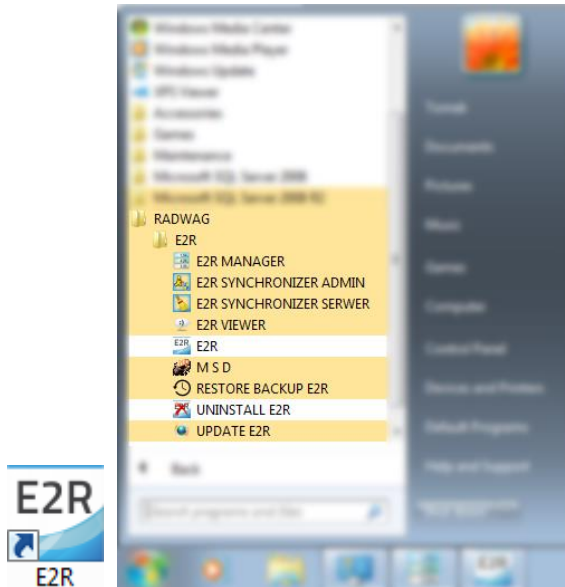
Due to the communication protocol, **E2R Weighings** software is compatible only with **RADWAG-manufactured** weighing instruments. Compatible weighing instruments series: **HY10**, **WLY**, **WPY** and **WPW**.



Prior software operation, set appropriate parameters on each of the weighing instruments in the network to ensure required measurement accuracy and correct cooperation. For detailed instruction on setting operating parameters refer to the user manual of a weighing instrument.

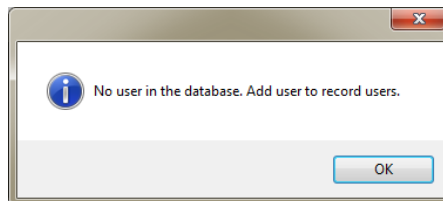
2. RUNNING THE SOFTWARE

The software can be run using shortcut on the desktop or using the menu: **START/PROGRAMS/RADWAG/E2R/E2R.**

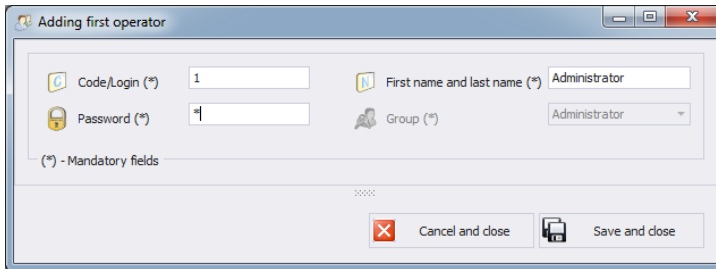


2.1. Adding the First Operator

When running the software for the first time, message informing on an empty Operator Database is displayed. Press **OK** button, the software will guide you through adding procedure.



Fill in the following fields: **Code/Login**, **Password**, **First name and last name**.



Caution:

The first added operator has administrator permissions level.

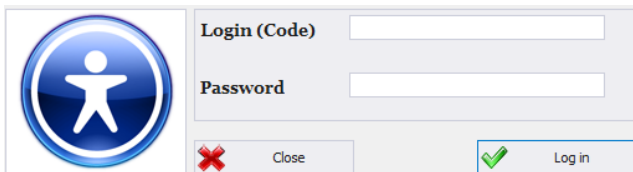
Fill in all mandatory fields; the code is also a login.

Press **Save and Close** button to confirm introduced modifications.

2.2. Logging in Procedure

Upon running the software, it is obligatory to log in.

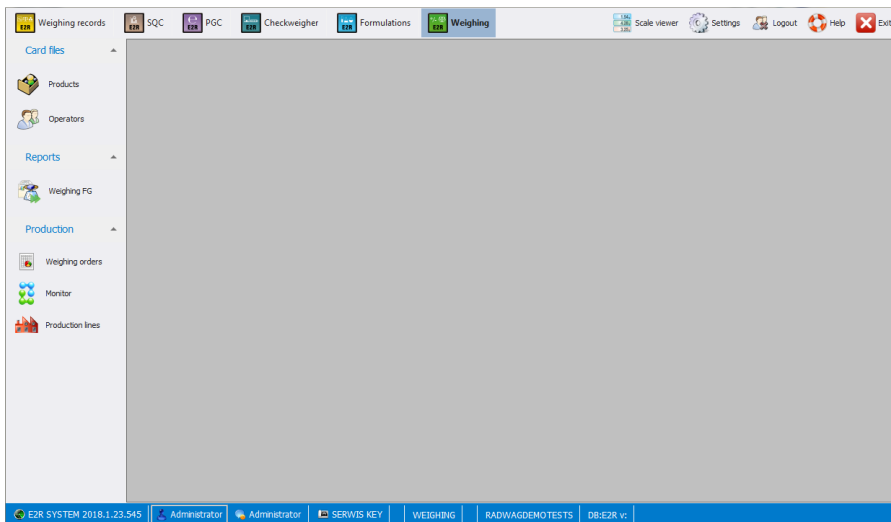
Enter **Login/Code** and **Password**.



Press **OK** button to confirm the entered values, Home Screen is displayed.

3. HOME SCREEN

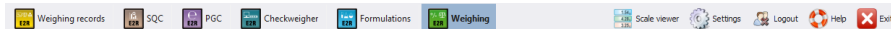
Home Screen of E2R WEIGHINGS software is displayed upon successfully completed logging in operation.



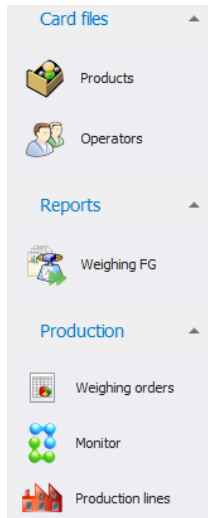
The home screen is divided into 4 sections:

- Top bar – System toolbar,
- Side bar – Navigation pane,
- Bottom bar – Status bar,
- Work pane.

System toolbar features exit button along with pictograms activating working modes, scales preview, parameters settings and logout operation.



Navigation pane comprises modules featuring buttons for activating software functions.



Status bar displays information on software version, logged in operator, operator's permissions, current working mode and license type.



Work pane has been designed to display windows triggered by Navigation Pane buttons. The windows provide all data and information.

3.1. Work Pane

Data displayed in the work pane is taken from the database. Measurements carried out using the system can be filtered and sorted.

Filter mechanism has been designed to allow searching particular information for specified columns. Sorting mechanism (grouping) features option of information summary for specified columns.

3.1.1. Data Sorting

Data displayed in a work pane of any available module can be freely sorted.

To group displayed data, first select particular column header, next drag it over area marked with red border and drop it.

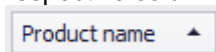
Drag a column header here to group by that column									
Product code	Product name	Description (Full Name)	EAN code	Nominal mass Qn	Unit	Tare	Min	Max	

Selected header is displayed as a button with a name. Press the button once to enforce list sorting in either ascending or descending order.

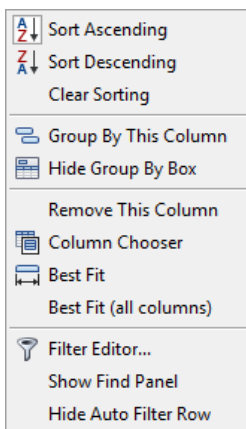
Product name ▾									
Product code	Product name ▴	Description (Full Name)	EAN code	Nominal mass Qn	Unit	Tare	Min	Max	

3.1.2. Data Filtering

In order to activate extra filtering options, press right top corner of respective column header.



Press right mouse button to operate the following context menu with sorting options.



Where:

Sort Ascending

Press to sort from A to Z

Sort Descending

Press to sort from Z to A

Clear Sorting

Press to delete grouping filter

Group By This Column

Press to group data by selected column

Hide Group By Box

Press to hide quick grouping option

Remove This Column

Press to delete selected column, the column is no longer displayed in a window

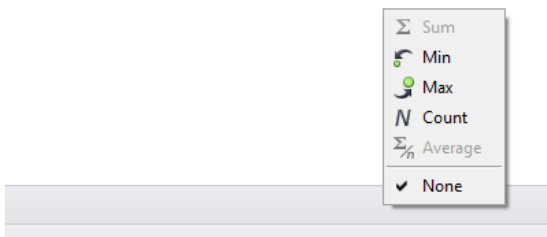
Column Chooser

Press to run column view editor

Best Fit

Press to modify column width to get optimal view

Best Fit (all columns)	Press to modify all columns widths to get optimal view
Filter Editor...	Advanced filter
Show Find Panel	One filtering field for all columns
Hide Auto Filter Row	Press to hide filter row option




Bottom work pane area features data filter allowing to generate 5 basic statistics for a particular column. To select statistics type, move the cursor over the bottom bar of a work pane and press right mouse button.

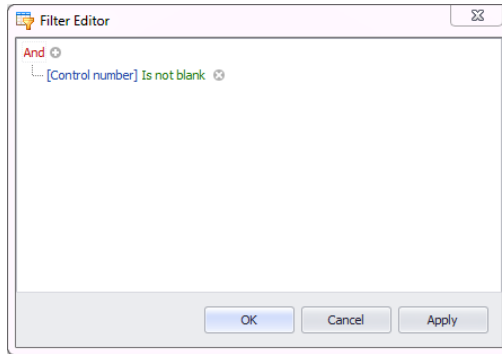
Basic statistics:

Sum	Press to display sum of all values of particular column
Min	Press to display minimum value of particular column
Max	Press to display maximum value of particular column
Count	Press to display quantity of rows of particular column
Mean	Press to display mean value of particular column

Depending on data type, there is a possibility of selecting all 5 options for a given column.

3.1.3. Filter Editor

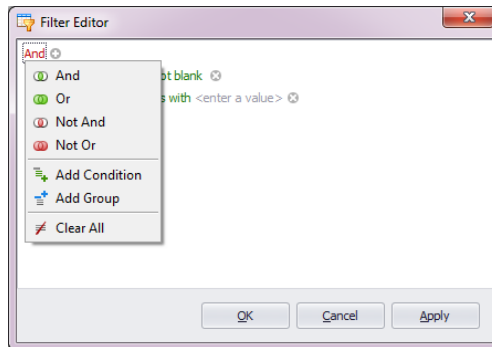
Upon setting a filter,  button is displayed in the bottom part of the work pane. Press it to open Filter Editor window. This enables database filtering.



By means of the editor you can set one or many filtering conditions, this provides detailed filtering. It is possible to generate reports on the filtered data.

Filter Editor window provides the following filtering criteria:

a) Filtering groups(And, Or, Not and, Not or):



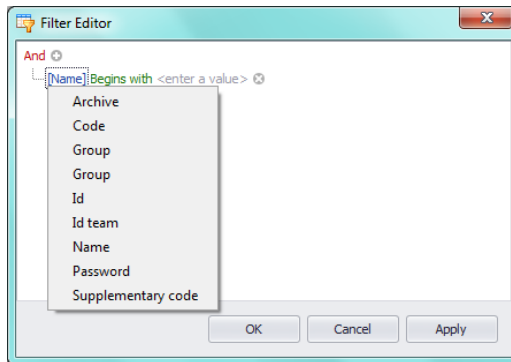
Where:

And	all filter criteria are met
Or	one of filter criteria is met
Not And	opposites of all filter criteria are met
Not Or	opposite of one filter criteria is met

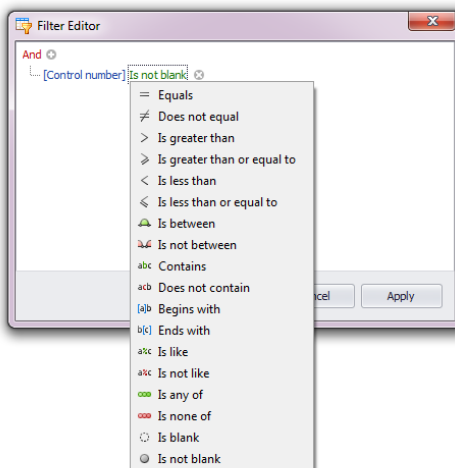
Add Condition	adding a new filter criteria
Add Group	adding a new group of filtering criteria
Clear All	deleting all filtering criteria

b) Filtering conditions – determining data to be filtered and methods of filtering:

- selecting a column to be filtered (in this case: Operator or Product)



- selecting filtering range and method



Where:

Equals	Displaying all records of the selected column which provide the very entered value
Does not equal	Displaying all records of the selected column which provide different than entered value (opposite to <Equal> filter)
Is greater than	Displaying all records of the selected column which provide values greater than the entered value,
Is greater than or equal to	Displaying all records of the selected column which provide values greater or equal to the entered value,
Is less than	Displaying all records of the selected column which provide values lower than the entered value,
Is less than or equal to	Displaying all records of the selected column which provide values lower or equal to the entered value,
Is between	Displaying all records of the selected column which provide values comprised within range specified by two given values
Is not between	Displaying all records of the selected column which provide values not comprised within range specified by two given values
Contains	Displaying all records of the selected column which include the given string of characters
Does not contain	Displaying all records of the selected column which do not include the given string of characters
Begins with	Displaying all records of the selected column which begin with the given string of characters
Ends with	Displaying all records of the selected column which end with the given string of characters
Is like	Displaying all records of the selected column which provide values of particular beginning and end, the filtering criterion has the following format „begin%end”
Is not like	Displaying all records of the selected column which do not provide values of particular beginning and end, the filtering criterion has the following format „begin%end”
Is blank	Displaying all records of the selected column which values are not determined (empty)
Is not blank	Displaying all records of the selected column which values are determined (not empty)
Is any of	Displaying all records of the selected column which provide values that are the same as one of the given patterns

Is none of	Displaying all records of the selected column which provide values different from all of the given patterns – opposite to <Is any of> filtering
-------------------	---


Here you can specify the exact criterion for filtering the selected column, e.g.: if you want to get a result concerning **<Onion>** select **<Product – Equal– value: Onion>**. In order to search for respective weighing only, press „+” button located next to the filtering group to add another criterion.

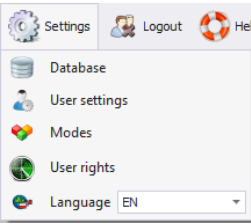
Having completed operating Filter Editor, when all necessary filters are set, press **Apply** button, the filter is activated.

The bottom bar displays selected filter type.




4. SOFTWARE SETTINGS

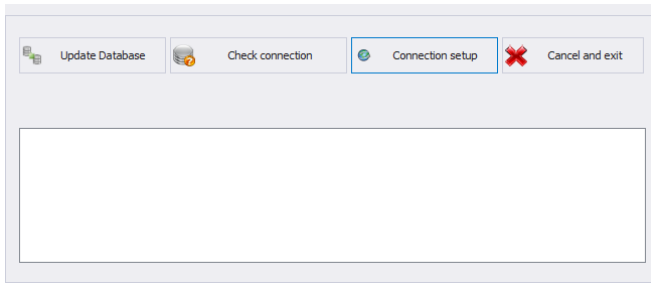
To run software settings, press  **Settings** button located on the system toolbar.



4.1. Database

Database function enables checking connection with the database, database relocation when the software is run on additional computer, providing backup copy and running server-stored copy.

To start database, press  **Database** button in **Settings** menu.




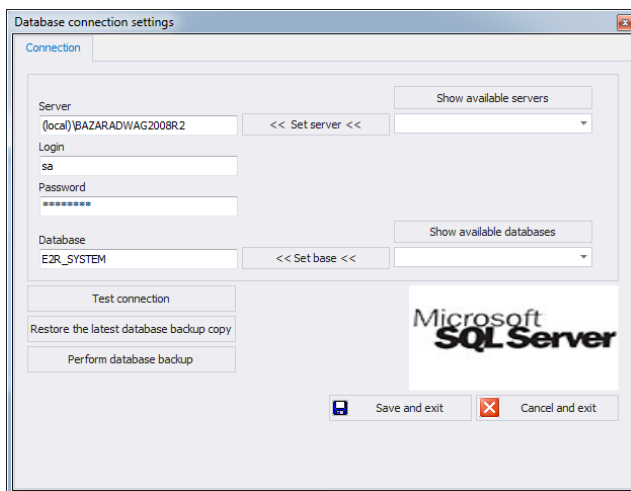
Database settings feature the following functions:

- | | |
|-------------------------|--|
| Update Database | Press to update database to which E2R software is connected. Use this function upon swapping from one database to another one. |
| Check connection | Press to check whether connection between E2R and database is correct. Function used when there is no connection between E2R and database. |
| Connection Setup | Press to establish connection with database when the database and E2R software are stored on separate computers. |

Press  **Cancel and exit** button to cancel introduced modifications.

4.1.1. Setting up Connection

Press  **Connection setup** button to activate window with database settings providing parameters for connection.



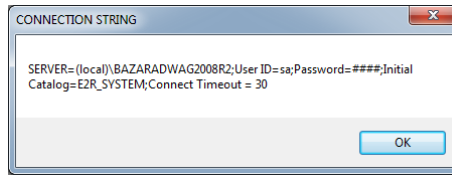
Where:

- Show available servers** Press to find available local Ethernet servers.
- Set server** Press to set server selected form list of available servers.
- Server (IP)** IP or name of server with running SQL server (add also server instance if declared).
Format: **SERVER\INSTANCE**.
By default: **(local)\bazaradwag2012**.
- Login** Operator's name, by default: **sa**.
- Password** Operator's password, by default: **Radwag99**.
The password is encrypted and is not visible for an operator.
- Show available databases** Press to search server and find available databases.
- Set base** Press to set database selected form list of available databases.
- Database** SQL database name, by default: **E2R**.

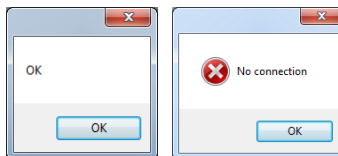
Caution!

When multiworkstation version has been installed, provide **Server (IP)** field with IP address or name of server with SQL database.

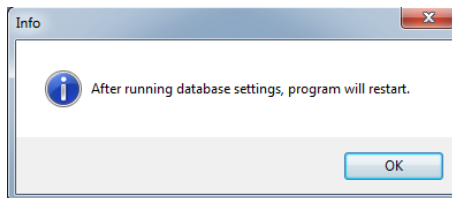
To check connection with database, press **Test connection** button.
Connection String window, featuring previously specified data, is displayed.



Press OK button to confirm, window informing on connection status is displayed.

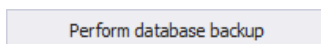


Close Database Settings window, a message informing you about restart is displayed. Press **OK** button to confirm.

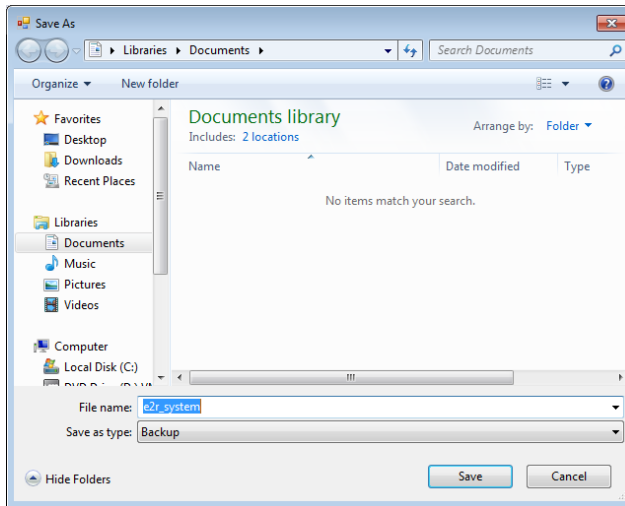


4.1.1.1. Database Backup

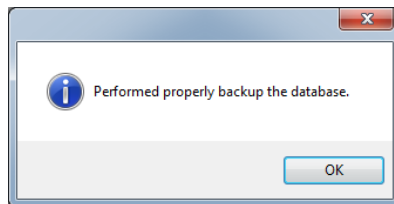
Complete backup copy of SQL database can be carried out by means of a computer with running SQL database engine. To provide backup copy, go to **Database Settings** window and press **Perform Database Backup** button.



Window allowing you to select destination folder for backup copy is displayed.



Message informing about completed backup copy creation is displayed.

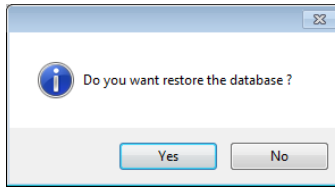


4.1.1.2. Restoring Database Copy

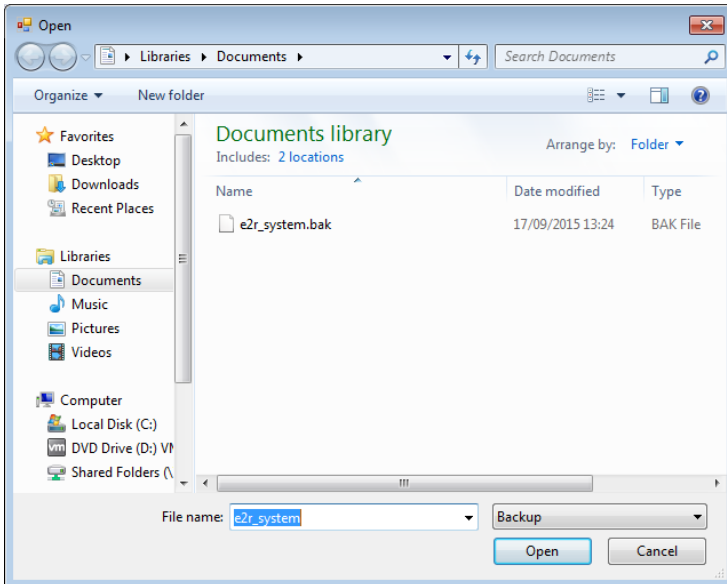
Restoring complete backup copy of SQL database can be carried out by means of a computer with running SQL database engine. To provide backup copy, go to **Database Settings** window and press **Restore the latest database backup copy** button.

Restore the latest database backup copy

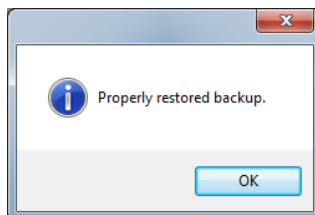
Respective request is displayed, press **Yes** button to confirm that you do want to restore the database.



Window allowing you to select destination folder for restored database is displayed.




Restoring the database takes from several seconds to tens of seconds which is conditioned by database size. Successfully completed operation is signalled by the following message:



Caution!

While restoring database, all current data is overwritten by the backup copy data.
If the system operates using HTY, WPY, WLY scales and 3Y balances, and if the data stored by them has not been removed then upon connection establishment, supplementary weighings and info is loaded from the devices to the system.

4.2. User Settings

To run User Settings press  **User settings** button in **Settings** menu.

User settings

General options

Logging options

Records settings

Company details

Company nam

Address

Time range for reports

Back interval [h]:

24

Transponder card reader settings

Select TC reader port

COM1

Test

Cancel and close

Save and close

Where:

General options tab:

Company Details
Address
Time interval for report [h]:
Select TC reader port

Company name displayed on PGC Reports.
Company address displayed on PGC Reports.
Default time interval for displaying windows containing date filter.
Parameters for port to which transponder card reader is connected.

Logging options tab:

User settings

General options

Logging options

Records settings

Automatic logout

Log out automatically after: 0 minutes of inactivity (0 disables function)

☐ Require operator password

Password change

☒ Enforce password change

Password expires after [days] 0

☐ Strong password

Automatic logging

☐ Automatic logging

Operator

Password

Cancel and close

Save and close

Where:

- Automatic logout

Option providing auto logout. The operation is performed after a defined period of time interval; time is given in minutes. Countdown starts at the moment of the latest noted activity. Bottom bar displays remaining time. 0 value disables auto logout function.
- Password change

Option ordering the operator to change the password.
- Password expires after [days]

Option specifying for how many days the password is to be valid.
- Strong password

6-character long password with at least one digit and one special sign is required.
- Automatic logging

Option providing automatically carried out logging operation.

Records settings tab:

The screenshot shows a 'User settings' dialog box with three tabs: 'General options', 'Logging options', and 'Records settings'. The 'Records settings' tab is active. It contains two sections. The first section, 'Uniqueness of products code', has two buttons: 'Required' and 'Not required'. The second section, 'Run multiple copies of the program', has a checkbox labeled 'Allow' which is currently unchecked. At the bottom right, there are two buttons: 'Close' (with a red 'X' icon) and 'Save' (with a floppy disk icon).


Uniqueness of products code

Enabling or disabling the need for providing unique products codes.

Run multiple copies of the program

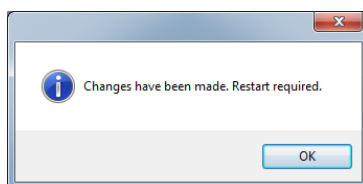
Enabling few software copies on one computer.

4.3. Modes

To swap between modes, go to **Settings** menu and press  **Modes** button. Window providing list of available modes is displayed, select respective mode and press **Set the Selected Mode** button.

The screenshot shows a software window for selecting a mode. At the top, there are two input fields: 'Active mode' containing 'WEIGHING RECORDS' and 'Mode key' which is empty. Below these is a section titled 'Available modes' containing a list box with the following items: 'CHECKWEIGHER', 'WEIGHING RECORDS', 'PGC', 'FORMULATIONS', 'SQC', and 'WEIGHING'. The 'WEIGHING' item is currently selected and highlighted with a blue background. Below the list box is a button labeled 'Set selected mode'. Underneath that is a section titled 'Enter the passkey' containing a text input field, a button labeled 'Load key from file', and a button labeled 'Assign key to the mode'. At the bottom right of the window is a 'Close' button with a red 'X' icon.

The following message is displayed, press OK button to confirm.



4.3.1. Mode Activation

Mode activation is required during first installation of the E2R software and to increase the quantity of weighing instruments connected to the software. In case of version for multiple workstations, the activation can be carried out on any computer connected to the system.

Active mode
WEIGHING
Mode key

Available modes

CHECKWEIGHER
WEIGHING RECORDS
PGC
FORMULATIONS
SQC
WEIGHING

Set selected mode

Enter the passkey

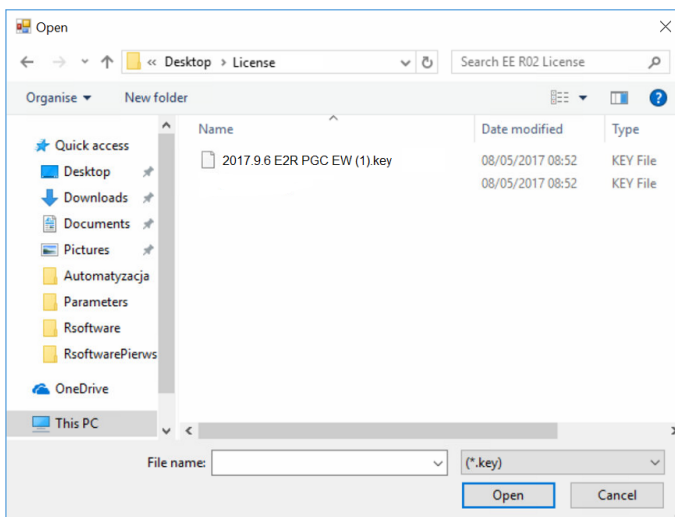
Assign key to the mode

Load key from file

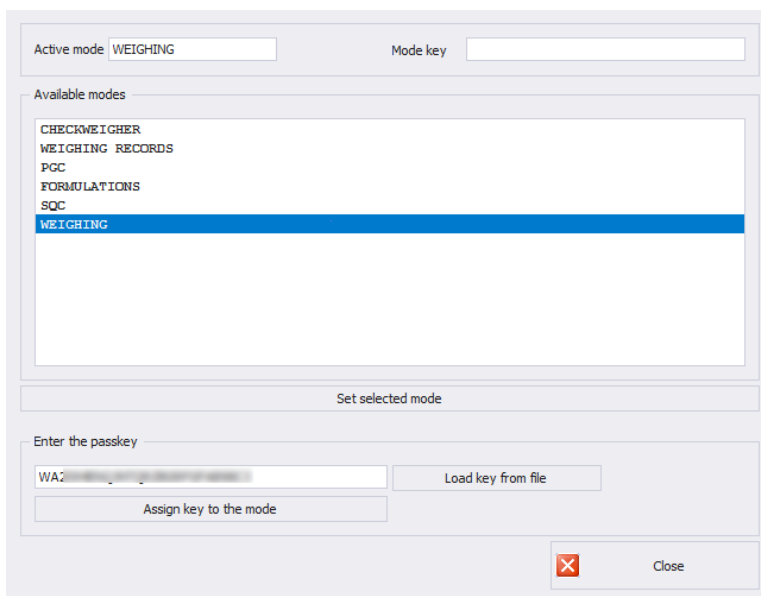
Close

Select mode from the list, in **Enter the passkey** field enter the passkey. Press **Assign Key to the Mode** button to activate selected mode. Another method for mode activation is to load key from file with *.key extension. The licence file is to be found on a CD comprising the software, or it can be acquired by an e-mail.

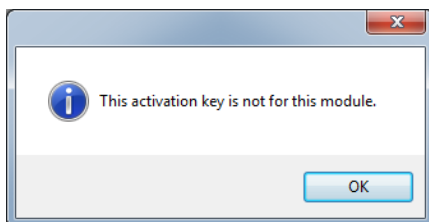
Press **Load Key From File** button, Windows OS dialog window opens, using it find directory storing file with the key. Select respective file and press **Open** button.



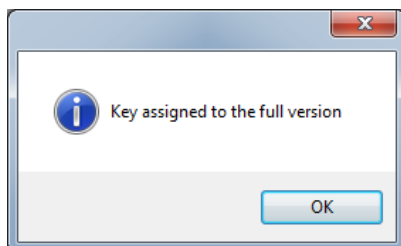
RADWAG licence is displayed in **Enter the Passkey** field.



Select particular mode, next press **Assign Key to the Mode** button.
If wrong mode has been selected, i.e. mode incompatible with the key, the following message is displayed:



In case of correct activation procedure, the following message is displayed:



Now, list of modes features the mode with assigned full software version licence.

Select a particular mode and press **Set the Selected Mode** button, now close the window.

4.4. Users Groups - Rights

This menu has been designed to enable/disable access of each permissions group to particular software functions.

Permissions for scales - indicators:


Scales - Indicators	Permissions group			
	Administrator	Advanced	Standard	Basic
WPW - PUEC41H	Administrator	Advanced Operator	Standard Operator	Standard Operator
WLY, WPY - PUE7.1	Administrator	Advanced Operator	Standard Operator	None
HY10	Administrator	Advanced Operator	Standard Operator	None
3Y,4Y	Administrator	Advanced Operator	Standard Operator	None

TMX - PUE5	Administrator	Advanced Operator	Standard Operator	Basic Operator
------------	---------------	-------------------	-------------------	----------------

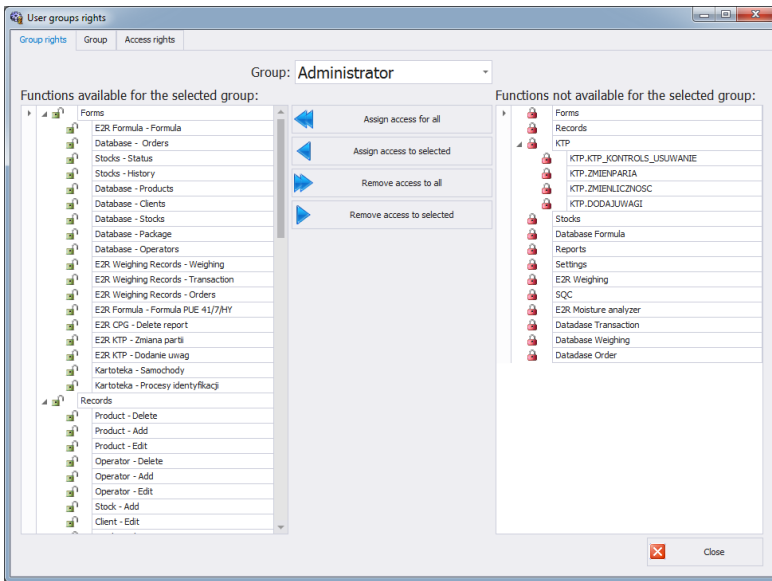
Caution!

It is not recommended to edit or delete already created permissions groups since they are strictly related to permissions groups on a computer and measuring devices.

If any permissions group is modified or deleted, the computer is restarted and the software restores the group with a default name. Groups names can be modified, to do it contact RADWAG.

To start authorization of operators and groups press  **USER GROUPS RIGHTS** button in **Settings/Service settings** menu.

Group Rights tab has been designed to allow setting permissions with regard to particular software modules.







Select group using **Group** menu, add or remove permission levels for the selected group.

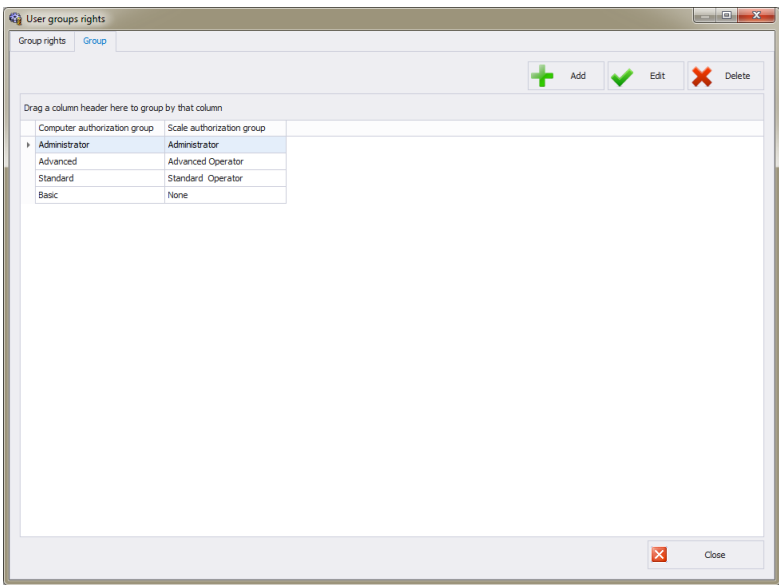
On the left there is a list of functions available for a given permissions group. In order to block access to a particular function, delete it.

On the right there is a list of functions unavailable for a given permissions group. It is possible to add a given function to the list on the left in order to make it accessible.

Buttons for disabling/enabling permissions:

-  Press to enable access to all functions (for a particular group).
-  Press to enable access to any function selected from the list on the right (for a particular group).
-  Press to block access to any function selected from the list on the left (for a particular group).
-  Press to block access to all functions (for a particular group).

Group provides list of defined groups of operators.



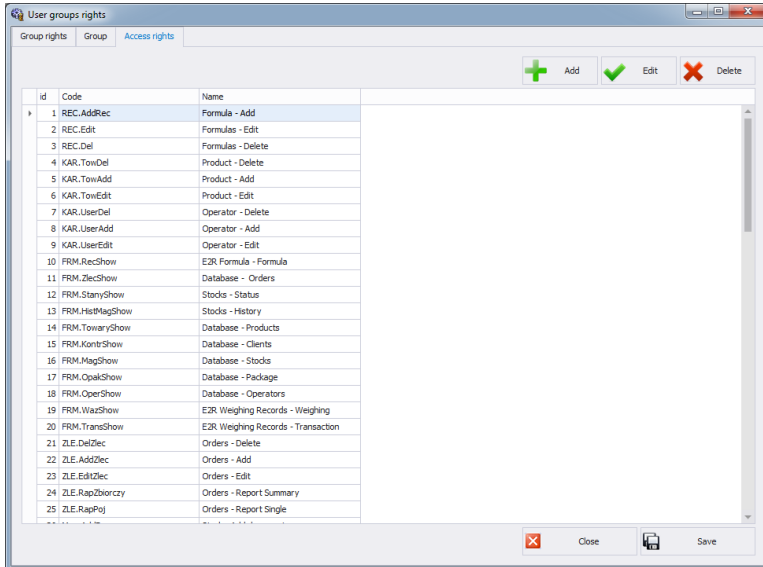
Where:

- Add** Press to add group of users
- Edit** Press to edit selected group of users
- Delete** Press to delete group of users

Save Press to save settings

When adding a new group of operators first name it, next assign it to one of scale permissions groups.

Access Rights tab stores all codes and functions names assigned to the codes, functions names are displayed on the list in Group rights tab.



4.5. Language

To swap between software languages go to Settings menu and use Language combo box providing you with list of available languages.



Where:

PL Polish
EN English


4.6. Update

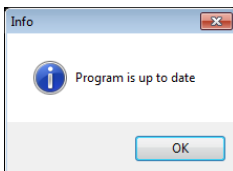
Use this option to either update your software version or to restore saved copy.

Caution!

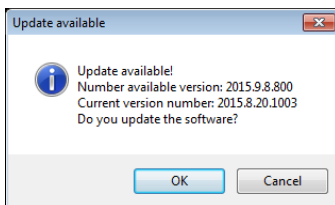
The update is available for customers with appropriate service package.

4.6.1. Check Updates

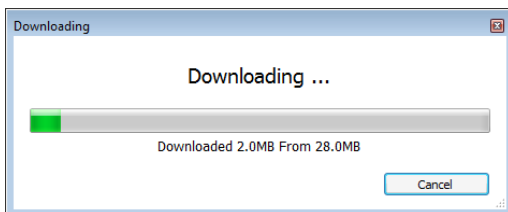
To check updates availability press  **Update check** button in **Settings** menu or use menu: **START/PROGRAMS/RADWAG/E2R/UPDATE E2R**. If you own the latest software version the following message is displayed:



If there are new software versions available the following message is displayed.



Press **OK** button to start updating your software version. Necessary files pack is downloaded from the server.



E2R, E2R Manager (scales viewer) and EP (parameters' editor) programs are archived prior to overwriting the old files with the newly downloaded ones. You can skip this step but remember that it will be impossible to restore previous software version. Upon completed archiving procedure, files are updated.

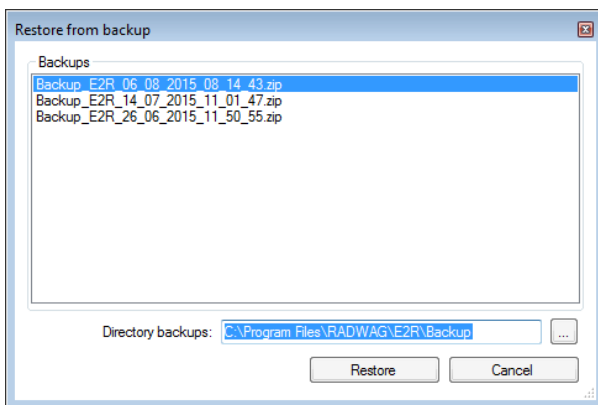
Caution!

Internet connection is necessary for update purposes. Prior an update, backup copy that can be restored is provided.

4.6.2. Restoring Previous Software Version

To restore previous software version press  **Restore old version** button in **Settings** menu or use menu:

START/PROGRAMS/RADWAG/E2R/BACKUP E2R. E2R backup is created prior update.




Caution!

Files with previous software versions are stored at a default location: **C:\ProgramFiles\Radwag\E2R\Backup**.

At each update, new backup is created but only three latest copies are saved. <Restore Old Version> option restores the software only, data stays unchanged. For instruction on how to provide backup and restore backup copy read 4.1 section of this manual.


4.7. Service Settings

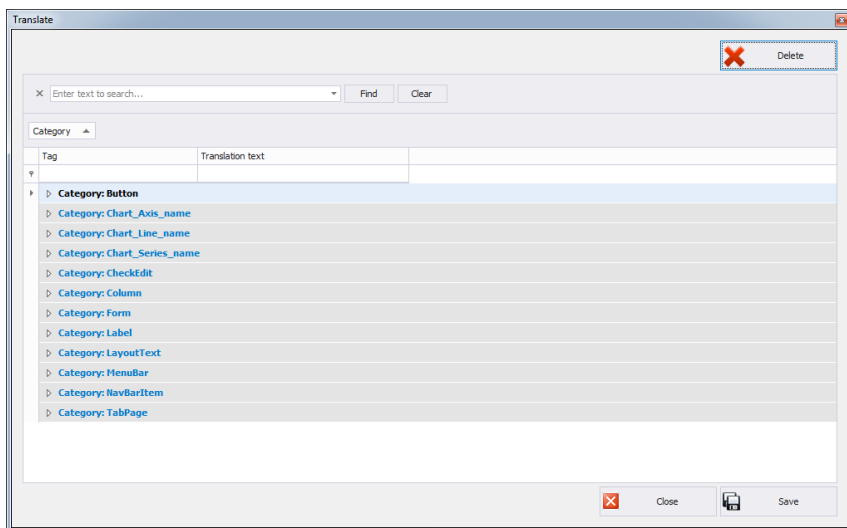
To run Service Settings press  **Service settings** button in **Settings** menu.

Caution:

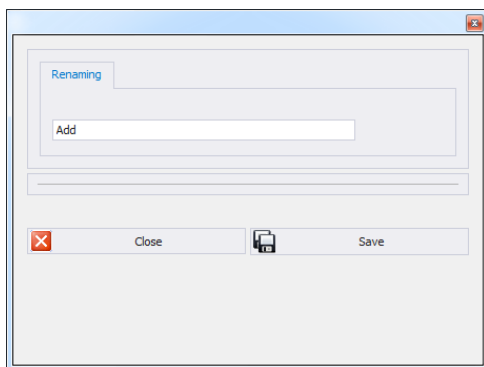
All service settings are available for RADWAG employees exclusively.

4.7.1. Translations

To run **Translation** press  **Translations** button in **Settings/Service Settings** menu.




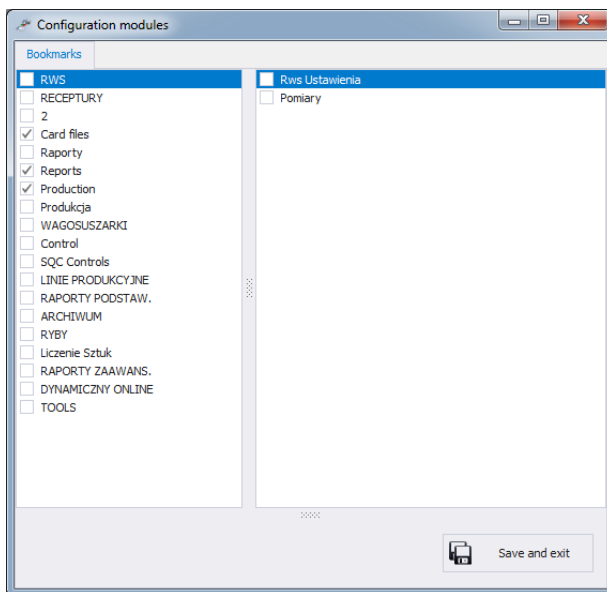
To rename particular word/caption/phrase, search **Translate** window using **Find** option and change its name in **Translation text** column. Another method for renaming word/caption/phrase requires pressing Ctrl+Alt buttons and pressing the name that is to be changed, both operations have to be performed simultaneously. Renaming window is displayed, enter new name.



4.7.2. Mode Setup

To carry out setup of currently operated mode go to

Settings/Configuration modules and select  **Konfiguracja modułów** option.



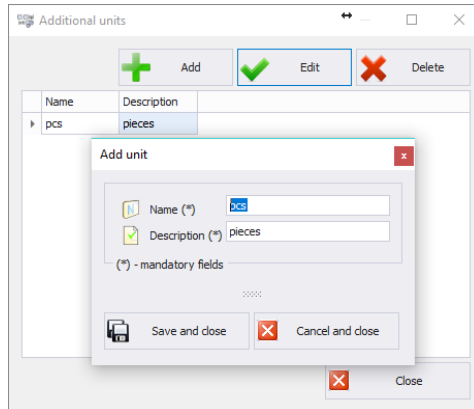
Mode setup is carried out by means of editing side toolbar pane. You can decide which modules and software functions are to be hidden and which visible.

Configuration modules window features two lists: one on the left comprises groups of functions, one on the right comprises functions.

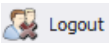
4.7.3. Additional Units

Additional units are assigned to a product (for description refer to section 5.1.1.) The value of the additional unit is the product of basic unit value (e.g. 1000g, 1kg) multiplied by the multiplier.


In order to add new additional unit, press **Add** button.

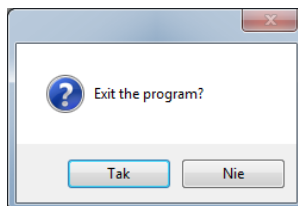


4.8. Logout Procedure

Press  button to log out.
Enter Login and Password and press **OK** button.

4.9. Exit Operation

To exit the software press  button, respective window requesting your confirmation is displayed.



Press **Yes** button to exit, press **No** button to return to home screen.

5. DATABASES

E2R Weighings software contains the following databases:

- Products,
- Operators,

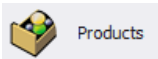
Databases can be edited using computer. Database editing using scales is disabled.

Upon adding new record or editing an existing one (e.g. product, warehouse, label, operator, universal variable) it will take max. 1 minute to update it on the weighing instrument.

5.1. Products

Products database enables managing database of products that are weighed using weighing instruments.

To run Products database, press **Products** button located on the side toolbar.



Products window:

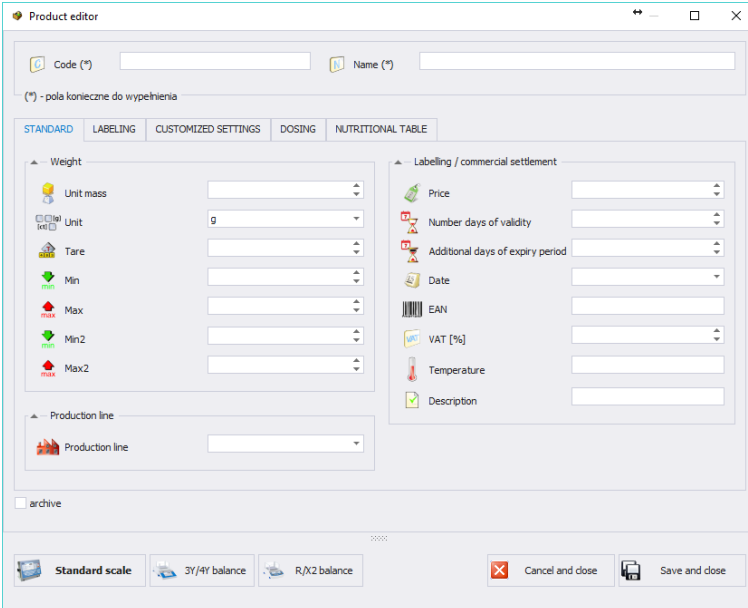
<div>Products</div> <div>Edit production linesReportRefreshClear filterDuplicateAddEditDelete</div> <div>Drag a column header here to group by that column</div> <table><thead><tr><th>Code</th><th>Name</th><th>Unit mass</th><th>Unit</th><th>Multiplier</th><th>Additional ...</th><th>Min</th><th>Max</th><th>Min 2</th><th>Max 2</th><th>Tare</th></tr></thead><tbody><tr><td>1</td><td>Product 1</td><td>100</td><td>g</td><td></td><td></td><td>90</td><td>110</td><td></td><td></td><td></td></tr><tr><td>2</td><td>Product 2</td><td>200</td><td>g</td><td></td><td></td><td>190</td><td>205</td><td></td><td></td><td></td></tr><tr><td>3</td><td>Product 3</td><td>300</td><td>g</td><td></td><td></td><td>295</td><td>310</td><td></td><td></td><td></td></tr><tr><td>4</td><td>Product 4</td><td>400</td><td>g</td><td></td><td></td><td>390</td><td>410</td><td></td><td></td><td></td></tr><tr><td>5</td><td>Product 5</td><td>500</td><td>g</td><td></td><td></td><td>490</td><td>510</td><td></td><td></td><td></td></tr></tbody></table>											Code	Name	Unit mass	Unit	Multiplier	Additional ...	Min	Max	Min 2	Max 2	Tare	1	Product 1	100	g			90	110				2	Product 2	200	g			190	205				3	Product 3	300	g			295	310				4	Product 4	400	g			390	410				5	Product 5	500	g			490	510			
Code	Name	Unit mass	Unit	Multiplier	Additional ...	Min	Max	Min 2	Max 2	Tare																																																																		
1	Product 1	100	g			90	110																																																																					
2	Product 2	200	g			190	205																																																																					
3	Product 3	300	g			295	310																																																																					
4	Product 4	400	g			390	410																																																																					
5	Product 5	500	g			490	510																																																																					

5.1.1. Adding/Editing Product

To add a new product to the database, press  button.

To edit a product in the database, press  button.

Product editor (window for adding and editing product records):



Where:

Code *

Product code

Name *

Product name

Archive

Marker set upon deletion of a product when weighings for the product still exist in a database. When ticked, it prevents products from being sent to weighing instruments.

Standard scale **

Press to modify window look. Fields for PUE 7, HY10 and PUE 5 are displayed exclusively.

R balance **

Press to modify window look. Fields for R balance are displayed exclusively.

3Y balance **

Press to modify window look. Fields for 3Y balance are displayed exclusively.

Standard tab:

Unit mass	Product unit mass
Unit	Product mass unit (by default: g).
Tare	Tare value for products with constant tare
Max	High weight threshold
Min	Low weight threshold
Max2	Additional high weight threshold
Min2	Additional low weight threshold
Price per unit [PLN]	Product unit price
Shelf-life in days	Product shelf-life in days
Additional shelf-life days	Additional days of shelf-life
Date	Field for entering date
EAN13	EAN code
VAT [%]	Value Added Tax
Temperature	Temperature box, printed on a label, option for TMX scale
Overview	Product overview
Production line ***	Production line to which particular product is assigned

(*) - mandatory fields required for editing product record.

(**) – button not intended to assign a given product to particular balance/scale type. Product displayed for all balances/scales.

(***) – product assigned to the production line is displayed on scales being part of the particular line exclusively.

Labelling tab:

Label field	Editing ingredients lines supported by WLY, WPY, HY10, TMX instruments.
WLY, WPY, HY10, TMX	
Label field	Editing ingredients supported by WPW scale.
WPW	
Label	Individual label name, assigned to a product and printed out upon each weighing
C label	Cumulative label name, assigned to a product

CC Label	Name of cumulative label for group of cumulative labels, assigned to a product
-----------------	--

Customized settings tab:

Multiplier	The number crucial for calculating the value of additional unit.
Additional unit	Any unit (for detailed description of how to add an additional unit refer to section 4.7.3).
Category *	Category to which product is assigned. To edit category, press Edit category button (this applies to WLY, WPY and HY10 weighing instruments).
Basic image	Small graphic displayed near product name in the weighing instrument database.
Extra image	Large graphic – can be displayed on the weighing instrument home screen (this applies to WLY, WPY and HY10 weighing instruments).

(*) - **Categories** are used to divide products database into folders (categories) in order to optimize grouping of individual records. For detailed description on how to enable products categories refer to the user manual of a weighing instrument.

Dosing tab:

Dosing output number*	Enables setting outputs for dosing (precise dosing for 2-threshold dosing).
Fast dosing output number*	Enables setting outputs for fast dosing during 2-threshold dosing.
Threshold [%]**	Threshold for switching the outputs during 2-threshold dosing.
Correction	Numerical value of dosing correction.
Automatic dosing	Outputs are enabled upon selecting an ingredient.
Save formulation modification	The value of dosing correction and automatic dosing option is modified in formulations containing currently edited product.
Mass for fast dosing***	Mass of ingredient for fast dosing (in case of 2-threshold dosing).

(*) – The outputs are used in dosing and formulations modes.

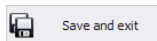
(**) – The threshold is used in formulations mode.

(***) – Mass for fast dosing is used in dosing mode.

Nutrition facts tab:

The tab contains basic and additional nutrition facts.

Upon entering/editing all respective product data, press

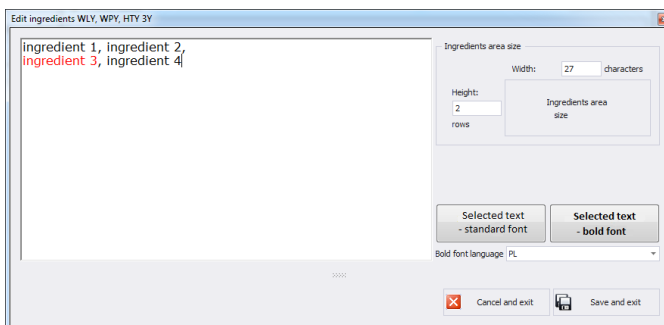


5.1.2. Editing Ingredients

To add and edit ingredients press



button.

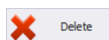


If any of the ingredients is an allergen and it is to be marked out (bold or underlined font) then select it and press **Selected text – distinguished font**.

<Ingredients field size> box features data necessary for label preparation carried out by means of <Label Editor>. While adding ingredients section to a label, it is necessary to specify width and number of columns that is to be comprised within the section. Depending on selected font, the selected ingredients shall be either bold or underlined.

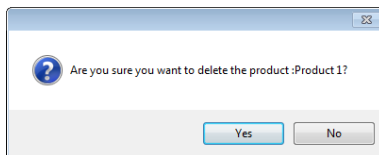
5.1.3. Deleting Products

To delete a particular product from a database press

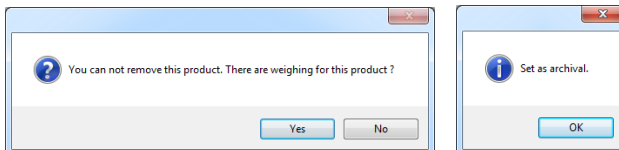


button.

The following message is displayed, press Yes button to confirm deletion of a selected product.



If a database stores weighing records of the selected product, then it cannot be erased. In such case the record is attributed as an archive one.



Archival products are not displayed on a balance.

5.1.4. Product Searching and Filtering

Each product registered in the system can be found by name, number etc., i.e. by an appropriate string of characters entered in a given column.

	Code	Name	Mass	Unit	Max	Min	Tare	Price	Archive
♀									

Upon entering product data in the selected column, the list of all products meeting the conditions is displayed below.

To delete filter for products display, press button.

Caution!

Information displayed in Products window can be sorted and filtered with use of additional filtering options. For detailed information refer to sections 3.1.2 and 3.1.3 of this user manual).

5.1.5. Products Reports

To generate report featuring list of products go to Products window and press button. The report may be printed on a printer, sent via e-mail or saved to file.



In the window containing generated report preview, quick access bar is displayed.



The bar contains the following basic functions:



press to activate quick printout on a default printer




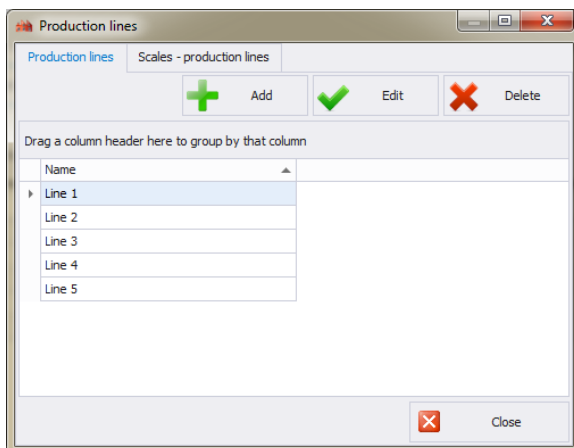
press to save and reopen a printout in a format dedicated for such type of reports



press to export printout to the following document formats: PDF, HTML, MHT, RTF, Excel, CSV, Text, Image.

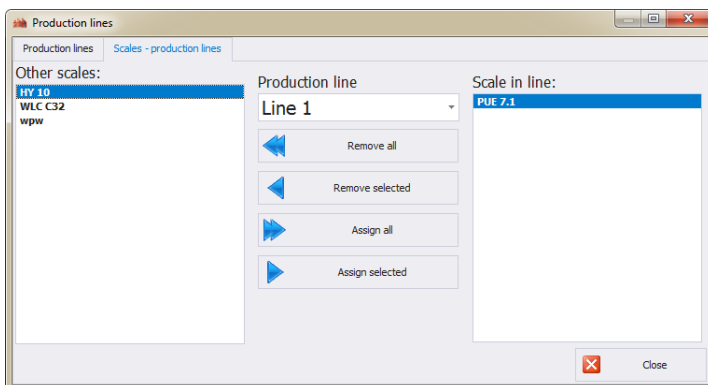
5.1.6. Production Line Editor

PRODUCTION LINE EDITOR enables managing the database of production lines. Press  **Edit production lines** button to display production lines window.



To add a new production line go to **Production lines** tab and press **Add** button and enter line name.

Select **Scales - production lines** tab.



Using Production line combo box, select newly added production line name. To assign selected scales to the newly added production line use centrally located arrow buttons.



Press to delete all scales form the production line

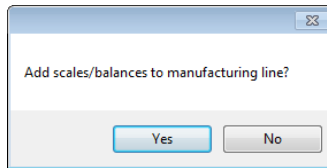
Press to delete one selected scale form the production line

Press to assign all scales to the production line



Press to assign one selected scale to the production line

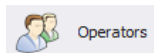
Press **Yes** button to save modifications.



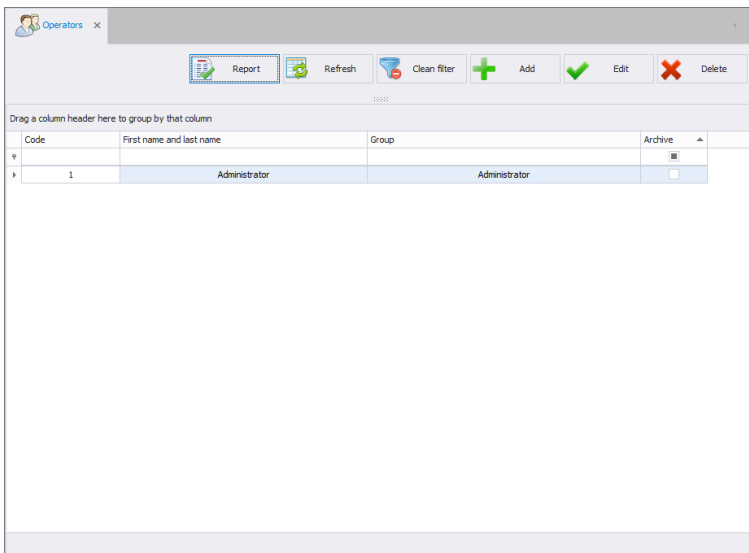
5.2. Operators

Operators database enables managing database of software operators. All database-recorded operators can log in to the software and to the scales.

To run Operators module, press **Operators** button located on the side toolbar.

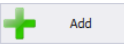
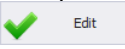


Operators window:

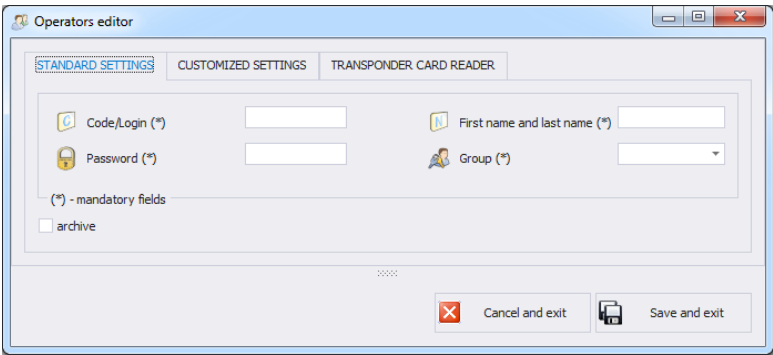


Operators window allows you to add, delete or modify operator’s accounts along with permissions attributed.

5.2.1. Adding/Editing Operator

To add a new operator to the database, press  button.
To edit a particular operator, press  button.

Operator editor (window for adding and editing operators records):



Standard settings tab:

- | | |
|-----------------------------------|--|
| Code/Login * | Operator’s code, login |
| Password * | Operator’s password (for detailed information on password-related options refer to section 4.2) |
| First Name and Last Name * | Operator’s name and surname |
| Group * | Permissions group specifying permissions for particular software options. There are four basic groups: Administrator, Advanced, Standard and Basic. To set permissions for particular group go to <i>Settings</i> module (section 4.4) |
| Archive | This marker, when ticked, makes particular operator inactive |
- (*) – mandatory fields

Customized settings tab:

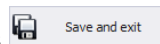
- | | |
|---------------------|--|
| Traceability | Traceability process to which a particular operator is assigned. |
|---------------------|--|

Product	Product to which a particular operator is assigned.
Shift	Shift to which a particular operator is assigned.
Language 3Y, R	Language for 3Y, R balance operation, set upon successfully carried out logging in operation.
MAX deviation [%]	MAX threshold deviation in percent. Enables increasing or decreasing the threshold for particular operator.
MIN deviation [%]	MIN threshold deviation in percent. Enables increasing or decreasing the threshold for particular operator.

Transporter Card Reader tab:

Card reader settings	Window with transponder card reader settings (refer to section 4.2).
Card code	Card number assigned to an operator.

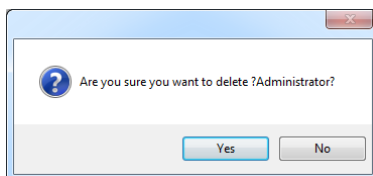
Upon entering/editing all respective operator data, press button to save the settings.



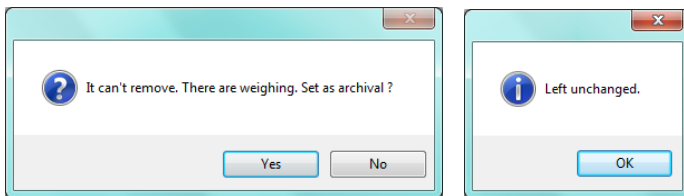
5.2.2. Deleting Operator

To delete an operator from a database, press button.

The following message is displayed, press Yes button to confirm deletion of selected operator.



If a database stores weighings carried out by selected operator, then the operator cannot be deleted.



Prior deleting a particular operator, it is necessary to delete all weighings carried out by the operator first.

Caution!

It is not possible to generate report on weighings that have been removed.

Alternative option is to use archive marker which when ticked prevents operator from being displayed by scales simultaneously allowing to generate reports on all performed weighings.

5.2.3. Product Searching and Filtering

Each operator registered in the system can be found by name, number etc., i.e. by an appropriate string of characters entered in a given column.

	Code	First name and last name	Group	Archive ▲
♀				<input type="checkbox"/>

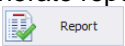
Upon entering operator data in the selected column, the list of all operators that meet the conditions is displayed below.

To delete a filter for operators display, press  button.

Caution!

Information displayed in Operators window can be sorted and filtered with use of additional filtering options. For detailed information refer to sections 3.1.2 and 3.1.3 of this user manual).

5.2.4. Operators Reports

To generate report featuring list of operators go to Operators window and press  button. The report may be printed on a printer, sent via e-mail or saved to file.



In the window containing generated report preview, a quick access bar is displayed.



The bar contains the following basic functions:



press to activate printout on a default printer



press to save and reopen a printout in a format dedicated for such type of reports



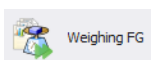
press to export printout to the following document formats: PDF, HTML, MHT, RTF, Excel, CSV, Text, Image.

6. REPORTS

REPORTS tab enables accessing all measurements recorded using scales operating in E2R Weighings system.

6.1. Weighing FG

To run weighing FG press <Weighing FG> button located on the side toolbar.



Weighing FG window:

Time range for weighing

From: To:

Refresh Clear filter Export to CSV Table report Close

Drag a column header here to group by that column

Date and time	Operator name	Product	Order symbol	Scale name	Mass [g]	Min [g]	Max [g]	Weighing OK
4/24/2018 3:49:55 PM	Administrator	Product 1	Order 1	PUE 7.1	105	90	110	✓
4/24/2018 3:49:54 PM	Administrator	Product 1	Order 1	PUE 7.1	105	90	110	✓
4/24/2018 3:49:54 PM	Administrator	Product 1	Order 1	PUE 7.1	105	90	110	✓
4/24/2018 3:49:53 PM	Administrator	Product 1	Order 1	PUE 7.1	105	90	110	✓
4/24/2018 3:49:53 PM	Administrator	Product 1	Order 1	PUE 7.1	105	90	110	✓
4/24/2018 3:49:48 PM	Administrator	Product 1	Order 1	PUE 7.1	112.5	90	110	✗
4/24/2018 3:49:48 PM	Administrator	Product 1	Order 1	PUE 7.1	112	90	110	✗
4/24/2018 3:49:44 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:43 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:43 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:42 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:42 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:41 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:40 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓
4/24/2018 3:49:40 PM	Administrator	Product 1	Order 1	PUE 7.1	109.5	90	110	✓

90 SUMA=...

✓ [Date and time] >= '4/20/2018 6:46:51 PM' And [Date and time] < '4/26/2018 6:46:51 PM' Edit Filter

E2R Weighings enables displaying all weighings collected in the SQL database. It is possible to create reports containing collected weighings (table report).


Each weighing can be sorted in few columns, e.g. by the date of weighing and formulation name for which weighings were carried out. The grouping of sorting conditions depends on the order of adding. Time interval including the report is to be set in the upper part of the window.

Once you have determined all the desired grouping conditions and pressed

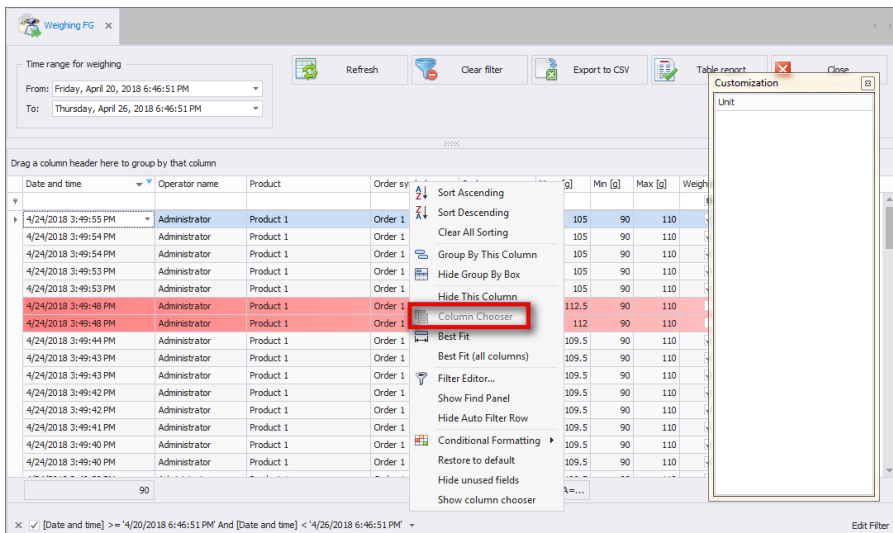


Table report

button, a report is generated as PDF file. It can be saved or printed out on a local printer connected to the computer with **E2R** software.

Upon pressing  Export to CSV button file with .csv extension is generated. You can open it using Excel program.

Weighing FG window enables combining columns using **Column chooser** tool.



To select the tool, press right mouse button on the columns names bar to open the pop up menu.

Customization window is opened. Customization window enables adding or deleting selected columns. 'Drag and drop' the column to add or delete it.

Caution!

To save all modifications, close Weighing FG window while pressing Ctrl key simultaneously. This applies to all windows.

7. PRODUCTION

The module features three main functions:

- collecting, managing and reporting weighings carried out using scales,
- creating, monitoring and reporting weighing orders,
- managing production line orders.

Operators carry out weighing when order, created using computer, is active. Upon activation of the order on the scale the following parameters are set: product, MIN threshold, and MAX threshold and batch. Scales can be grouped into production lines. You can perform different orders on each of the production lines.

7.1. Weighing Orders

Weighing orders module enables creating weighing orders and presenting orders already carried out using scales. One order can contain few subcontracts. The subcontract is created on each production line order start.

You can group completed orders by any column. To do that, drag over the order to the quick sorting bar(for detailed instructions refer to section 3.1).

Weighing orders window:

Weighing orders

Time range for orders

From: Sunday, April 22, 2018 6:54:11 PM

To: Thursday, April 26, 2018 6:54:11 PM

Refresh

Clear filter

Stop order

Selected

Older than 60 days

Add

Edit

Delete

Drag a column header here to group by that column

Start date	End date	Order symbol	Product name	Issued by	Description
4/23/2018 8:37:36 PM		Order 1	Product 1		

Drag a column header here to group by that column

Order symbol	Issued by	Product name	Start date	End date	Description	Time	Shift	Production line	Pieces	Total weight	Mean
Order 1-POD1		Product 1	4/24/2018 3:45:21 PM	4/24/2018 3:48:09 PM		168	1	Line 1	49	5032.000	102.
Order 1-POD2		Product 1	4/24/2018 3:48:42 PM	4/24/2018 3:50:24 PM		102	1	Line 1	41	4311.500	105.

Drag a column header here to group by that column

Scale name	Production line	Product	Issued by	Pieces	Mean	Standard deviation	Max weighing	Min weighing	Real start date	Real stop date
PUE 7.1	Line 1	Produ...	Administrator	41	105.1585	5.255282	114.5	97.5	4/24/2018 3:48:48 PM	4/24/2018 3:49:55 P

7.1.1. Adding/Editing Weighing Orders

To add a new order to the database press

Add

 button.

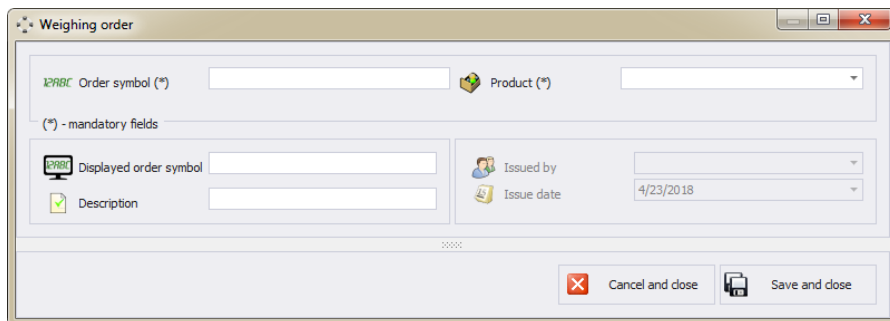
To edit a new order in the database press

Edit

 button.

52


Weighing orders adding/editing window:



Where:

Order symbol *	Symbol of an order
Product *	Product to be weighed
Displayed order symbol	Order symbol to be seen when issuing an order (by default: the same symbol as the order symbol)
Description	Short production order description
Issued by	Name of an operator who issued an order
Issue date	Date of order issuing

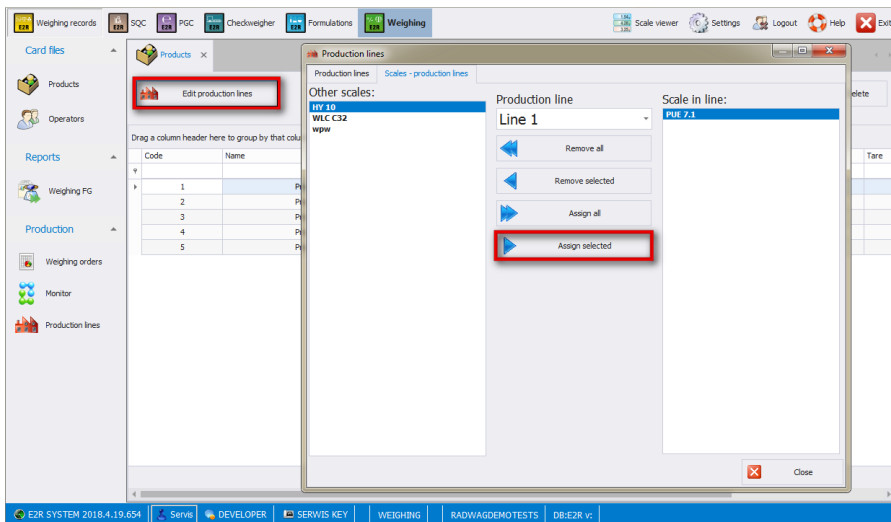
Upon entering/editing all respective Order data, press **<Save and close>** button.

In Order editing window there is  **Stop order** button. Press it to stop issuing an order in the system (it will not be possible to issue an order on any production line).

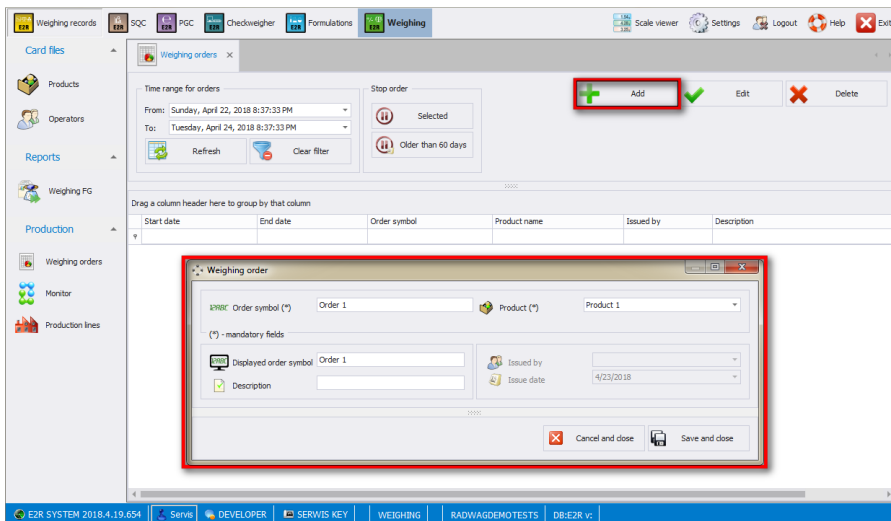
7.1.2. Execution of the Weighings Order on the Production Line

Procedure:

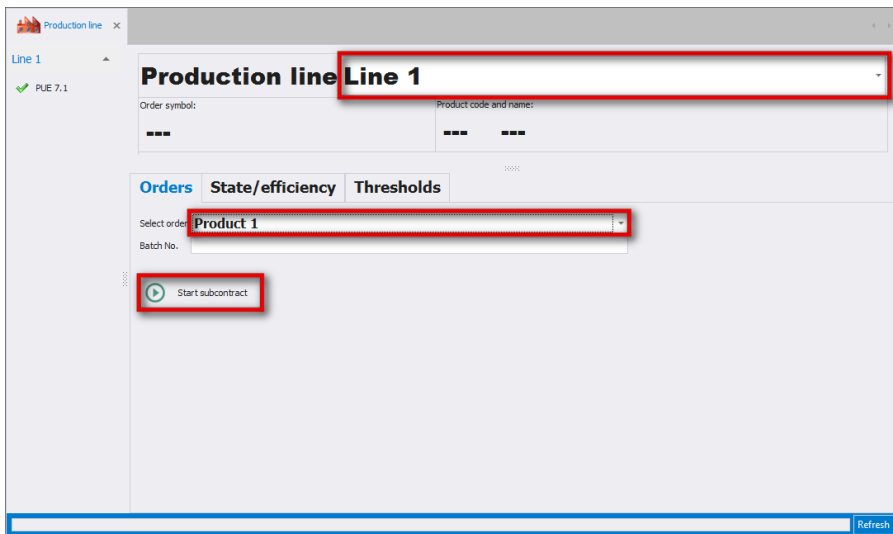
1. In **Products** database add production lines and assign scales to them (for detailed information on editing production lines refer to section 5.1.6).



2. Add an order in **Production/Weighing orders** tab (for detailed information refer to section 7.1).



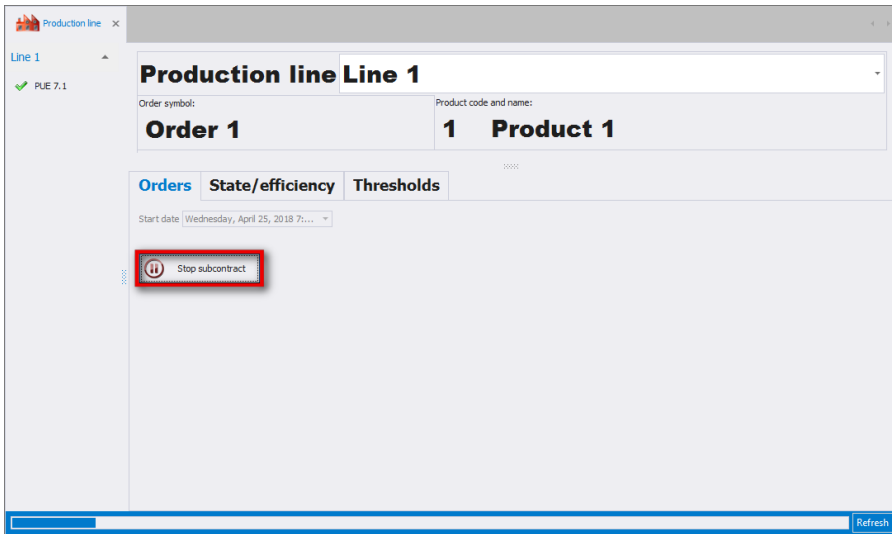
3. In **Production/Production lines/Orders** set a production line, select an order and press <Start subcontract> button.




4. The following message is displayed. The product is selected and the thresholds set.

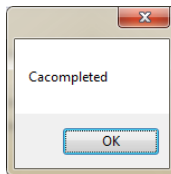


5. Upon carrying out all weighings, press <Stop subcontract> button. Product on the scale is deactivated.

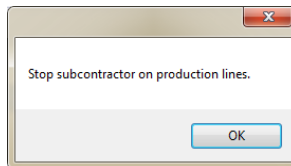



7.1.3. Weighing Order Stop

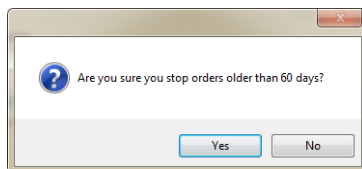
Press  Selected button to stop an order. The following message is displayed:



Stopped order cannot be selected in the production line window to start a subcontract. It is impossible to stop an order containing subcontract on the production line. In such case the following message is displayed:



Press  Older than 60 days button to stop all orders which were added at least 60 days ago. The following message is displayed:



7.1.4. Order Searching and Filtering

Basic filter in **<Orders>** table is time range of order execution.

Upon selecting a specific time range, orders matching the conditions are displayed in the workplace.

If respective orders are not displayed - select longer period.


Each order registered by the system can be searched by entered phrase suitable for each column.

	Start date	End date	Order symbol	Product name	Issued by	Description
▼						

Orders table in **<Weighing orders>** module contains the following columns:

Start date	Date of issuing production order
Order symbol	Symbol of an order
Product name	Name of a product for which an order is issued
Issued by	Name of an operator issuing a production order
End date	Date of order stop
Description	Detailed order description

Upon entering order data in the selected column, the list of all orders that meet the conditions is displayed below.

Press  button to display all records on the list. All filters are deleted.

Caution:

*Additional sorting functions in **<Weighing orders>** menu are described in sections .3.1.1 and 3.1.2 of this user manual.*

7.1.5. Order Details

You can preview order details by pressing „+” button located next to a given item in „**Order name**” tab. When there is no „+” button, issuing an order is not initiated. **<Subcontracts>** table containing order details features the following columns:

Order symbol	Symbol of the order
Issued by	Name of an operator issuing a subcontract
Product name	Name of weighed product
Start date	Subcontract start date
End date	Date of subcontract end
Time	Time range for subcontracts in [s]
Pieces	Quantity of all weighings in a subcontract
Real start date	Date of first weighing in a subcontract
Real stop date	Date of last weighing in a subcontract
Real duration	Time measured from the first to the last weighing in [s]
Quantity OK	Quantity of weighings between MIN and MAX thresholds


7.1.6. Subcontract details

You can preview subcontract details by pressing „+” button located next to a given item in „**Subcontract symbol**” tab. When there is no „+” button, no weighing was carried out for a subcontract. **<Subcontracts Operators>** table contains subcontract details on an employee that carried out given subcontract, it features the following columns:

Scale name	Name of a workstation
Issued by	Name of an operator carrying out weighing procedure

Pieces	Quantity of all weighings carried out by an operator in a subcontract
Real start date	Date of the first weighing in a subcontract carried out by an operator
Real end date	Date of the last weighing in a subcontract carried out by an operator
Real duration	Time measured from the first to the last weighing carried out by an operator; presented in [s]
Duration	Subcontract duration in [s]
Pieces OK	Quantity of weighings, carried out by an operator, between MIN and MAX thresholds

7.1.7. Orders Update

Press  Refresh button to refresh records displayed in **<Weighing orders>** module.

7.2. Monitor

Monitor window enables previewing current and previous data on operation time range.

The data is presented in the table that can be freely configured by dragging respective fields over certain areas.
You can also use **Field List** tool.

Monitor

Refresh Export to XLS Table report

Working time report Working time monitor Monitor

Time range for subcontract
From: Tuesday, April 24, 2018 8:24:03 PM To: Thursday, April 26, 2018 8:24:03 PM

Operator code Product code

Total mass [g] Quantity [pcs] Time interval between th... Effective productivity [pcs/h]

Order Product Operator name Quantity [pcs] Time interval between th... Effective productivity [pcs/h]

Order	Product	Operator name	Quantity [pcs]	Time interval between th...	Effective productivity [pcs/h]
Order 1-POD1	Product 1	Administrator	5032.000	49	1.0
Order 1-POD2	Product 1	Administrator	4311.500	41	0.0
Order 2-POD1	Product 2	Administrator	1407.000	8	1.0
Grand Total			10750.500	98	2.0

PivotGrid Field List

Drag Items to the PivotGrid

Effective productivity [pcs/h]

Effective time [min]

Efficiency plan

Start order

Add To Data Area

To select the tool, press right mouse button on the columns names bar to open the popup menu.

PivotGrid Field List window is displayed. This window enables adding or deleting selected columns in a given report. To add or delete a column use 'Drag and drop' option or select respective area and press **Add to** button.

Caution!

To save all modifications, close Monitor window while pressing Ctrl key simultaneously. This applies to all windows.

7.2.1. Working Time Report

Working time report tab contains data on carried out subcontracts.

Monitor

Refresh

Export to XLS

Table report

Working time report

Working time monitor

Monitor

Time range for subcontract

From: Tuesday, April 24, 2018 8:24:03 PM

To: Thursday, April 26, 2018 8:24:03 PM


Operator code

Product code

Total mass [g]	Quantity [pcs]	Time interval bet...	Effective producti...	Drop Column Fields Here			
Grand Total							
Order	Product	Operator name	Total mass [g]	Quantity [pcs]	Time interval between th...	Effective productivity [pcs/h]	
Order 1-POD1	Product 1	Administrator	5032.000	49	1.0	2940	
Order 1-POD2	Product 1	Administrator	4311.500	41	0.0	0	
Order 2-POD1	Product 2	Administrator	1407.000	8	1.0	480	
Grand Total			10750.500	98	2.0	2940	

Time interval including the report is to be set in the upper part of the window. Table containing details on previously carried out subcontracts features the following columns:

Order	Subcontract symbol
Product	Name of weighed product
Operator name	Operator name
Total mass	Total mass of all weighings carried out by an operator for a given subcontract
Quantity	Quantity of all weighings carried out by an operator in a subcontract
Time interval between the first and the last weighing of suborder [min]	Operation time given in minutes
Effective productivity [pcs/h]	The forecast quantity of weighings carried out within one hour by the operator
Effective time [min]	Operator's working time in minutes, excluding downtime (if in given minute the operator does not carry out any weighing, it is not counted)
Effective productivity [pcs/h]	The forecast quantity of weighings carried out within one hour with regard to effective time.

Press  **Table report** button to generate report as PDF file. It can be saved or printed out on a printer connected to the computer with **E2R Weighings** software installed on it.

7.2.2. Working Time Monitor

Working time monitor tab contains data on currently carried out subcontracts. The main purpose of this tab is to present data on an operator: working time in a subcontract and quantity of weighed pieces.

If there is no order currently performed, the tab is empty.

Monitor

Refresh

Export to XLS

Table report

Working time report

Working time monitor

Monitor

Scale

Operator code

Time [min]

Quantity[pcs]

Drop Column Fields Here

Grand Total

Time [min]

Quantity[pcs]

Efficiency [pcs/h]

Line

Operator name

Product

Time [min]

Quantity[pcs]

205

Line 1

Administrator

Product 3

6


21

Table containing details on carried out subcontracts features the following columns:

Efficiency [pcs/h]	The forecast quantity of weighings carried out within one hour by the operator
Line	Production line name
Operator name	Operator name
Product	Name of weighed product
Time [min]	Operation time given in minutes, counted from the moment of subcontract start

Quantity [pcs]

Quantity of all weighings carried out by an operator from the moment of subcontract start

Press  **Table report** button to generate report as a PDF file. It can be saved or printed out on a printer connected to the computer with **E2R Weighings** software installed on it.

7.2.3. Monitor

Monitor tab contains the same data as **Working time monitor** as well as the following data: efficiency, mean, standard deviation.

If there is no order currently performed, the tab is empty.

Monitor

Refresh

Export to XLS

Table report

Working time report

Working time monitor

Monitor

Operator code

Quantity [pcs]

Time [min]

Efficiency [p...

Sum of mass...

Mean [g]

Standard de...

Drop Column Fields Here

Line

Product

Scale

Operator name

Nominal mass

Grand Total

Quantit...

Time [min]

Efficiency [pcs/h]

Sum of mass...

Mean [g]

Standard deviation

Line 1

Product 3

PUE 7.1

Administrator

300.0000

21

6

205

4476.000

213.143

138.1482

Table containing details on carried out subcontracts features the following columns:

Efficiency [pcs/h]

The forecast quantity of weighings carried out within one hour by the operator

Line

Production line name


Product

Name of weighed product

Scale

Scale name

Operator name	Name of an operator carrying out weighing
Nominal mass	Product nominal mass
Quantity [pcs]	Quantity of all weighings carried out by an operator from the moment of subcontract start
Time [min]	Operation time given in minutes, counted from the moment of subcontract start
Efficiency [pcs/h]	The forecast quantity of weighings carried out within one hour by the operator
Sum of masses [g]	Total mass of all weighings carried out by an operator from the moment of subcontract start
Mean [g]	Mean mass of all weighings carried out by an operator from the moment of subcontract start
Standard deviation	Variation measure, statistical term

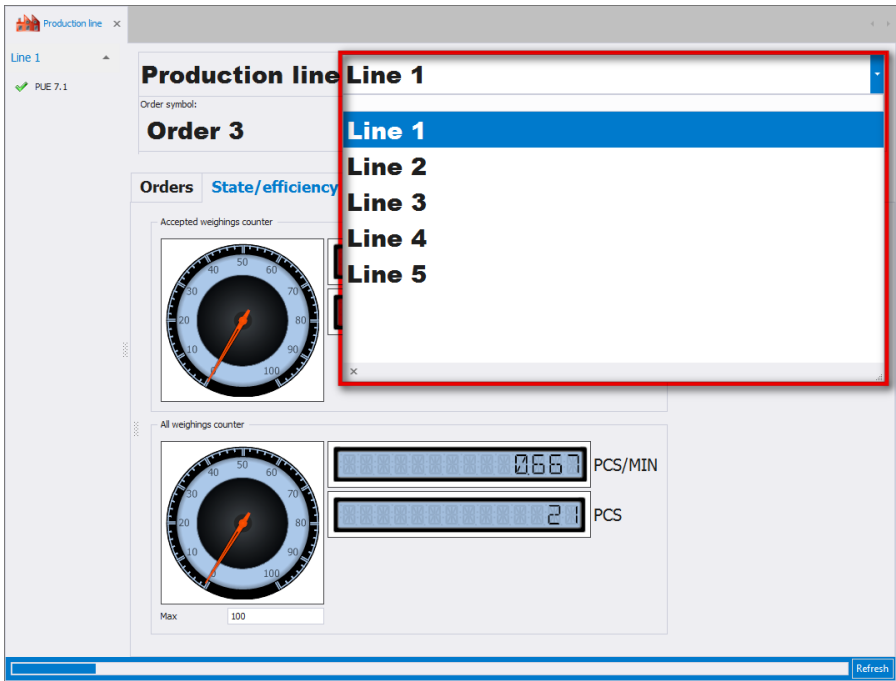
Press  **Table report** button to generate report as a PDF file. It can be saved or printed out on a printer connected to the computer with **E2R Weighings** software installed on it.

7.3. Production Lines

Production lines window enables starting or stopping a subcontract for a given production line. You can preview the quantity of carried out weighings and efficiency on an ongoing basis.

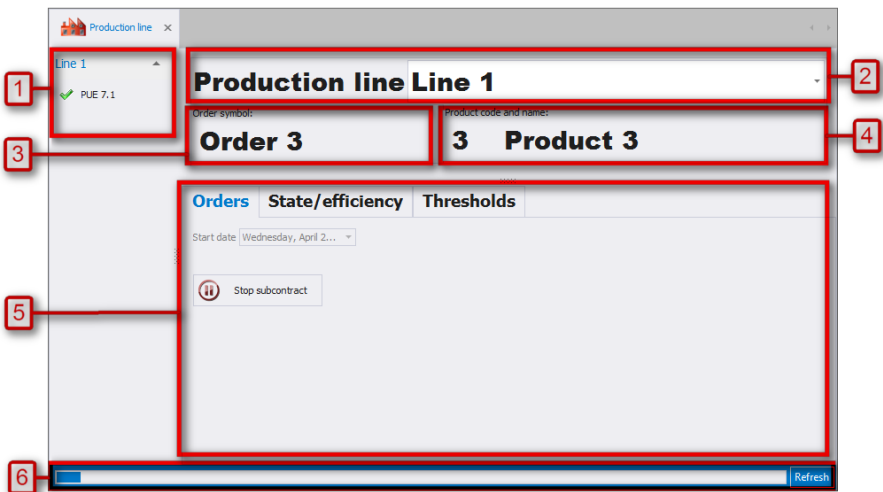
To configure production line (creating production line, adding scales to respective production lines) go to **Products** database. For detailed information refer to section 5.1.6 of this user manual.

Open **Production lines** window to display data on the first production line. You can select different production line in the top bar.



7.3.1. Production Line Home Screen

Production line window:

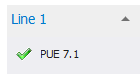


Where:

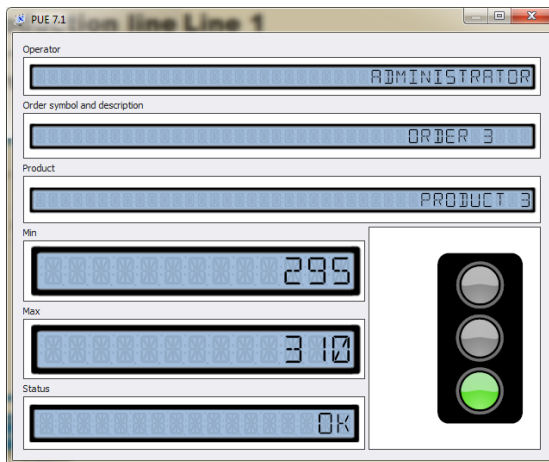
- 1 - The list of weighing instruments assigned to the production line,
- 2 - Selected production line,
- 3 - Symbol of an order that is currently carried out on the production line,
- 4 - Code and name of a product that is set on every weighing instrument on the production line,
- 5 - Workplace containing the following tabs: Orders, State/efficiency and Thresholds,
- 6 - Refresh bar - upon reaching the right end, the data is refreshed. Press Refresh button to refresh the window.

7.3.2. Weighing Instruments Assigned to the Production Line

List of weighing instruments assigned to selected production line is located in the top left corner of the window:



Pictogram on the left of each item on the list shows current state of the weighing instrument. Upon entering respective item, a window with details is displayed:



The top part of the window contains the following information:

- Operator,
- Order,
- Product.

Below, thresholds are displayed. Thresholds are defined on a given weighing instrument on the production line.

<Status> field contains information on scale current condition, where:

Red light	No scale-server communication
Yellow light	Incorrect order settings/parameters
Green light	Communication and order settings correct

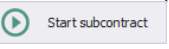
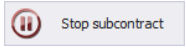
7.3.3. Production Order Initiation

You can initiate (issue) an order for previously selected production line.

Procedure:

- Select respective production line in accordance with section 7.3 of this user manual,
- Select **<Orders>** tab, the following window is opened:

The screenshot shows a software interface with three tabs: 'Orders', 'State/efficiency', and 'Thresholds'. The 'State/efficiency' tab is selected. Inside this tab, there is a 'Select order' dropdown menu showing 'Product 3' and a 'Batch No.' input field containing '123456'. Below these fields is a button labeled 'Start subcontract' with a green play icon.

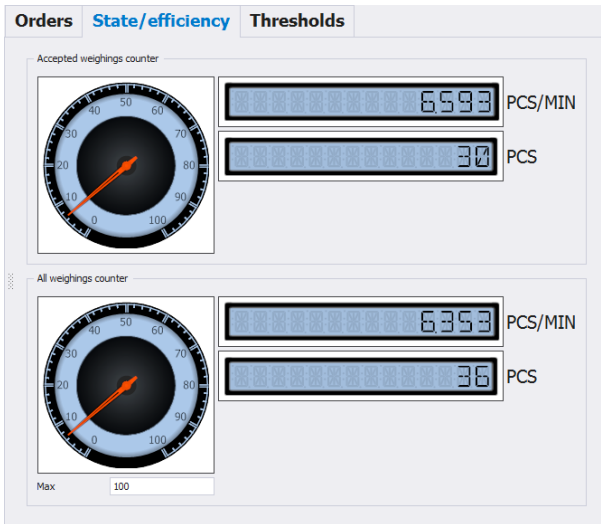
- Using the list, select order in accordance with one of the following criteria: symbol name or date of issuing an order,
- Enter batch number (if required),
- Press  button to initiate an order,
- Upon carrying out all weighings, press  button to stop the subcontract. Product on the scale is deactivated.

7.3.4. Efficiency

<State/Efficiency> tab contains efficiency of the production line.

Caution:

*Upon settings modification in **<State/Efficiency>** tab, restart production lines window to update data.*



Where:

**Accepted
weighings counter**
**All weighings
counter**
Max

- Current quantity of weighings that are between MIN and MAX thresholds
- Current quantity of all weighings in an active order,
- Maximum pieces quantity/weighings per minute that is displayed on the clock diagram

7.3.5. Checkweighing Thresholds

<Thresholds> tab contains thresholds determined for a product and the first scale on the production line.



8. TOOLS

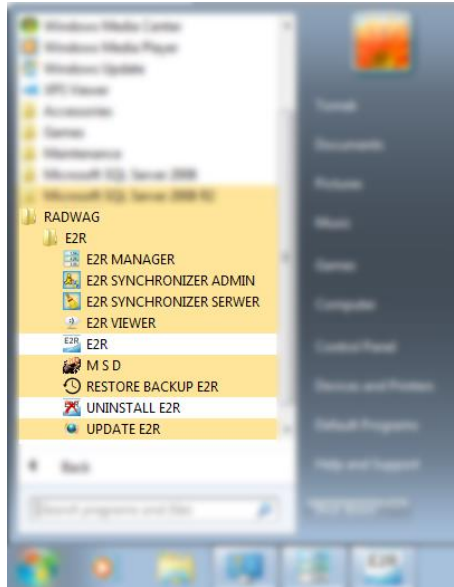
8.1. E2R MANAGER

E2R Manager is intended for displaying status of communication with weighing instruments and for previewing currently carried out weighing. Additionally it provides information on logged in operator, measured product, nominal net weight (mass standard), batch/lot number of measured product, customer, product tare value, low limit and high limit, working mode and other.

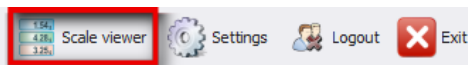
Due to simplified interface it is recommended to use it for weighing instruments configuration instead of **E2R SYNCHRONIZER ADMIN**.

All messages serve informative purposes, this means that they cannot be saved to or printed by **E2R Manager**. **To perform the said operations launch E2R WEIGHINGS** software.

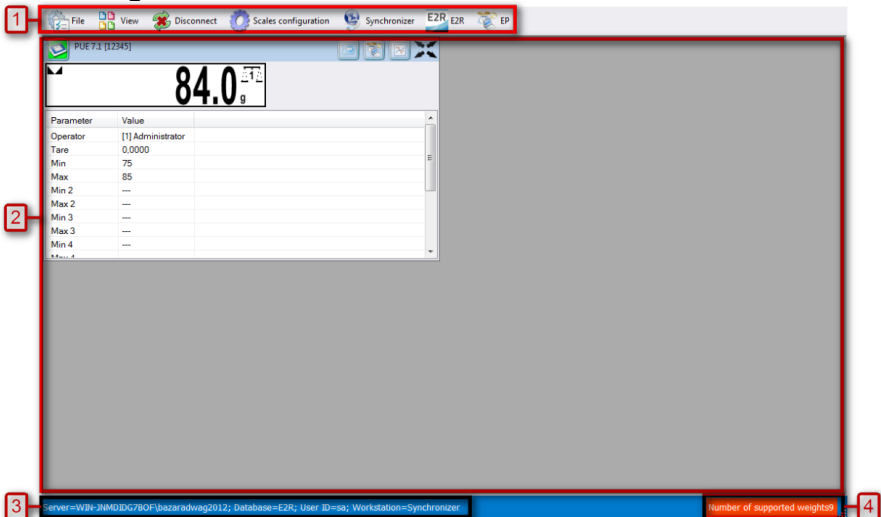
Upon **E2R SYSTEM** installation, a shortcut is created in the Start menu.



Another option for accessing **E2R Manager** is to press **Scale viewer** button.



E2R Manager home screen:



Where:

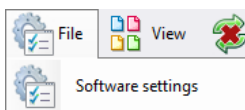
- 1 - Function buttons
- 2 - Operated weighing instruments
- 3 - Connection parameters
- 4 - Maximum quantity of operated weighing instruments

Caution:

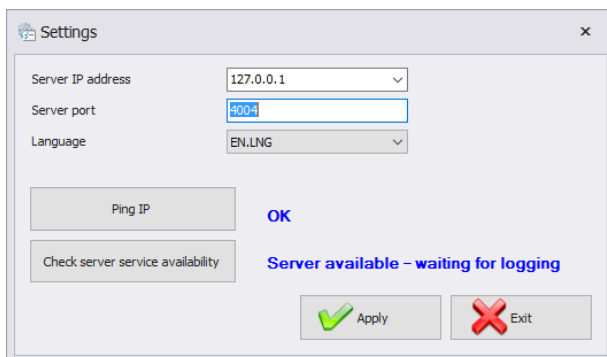
*Scale panel is displayed only upon communication between **E2R Manager** and **Radwag Synchronizer** is established, provided that the scale is on.*

8.1.1. Setting Connection with E2R SYNCHRONIZER

To run E2R SYNCHRONIZER software settings, press **File** button, next press **Software settings** button.



Software settings editor opens, set **IP** address and **communication port** for computer used to support connection with scales (server service).



Where:

Server IP address	IP address of computer running the Synchronizer. Combo box provides list of available synchronizers.
Server port	TCP port of computer running the Synchronizer.
Language	Language of E2R Manager PC software.
Ping IP	Test of connection for selected IP address, by default: local IP address;
Check server service availability	Test of E2R Synchronizer availability

If **E2R SYNCHRONIZER** and **E2R MANAGER** are installed on the same computer then the default IP address remains unchanged - **127.0.0.1**.

Default server port, **4004**, shall be changed only if it has been previously changed in **E2R SYNCHRONIZER**. The ports have to match each other.

Synchronizer Admin 17.1.17.0 - Server 17.3.1.0

Windows Service Parameters

Attr.CategoryName.OPTIONS	4005
Attr.DisplayName.Pue5server_Port	4005
Language	Polish.lng
LangFile	
Management	
Port	4004
Account	
Password	
SQL Access	
Server	(local)\bazaradwag2012
Database	E2R
Login	sa
Password	*****
Workgroup	Synchronizer

Server
Servers[Instance] location

Connect Available Workstations Save

Caution:

4001 and 4005 ports cannot be used as TCP Port. They serve different purposes.

The software provides various languages. To change language use **Language** option.

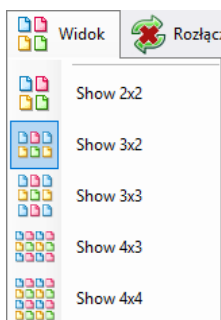
Available languages:

PL	Polish
EN	English

Press **Save** button to confirm modifications and exit the software. All modifications are implemented upon restarting the software.

8.1.2. Scales Layout

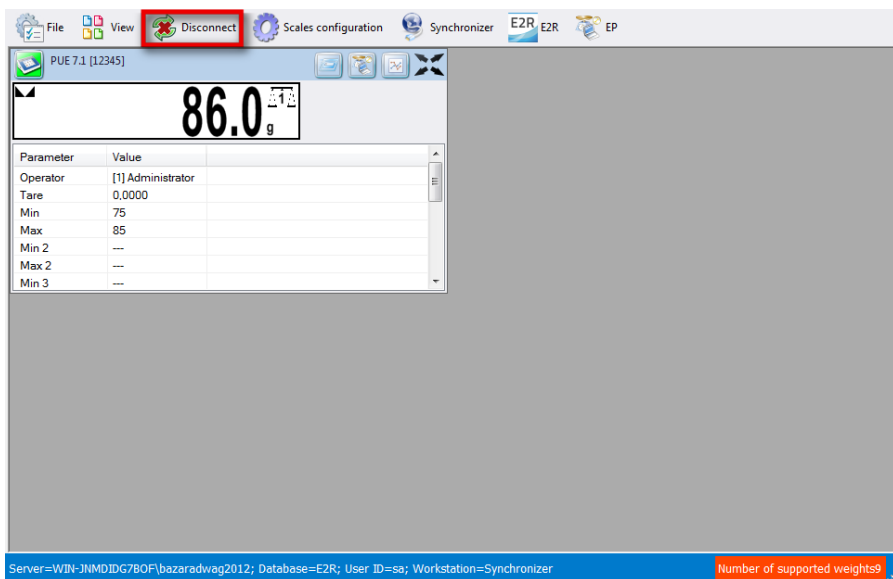
Scales layout can be freely customized. To view layout options press **View** button.



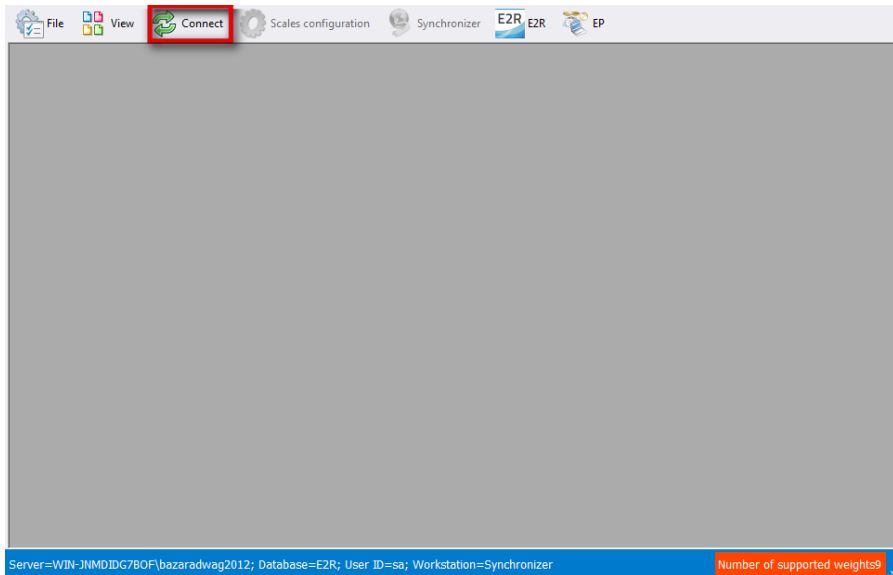
There are 5 standard layout options: 2x2, 3x2, 3x3, 4x3, 4x4.

8.1.3. Connecting/Disconnecting E2R SYNCHRONIZER

In order to disconnect synchronizer without exiting the program press **Disconnect** button.



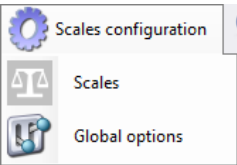
In order to run an on-line preview when the program is being operated, press **Connect** button.



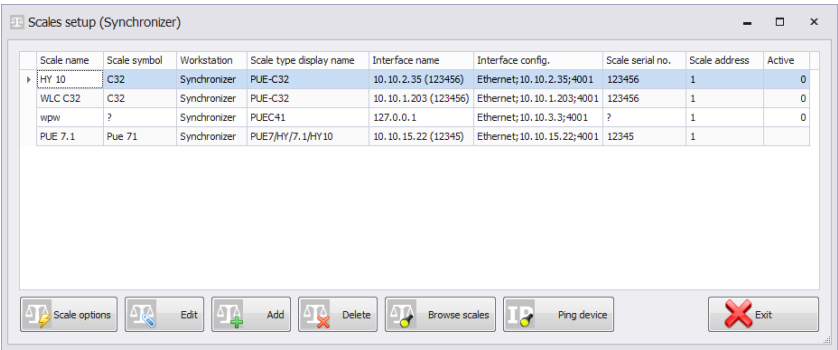
8.1.4. Scales Configuration

8.1.4.1. Scales

To configure a scale select **Scales** option in **Scales configuration** menu.

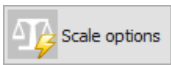


Scales configuration (Synchronizer) window opens, list of scales cooperating with the system is displayed.



Select the scale that is to be edited or deleted.

Buttons' functions



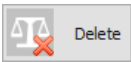
Press to run Scale Options window



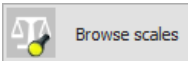
Press to edit scale selected out of scales list



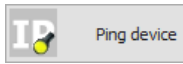
Press to add scale to a system



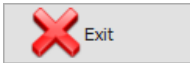
Press to delete selected scale



Press to search scales in local network








Press to check scale IP address



Press to exit Scales configuration window

8.1.4.1.1 Adding a Scale

Weighing instruments can be added automatically or manually. Prior adding the weighing instrument to the system, make sure it is correctly configured. Required settings for HY10:

Settings/ Peripherals/ Computer/ Port	 RS 232 (1)	 RS 232 (2)	 Tcp
Settings/ Peripherals/ Computer/ E2R System	 System is active 		

Correctly configured Communication settings.

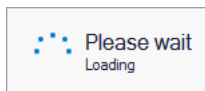


Automatic method:

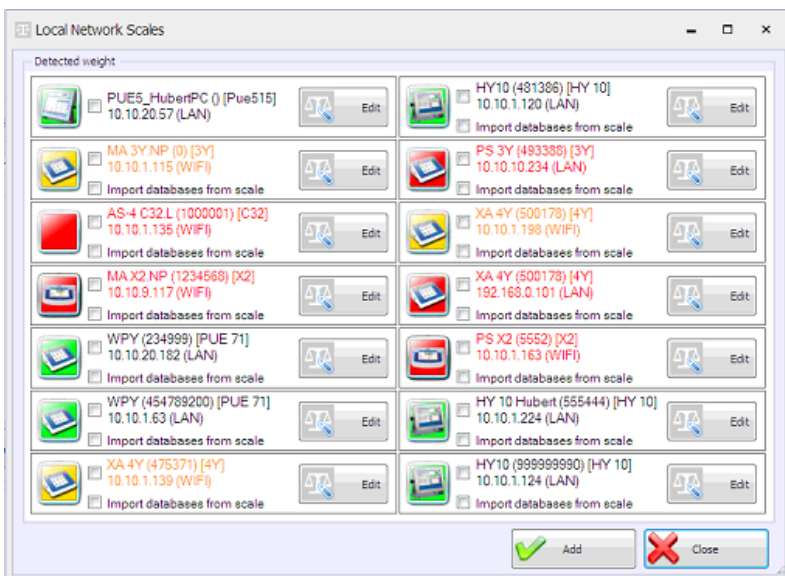
Weighing instruments connected to the local Ethernet network can be searched and added automatically.

Press  Browse scales

button, the following message is displayed:



Next Local Network Scales window featuring list of available scales is opened:




Where:

<input checked="" type="checkbox"/> HY10 (999999990) [HY 10] 10.10.1.124 (LAN) <input type="checkbox"/> Import databases from scale	Scale already cooperating in the system,
<input type="checkbox"/> HY10 (481386) [HY 10] 10.10.1.120 (LAN) <input type="checkbox"/> Import databases from scale	Detected scale, the scale parameters read correctly
<input type="checkbox"/> XA 4Y (500178) [4Y] 10.10.1.198 (WiFi) <input type="checkbox"/> Import databases from scale	Detected scale, prior adding the scale to the system some of the parameters need to be completed
<input type="checkbox"/> PS 3Y (493386) [3Y] 10.10.10.234 (LAN) <input type="checkbox"/> Import databases from scale	Detected scale, the scale parameters read incorrectly

(*) – Incorrectly configured weighing instrument does not connect with the database. Connection parameters have to be set manually:


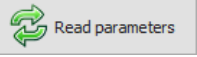
Settings/Databases/Database configuration/SQL connection.

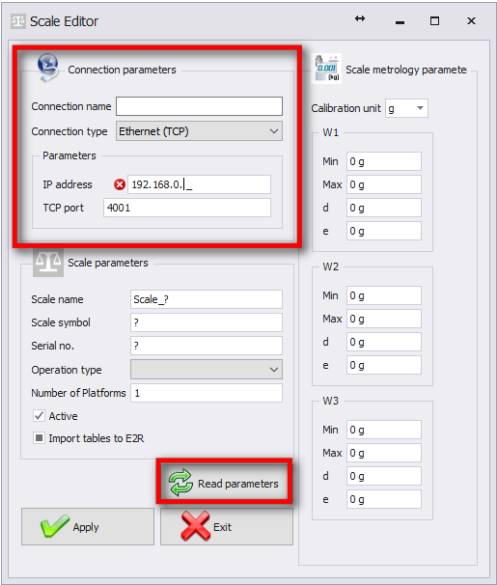
Select scales that are to be added and press **Add** button.

Prior adding the scale you can press  button to verify its configuration. For description of Scale Editor read manual method instruction.

Manual method:

WPW scales and Checkweighers have to be added manually.

Press  button. Scale Editor opens, modify the parameters and press  button.



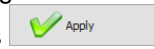
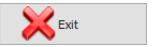
Where:

Connection name	Freely designed name of communication interface.
Connection type	Combo box enabling selection of interface for scale connection: Serial – scale connected via RS232, Ethernet – scale connected via Ethernet.
IP address	IP address set in Ethernet interface on a scale.
TCP port	TCP port set on a scale (by default: 4001).
Scale name	Scale name presented on reports.


Scale symbol	Scale symbol exposed on the scale housing. Required by PGC system.
Serial no.	Serial number of the scale.
Operation type	<p>Type of connection with a scale:</p> <ul style="list-style-type: none"> • <i>PUEC41</i> – connection with WPW scale, • <i>Pue7/HY7.1/HY10</i> – connection with industrial weighing instruments of WLY, WPY, HTY and HY10 series with standard program version, • <i>3Y/4Y</i>– connection with laboratory balances of 3Y and 4Y series, • <i>Pue7/HY7.1/HY10 PGC/SQC</i> – connection with industrial scales of WLY, WPY, HTY and HY10 series operating in PGC mode, • <i>3Y/4Y PGC</i> – connection with laboratory balance of 3Y and 4Y series operating in PGC mode, • <i>DynPGC</i>– connection with dynamic scale, • <i>MAX</i> – connection with moisture analyzer of MAX, PMC series, • <i>Pue4 Land</i> – connection with scales based on PUE4L indicator, • <i>Pue7 (PCS)</i> – connection with scales based on PUE7 and HY terminal (version with Parts Counting program), <i>Disabled for Parts Counting mode of standard scale program,</i> • <i>PUE-5</i> – connection with TMX scale with version 3 or earlier of the software, • <i>OCS/ISHIDA</i> – connection with OCS/ISHIDA scale and metal detector, • <i>R</i> – connection with laboratory balance of R series • <i>R Dryer</i>– connection with moisture analyzer of R series • <i>X2</i>– connection with laboratory balance of X2 series • <i>PUE5.15/19</i> – connection with TMX scale with version 3 or later of the software.
Number of platforms	Quantity of platforms supported by the scale
Active	Select the option if the weighing instrument is to be previewed.
Import tables to E2R*	Import of the weighing instrument database

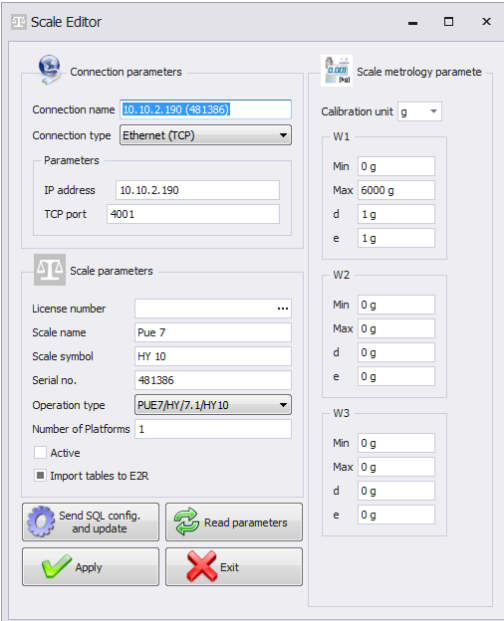
Scale metrology parameters	Scale parameters section: Max, Min, d, e; Required by PGC system
----------------------------	---

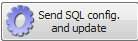
(*) – it is possible to import database of the weighing instrument only when adding the instrument to the E2R.



Press  button to make introduced modifications valid,
press  button to exit Scale Editor without saving changes.

8.1.4.1.2 Editing Scales

Select scale which parameters are to be modified and press  button.




Press  to send connection settings with E2R database to the scale. Upon pressing the button, full data synchronization is carried out on the scale. This option is available for HY10, WLY, WPY weighing instruments exclusively.

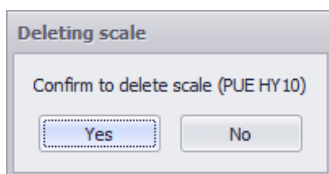
Press  button to make introduced modifications valid, press  button to exit Scale Editor without saving changes.

8.1.4.1.3 Deleting Scales

In configuration window select scale that is to be deleted from the list and

press  **Delete** button.

Press **Yes** button to confirm.

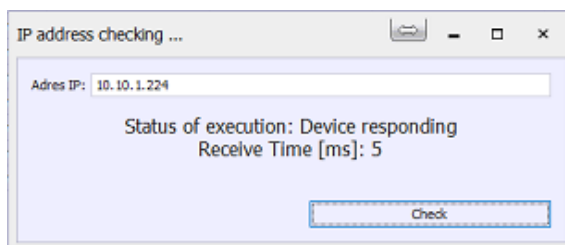


Caution!

Be especially careful while deleting scales, along with the scale all scale-related information displayed on a report is deleted.

8.1.4.1.4 IP Address Check

In a configuration window press  **Ping device** button. The following window is displayed:



Enter scale IP address and press **Check** button. Information on status and time is displayed.

8.1.4.1.5 Scale Options

Scale Options window features three buttons for three different option groups: Public, Service, Developer.

Scale options: PUE HY10

Parameters

<div><div></div><div></div></div>	Execute
<div><div></div><div>Carry out full product update</div></div>	
<div><div></div><div>Pue7 - weighing days number</div></div>	30
<div><div></div><div>Online update disabled</div></div>	<input type="checkbox"/>
<div><div></div><div>Edit scale tables</div></div>	<input type="checkbox"/>

☒ Public

☐ Service

☐ Developer

Apply

Exit

Enabling/disabling options:



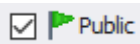
Option enabled,



Option disabled.

• **Public**

Public options are enabled by default. Public options modification does not influence system operation negatively.



Parameters

<div><div></div><div></div></div>	Execute
<div><div></div><div>Carry out full product update</div></div>	
<div><div></div><div>Pue7 - weighing days number</div></div>	30
<div><div></div><div>Online update disabled</div></div>	<input type="checkbox"/>
<div><div></div><div>Edit scale tables</div></div>	<input type="checkbox"/>

Carry out full product update*	Complete update of products carried out for a particular scale
Pue 7 - Weighing days number	Specifying how long the weighings are to stay archive
Online update disabled	Disabling scale database synchronization

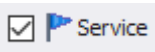
Edit scale tables

Enabling database editing on a balance

(*) – update of products on scales is carried out regularly therefore there is no need to use this parameter

- **Service**

To enable Service options it is necessary to tick **Service** box. Option of selected information update, wherein system information is updated with scale information, has to be set in global options settings.



Parameters	
Kronopol Scale 1-order start, 2-order stop	0
Enable data update: scale-system	<input type="checkbox"/>
Enable tare update: scale-system	<input type="checkbox"/>
Enable thresholds update: scale-system	<input type="checkbox"/>
Enable nominal weight update: scale-system	<input type="checkbox"/>
Use scale-declared thresholds	<input type="checkbox"/>
Pue7 option - Nestle Bars	<input type="checkbox"/>
Pue7 option - EspersenMode	<input type="checkbox"/>
Record weighings to Fast Weighings Table – E2R WEIGHING RECORDS	<input type="checkbox"/>

Kronopol Scale 1-order start, 2-order stop

Customized settings for Kronopol scales.

Enable data update: scale-system

Enabling update of system information with scale information. Updated values: tare, thresholds, weight.

Enable tare update: scale-system

Enabling update of system information with scale information. Updated value: tare.

Enable thresholds update: scale-system

Enabling update of system information with scale information. Updated value: thresholds.

Enable nominal weight update: scale-system

Enabling update of system information with scale information. Updated value: nominal weight.

Use scale-declared thresholds

Enabling operation with thresholds set on a scale, instead of operation with thresholds set in the system.

PUE 7 option – Nestle/bars

Customized settings for Nestle scales.

PUE 7 option – Espersen

Customized settings for Espersen scales.

Record weighings to Fast Weighings Table – E2R WEIGHING RECORDS

Customized settings for WPW scales, for E2R Weighings software.






























Caution!

Do not tick “Record Weighings to Fast Weighings Table” option for WEIGHING RECORDS, FORMULATIONS, PGC, MOISTURE ANALYZERS or CHECKWEIGHER modes.

- **Developer**

To enable Developer (programming) options it is necessary to tick **Developer** box. These options serve informative purposes, they shall not be modified.



Parameters	
 Version No. of database of products	0
 Version No. of database of operators	0
 Version No. of database of clients	0
 Synchronize universal variables changes	0
 Synchronize vehicle changes	0
 Synchronize traceability changes	0
 Synchronize package changes	0
 Synchronize warehouse changes	0
 Full scale update	0
 Status Description	WAGA WYŁĄCZONA
 Set a batch	
 Set a lot	11111
 Set package ID	
 Set Client ID	
 Scale serial no.	481386
 Weight high threshold - MAX	200
 Weight low threshold - MIN	100
 Refresh data	1
 Scale-set order ID	0
 System-set order ID	0
 ID of last acquired weighment from PUE7/HY	44
 ID of last formulation report acquired from PUE7/HY	0
 Last vehicle measurement report ID	0
 Scale-set product ID	0
 System-set product ID	1
 Status	1
 Scale-set operator ID	0
 System-set operator ID	0
 Package ID	0

Database Version No. ...

Version number of database taken from scale, the number serves as base for scale databases synchronization.

Scale Serial No.

Serial number taken from scale.

Weight high threshold - MAX

High threshold value taken from scale.

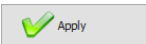
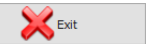
Weight low threshold - MIN

Low threshold value taken from scale.

Scale-set order ID	ID of current order taken from scale.
System-set order ID	ID of current order set in the system.
Scale-set product ID	ID of current product taken from scale.
System-set product ID	ID of current product set in the system.
Scale-set operator ID	ID of current operator taken from scale.
System-set operator ID	ID of current operator set in the system.
Last report, weighing... ID	Number of PUE7/HY records or 3Y records saved to a system. Having noticed that weighings or reports are not acquired, although automatic algorithm for capturing scale data is in use, set 0 value for particular database.

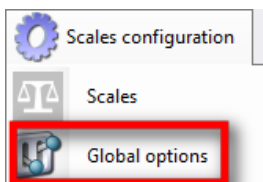
Caution!

Setting 0 value for last report or weighing ID results with acquisition of the same set of weighings from scale to system again.

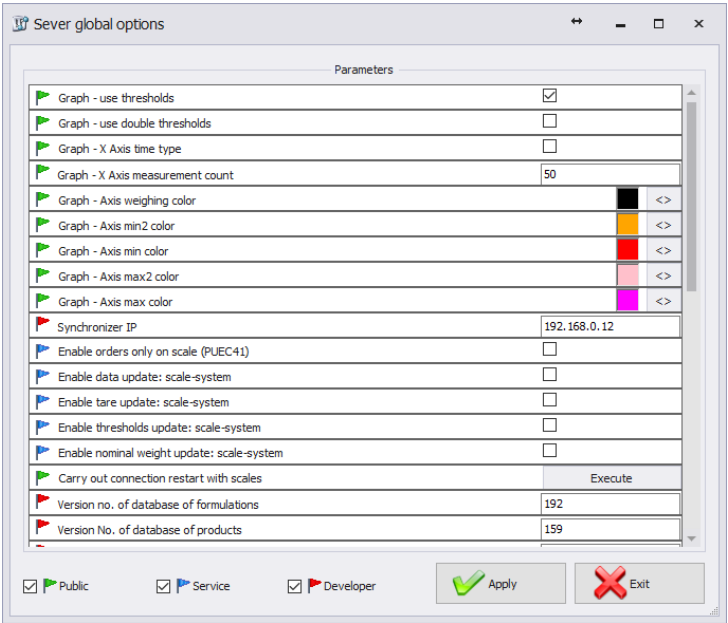
Press  button to confirm introduced modifications,
press  button to exit Scale Options window without saving changes.

8.1.4.2. Global Options

System configuration is carried out upon selecting **Global options** in **Scales configuration** menu.



Server global options window is opened and list of available parameters is displayed.



Server Global Options window features three buttons for three different option groups: Public, Service, Developer.

Enabling/disabling options:



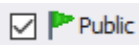
Option enabled,


















Option disabled.

- **Public**

Public options are enabled by default. Public options modification does not influence system operation negatively.



Parameters		
 Graph – thresholds display	<input checked="" type="checkbox"/>	
 Graph – extra thresholds display	<input type="checkbox"/>	
 Graph – X axis displayed as time	<input type="checkbox"/>	
 Graph – measurements quantity		50
 Graph – weighing series colour		 <>
 Graph – MIN 2 threshold colour		 <>
 Graph – MIN threshold colour		 <>
 Graph – MAX 2 threshold colour		 <>
 Graph – MAX threshold colour		 <>
 Perform complete product update	Execute	

Graph – thresholds display

Graph with MIN and MAX thresholds displayed

Graph – extra thresholds display

Graph with MIN2 and MAX2 thresholds displayed

Graph – X axis displayed as time

Scaling X axis by measurement time

Graph – measurements quantity

Determining quantity of simultaneously displayed measurements

Graph – weighing series colour

Specifying colour for series of weighings

Graph – MIN 2 threshold colour

Specifying colour for MIN 2 threshold

Graph – MIN threshold colour

Specifying colour for MIN threshold

Graph – MAX 2 threshold colour

Specifying colour for MAX 2 threshold

Graph – MAX threshold colour


Specifying colour for MAX threshold















Perform complete product update*

Forcing performance of complete update of products for a particular scale.

- Service

To enable Service options it is necessary to tick **Service** box.

☒  Service

Parameters		
	Enable only orders on scale (PUEC41)	<input type="checkbox"/>
	Enable data update: scale-system	<input type="checkbox"/>
	Enable tare update: scale-system	<input type="checkbox"/>
	Enable thresholds update: scale-system	<input type="checkbox"/>
	Enable nominal weight update: scale-system	<input type="checkbox"/>
	Restore tare after zeroing (WPW)	<input type="checkbox"/>
	Transaction synchronization: PUE5-system	<input checked="" type="checkbox"/>
	Orders synchronization: PUE5-system	<input checked="" type="checkbox"/>
	Use product name with code instead of product name (PUEC41)	<input type="checkbox"/>
	On scale, use product ID instead of Code (PUEC41)	<input type="checkbox"/>
	On scale, use operator ID instead of Code (PUEC41)	<input type="checkbox"/>
	Multeafil statistics restart (PUEC41)	<div>Execute</div>
	Weighings counter for product (PUEC41)	<input type="checkbox"/>
	PUE7 option - Use supplementary thresholds	<input type="checkbox"/>

Enable only orders on scale (PUEC41)	Manual selection of a product on a scale is blocked.
Enable data update: scale-system	Enabling update of system information with scale information. Updated values: tare, thresholds, weight.
Enable tare update: scale-system	Enabling update of system information with scale information. Updated value: tare.
Enable thresholds update: scale-system	Enabling update of system information with scale information. Updated value: thresholds.
Enable nominal weight update: scale-system	Enabling update of system information with scale information. Updated value: nominal weight.
Restore tare after zeroing (WPW)	Restoring product tare value that was valid prior zeroing.

Transaction synchronization: PUE5-system	Enabling synchronization of transaction, synchronization with PUE5.
Orders synchronization: PUE5-system	Enabling synchronization of orders, synchronization with PUE5.
Use product name with code instead of product name (PUEC41)	Modification of name field for PUEC41 indicator, change result: ID + PRODUCT NAME. Function active only when you select option: <i>Use product ID instead of product code, for scale.</i>
Use product ID instead of code (PUEC41)	Modification of product code field for PUEC41 indicator, change result: product ID.
Use operator ID instead of code (PUEC41)	Modification of operator code field for PUEC41 indicator, change result: operator ID.
Multefail statistics restart (PUEC41)	Use of PGC intended software to zero statistics of WPW scale.
Weighings counter for product (PUEC41)	Synchronization of number of weighings for product from WPW scale.
PUE7 option - Use supplementary thresholds	Activation of MIN 2 and MAX 2 thresholds.










Caution!

For WPW scale, code field is limited in databases, the limitation allows 6-character long codes maximum.

- **Developer**

To enable Developer (programming) options it is necessary to tick **Developer** box. These options serve informative purposes, they shall not be modified.



Parameters	
 Synchronizer IP	192.168.0.12
 Version no. of database of formulations	192
 Version No. of database of products	159
 Version No. of database of operators	44
 Version No. of database of clients	3
 Synchronize additional variables changes	0
 Synchronize package changes	2
 Synchronize warehouse changes	555
 Refresh data	1

Synchronizer IP IP address of computer operating synchronizer.

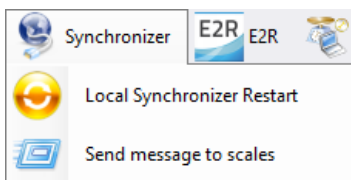
Database version number ... System database version number, on the basis of this number all scale databases are synchronized.

Caution!

With completed settings modification restart the software.

8.1.5. Synchronizer

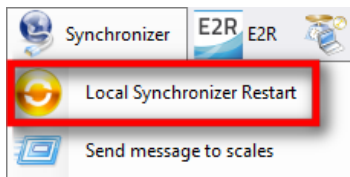
Synchronizer menu features option for connection restart used to update databases on scales, and option for sending messages to all scales networking in the system.



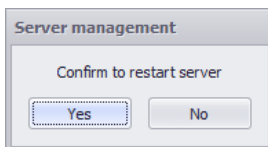
8.1.5.1. Local Synchronizer Restart

Local synchronizer restart option is available for computer with running **E2R SYNCHRONIZER**. With this option it is possible to reboot server setup and to update scales databases.


Go to **Synchronizer** menu and press **Local Synchronizer Restart**.

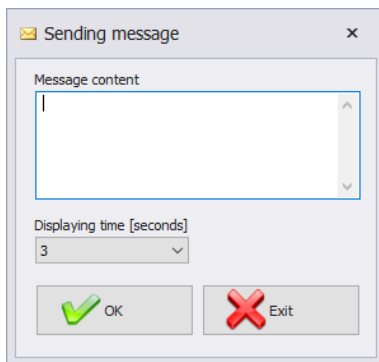


Press Yes button to restart.

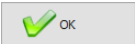
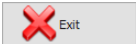


8.1.5.2. Sending Messages to Scales

It is possible to send message to scales cooperating in the system. To do that, go to **Synchronizer** menu and press  **Roześlij wiadomość na wagi** button.



Message display time range is 3-3600 seconds.

Press  button to send the message, press  button to exit Sending Message window.

8.1.6. E2R Manager: Scales Status

Status informing on establishing computer-scale communication:



Communication established.
Correct scale setup.
Correct scale setup for E2R Synchronizer.



Communication established.
Temporary lack of response.
Incorrect scale setup or incorrect scale setup for E2R Synchronizer.



Communication not established.
Scale switched off or no communication interface connection.
Incorrect scale setup or incorrect scale setup for E2R Synchronizer.

8.1.7. Scale Panel

Scale panel overview:



1	-	Scale status/ function button
2	-	Current scale-displayed weight value
3	-	Current scale parameters
4	-	Measurements presented in a form of graph
5	-	Full screen button
6	-	Parameters on/off button
7	-	EP software launch, the software automatically connects with the scale*
8	-	RRD Viewer software launch

(*) – when connection between EP software and a scale gets established, the scale disconnects from E2R

Caution:

*Scale panel is displayed only upon establishment of communication between **E2R Manager** and **Radwag Synchronizer** provided that the scale is on.*

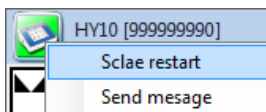
For key service settings, read E2R SYSTEM service manual.

8.1.7.1. Connection Restart and Scale Update for E2R

It is possible to restart scale in course of system operation, to do it press



button. Next press **Scale restart** button.



After few seconds the scale is connected to the system and all databases are updated.

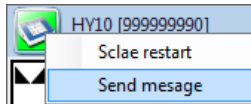
8.1.7.2. Sending Messages to Scales

It is possible to send message to one particular scale.

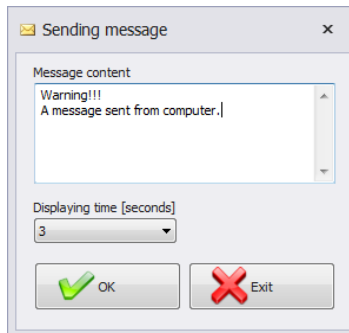


To do it press button.

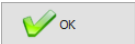
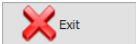
Next press **Send message** button:



Enter respective text that is to be displayed on a given scale.



Message display time range is 3-3600 seconds.

Press  button to send the message, press  button to exit Sending Message window.

The following message is displayed on a selected scale:

