

INDUSTRIAL „INK-JET” PRINTER

EBS 2600

USER MANUAL

2020/01/09#1.1EN



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Dear User,

This Manual contains very useful information on how to operate your Printer. Please read this Manual carefully.

This manual applies to Offline EBS Web User Interface (Offline WUI) in version 1.6.4 and the **EBS 2600**, printers equipped with the control system in version 1.02.45. In order to view the printer system version go to:

- On the printer LCD: **Tools – Service – Information – System**,
- In EBS Web User Interface (WUI): **Info – About – System version**.

The product delivered to you corresponds to your specific order, and it may happen that the options and functionality of your printing system differ from some descriptions or illustrations. As we need to keep pace with new technological advancement and wish to meet individual requirements of our clients, we reserve the right to introduce changes in the design and construction as and when necessary. Therefore, claims cannot be made regarding differences to data, illustrations or descriptions contained in this manual. Should your printer be equipped with options or software that are not illustrated or described in this manual or should you have additional queries after having read the manual, please contact any **EBS Ink Jet Systeme** authorized representative office for more information.

The manufacturer shall not be liable for any damages to the printer resulting from failure to follow the instructions or from consequences of editorial or publishing errors contained in this manual.

The application and use of the products are beyond our control and are under full responsibility of the user.

This document has originally been drawn up in English. Any other language versions are translations from the original version. Should any discrepancies occur, the English language version shall prevail.

1. PRELIMINARY INFORMATION

The following symbols are used in the manual.



Additional information on a given subject. a supplement or a reference to the text where more details can be found.



*An important note or tip.
It is advisable to strictly follow the tips.*

The part numbers quoted in this document are the same for every figure and every description given in this document.

1.1. RESPONSIBILITY

EBS Ink Jet Systeme shall not be responsible for damage or personal injuries that might occur

during installation, operation or maintenance of the **EBS Ink Jet Systeme** printers due to the failure to follow the safety instructions and also the good manufacturing practices and safety standards generally established in the industry.

Every user who modifies or repairs the **EBS Ink Jet Systeme** printers using consumables, spare parts or accessories other than those supplied by **EBS Ink Jet Systeme** or inconsistent with the **EBS Ink Jet Systeme** specifications shall bear exclusive responsibility for such behavior.

EBS Ink Jet Systeme shall not be responsible for any failures or damage caused by modifications to the printer or by the application of the printer to other purposes than those the printer is designed for. The user shall be responsible for ensuring that any required precautions are taken each time the **EBS Ink Jet Systeme** printer is used.

The **EBS Ink Jet Systeme** consumables, spare parts and accessories are designed for use in the **EBS Ink Jet Systeme** printers. The application of consumables, spare parts and accessories not manufactured or recommended by **EBS Ink Jet Systeme** for use with a particular printer may cause printer malfunction or lead to printer damage, and it always results in loss of the right to warranty claims.

The **EBS Ink Jet Systeme** printers are tested together with **EBS Ink Jet Systeme** consumables and spare parts according to the relevant safety regulations and standards, therefore any use of consumables and spare parts other than those supplied by **EBS Ink Jet Systeme** may distort the test conditions and affect the conformity of the printer with certain standards. The user shall bear all risks involved with the use of improper consumables and spare parts.

1.2. SAFETY RULES



Before using the **EBS 2600** printer read carefully the consumable data sheets.

No efforts have been spared to design the printer diligently so that its operation is safe and reliable. However, the knowledge and observance of a few safety rules and precautions are the prerequisite for safe use of the printer.

The printer should be operated by trained personnel. It is recommended that the printer be supervised during operation.



Any service operations, in particular:

- installation and removal of the printer,*
- the operations that involve opening or removing any of the printer's protective covers, must be performed exclusively by the manufacturer's authorized service point or by a user trained in such operations by the manufacturer's authorized representatives.*

- Do not print on objects whose temperature exceeds 100°C (212°F) at the time of labeling.
- Make any manipulations in the electrical part of the printer only when the power is turned off.
- Do not direct the printhead outlet towards persons or animals.
- Wear protective clothing and goggles while performing any operations in the ink system and the printhead.
- Do not use plastic vessels for washing. Drip pans of metal are recommended.
- If you need to disconnect the printer from the electrical mains, take out power plug from the mains socket **13** (see **Fig. 1 (p. 11)**).

1.3. IN CASE OF ACCIDENT

When ink spills, wipe the spilled liquid with absorbent material and dispose of it following the fire and health and safety at work regulations.

Take the splashed clothes off as soon as possible.

If eyes or skin get irritated:

- **EYES** need rinsing with running water over 15 minutes; then contact an ophthalmologist,
- **SKIN** needs washing with water and soap.

1.4. FIRE PROTECTION



The instructions described in the data sheets for every ink or solvent should be followed strictly.

- Place a fire extinguisher (designed for extinguishing electrical equipment and flammable solvent fires) near the printer.
- Do not print in the areas where an explosion hazard exists.
- Do not use open flames or sparking devices in the printer work area.
- Do not leave ink, solvent or wash-up in open containers.
- Before coming close to flammable liquids touch a grounded metal object (e.g. the grounded printer housing).
- Ensure good ventilation in the area where the printer is installed (especially near the print-head) and where consumables are stored.

1.5. WORKING CONDITIONS

- Connect the printer to an electric outlet equipped with protective grounding.
- Supply voltage: **100 - 240 VAC, 50/60 Hz**.
- Working temperature: **+5 - +40 °C (+41 - +104 °F)**.
- Relative humidity: **up to 80%** without condensation.

1.6. APPLICATION

The **EBS 2600** printer is designed for marking and labeling articles moving on the conveyor belt, for example, and for putting prints and simple graphics on such articles.

Prints are put on articles with the application of the INK-JET method.

1.7. COMPLIANCE WITH STANDARDS

The manufacturer declares with its full responsibility that when installed and operated in compliance with the manufacturer's instructions, the **EBS 2600** printer together with its manufacturer-supplied accessories meet the essential requirements and other relevant provisions of the following European Union Directives:

- **2014/53/EU**,
- **2011/65/EU**

and meet the following harmonized standards:

Standard	RED Directive reference
<ul style="list-style-type: none"> - EN 60950-1:2006 + A11:2009 + A1:2010 + A2:2013, - EN 50364:2010, - EN 62369-1:2009 	<p>The protection of health and safety of persons and of domestic animals and the protection of property - with reference to Art. 3, par. 1 a)</p>
<ul style="list-style-type: none"> - ETSI EN 301 489-1 V2.1.1:2017, - ETSI EN 301 489-3 V2.1.1:2017, - EN IEC 61000-6-2:2019 <p>Note: The exposure severity levels applied during EMC immunity testing met the EN 61000-6-2 for industrial environment)</p> <ul style="list-style-type: none"> - EN 61000-6-4:2007 + A1:2011, - EN 55022:2010 + AC:2011, - EN 61000-3-2:2014, - EN 61000-3-3:2013, - EN 61000-4-2:2009, - EN 61000-4-3:2006 + A1:2008 + A2:2010, - EN 61000-4-4:2012, - EN 61000-4-5:2014 + A1:2017, - EN 61000-4-6:2014, - EN 61000-4-11:2004 + A1:2017, - EN 61000-4-20:2010, - EN 55016-2-1:2014 + A1:2017, - EN 55016-2-3:2010 + A1:2010 + A1:2014 	
<ul style="list-style-type: none"> - ETSI EN 300 330 V2.1.1:2017 	<p>The protection requirements with respect to electromagnetic compatibility - with reference to Art. 3, par. 1 b)</p> <p>Effective use and support the efficient use of radio spectrum in order to avoid harmful interference - with reference to Art. 3, par. 2</p>

Therefore the **EBS 2600** printer will bear the mark:



The **EBS 2600** printer is class **A** equipment as defined by **EN 55022:2010 + AC:2011** (industrial environment). In a domestic environment it may cause radio interference in which case the user may be required to take adequate counter measures.

2. COMPONENTS OF PRINTER SYSTEM

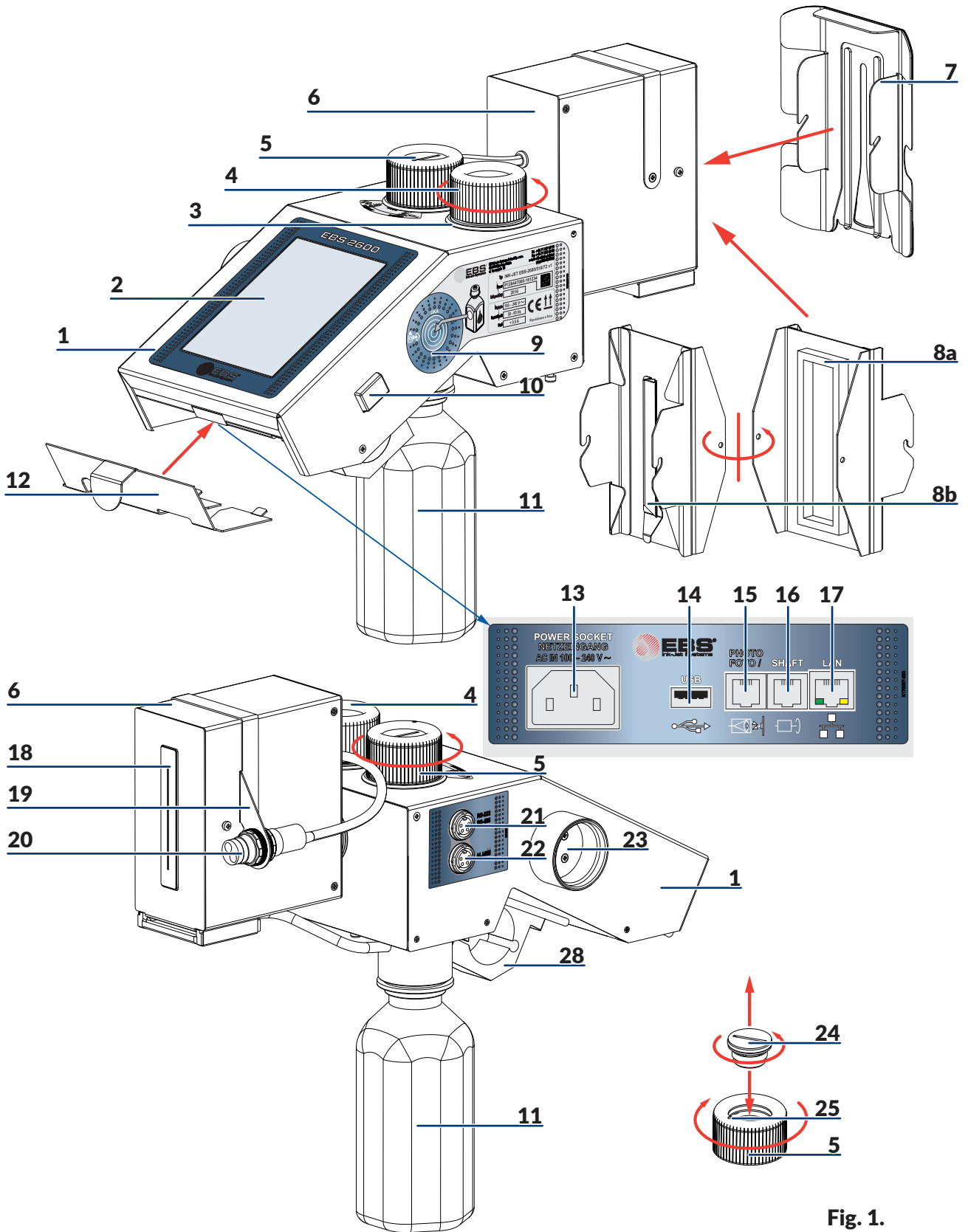


Fig. 1.

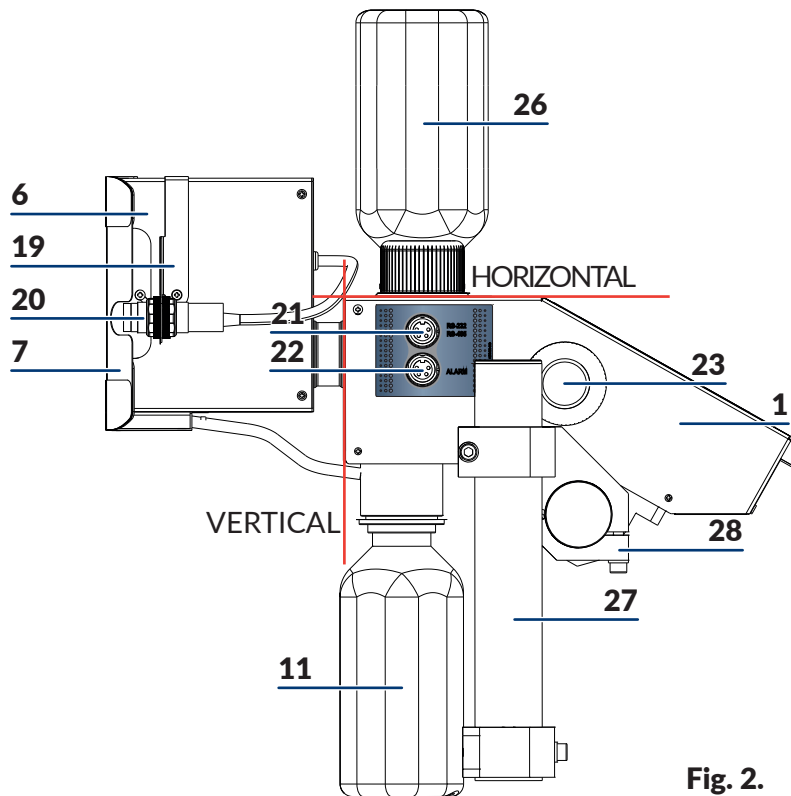


Fig. 2.

- 1 Printer controller with ink system
- 2 Control panel LCD display
- 3 Seat where bottle 26 is fixed
- 4 Ink pot cap
- 5 Ink system vent valve with air filter 24
- 6 Print head
- 7 Head slide for ensuring that objects to be labeled are precisely guided and hit no printhead edge
- 8a Protection for securing print head nozzles against mechanical exposure and ink spill and
- 8b gutter for draining out ink during purging
- 9 Ink bottle transponder reader
- 10 Power switch
- 11 Blue bottle for ink slops
- 12 Cover for protecting back panel connection sockets
- 13 Mains socket
- 14 USB port
- 15 Socket for external photo-detector
- 16 Socket for conveyor shaft-encoder
- 17 Ethernet socket
- 18 Nozzle plate – printhead face (ink outlet)
- 19 Photo-detector holder

20	Internal photo-detector
21	RS-232/RS-485 connector
22	Beacon connector
23	Seat for storing unscrewed cap 4
24	Filter of air sucked into ink system
25	Indicator of valve 5 position
26	Ink bottle (a smaller capacity starter bottle of ink is supplied together with printer)
27	Stand for fixing printer to
28	Controller handle for stand 27

3. PREPARING THE PRINTER FOR OPERATION AND SETTING BASIC PARAMETERS

Position the printer in a place that is free from vibration, shocks, excessive dust, smoke and dirt as well as from aggressive or inflammable vapors and gases.

If the printer is to be operated in a heavily dusty or contaminated environment, please consider whether an additional filter should be used in order to protect vent valve 5 or whether a cover allowing free airflow should be installed (ask your dealer for optional accessories).



The mechanical parameters and ambient conditions should meet the requirements given in 8.4. Working conditions (p. 111).

3.1. MECHANICAL INSTALLATION OF THE PRINTER IN A WORKPLACE

See *Fig. 1 (p. 11)* and *Fig. 2 (p. 12)*.

To prepare a new printer for operation, perform the following operations:

1. Take all system components out of the package.



The printer must not be tilted in any direction by a greater angle than 30° during installation and operation.

2. Install the printer stand in a convenient position. If the printer stand is screwed to a conveyor whose oscillation and vibration are too strong, fasten the printer to a stable rack or wall that is not linked to the conveyor.
3. Fasten the printer to the stand. The printer should be installed and operated in the position where the top surface of the housing of controller 1 is the horizontal, whereas the printhead face is the vertical.



The EBS 2600 printer can work in a horizontal position only.

4. Install internal photo-detector 20 in holder 19 on print head 6 or in any other place that will allow you to release printing conveniently within the reach of photo-detector cable. The holder can be put on the other side of the head, if need be, by unscrewing the holding down bolts and reversing the holder 19.
5. Fix an external photo-detector (optionally) in a required place and attach it to connection socket 15.

6. Install a conveyor speed converter, a so called shaft-encoder (optionally) in a convenient place on the conveyor on which articles to be labeled will move, so that the converter is driven by the conveyor. Connect the shaft-encoder to socket **16**.
7. Remove protection **8a**, which secures the printhead nozzles during transport against mechanical exposure and ink spillage in case of tilt or shock. Screw in head slide **7** in place of the protection.



The use of the slide is obligatory and vital for the proper operation of the printer.

8. Connect the controller feeder cable to socket **13** and to a mains socket.
9. Install cover **12** to secure the back panel connectors.
10. Screw blue bottle **11** to the printer bottom to collect ink slops.
11. Remove protective film from panel LCD **2**.

3.2. FIRST START-UP

See **Fig. 1 (p. 11)**.

1. Unscrew air filter **24**, which is inside vent valve **5**, and check whether it is clean or not. If it is dirty, clean it (see **6.1. Periodic Maintenance (p. 105)**). Re-install the filter.
2. Open valve **5** (marker **25** on valve **5** should be in the PRINTING position).
3. Unscrew cap **4** out of sea **3** carefully (the direction of unscrewing is shown in **Fig. 1 (p. 11)**) and remove it. Put the unscrewed cap **4** in seat **23** which is on the left-hand side of the controller.
4. Remove the aluminium foil that protects the cap of starter bottle **26**.
5. Screw the starter bottle into bottle seat **3**. No turning of the bottle upside down makes ink spill as the bottle is equipped with a protective valve.
6. Screw in blue bottle **11** to the printer bottom for collecting waste ink.
7. Start up the printer – see **3.5.1. Switching the Printer On (p. 17)**.
8. Follow the purging procedure to remove air from the printer – see **4.1.7.1. Purging (p. 64)**. When the printer is started up for the first time (e.g. after the printer has been delivered), a full, long purging procedure should follow. The amount of ink contained in the starter bottle is sufficient enough to do the first full purging of the printer.
9. Replace the starter bottle with a target ink bottle – see **3.6. Replacing an Ink Bottle (p. 19)**.
10. Do the short-lasting purging to remove air from the printer – see **4.1.7.1. Purging (p. 64)**.
11. Set a conveyor-belt travel speed – see **3.8. General Settings (p. 22)**.
12. Prepare a project – see **4.1.4. Project Processor (p. 37)** and set printing parameters – see **4.1.5. Printing Parameters (p. 60)**.
13. Make a few test prints. If print quality is unsatisfactory, repeat the purging procedure.

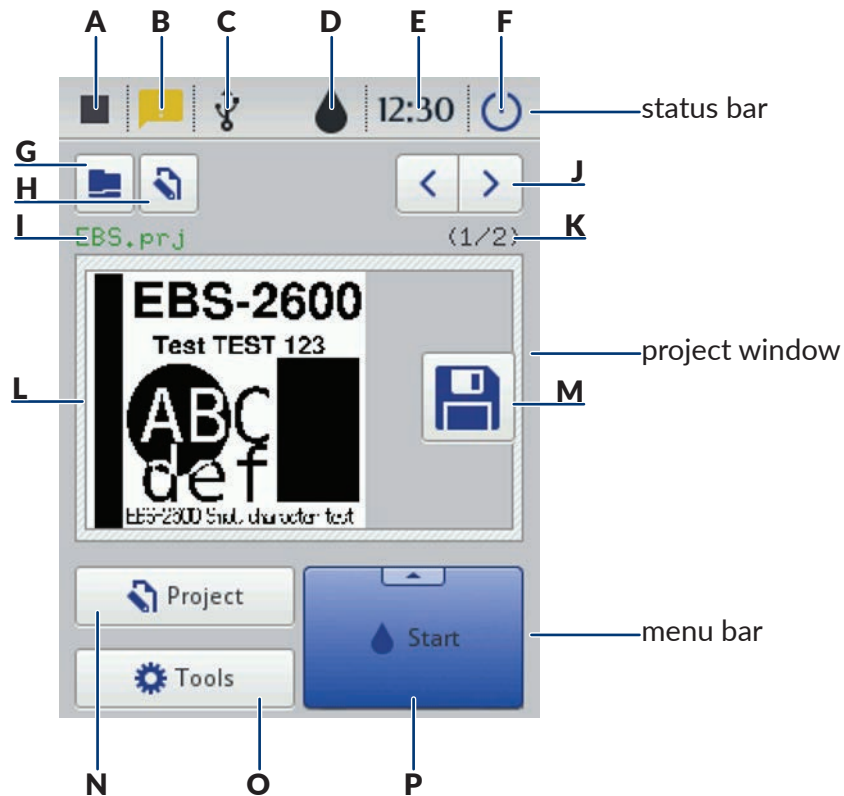
3.3. CONTROLLING A BELT CONVEYOR

The **EBS 2600** printer can work with an additional, optional beacon, an alarm signaler, which works with the ALARM/STOP module to control conveyor operation. With the module, the conveyor belt can stop moving as soon as a fatal error occurs and the alarm makes further printing impossible (or as soon as printing is paused intentionally), and then belt movement can be restarted manually and printing can be resumed at the same time.

The alarm signaler or ALARM/STOP module shall be connected to socket 22.
 For more information on the subject see the separate document entitled *Controlling a Factory Conveyor*.

3.4. OPERATING THE TOUCH SCREEN

The main screen of the printer consists of the following elements:



status bar	A	Printing status – see 5.2.1. Printing a Project via Printer LCD (p. 105)
	B	Messages containing the information on printer operation (the icon displayed when the messages are available) – see 3.15. Messages (p. 33)
	C	Pendrive/USB disc status (the icon is not displayed, when the disc is not connected to the printer) – see 3.14. Connecting USB Disc to the Printer (p. 30)
	D	Ink container status – see 3.7. Ink Level in Bottle (p. 21)
	E	The current time of the printer and the date and time settings – see 3.9. Date and Time Settings (p. 24)
	F	Switch the printer off and then on again and log out the user – see also 3.5.2. Switching the Printer Off (p. 18)

project window	G	Open a project to be printed	
	H	Edit a project to be printed and printing parameters of that project	
	I	Project name (if the name is in green, the project is ready for printing)	
	J	Select projects to be printed, from the same folder	
	K	Project number in the folder / the number of projects in the folder	
	L	Preview a project to be printed	
menu bar	M	Save the project parameters modified	If a modification is not saved, the project can be printed with the modified parameter only until a new project is opened or the printer is switched off
	N	Create a new project and edit an existing project – see 4.1.2. Creating a New Project (p. 36) and 4.1.3. Opening and Editing a Project (p. 36)	
	O	Set the language, date and time format (3.8. General Settings (p. 22)), sound (3.10. Sound Settings (p. 25)), display (3.11. Display Parameters Settings (p. 26)), users (3.12. User Manager (p. 26)), network (3.13. Wired Communication between the Printer and a Computer (p. 27)), and service options – see 4.1.7. Service (p. 64)	
	P	Enable and disable printing – see 5.2.1. Printing a Project via Printer LCD (p. 105) , rinse the nozzles – see also 4.1.7.1. Purging (p. 64)	

Make sure that the edges of the housing are not touched while LCD buttons are being touched on the screen touch – this may disrupt the detection of a touch.



















3.4.1. LCD KEYPAD

The on-screen keypad can be used for changing the settings of parameter and inputting text files from the printer touch screen (LCD) level. It is displayed on the LCD display after a given parameter field has been chosen, while the password is being typed in during logging in operation or while a text is being input to a project.



The keypad contains a full set of Latin letters and a set of digits; moreover it also contains

special buttons:

	to move the cursor (  are available for the keypads that are displayed while multiple-line text objects are being edited)
	to shift between small letters to capital letters and the other way round
	to shift between letters and punctuation marks and the other way round
	to convert the Latin letters into Chinese characters (mode of input: pinyin) and the other way round (the button is available after the  button has been touched)
	to convert the Latin letters into Cyrillic letters and the other way round (the button is available after the  button has been touched)
	to convert letters into special symbols and the other way round
	ENTER - to move to the following line
	to delete the character that is on the left of the cursor
	to delete an entire text (to clear the edit field)
	to undo deletion (the button is available after the  button has been touched)
	to move back to the previous display
	to confirm that you want to input a text you have typed in (the button is available after you have started typing in)
	to abandon inputting a text (the button is available after you have started typing in)

Moreover, diacritical characters are hidden under certain buttons (they are available after a given button has been touched and held on).

3.5. SWITCHING THE PRINTER ON AND OFF

See *Fig. 1* (p. 11).

3.5.1. SWITCHING THE PRINTER ON



Press button **10**, which is on the right-hand side of printer controller **1**. The printer is ready for operation when the main screen is displayed (in about 30 s from the switching on).






When the printer is switched on, you can move to print a text file from printer memory.

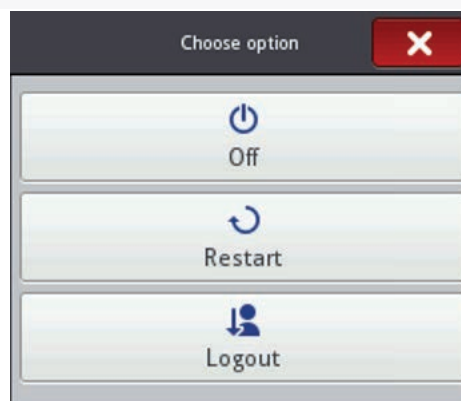
3.5.2. SWITCHING THE PRINTER OFF

The printer can be switched off in two ways:

- By means of the  (F) button on the printer touch screen 2.
- Remotely, with EBS Web User Interface available via a Web Browser, by means of the  button.

When the  (F) button is touched, the window containing the following options is displayed on the printer touch screen and also in EBS Web User Interface:

-  to switch off promptly after the button is touched
-  to switch off and restart the printer
-  to log out the current user and display the log in display – see [3.5.3. Logging In \(p. 19\)](#)




The switching off is done properly, when screen 2 switches off. It can also be signaled with an audible signal (see [3.10. Sound Settings \(p. 25\)](#)).

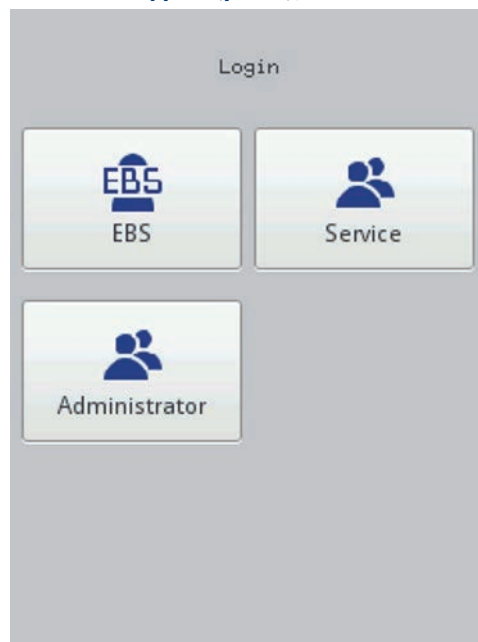
In an emergency situation, when the above mentioned ways of printer switch off turn out ineffective or when the printer needs to be switched off immediately, you can do that by holding button **10** over a minimum of 4 second.

After emergency switch off the settings of the printer counters and unsaved projects are lost. If the emergency switch off occurs too frequently, it may lead to printer damage (e.g. damage to the file system).


3.5.3. LOGGING IN

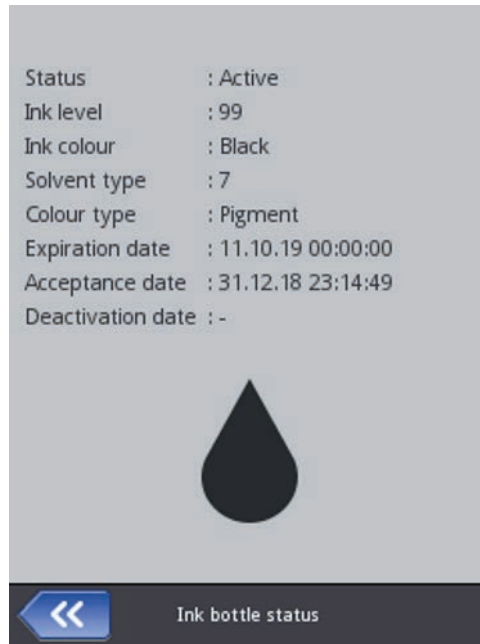
You can be logged in automatically as Administrator by default (the default password is 1). You can disable automatic logging in or change the default account – see [4.1.1. File Manager \(p. 34\)](#).

If the current user is logged out with the  **Logout** button (see [3.5.2. Switching the Printer Off \(p. 18\)](#)), a list of user is displayed on the printer screen. After a user name has been chosen, a keypad is displayed (see [3.4.1. LCD Keypad \(p. 16\)](#)) with which to type in the password.



3.6. REPLACING AN INK BOTTLE

Every ink bottle is equipped with a transponder that stores the information on the type of ink and its date of manufacture. The printer has a built-in circuit that scans the data from the transponder and thereby it helps check whether the ink used is of the proper quality. The detailed information on ink (the bottle fill-in level, the ink color, the type of solvent, the type of dye, the expiration date for the ink, the date when the bottle has been accepted) is available after the drop-shape icon  (D) on the main display top bar has been touched.



Follow the steps below in order to replace an ink bottle:



If possible, replace the container in dust-free conditions so as to minimize the amount of contaminants getting in to the printer's ink system. Do not leave the printer with the ink bottle detached for a longer time than that required to replace the bottle.


1. Start up the printer – see **3.5.1. Switching the Printer On (p. 17)**.
2. Put a new ink bottle to transponder reader **9** in the way shown on the reader label, for ink identification and validation. After the information about the ink has been read, an ink validation message icon is displayed in the top right corner of LCD panel **2** (press the icon to read the message – see **3.15. Messages (p. 33)**). The new bottle is validated and the following message is displayed: **(I99000) New ink container successfully accepted..**



An ink bottle can be subjected to identification and validation only once.

3. Unscrew and remove the consumed ink bottle carefully.
4. Tear off the aluminium foil that secures the cap of the new bottle.
5. Screw the new bottle into bottle seat **3**. When the bottle is turned upside down, no ink spills because the bottle is equipped with a protective valve.
6. Start the purging procedure – see **4.1.7.1. Purging (p. 64)**. When it is finished, make a test print. Keep repeating the purging procedure, if needed be, until a correct print is made.

While replacing ink bottles, check the level of the waste ink in waste-ink bottle **11**, empty the waste-ink bottle, if need be. Dispose of waste ink in compliance with the waste ink disposal standard. Avoid overfilling the waste-ink bottle, as otherwise the suction pump may get damaged.

Should problems with the validation of an appropriate and correct bottle occur, the service staff can make temporary validation of such a bottle possible (for 50 hours) – see **4.1.7.3. Unlocking Options (p. 66)**. The information on such a temporarily validated bottle appears in the form of the  icon (**D**) on the status bar.

3.6.1. CHANGING THE TYPE AND/OR COLOR OF INK



Inks of various types (which differ with the type of solvent applied) must not be mixed with each other. Before ink of a different type than previously is used, rinse the ink system thoroughly; remnants of old ink may result in irreversible damage to the printhead.

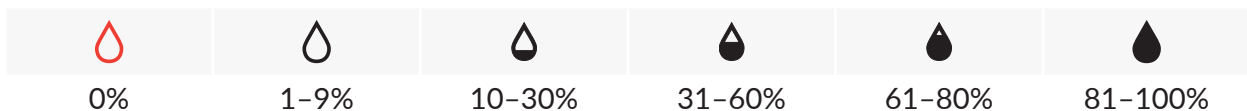
Follow the below-given steps to replace an ink bottle with a bottle of ink of another type and/or color:

1. Start up the printer – see [3.5.1. Switching the Printer On \(p. 17\)](#).
2. Unscrew and remove carefully the ink bottle that you want to change, and empty the waste-ink bottle [11](#).
3. Empty the ink pot of any ink (by purging until ink stops flowing out of the printhead – see [4.1.7.1. Purging \(p. 64\)](#)).
4. Screw a bottle of solvent whose type corresponds to that of the previous ink into bottle seat [3](#). Initiate the long, ink-purging procedure – see [4.1.7.1. Purging \(p. 64\)](#).
5. Unscrew and remove carefully the used up bottle, and empty the waste-ink bottle.
6. Empty the ink pot of any solvent, by purging until the ink system is emptied.
7. Start the enabling function – see [4.1.7.3. Unlocking Options \(p. 66\)](#) and enable the ink type/color of ink to be changed.
8. Put a new ink bottle to transponder reader [9](#) in the way shown on the reader label, for ink identification and validation. After the information about the ink has been read, an ink validation message icon is displayed in the top right corner of LCD panel [2](#) (press the icon to read the message – see [3.15. Messages \(p. 33\)](#)). Validation of the new bottle is signaled on the display with the following message **(I99000) New ink container successfully accepted..**
9. Screw the new ink bottle into bottle seat [3](#).
10. Start the purging procedure. When it is finished, make a test print. Keep repeating the purging procedure, if need be, until a correct print is made.

3.7. INK LEVEL IN BOTTLE



When the printer stops printing, make sure that it is because the ink bottle has been emptied.

The level of ink in the bottle is displayed on screen [2](#) with the  icon (**D**):






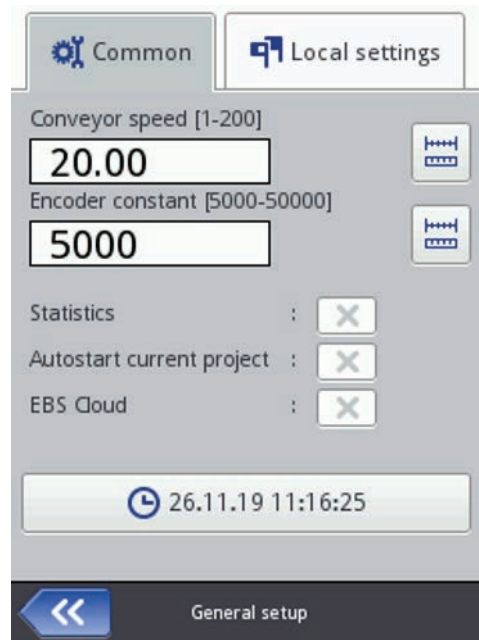
Low ink (the empty ink bottle and low ink level in the ink pot) is signaled with message displayed on screen [2](#) and also with the optional signaler lamp blinking green.

In addition, the  and  (**D**) icons displayed alternatively can indicate that:




- There is a problem with ink, e.g. the ink is past its use-by date, or the print limit assigned to the printer has been exceeded. The information about the problem is displayed after the  icon (**D**), has been touched, and also in message form after the  message icon (**B**) has been touched.
- There is no communication with the controller – restart the printer, and when the problem does not subside, contact your service point.

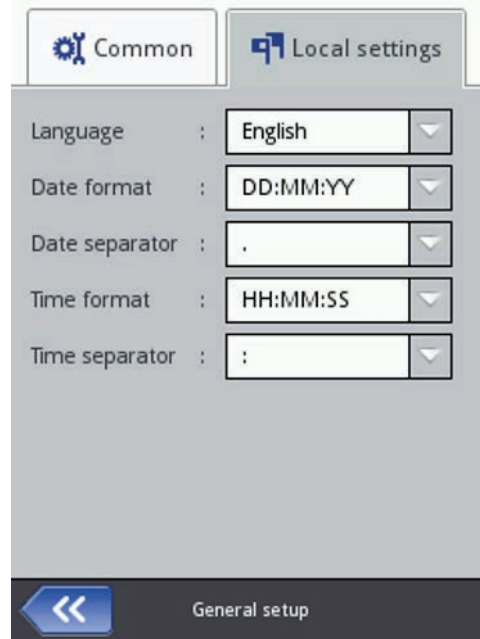
3.8. GENERAL SETTINGS


The general settings are accessible by touching the following buttons in turn:  **Tools (O)**,  **Settings** and  **General**.






In the  **Common** sheet tab you can:










- Measure and save the conveyor-belt travel speed – see [Measure \(p. 23\)](#),
- Measure and save the encoder (or rather shaft-encoder, or rotational speed sensor) constant – see [Measure \(p. 23\)](#),
- Measure and save the encoder (or rather shaft-encoder, or rotational speed sensor) constant – see **Statistics**. You can collect the data on the number of prints made for each of the projects. The report is available in the printer after the  **Tools (O)** and  **Statistics** buttons have been touched as well as in EBS Web User Interface in the **Info** menu – see [4.2.9.2. Operating statistics \(p. 103\)](#).
- Enable/disable the **Autostart current project** option – after the printer has been switched on, the recently printed project is read-in automatically, and the printer moves to the **Print on (waiting)** state. When the photodetector is activated, printing starts.
- Switch on/off **EBS Cloud**, a tool that enables you to maintain and monitor the state of the printer remotely.
- Re-set the printer date and time settings by touching the  button – see [3.9. Date and Time Settings \(p. 24\)](#).

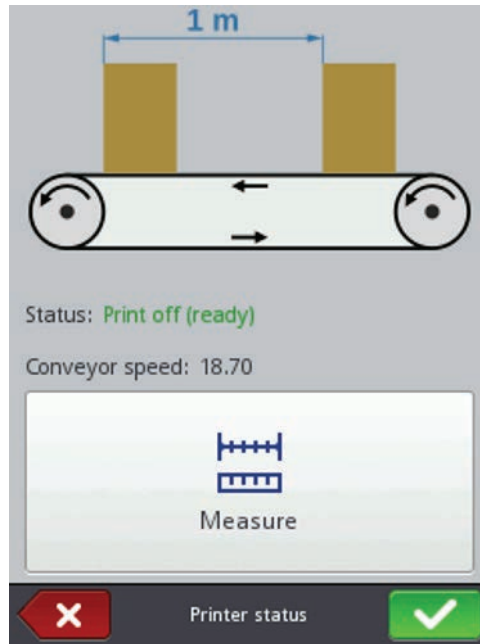


In the  **Local settings** sheet tab you can change the interface **Language** (after a new language setting has been confirmed, the interface software on the LCD starts running again within 10 seconds), date and time format (the sequence and the number of date and time components), and also change separators between the date and time components as default formats for newly created **Date/Time**-type text objects.

Confirm the modified parameter settings with the  button or abandon them with the  button. If no modifications have been made, you can go back to the previous screen by touching the  button.

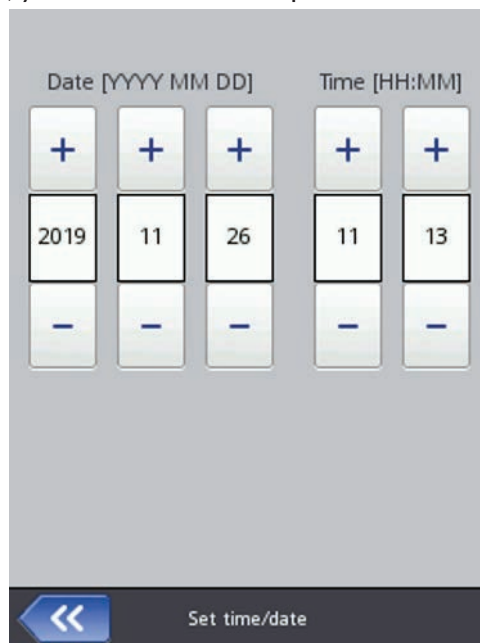
The printer is equipped with a practical tool called **Measure**. It can be used for measuring conveyor-belt travel speed or encoder constant. Follow the below-given operations to take a measurement:

1. Put two (2) articles on a conveyor belt at a distance of 1m from each other (the distance is measured between the leading edges of the articles). It is important that the articles are big enough to activate the photodetector when they move.
2. In the general settings window (available after pressing  **Tools (O)**,  **Settings** and  **General** in turn), in the  **Common** sheet tab, press the  button at the **Conveyor speed** or **Encoder constant** parameter.
3. In the window displayed press the  **Measure** button.
4. Set the conveyor belt moving. When the two articles move in front of the photodetector, the encoder constant or conveyor-belt travel speed is automatically displayed in the corresponding field.
5. To confirm a modification to the parameter setting, press the  button; to abandon the modification, press the  button. If no modification is made, you can return to the previous screen by pressing the  button.



3.9. DATE AND TIME SETTINGS

The date and time are accessible for modification by touching time (E) displayed on the top bar of main screen 2. Modifications can be made with the **+**, **-** buttons or by typing in a setting via the keypad. Confirm the modification with the **✓** button or abandon it with the **✗** button. If no modifications have been made, you can return to the previous screen by touching the **⏪** button.






The date and time themselves and their formats can be modified in the general settings menu – see **3.8. General Settings (p. 22)**.

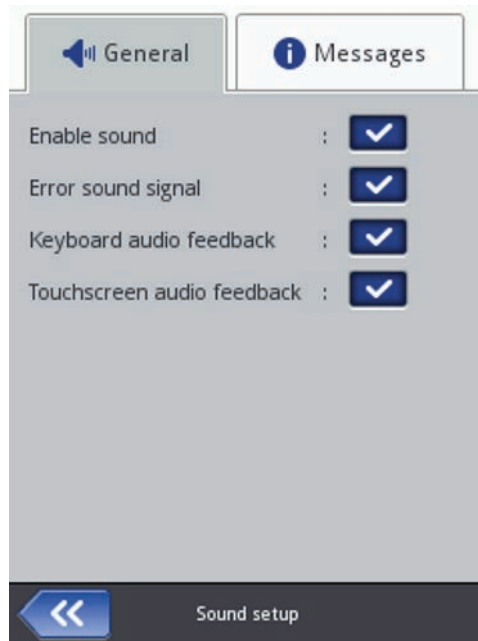
The modified parameter settings should be confirmed with the **✓** button or abandoned with the **✗** button. If no modifications have been made, you can go back to the previous screen by touching the **⏪** button.


The date and time settings can also be modified with EBS Web User Interface – see [4.2.6.1. General settings \(p. 99\)](#).

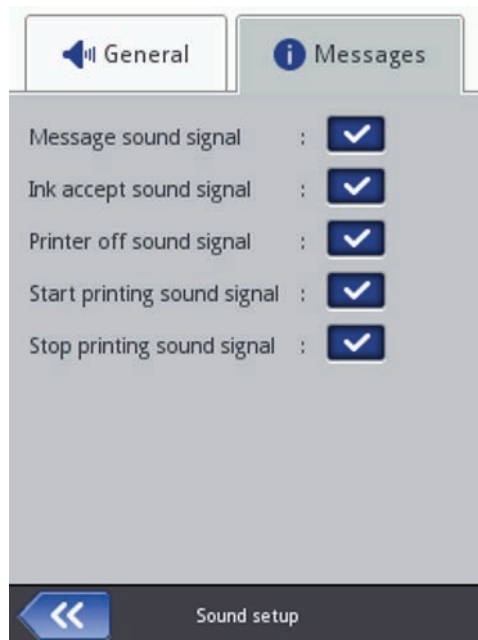
On changing the date, restart the printer.

3.10. SOUND SETTINGS

The sound settings are accessible by touching the following buttons in turn:  **Tools (O)**,  **Settings** and  **Sound**.






In the  **General** sheet tab you can set **Error sound signal**, **Keyboard audio feedback**, **Touchscreen audio feedback**. If the **Enable sound** check box is unticked, the sound is silenced completely, irrespective of what the settings of the other options are.



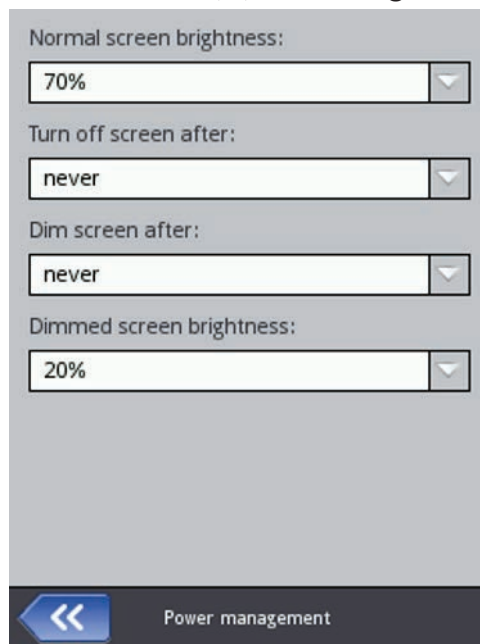
In the  **Messages** sheet tab you can modify the sound settings for starting and stopping

printing (**Start printing sound signal** and **Stop printing sound signal**), accepting an ink bottle (**Ink accept sound signal**), and also for switching the printer off (**Printer off sound signal**). If the **Message sound signal** check box is unticked, the sound that goes with every message is disabled.

The modified parameter settings should be confirmed with the  button or abandoned with the  button. If no modifications have been made, you can go back to the previous screen by touching the  button.




3.11. DISPLAY PARAMETERS SETTINGS

Touch the following buttons in turn:  **Tools (O)**,  **Settings** and  **Power**.






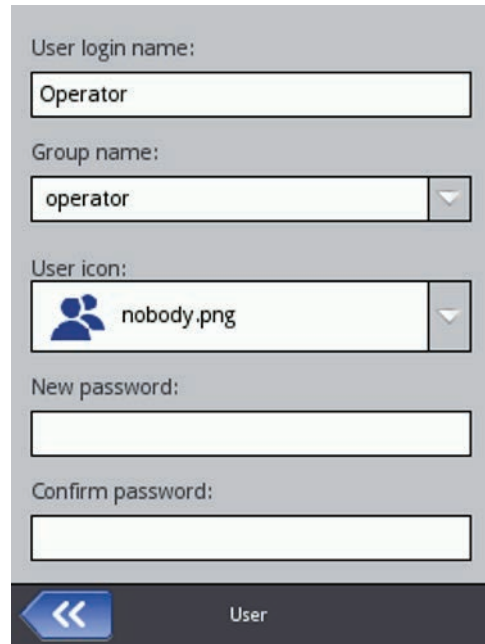
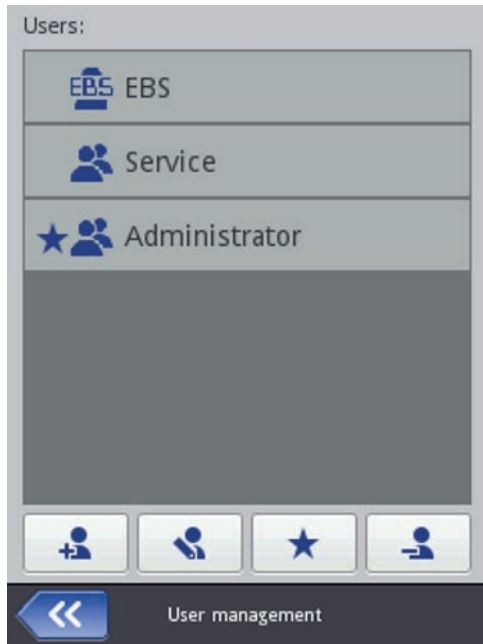
On screen displayed you can do the following:



- Set **Normal screen brightness**,
- Blank the screen after a time with the **Turn off screen after** command,
- Dim the screen after a time with the **Dim screen after** command,
- Modify the setting of the **Dimmed screen brightness** parameter,



The modified parameter settings should be confirmed with the  button or abandoned with the  button. If no modifications have been made, you can go back to the previous screen by touching the  button.



3.12. USER MANAGER




The printer can be used by a few users; each of them can have his own sound, display or other settings, and can also have different authorizations. Touch the  **Tools (O)**,  **Settings** and  **Users** buttons in turn to open User Manager.




Touch the  button to add a new user. In the window displayed fill in the **User login name**, **New password**, **Confirm password** fields, and also choose the group to which the new user is to be assigned. You can also choose an icon for identifying the user (the icon must be saved in printer memory in advance – see [4.2.5.1. Images manager \(p. 94\)](#)). The modified parameter settings should be confirmed with the  button.

Highlight the name of a user in the user list and touch the  button in order to edit the user data. The modified data should be confirmed with the  button.

Highlight the name of a user in the user list and touch the  button in order to remove the user. The user removal operation should be confirmed with the  **Yes** button on the screen.




If a user is marked with  (by touching the  button after the user has been highlighted), this user will be logged in automatically after the printer has been switched on. Administrator is marked with , by default.

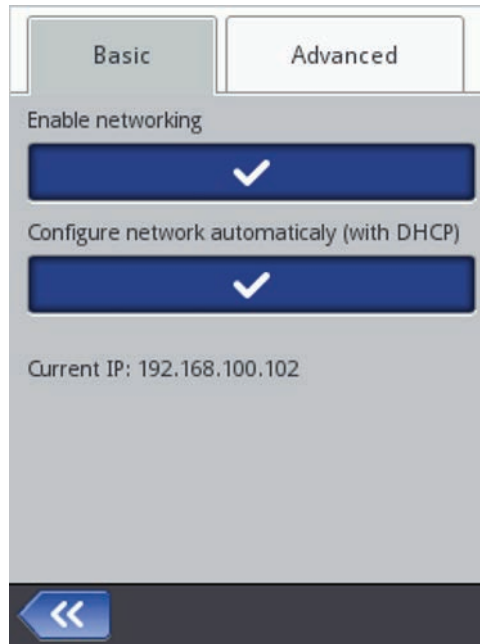
The User Manager is also available via a Web Browser – see [4.2.5.4. Users manager \(p. 96\)](#).

Touch the  button to return to the previous screen.

3.13. WIRED COMMUNICATION BETWEEN THE PRINTER AND A COMPUTER

The printer can communicate with a computer via a wired Ethernet network.


To set parameters of the wired Ethernet, press the following:  **Tools (O)**,  **Settings** and  **Network** in turn.






In the **Basic** sheet tab you can find the link to the network the printer is linked into. With the buttons available, you can enable and disable networking and also select a network configuration mode: automatic or manual.

Tick **Configure network automatically (with DHCP)**, to enable the printer to configure a network connection automatically (the printer will receive addresses and masks assigned to it by the DHCP handler). No settings available in the **Advanced** sheet tab can be edited in this mode.

Untick **Configure network automatically (with DHCP)**, to configure network addresses and masks manually in the **Advanced** sheet tab. Press the field you want to edit. a numerical keypad is displayed to set addresses and masks.

To confirm the modification of data, press the  button.

The modified parameter settings should be confirmed with the  button or abandoned with the  button. If no modifications have been made, you can go back to the previous screen by pressing the  button.

3.13.1. DIRECT CONNECTION WITH A COMPUTER

1. Set network connection parameters on your computer:




- IP: 192.168.5.2 (for example)
- Netmask: 255.255.255.0

If a problem arises, contact the network administrator.

2. Connect the printer and the computer with Ethernet Crossover Cable.

3. Switch the printer on.

4. Log in as Administrator – see [3.5.3. Logging In \(p. 19\)](#).

5. If your computer supports DHCP (it has a DHCP server installed), the network is set up automatically – go to point 7. If your computer does not support DHCP, press the following in turn:  **Tools (O)**,  **Settings** and  **Network**, to access the network settings.

6. Untick **Configure network automatically (with DHCP)** and set the following parameters

in the **Advanced** sheet tab:




- **IP:** 192.168.5.10 (for example)
- **Netmask:** 255.255.255.0
- **Gateway:** leave blank
- **DNS:** leave blank

The screenshot shows a mobile interface with two tabs: 'Basic' and 'Advanced'. The 'Advanced' tab is selected. Below the tabs are four input fields: 'IP' (192.168.100.102), 'Netmask' (255.255.255.0), 'Gateway' (empty), and 'DNS' (empty). At the bottom, there is a blue back arrow button on the left and a green checkmark button on the right.

Confirm any modification to data by pressing the  button.

7. Access the network settings and find the **Current IP** in the **Basic** sheet tab.
8. Use a Web browser to go to the address: **http://Current IP**, where „**Current IP**” is the IP address viewed at point 7. EBS Web User Interface (WUI) is displayed on the computer screen.

3.13.2. CONNECTION WITH THE ETHERNET

1. Obtain the following information from the network administrator:
 - The IP address assigned to the printer
 - Netmask
 - Default Gateway IP address
 - DNS server IP address
2. Connect the printer to the Ethernet. Consult the network administrator about the type of cable required.
3. Switch the printer on.
4. Log in as Administrator – see [3.5.3. Logging In \(p. 19\)](#).
5. If it supports DHCP, the network is set up automatically – go to point 7. If the network does not support DHCP, press the following in turn:  **Tools (O)**,  **Settings** and  **Network**, to access the network settings.
6. Untick **Configure network automatically (with DHCP)** and open the **Advanced** sheet tab to set the following parameters according to the information obtained at point 1:
 - **IP**

- Netmask
- Gateway
- DNS

Confirm any modification to data by pressing the  button.

7. Access the network settings and find the **Current IP** in the **Basic** sheet tab.
8. Use a Web browser to go to the address: **http://Current IP**, where „**Current IP**” is the IP address viewed at point 7. EBS Web User Interface (WUI) is displayed on the computer screen.





3.14. CONNECTING USB DISC TO THE PRINTER

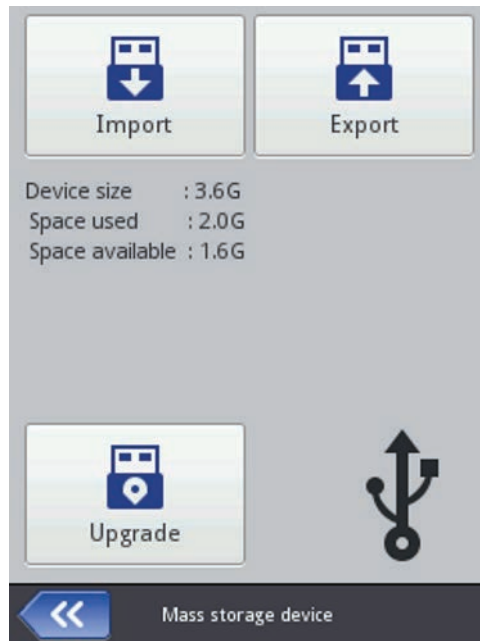
If you connect a disc to the printer via USB port **14**, you can import and export files and update printer software.



The USB disc must be formatted in the FAT or FAT32 file system.




The USB disc tools are accessible in two ways:

- By touching icon  on the status bar of the main screen (the icon is displayed when a disc is connected to the printer), or
- By touching the:  **Tools (O)**,  **Service** and  **USB** buttons in turn.



3.14.1. IMPORTING PROJECTS

With the project import function you can download projects made with Offline EBS Web User Interface or created in another printer to the printer.

Touch the  button. Choose a file with the extension EXP in the file list on the screen displayed or touch the text field and type in the name of a file via the keypad displayed, and then confirm with the  button. On choosing the file or typing in its name, confirm the selection with the  button. When the file is imported successfully, the following message is dis-

played:






File imported successfully.





3.14.2. EXPORTING PROJECTS



With the export project function you can save the projects that are in printer memory in order to use them in another printer and make a backup copy.



It is recommended that backup copies are made regularly to protect the data against loss.

Touch the  button. Choose a mode of export on the screen displayed:  >  **All projects** or  >  **Single project**.

Touch the  >  **Single project** button to export a single file. On the screen displayed choose a file with the extension PRJ in the list or touch the text field at the top of the screen and type in the name of a file via the keypad displayed and confirm with the  button. On selecting the file or typing in its name, confirm the selection with the  button.

Touch the  >  **All projects** button in order to export all projects. If a single project or all projects are exported successfully, the following message is displayed:



Export successful ! File with export data was created on main directory of USB device.

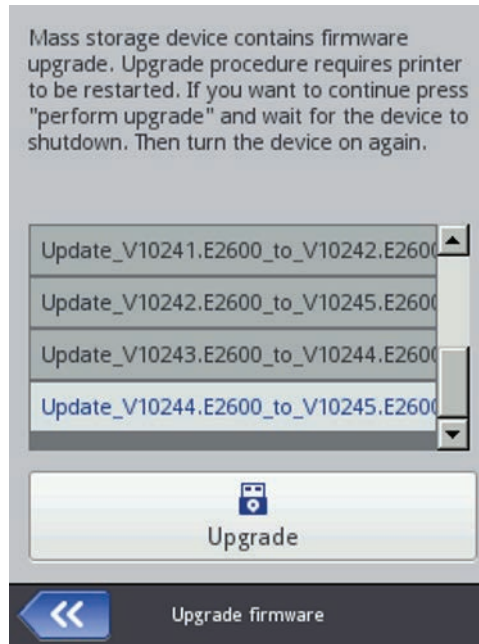
3.14.3. UPDATING SOFTWARE

Owing to software updates, the printer always has up-to-date and improved software, which makes it function better.

New versions of the software are available from the EBS distributors. Contact your local distributor to get the software that is suitable for your printer.

The update may involve a loss of projects and user-specific settings, and also the deletion of fonts and images installed. Make sure that the projects and files you wish to save have been backed up before updating – see [3.14.2. Exporting Projects \(p. 31\)](#) via the printer (only projects are exported) or [4.2.4.4. Export project \(p. 71\)](#) via EBS Web User Interface (projects and images are exported).

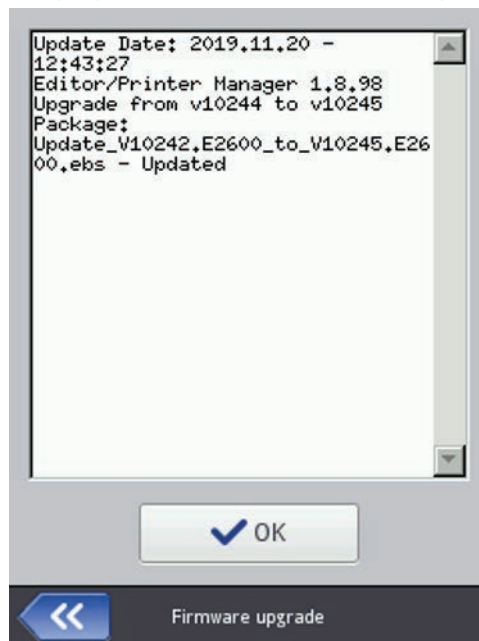
Touch the  **Upgrade** button. On the screen displayed choose an update file with the extension EBS in the list. On selecting the file, touch the  **Upgrade** button.



The update procedure is preceded by the message:

Printer is prepared for update. Press “OK” to turn off the printer. After printer is turned off please turn it on again, update will continue . It may take some time - please be patient and do not turn printer off!


Wait until the printer shuts down and then switch it on again and wait until the updating finishes. The following report is displayed when the software is updated successfully:



No printer software can be updated, when:

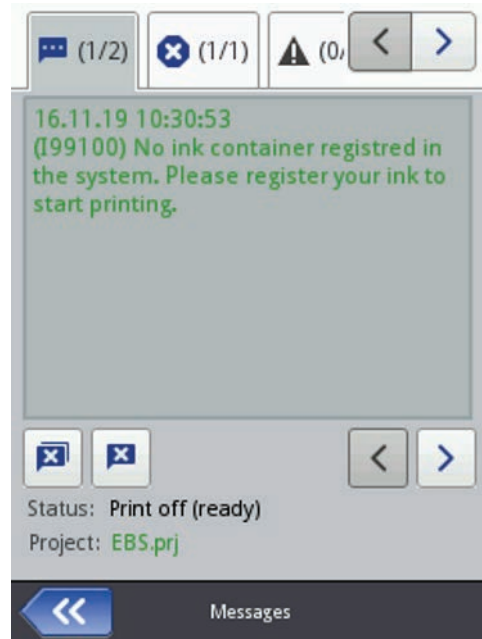
- The printer software version number is too low; before the latest version can be installed, an update package with a lower version number needs installing,
- The printer software is already up-to-date,
- The version of printer software is later than that of the selected software update.



3.15. MESSAGES

Important information about printer operation is signaled with the  icon (B) displayed on the status bar (the color of the icon indicates the type of message) and the following message shown in the printer screen:








Attention! The message list contains new information, which must be read and confirmed.

A list of messages is displayed after the  **Show messages** button has been touched.





The message list can also be displayed by touching the  **Tools (O)** and  **Messages** buttons in turn.

The list is divided into four sheet tabs:

- All messages ,
- Error messages  (the messages are displayed in red, and the  icon is shown on the status bar),
- Warning messages  (the messages are displayed in yellow, and the  icon is shown on the status bar),
- Info messages  (the messages are displayed in green, and the  icon is shown on the status bar).

The following buttons are designed for use in order to view and delete messages:

 to display the previous message

 to display the following message

 to delete a single message

 to delete all messages

If there are no messages at any time, the view buttons are inactive.

3.16. STATISTICS

The statistics are accessible after the **Tools (O)** and **Statistics** buttons are touched in turn. On the screen displayed, in the **Basic** sheet tab you can view the data on the number of hours the printer has run (work time) and on the number of prints made, presented in a user report and a service report (general statistics). Every report is updated after printing has been disabled (see [5.2. Printing a Project \(p. 105\)](#)) and the statistics window re-opened.

Basic		Clear
Worktime	Printouts	
User		
150.27h	61	
Service		
254.05h	124	
Exploitation statistics		

The user report is generated for all users generally. If you wish to obtain a separate report for a given user, clear the statistics at the beginning of work. For that purpose, go to the **Clear** sheet tab and touch the **Clear user report** button.

The general statistics (service report) can be deleted by a Service-type user.

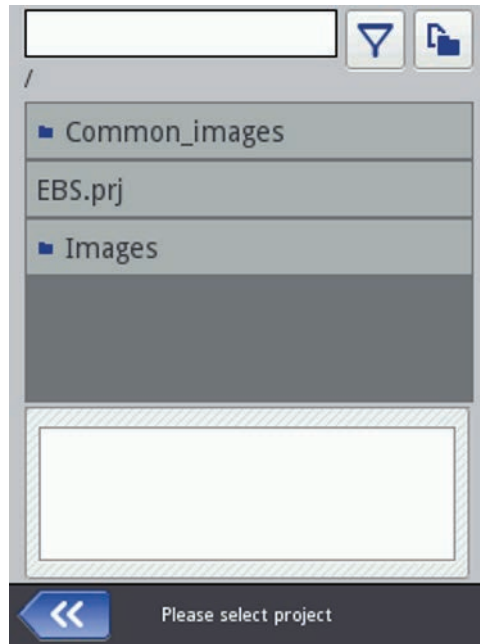
4. GETTING STARTED





Projects for printing can be created and edited in two ways: via the touch screen of the printer and with a processor that is available via a Web Browser.


4.1. OPERATING THE PRINTER VIA PRINTER TOUCH SCREEN

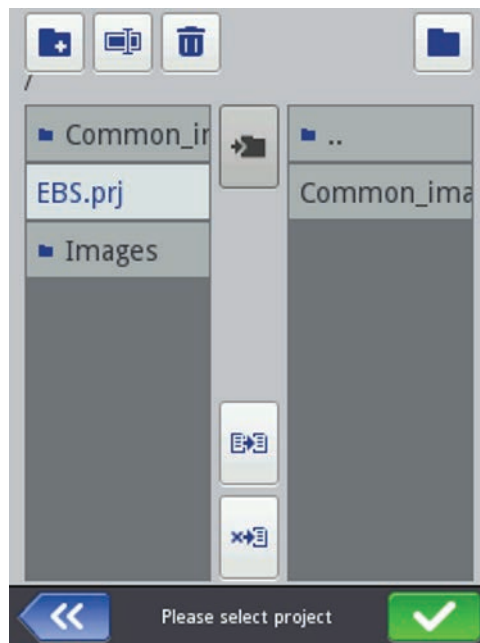
4.1.1. FILE MANAGER



File Manager is available after **Create project**, **Edit project** have been touched (they are accessible with the **Project** button (N)) or after the open-project-for-printing button (G) accessible on the main screen has been touched.






The preview of the set of project or graphics files can be narrowed by filtering. Press the  button, type in a character string after which filtering should follow in the window displayed, and then confirm with the  button (the characters in the string are case sensitive). To abandon filtering, press the  button again, delete the filtering string and confirm with the  button.




Touch the  button to move to the File Manager. In the newly displayed screen you can manage files and directories.





Touch the  button in order to create a new folder. Type in a name of the new folder on the screen displayed and confirm with the  button.



Highlight a file or folder name in the list and then touch the  button, in order to delete the file or folder. Highlight a file or folder name in the list, and then touch the  button in order to change the name of the file or folder.

To access a folder or return to the parent folder, highlight the folder name in the list, and then press the  button.


You can copy files and move them among folders with the  copy button and the  move button. Touch the  button in order to close the File Manager and return to the previous screen.



4.1.2. CREATING A NEW PROJECT

Touch the  **Project** button (N) and then  **Create project**.

On the screen displayed, touch the white box at the top of the screen, type in a name via the keypad displayed and confirm it with the  button. In the following screen confirm the creation of the project with the  button.

4.1.3. OPENING AND EDITING A PROJECT



Touch the  **Project** button (N) and then  **Edit project**.

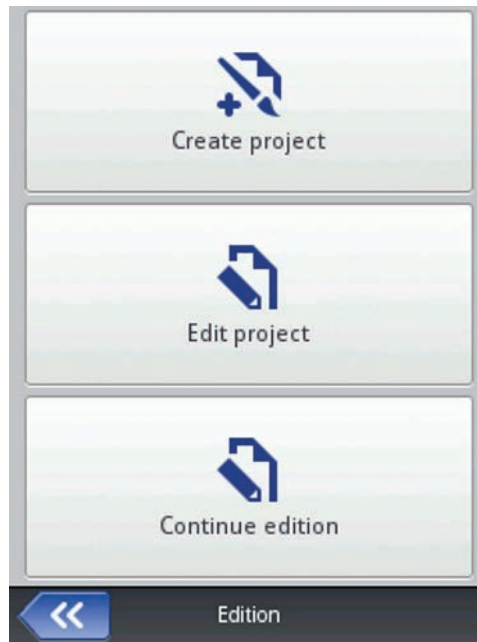
On the screen displayed, choose a project in the list or touch the white box at the top of the screen, type in the name of a project via the keypad displayed and confirm it with the  button. In the following screen confirm the opening of the project (for editing) with the  button.

If an attempt is made to open a project, when a project is already opened in EBS Web User Interface, the following message is displayed:

Some project is currently opened for edit by WWW editor. Do You want to force open ?

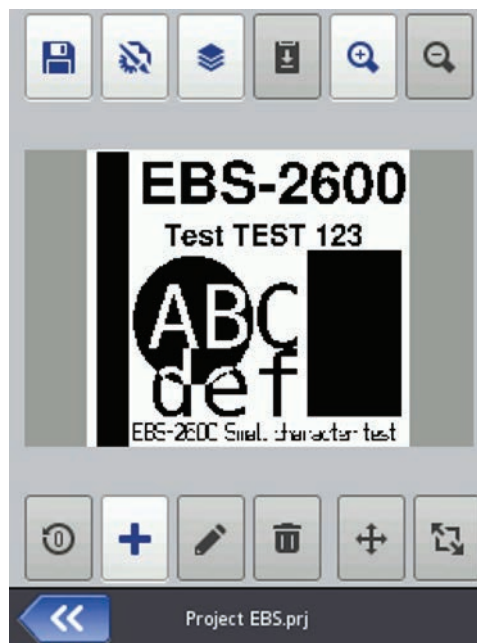
The project opened in EBS Web User Interface must be saved before any project is opened on the printer. If you do not do that, the project is closed unsaved and any modification to it are lost.

If you wish to continue editing the project that is opened in WUI, touch the  **Project** button (N), and then  **Continue edition**.



4.1.4. PROJECT PROCESSOR




The processor installed on the printer allows you to modify a project from the LCD panel of the printer without any use of a PC.



The edit window is divided into 4 parts:

- Top bar with tool icons,
- Edit area (gray), inside which a project is displayed (white),
- Bottom bar with tool icons,
- Footnote, where there is the name of a project to be edited and the button designed for















closing the processor:

-  to save the project currently edited and exit the processor
-  to exit the processor without saving the project
-  to return to the previous screen when no modifications have been made



The processor footnote shows the project name, whose color changes after the project has been modified (from gray to yellow). When the project is saved, the color of the name changes back to gray.


Part of the buttons can be disabled if a given function is not available for a given type or state of object. When a button is active, the corresponding option is available.

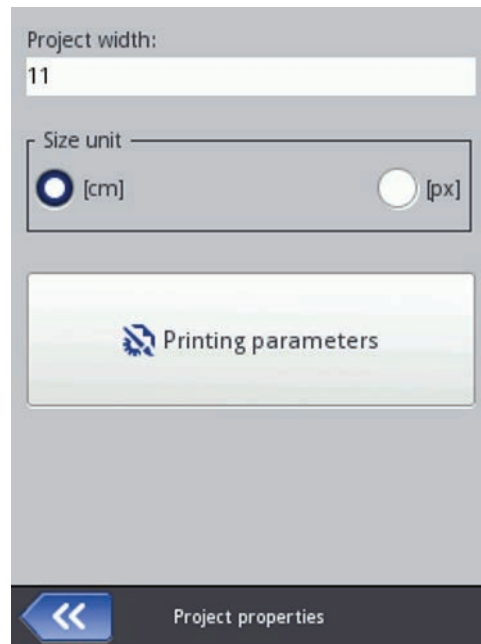
The meaning of the buttons:

-  to save a project
-  to set a width of the edit area and printing parameters
-  to open the list objects/clipboard/trash
-  to copy objects to the clipboard (the button is active after an object has been highlighted)
-  to paste the object (the button is active after an object has been copied to the clipboard and no object is highlighted)
-  to magnify the project inside the edit area
-  to decrease the project inside the edit area
-  to change the initial setting of a counter
-  to add a new object
-  to modify parameters of an object highlighted
-  to restore a deleted object from trash (the button is available, when the deleted object is in trash and no other object is highlighted)
-  to delete the highlighted object
-  to reposition the highlighted object
-  to resize the highlighted object


4.1.4.1. PROJECT PROPERTIES






The Project Properties window is displayed with the  button. With this tool you can set the width of the working area precisely. The setting can be given as a number of pixels (**px**) or centimeters (**cm**), and the unit needs to be chosen. Any modified setting needs to be confirmed with the  button.

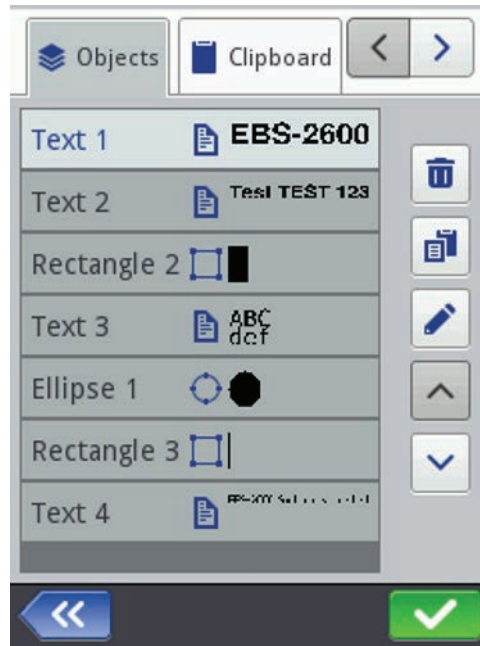
You can also move to set the printing parameters with the  **Printing parameters** button – see [4.1.5. Printing Parameters \(p. 60\)](#).




4.1.4.2. LIST OF OBJECTS



The list of all objects used for a project is accessible with the  button. The following operations can be performed on objects in the list:

- a highlighted object can be deleted with the  button - the deleted object is moved to the trash - see [4.1.4.4. Trash \(p. 40\)](#),
- a highlighted object can be copied with the  button - the copied object is moved to the clipboard - see [4.1.4.3. Clipboard \(p. 40\)](#),
- a highlighted object can be edited; when the  button is touched, the object parameter window opens,
- the sequence of objects in the list, and thereby the sequence in which objects are arranged in the edit area (the last object in the list is in the lowest layer, the first object is in the highest layer) can be changed with the  and  buttons.



4.1.4.3. CLIPBOARD

The **Clipboard** is accessible with the  button (the button is available when an object is copied to the clipboard and no object is highlighted). The following operations can be performed on objects in the clipboard:



- a highlighted object can be deleted from the clipboard with the  button,
- a highlighted object can be pasted from the clipboard to a project with the  button.



4.1.4.4. TRASH



The **Trash** is accessible by touching the  object-list button or the  clipboard button and

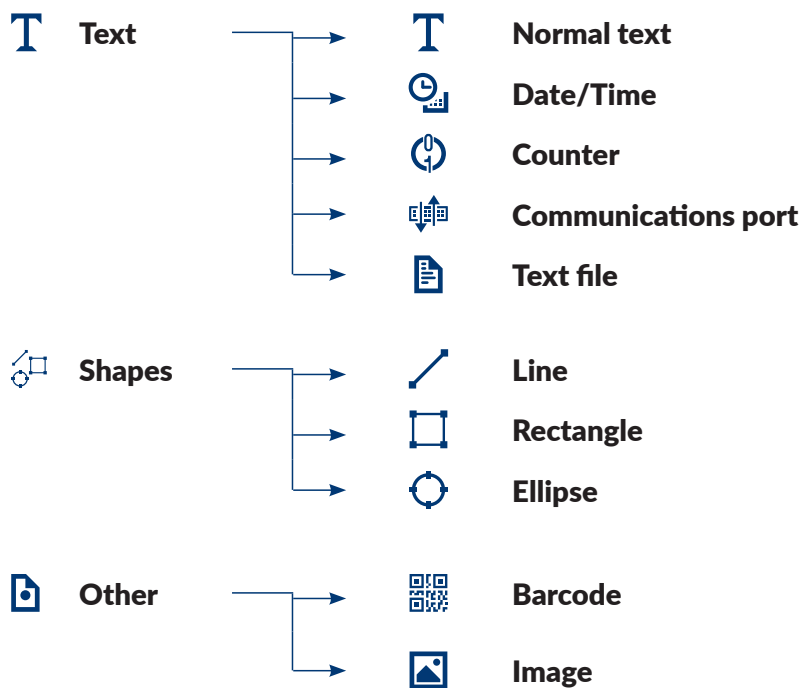
by switching to the **Trash** sheet tab. The following operations can be performed on trash objects:

- a highlighted object can be deleted from trash with the  button,
- a highlighted object can be restored into the list of objects with the  button.




4.1.4.5. OBJECTS



In order to add a new object to a project, touch the **+** button and then choose an appropriate object on the screen displayed. Objects are grouped in sheet tabs by type: **T Text** (text objects),  **Shapes** and  **Other**.





When you choose an object, the object parameter window is displayed so that the parameters could be modified.

You can use the cursor to choose (highlight) the object whose parameters you wish to modify within the edit area. The appearance of a red setting-out frame around the object is tantamount to choosing an object.


Touch the  button to modify the parameters of a given object. The window displayed as the result contains the parameters that are specific for a given type of object and whose settings can be modified. If a new setting is of a wrong type or out of the permissible range, the text field is highlighted in red. Amend the setting accordingly.

Save the project with the  button. The project is saved with the name that was given to it when it was created or it had when it was opened. The button is disabled when the project is already saved or when no modifications have been made. If the project is not saved, the  button is enabled; in addition, the project name displayed at the top of the processor window is red (after saving it changes the color to white).





A project can also be saved with another name by means of the  button.

You can exit the processor with the  button. In this way you abandon editing and the project is not saved.



4.1.4.5.1. REPOSITIONING AN OBJECT

Highlight an object in the edit area in order to change its position (a red setting-out frame appears), and then touch the  button – the setting-out frame changes its color to green.


You can reposition an object in two ways:

- By touching the screen anywhere in the edit area. The point of touch defines the position of the top left-hand corner of an object (the entire object framed in green is moved in relation to the given point).
- By means of the , , ,  buttons. The object is moved by 1 pixel with every touch.







The object is shifted provided that the project area is greater than the object to be relocated.



Confirm the change in position with the  button or abandon the change with the  button.

4.1.4.5.2. RE-SIZING AN OBJECT



In the edit area, highlight an object whose size you wish to change (a red setting out frame occurs), and then touch the  button – the setting-out frame changes color to violet.

You can change the size of an object in two ways:

- By touching the screen below and on the right of the fixed, top left-hand corner of the object. The indicated point defines the position of the bottom right-hand corner.
- By means of the  and  buttons (to shift the top edge of the object), the  and  buttons (to shift the bottom edge of the object), the  and  (to shift the left-

hand edge of the object) as well as the  and  buttons (to shift the right-hand edge of the object).

The object is magnified provided that the project area is greater than the object whose size is changed.

Touch the  button in order to confirm the change in size or the  button in order to abandon the change.



The **Normal text**, **Counter** and **Date/Time** objects can be resized only when the **Scaling** parameter is different than **Fit frame to content**; otherwise the size of the object does not change. The size of a text can be changed with the **Font size** parameter (for True Type fonts) or by changing the type of font (for EBS built-in fonts).

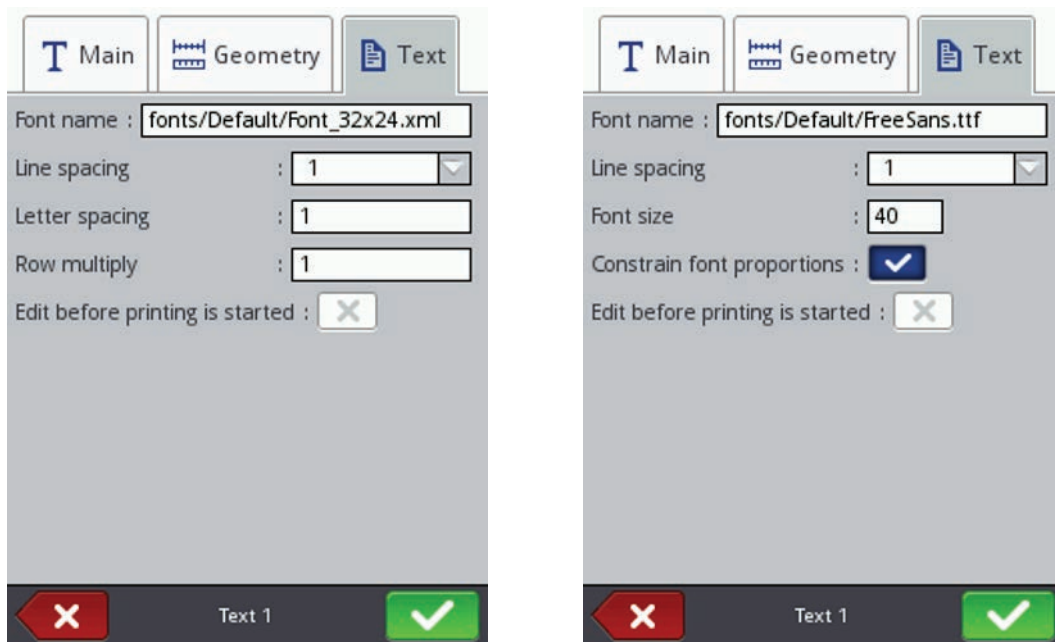
4.1.4.5.3. COMMON PARAMETERS OF OBJECTS

The following object parameters are available in the  **Geometry** sheet tab:









- **Object name.** The type of object is used as the object name, as standard (e.g. Counter 1, Image 2). You can name objects at your choice to facilitate identification, but the same names must not be used, i.e. they must be unique within one project. If you use a name that has already been used within the project, an error is reported when you try to save the parameters of the object named so.
- The **Position** parameter shows the coordinates of the top left-hand corner of the object frame. You can modify the coordinates and thereby change the position of an object. Place the cursor in the **Position** field and modify the coordinates in the window displayed. The first coordinate determines the location in the horizontal direction (**Object position x**), the second one determines the location in the vertical direction (**Object position y**). An object can also be repositioned in the edit area – see [4.1.4.5.1. Repositioning an Object \(p. 42\)](#).
- The **Size** of an object is displayed as a number of pixels (dots). The first size component is the width and the second – the height. You can re-size an object by editing the values. The resizing operation can also be performed in the edit area – see [4.1.4.5.2. Re-sizing an Object \(p. 42\)](#).

The **Position** and **Size** parameters are particularly useful when you need to arrange or align two or more objects precisely.

- The **Scaling** parameter allows you to adjust the object frame size to the size of the object. If the **Scaling** parameter is set to **Fit frame to content** the object frame is the same as the size of the object. If the **Scaling** parameter is set to **Fit content to frame**, the size of the object is equal to the size of the frame (not available to text objects where an EBS built-in font is used and to barcode-type objects). If **Without scaling** is chosen, the frame size can be modified without resizing the object.
- The **Object rotation** parameter allows you to rotate the entire object clockwise (the setting of 90), counterclockwise (the setting of 270) or „upside down” (the setting of 180).
- If the **Transparent** parameter check box is ticked, the object is transparent and you can see an object that is ‚under’ it. This property is useful when a number of objects have been placed in the edit area and there is a risk that objects overlap each other.






In the **Text** sheet tab (available for text objects):


- You can change the type of font by modifying the **Font name** parameter. EBS  built-in fonts and True Type (default fonts  and user fonts  fonts are available. If a font is marked with  (with the  button after the font name has been highlighted), it is added to favorites and moved to the beginning of the font list.
- For the EBS  built-in fonts you can modify the **Row multiply** and **Letter spacing** parameters. The **Row multiply** parameter defines how many times printing of every vertical row of text is to be repeated. The multiplication of rows is used in order to increase intensity of prints on porous materials, which absorb ink heavily, and on which the characters (consisting of the same size dots) printed are not well visible due to their grainy structure. The **Letter spacing** parameter defines the space between object characters. The space is given as a number of vertical rows (up to 1000 rows).
- For the True Type fonts (default fonts  and user fonts ) you can modify the **Font size** parameter (given as a number of pixels). The parameter is linked with the **Con-**

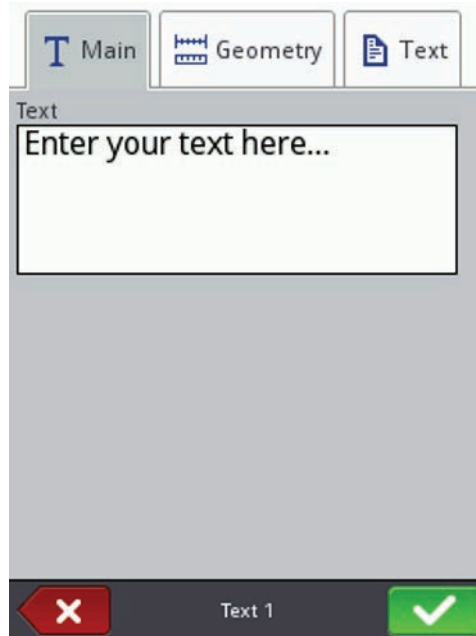
strain font proportions parameter. The **Font size** (the font width and height) can be modified proportionally (when the check box of the **Constrain font proportions** parameter is ticked) or either of the components, the width (**Font width**) and the height **Font height**) can be modified independently (the check box of the **Constrain font proportions** parameter is unticked).





- With the **Line spacing** parameter you can add spaces between lines of text. The spaces are measured in pixels (dots). Up to 20 pixel spaces can be added. The space is added after every end-of-line character.

Touch the  button in order to confirm the modifications or the  button in order to abandon any changes. If no changes have been made, you can return to the previous screen by touching  button.

4.1.4.5.4. TEXT OBJECT - NORMAL TEXT



Touch the  button in project processor window, choose the **T Text** sheet tab, and then touch the **T Normal text** in order to add a new, **Normal text**-type text object to a project.

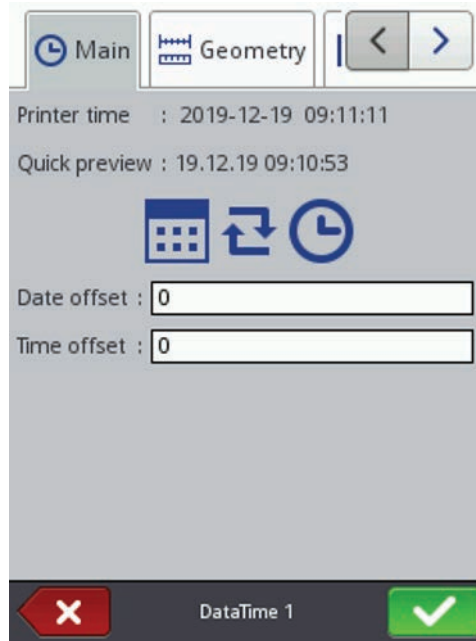






You can type in any string of characters in the **Text** field of the **T Main** sheet tab. The division of a text into lines can be done by touching the ENTER button on the keypad displayed. On finishing the typing in, confirm the text with the  button. Touch the  button in order to add the object to a project or the  button in order to abandon the addition. If no changes have been made, you can return to the previous screen by touching  button.

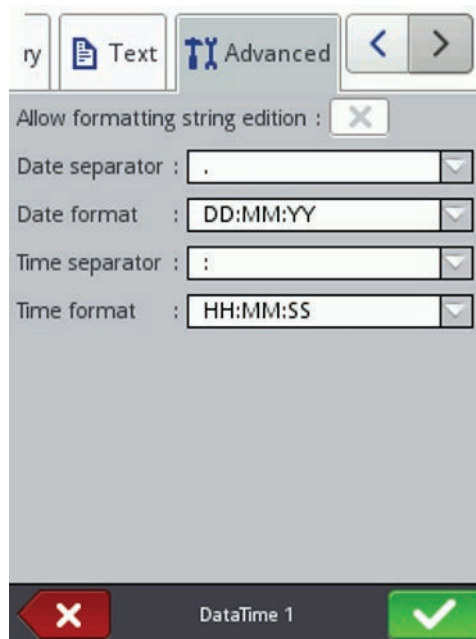
4.1.4.5.5. TEXT OBJECT - DATE/TIME

The **Date/Time** text object allows you to print the current date and the current time and also an expiration date automatically.

Touch the  button in project processor window, choose the **T Text** sheet tab, and then touch the  **Date/Time** in order to add a new, **Date/Time**-type text object to a project.



The current date and time generated by the printer clock are given in the  **Main** sheet tab, where you can also preview a time and/or date print. With the  clock icon or the  calendar icon you can choose components for printing – the date, the time or both of them. You can change the order of these components with the  arrow icon. The **Date offset** parameter allows you to shift the current date by a set number of days, in order to include an expiration date, for example. The **Time offset** parameter allows you to readjust the current time by a set number of hours (up to 24). The modification can impact on date shifting. Such a change may cause a calendar day to start at a different time than 00:00 (e.g. at 6 o'clock a.m., when a morning shift in the factory starts).



In the  **Advanced** sheet tab you can modify the **Date separator** and **Time separator**

parameters (for selecting separators to be used between date/time components) and also **Date format** and **Time format** (for selecting the sequence of the date/time components).




The default settings of date and time formats and separators for newly created **Date/Time**-type text objects can be modified in the **Settings** menu – see [3.8. General Settings \(p. 22\)](#).



The **Formatting string** parameter is available when the **Allow formatting string edition** check box in the **Advanced** sheet tab is ticked. Below there are the characters with which the date and time components are coded. Any characters that are different from those mentioned below and also spaces can precede, separate or follow the successive components of the universal-date special registers. If no local name exists, an English equivalent is displayed.




%a	local short form for the name of day of the week (Mon, ... , Sun)
%A	local full name of day of the week (Monday, ..., Sunday)
%b	local short form of the name of month (Jan, ... , Dec)
%B	local full name of month (January, ... , December)
%c	local date and time in the following format: short form for the name of day of the week, short form for the name of month, day of the month, hours, minutes, seconds, year
%C	number of century
%d	day of month (01, ... , 31)
%D	date in the format: mm/dd/yy
%e	day of month (1, ..., 31)
%F	date in the format: yyyy-mm-dd
%g	2-digit year corresponding to the number of week %V
%G	4-digit year corresponding to the number of week %V
%h	local short form for the name of month (Jan, ... , Dec)

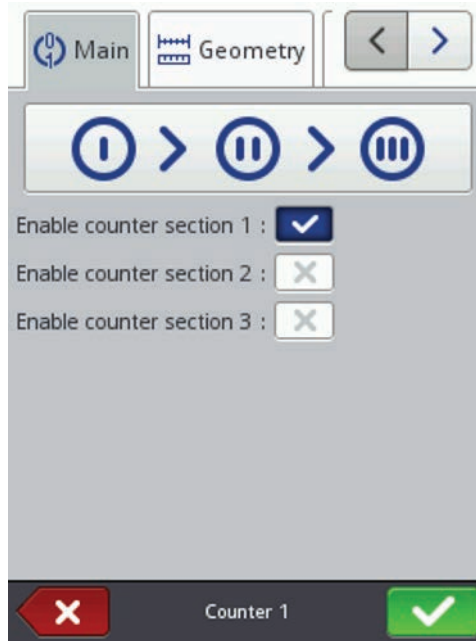
%H	hour, in 24-hour system (00-23)
%I	hour, in 12-hour system (01-12)
%j	day of year (001, ... , 366)
%k	hour, in 24-hour system (0-23)
%l	hour, in 12-hour system (1-12)
%m	month (01, ... , 12)
%M	minute (00, ... , 59)
%p	local equivalent to AM or PM (empty on many sites)
%P	local equivalent to a.m. or p.m. (empty on many sites)
%r	time in 12-hour system in the format: hh:mm:ss [AM] or [PM]
%R	time in 24-hour system in the format: hh:mm
%s	number of seconds from 00:00:00, 1 January 1970 (extension GNU)
%S	second (00, ..., 60); 60 means a leap second
%T	time in 24-hour system in the format: hh:mm:ss
%u	day of the week (1, ... ,7); 1 means Monday
%U	number of the week in year (00, ... , 53), Sunday starts the week
%V	number of the week in year (01, ... , 53), Monday starts the week
%w	number of day of the week, 0-Sunday, 1-Monday, etc.
%W	number of the week in year (00, ... , 53), Monday starts the week
%x	local representation of the date
%X	local representation of the time
%y	two last digits of year (00, ... , 99)
%Y	year in the format yyyy
%z	time zone in numerical format compliant with RFC-2822 (e.g. +0100) (non-standard extension)
%Z	time zone (e.g. EDT) or nothing, if no zone can be determined


Touch the  button in order to add the object to a project or the  button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the  button.







4.1.4.5.6. TEXT OBJECT - COUNTER

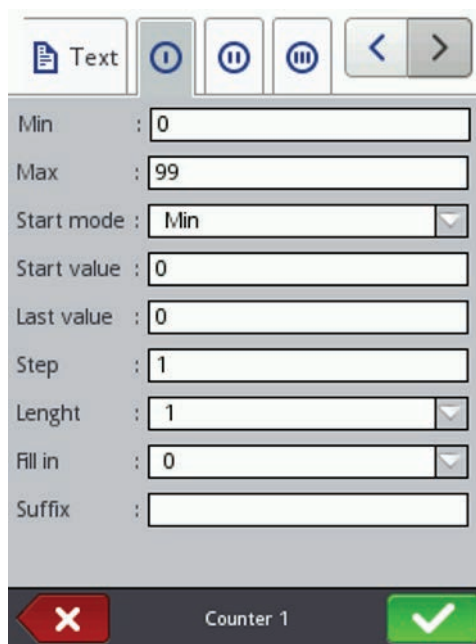
The **Counter** text object allows you to print automatically a consecutive number on every successive article to be labeled. The setting of the counter changes each time the photodetector activates.

Touch the  button in project processor window, choose the  **Text** sheet tab, and then touch the  **Counter** button in order to add a new, **Counter**-type text object to a project.






In the  **Main** sheet tab you can choose how many sections the **Counter** is to have. For simple counting of articles, it is enough to use one, the first section and the default settings to create a counter-type object. You can use a cascade of up to 3 identical sections. Each of the sections can be visible (displayed) or not.

By touching    (  ) you can change the **Increment order**. The parameter defines which of the sections is considered as first and what the timing order is. The section timed first receives a timing pulse whenever a print is to be made. Every successive section receives a timing pulse from the previous section, when that section has counted to the end (that is, to the **Max** setting when the counter is incremented or to the **Min** setting when it is decremented). The timing pulse modifies the counter by a set **Step**.






In every counter section you can configure each of the following parameters:

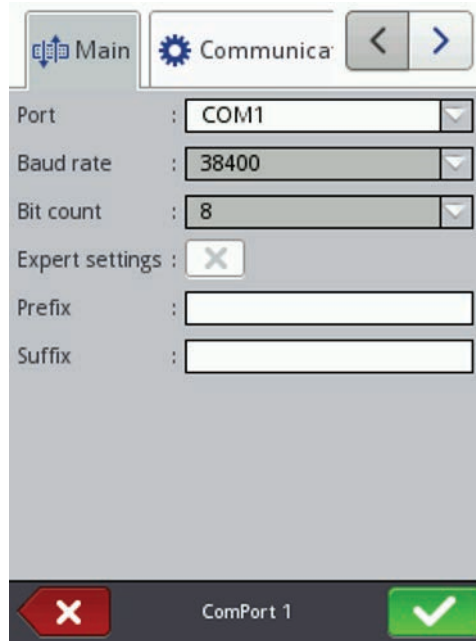
- **Min** – the setting from which counting starts (for counting up), or with which counting finishes (for counting down).
- **Max** – the setting at which a counter overflows. When a counter overflows, counting starts again from the **Min** setting.
- **Start mode** – the parameter allows you to set the value from which counting starts after printer operation has been resumed. Four options are available:
 - **Min,**
 - **Max,**
 - **Start value,**
 - **Last value.**
- **Start value** – the counter setting from which counting starts after operation has been interrupted, e.g. when a power failure occurs. This is effective when the **Start mode** parameter is set to **Start value**.
- **Last value** – the last setting of a counter, which is saved after the printer has been switched off in regular mode.
- **Step** – a counter increment. When the setting is a positive number, counting is incremental, and when it is a negative number, counting is decremental.
- The **Length** parameter is used to adjust the number of counter digit positions to that required by the user.
- The **Fill in** parameter is used to define a replacement for insignificant digits of a counter: 0 or space.
- **Suffix** – any character string to follow the counter printout, limited to 41 characters.


Touch the  button in order to add the object to a project or the  button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the  button.

4.1.4.5.7. TEXT OBJECT – COMMUNICATIONS PORT


The **Communications port** text object is used to print automatically the data that is transferred from external devices (e.g. a computer, automatic scales, a barcode reader) to the printer.

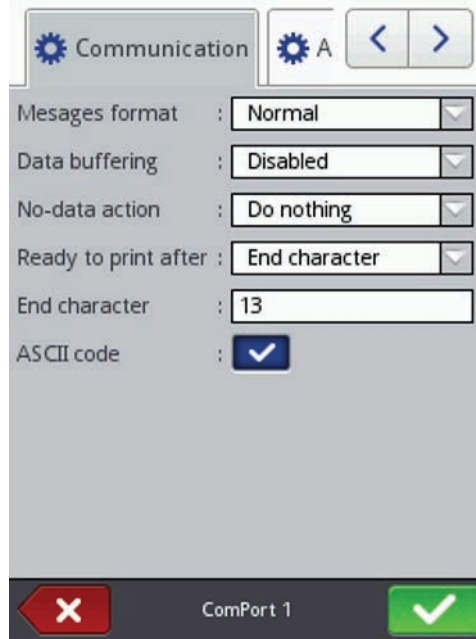
Touch the  button in project processor window, choose the  **Text** sheet tab, and then touch the  **Communications port** button in order to add a new, **Communications port**-type text object to a project.




In the  **Main** sheet tab you can set the parameters that are significant for establishing communication between the printer and an external device. The printer and the device must have the same settings of the following parameters to communicate successfully:

- **Port** – it defines the name of a printer port to which an external device is connected as a source of serial transmission signals in RS-232 or RS-485 standard. You can connect an external device (a computer, automatic scales, a barcode reader, etc.) to a port **21** or with USB-RS232 Adapter to a port **14**. The list of ports is fixed and contains ports numbered from COM1 to COM9.
- **Baud rate** – it signifies a rate of transmission (a number of symbols per second) through the port. The list to choose from contains the most typical rates used for serial communication.
- The **Bit count** parameter defines the number of bits in every portion of the data transferred.

In addition, you can enable **Expert settings** (see the **Advanced (p. 53)** sheet tab) in the  **Main** sheet tab and create a text that will precede (**Prefix**) or follow (**Suffix**) the data to be received from an external device.



In the  **Communication** sheet tab you can set communication parameters, which define the rules for communication between the printer and an external device:

- **Messages format** – this parameter defines the format of data to be transferred from the printer to a device. Two modes are available: **Normal** and **Hexadecimal**. In the normal mode, the data is transferred as ASCII characters, whereas in the hexadecimal mode it is transferred as hex numbers.
- **Data buffering** – it is used for storing successive data portions in a special register, **Communications port**. Two modes can be set:
 - **Enabled** – a successive portion of the data received by the special register is stored if the end condition is met – see **Ready to print after**. The buffer size is 20, which means that 20 various, ready-to-print pieces of data can be received and stored. When any other data comes, it will overwrite the data at the 20th position and a long sound is heard at the same time to inform about the overflow. The data buffer forms a kind of queue, the data is printed in the same sequence in which it has been received by the special register. If all the data buffered is printed out, and another print is released, the printer behaves according to the **No-data action** parameter setting.
 - **Disabled** – a successive portion of the data received by the special register overwrites the data that has been received earlier but has not been printed yet. The data is overwritten until it is printed. If no other data is received subsequently, the printer behaves according to the **No-data action** parameter setting. In this mode, the last data received is the first printed.
- **No-data action** – it defines printer behavior when no data has come from an external device (when the end condition is not met – see **Ready to print after**) and printing of a project containing a **Communications port** object has been released. The following modes of operation can be set:
 - **Do nothing** – if printing is released when data is not received properly or the end condition is not met (see **Ready to print after**) the project is not printed. The message informing about this fact is displayed.
 - **Print blank object** – the project is printed as usual, with the entire **Communi-**

- communications port** object being empty.
- **Print last message** – the project is printed together with the **Communications port** object, with the object being filled with the last message received successfully from an external device. If such a printout is made as a first, the project is printed but the area where the data should be is empty.
- **Ready to print after** – it defines how the printer decides whether it has received complete data (the end condition) from an external device or not. The following modes can be set in this parameter:
- **Time interval [ms]** – the printer waits for data over a certain time. The time is counted from the moment when a last project is printed or, if the **On data process** field (in the expert settings – see the **Advanced (p. 53)** sheet tab) is filled in – from the moment when an end-of-printing acknowledgement is sent. The time is typed in in the field below the parameter as a number of milliseconds (between 4 and 1000 ms). If no data is received within the defined time, the printer behaves according to the **No-data action** parameter setting.
 - **Data count** – the printer is ready for printing a project containing a **Communications port** object when it receives a number (from 1 to 255) of characters from an external device; with the number being defined in the field below the parameter. If printing is released although the condition is not met (the defined number of characters has not been received) the printer behaves according to the **No-data action** parameter setting.
 - **End character** – the printer is ready for printing a project containing a **Communications port** object when it receives data ending with a defined character from an external device, with the character being defined in the field below the parameter. In this mode you can also define an ASCII character that is to be the end of a portion of the data received. For that purpose, tick the **ASCII code**, check box and type in the decimal value of the ASCII code. If printing is released when the condition is not met (the defined end-of-data character is not received) the printer behaves according to the **No-data action** parameter setting.

Advanced Geomel < >

On print start :


On data process :


On print finish :



Formatting string : %ls




Script name: : none

ComPort 1

In the  **Advanced** sheet tab (available when the **Expert settings** check box in the




 **Main** sheet tab is ticked) you can modify the **Expert settings**, which define the rules for processing of the data received from an external device, and also the mode of acknowledgement of printer states (starting printing, stopping printing, project printed) to the device:

- **On print start** – it defines the data to be transferred from the printer to the external device immediately after printing has been initiated (the  **Start** button (*P*) has been touched).
- **On data process** – it defines the data to be transferred from the printer to the external device each time a project containing the **Communications port** object has been printed.
- **On print finish** – it defines the data to be transferred from the printer to the external device immediately after printing has been stopped (with the  **Stop** button (*P*)).
- **Formatting string** – this is an advanced mode of formatting of the data transferred from an external device to the printer. It describes how the incoming data is interpreted by Printing Manager. Marks applied: %s – a character string, %d – a number.
- **Script name** – this field is used for selecting a script with which data is transferred for processing before printing (in order to retrieve the data to be printed, e.g. from a database, an Excel or csv file, etc.). The script files must be stored in the folder named CustomData on the user partition in the printer's internal memory. The partition can be accessed through Network Neighborhood. The name of an added file is displayed in the list box. For more information on scripts refer to the document entitled *PHP Scripts for EBS Printer COMMUNICATIONS PORT*.
 - none
 - SearchInExcel.php
 - SearchInDB.php
 - SearchInCSV.php

Touch the  button in order to add the object to a project or the  button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the  button.

4.1.4.5.8. TEXT OBJECT – TEXT FILE

The **Text file** text object is used to print the data saved in a TXT file.

Touch the  button in project processor window, choose the  **Text** sheet tab, and then touch the  **Text file** button in order to add a new, **Text file**-type text object to a project.

Touch the **File path** text field in order to roll-in a text file. On the screen displayed, choose the file name out of those listed (or type in the file name in the text field), and then touch the button.

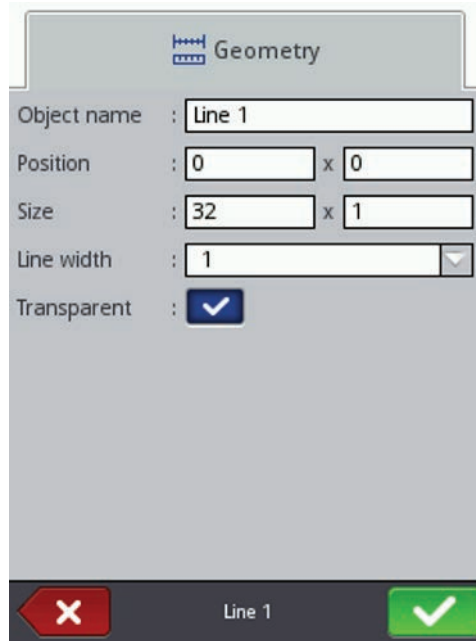
In the **Main** sheet tab you can set the following parameters:

- **Line count** – the number of lines to be added to the object from a text file.
- **Line step** – the number of lines by which text file data moves each time a print is made. If the **Line count** is greater than the **Line step**, the data moves by the number of lines given in the **Line count**.
- **Line maximum value** – the last line of a text to be included in a printout.
- The **Start mode** parameter is used to define which line of a text file is to be rolled-in after printer operation has been resumed. Two options are possible:
 - **Start value** – the line defined by the setting of the **Line start value** parameter is to be rolled-in,
 - **Last value** – the line shifted by the **Line step** in relation to the line on which printing finished is to be rolled-in.
- **Line start value** – the text line to be added to an object as a first one.
- **Line last value** – it indicates the line that has been printed as the last. The line is memorized provided that the printer is switched off properly – see [3.5.2. Switching the Printer Off \(p. 18\)](#).

Touch the button in order to add the object to a project or the button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the button.

4.1.4.5.9. SHAPE-TYPE OBJECT – LINE

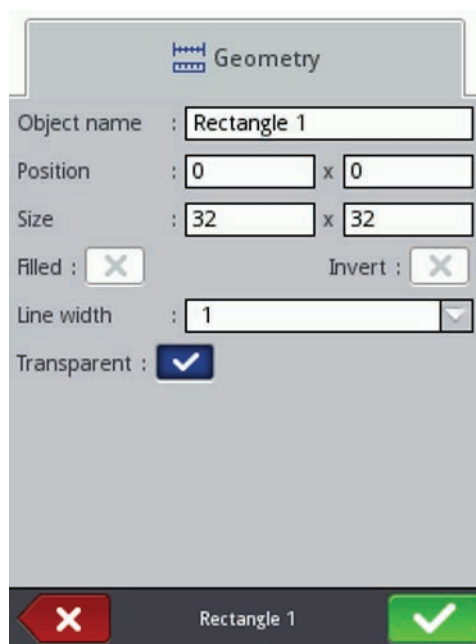
Touch the button in project processor window, choose the **Shapes** sheet tab, and then touch the **Line**, button in order to add a new, shape-type object, a **Line**, to a project.



The **Line width** can range from 1 to 30. The **Line width** is given as a number of dots. Touch the button in order to add the object to a project or the button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the button.

4.1.4.5.10. *SHAPE-TYPE OBJECT – RECTANGLE*

Touch the button in project processor window, choose the **Shapes** sheet tab, and then touch the **Rectangle** button in order to add a new, shape-type object, a **Rectangle**, to a project.



The **Rectangle** object allows you to print any rectangle: an outline only or the entire figure (in the latter case the **Filled** check box needs to be ticked).

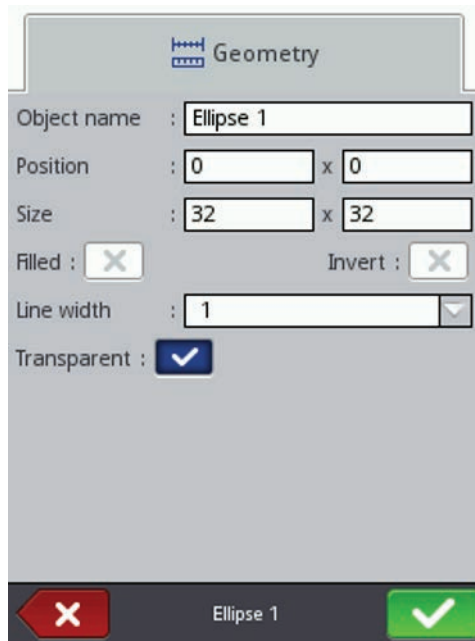
If the **Invert** check box is ticked, then where the **Rectangle** "covers" another object that is in a lower layer, the common part of the rectangle and that another object is not printed.

The **Line width** parameter can be used to set the outline thickness.

Touch the button in order to add the object to a project or the button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the button.

4.1.4.5.11. SHAPE-TYPE OBJECT - ELLIPSE

Touch the button in the project processor window, choose the **Shapes** sheet tab, and then touch the **Ellipse**, button in order to add a new, shape-type object, an **Ellipse** to a project.



The screenshot shows a 'Geometry' dialog box with the following fields and controls:

- Object name : Ellipse 1
- Position : 0 x 0
- Size : 32 x 32
- Filled :
- Invert :
- Line width : 1
- Transparent :

At the bottom of the dialog, there are three buttons: a red button with a white 'X' (Cancel), a button labeled 'Ellipse 1', and a green button with a white checkmark (Confirm).

The **Ellipse** object allows you to print any ellipse: an outline only or the entire figure (in the latter case the **Filled** check box needs to be ticked).

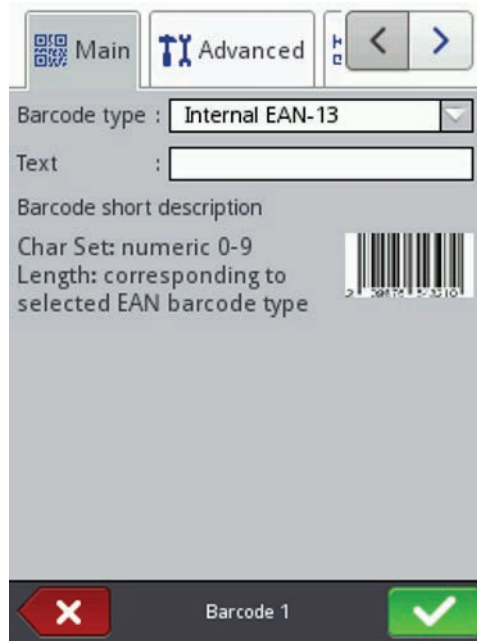
If the **Invert** check box is ticked, then where the **Ellipse** "covers" another object that is in a lower layer, the common section of the ellipse and that another object is not printed.


The **Line width** parameter can be used to set the outline thickness.

Touch the button in order to add the object to a project or the button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the button.

4.1.4.5.12. BARCODE

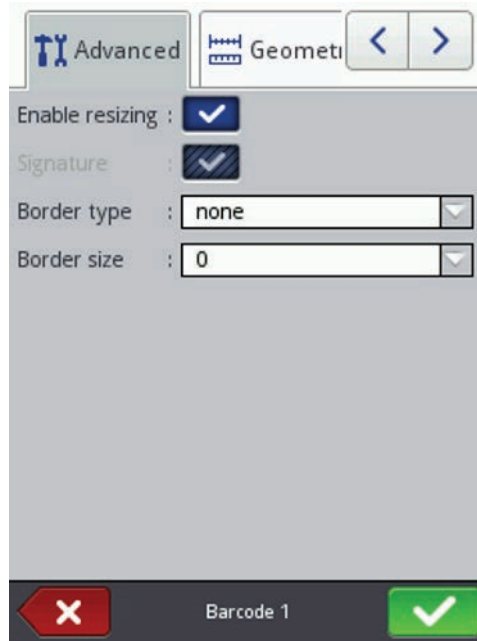
Touch the button in project processor window, choose the **Other** sheet tab, and then touch the **Barcode** button in order to add a new, **Barcode**-type object to a project.




In the  **Main** sheet tab, choose **Barcode type** and in the **Text** field, type in a character string that is to be presented as a barcode. Make sure that the code type fits the number and type of characters. When the **Text** field changes its color to red, this means that the character string typed in is not appropriate to a given type of code (a wrong number or type of characters). The detailed information on code formats is displayed while a type of code is being chosen in the **Barcode short description** field.

The following types of barcodes are available:

- Numerical: EAN-2, EAN-5, EAN-8, EAN-13, EAN-5 + EAN-2, EAN-8 + EAN-2, EAN-8 + EAN-5, EAN-13 + EAN-2, EAN-13 + EAN-5, Code 25, Code 11, Code 25 Industrial, Code 25 Interleaved, Code25 IATA, Code 25 Data Logic, Codabar, Leti-code, Identcode, GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, UPC-A, UPC-E, PostNet, MSI Plessey, Pharmacode One-Track, Pharmacode Two-Track, ITF-14, PZN.
- Alphanumeric: Code 39, Code 39 Extended, GS1-128 (UCC/EAN-128), Code 128, Code 16k, Code 93, Telepen Alpha, 2D:PDF417, 2D:PDF417 Truncated, 2D:QR Code, Australia Post 4-State, Royal Mail 4-State (RM4SCC), 2D:Data Matrix, 2D:MicroPDF417.






In the  **Advanced** sheet tab you can modify the following parameters:




- If the **Enable resizing** check box is ticked, the code can be resized. If you change the code size and then untick the check box, the barcode regains its original size.
- **Signature** – the digital description of a code is to be printed beneath the code (it is available for selected codes).
- **Border type** – the type of barcode frame (it is available for selected codes); three types are available:
 - **none** – no frame,
 - **bind** – frame lines at the top and bottom of a code,
 - **box** – a code is framed on each side.

If the **bind** or **box** option is chosen, set the **Border size** to a different setting than 0 to make the frame visible.



- **Border size** – the width of a barcode frame; it allows you to modify the frame width when the **Border type** is set to **bind** or **box**.




Touch the  button in order to add the object to a project or the  button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the  button.

4.1.4.5.13. *IMAGE*


Touch the  button in project processor window, choose the  **Other** sheet tab, and then touch the  **Image** button in order to add a new, **Image**-type object to a project.

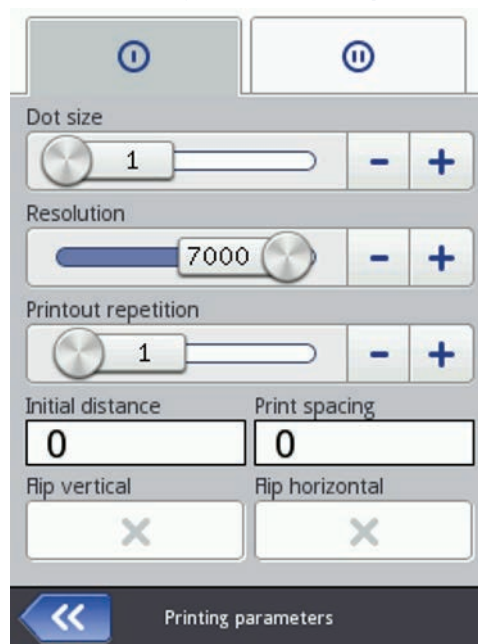


In the  **Main** sheet tab touch the **Image path** check box. On the screen displayed, choose a file name out of those listed (or type in the file name in the white field), and then touch  button. The printer uses PNG files.

Touch the  button in order to add the object to a project or the  button to abandon the addition. If no changes have been made, you can return to the previous screen by touching the  button.

4.1.5. PRINTING PARAMETERS



The printing parameter window is displayed after the  and  **Printing parameters** buttons have been touched in turn – see 4.1.4. *Project Processor* (p. 37).



In the  sheet tab:

- The **Dot size** parameter is used in order to increase the intensity of prints on porous materials, which absorb ink heavily, on which the characters printed (consisting of the same size dots) are not well visible due to their grainy structure. An increase in the setting of that parameter results in higher intensity of prints made, owing to a bigger size of ink drops jetted out of the printer head. Increased intensity involves higher consumption of ink.


Intensity is physically constrained by the real speed at which the head can print – it means that when the intensity is too high for a given printing speed, the printer signals an error with an audible signal (provided that an appropriate warning is set – see [3.10. Sound Settings \(p. 25\)](#)), and higher intensity also limits the printing speed.


- The **Resolution** parameter impacts on the visibility of the project characters after they have been printed. It decides on print resolution, which is given as a number of rows/ meter. In other words, a change in the width of characters printed and in the length of the entire project are the visual effects of a change in the setting of the **Resolution** parameter.
- The **Printout repetition** parameter defines how many times a print is to be re-printed after the photodetector has been activated. It allows you to make a print repeatedly on the same article (repetition). Continuous repetition of prints can be set for continuous articles (e.g. cables, hose, tubes, pipes) (**Printout repetition**=). The distance between successive prints is set with the **Print spacing** parameter – see the  (p. 62) sheet tab.
- The **Initial distance** parameter defines the distance from the point where the photodetector has been activated to the point where printing of a print should start. The distance is given as a number of millimeters, and it is measured after the photodetector has been activated and before printing starts. It enables you to adjust the print position in relation to the beginning of the article.
- The **Print spacing** parameter defines the distance between the beginnings of prints that are made repeatedly (**Printout repetition**>1). The distance is given as a number of millimeters.





If the distance set with the **Print spacing** parameter is smaller than the print length, prints are printed one just after another.

- The **Flip vertical** parameter defines the mode of printing in the vertical direction: normal or turned upside down. It can be useful when an article to be labeled is turned.

- Normal print ,

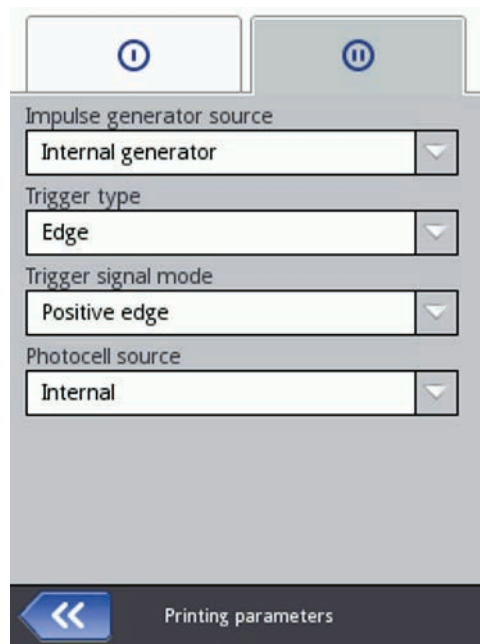
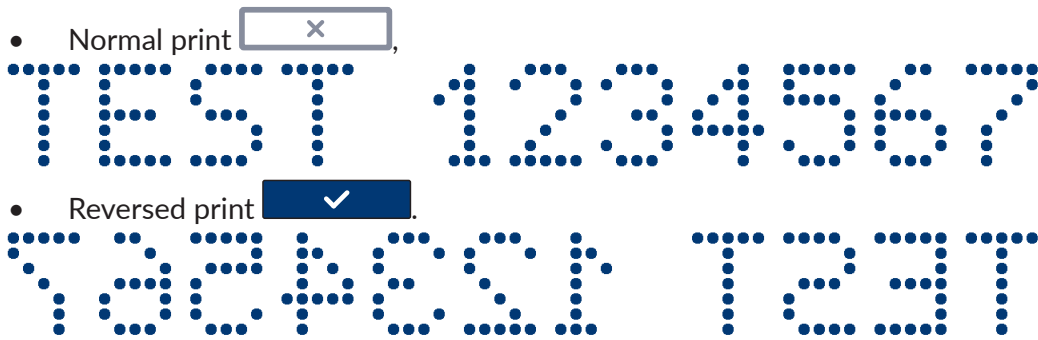


- Reversed print .



- The **Flip horizontal** parameter can be useful if you need to label articles from right to left or if you print on transparent materials and the prints should be legible from the opposite

side.



In the sheet tab:

- The **Impulse generator source** parameter defines the source of a signal that determines when vertical columns of a project should be printed. Two sources are available:
 - **Internal generator** – impulses are generated at a constant frequency. If an internal generator is used for timing, printing speed is not synchronized with conveyor-belt travel speed,
 - **External source** – impulses are received from an external, conveyor-belt speed sensor.
- The **Trigger type** parameter defines the type of impulse generated by the photodetector to initiate printing. Printing can be released by:
 - **Edge (Positive edge or Negative edge),**
 - **Level (High level or Low level),**

The **Trigger type** parameter is used for the **Printout repetition=1, ..., 20** parameter.




- The **Trigger signal mode** parameter defines the voltage of a photodetector impulse that initiates printing. According to the setting of the **Trigger type** parameter, printing starts when the following is detected:
 - **Positive edge** (when **Trigger type=Edge**), that is the transition from exposure to covering of the photodetector cell,

- **Negative edge** (when **Trigger type=Edge**), that is the transition from covering to exposure of the photodetector cell,
- **High level** (when **Trigger type= Level**), that is when the photodetector cell is covered,
- **Low level** (when **Trigger type= Level**), that is when the photodetector cell is exposed.

If the **Positive edge (Negative edge)** parameter is selected, printing starts when the photodetector state changes from exposed to covered (from covered to exposed). The printer examines the photodetector signal after printing of the last of the repeated texts has been finished. If an impulse edge is detected, printing is repeated.

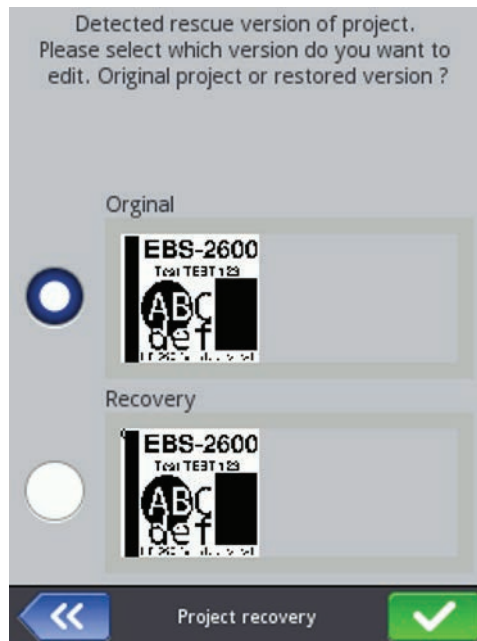
If the **High level (Low level)** parameter is selected, printing starts when shading (exposure) of the photodetector cell is detected. The printer examines the photodetector signal after printing of the last of the repeated texts has been finished. If the level remains the same, printing is repeated. The level may change during printing, but it does not impact on printing – the text is printed completely the set number of times.


- The **Photocell source** parameter defines which of the photodetectors is to release printing:
 - **Internal,**
 - **External,**
 - **Both.**

Touch the  button in order to approve the changes to the parameters, or the  button to abandon the changes. If no changes have been made, you can return to the previous screen by touching the  button.

4.1.6. PROJECT RECOVERY

If the printer is switched off, e.g. in emergency mode, while a project is being edited but has not been saved yet, then when the printer is switched on again and the project is opened for editing, a project recovery tool starts running.



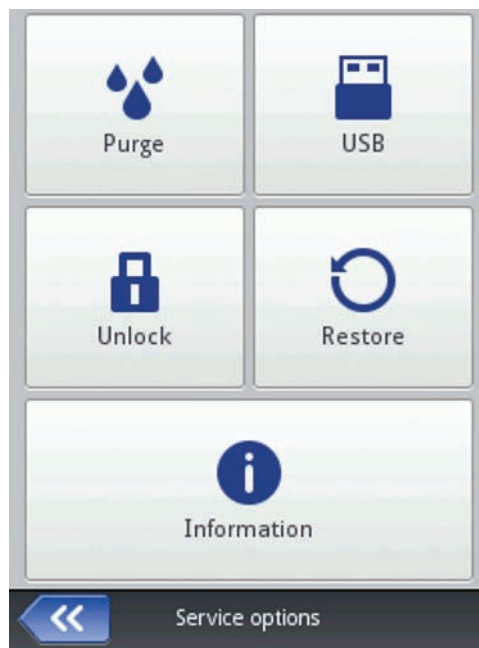
In the screen displayed, touch the check box of a project that you wish to edit. If you choose the original project and approve your choice with the  button, the recovered project is

deleted (the deletion needs confirming on the screen displayed). If you choose the recovered project, then it is saved in printer memory under a name you may choose.

4.1.7. SERVICE

With the service options available in the  **Service** menu you can do the following:

- make your printer ready for operation – by purging the head in order to vent it, e.g. after transportation, or to clear choked nozzles,
- update printer software, export or import projects,
- enable additional options,
- restore preliminary settings and data stored in printer memory,
- view the manufacturer’s contact details and the version of printer software.











4.1.7.1. PURGING

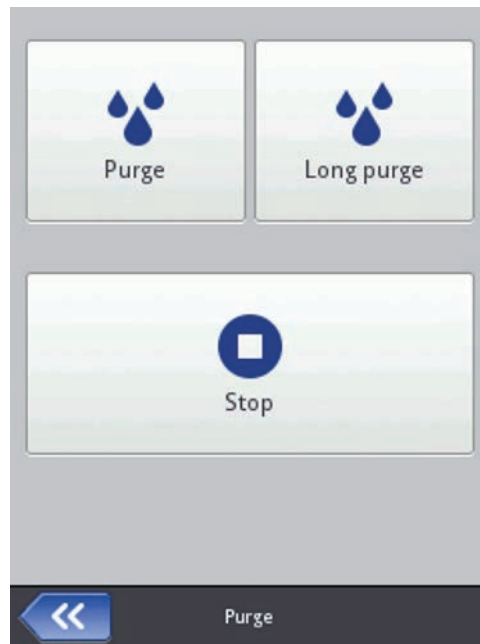


*Before starting purging, direct the outlet of nozzles **18** to a vessel, e.g. the one that is used for washing the printer or fasten protection **8b** in the purging position (i.e. with the draining gutter directed towards the nozzles)!*



The purging function is used for clearing slightly choked nozzles or for removing air from the head. Make several sample prints after purging. If the print quality turns out to be unsatisfactory, start purging again.



Purging can be initiated in several ways:



- by touching the  **Tools (O)**,  **Service**,  **Purge** and  **Purge** or  **Long purge** buttons in turn,
- by touching the  **Start** button (**P**) and holding it until a drop-down menu appears; then choosing  **Purge** or  **Long purge**.



Two modes of printhead purging are available:

- Short purging, initiated with the  **Purge** command,
- Long purging, initiated with the  **Long purge** command.

By pressing the  **Purge** button, you can start short, two-second purging. The option is useful when the printer operates in a heavily dusted or contaminated environment. Short purging cleans the printhead face by rinsing off dirt with the ink flowing out of the printhead nozzles. If the  **Purge** button is pressed several times, the time for purging extends.

By pressing the  **Long purge** button, you can start the 85-second purging procedure. Owing to a significant amount of ink consumed during the procedure, the user is requested to confirm that he wants to follow it. After confirmation, the long-purge progress window is displayed. If the  **Stop** button is pressed, the ink stops flowing out of the printhead.



Both of the short and long purging procedures involve operation of not only an ink pump but also of a suction pump that removes the ink that flows out of the printhead. The suction pump runs a dozen or so seconds after purging has been finished, to remove the entire ink from the receiver and collect it in the blue bottle **11** (installed at the bottom of the printer). Moreover, the suction pump is still used over 2 seconds every minute to remove the ink collected in the receiver. After purging, check the waste-ink level in the blue bottle **11** and empty the bottle, if need be. Dispose of waste ink in compliance with the waste ink disposal standard. Avoid overfilling the waste-ink bottle, as otherwise the suction pump may get damaged.

The air trapped in the ink system may not be removed from the system completely. Air bubbles may get into head **6** after some time. Therefore, if print quality reduces, purging needs to be repeated. The reduced print quality can be caused by dirt on the printhead face or in filter **24** in vent **5**. Therefore, if print quality reduces, check and clean, if need be, the above mentioned components (see further below), and then perform purging.

After purging, wait from a few to a dozen or so seconds until the entire ink flows down the printhead face (the printhead face should be clean); otherwise drops of the ink remaining on the printhead face can obstruct ink jetting out of some of the nozzles.

4.1.7.2. USB

See **3.14. Connecting USB Disc to the Printer (p. 30)**.

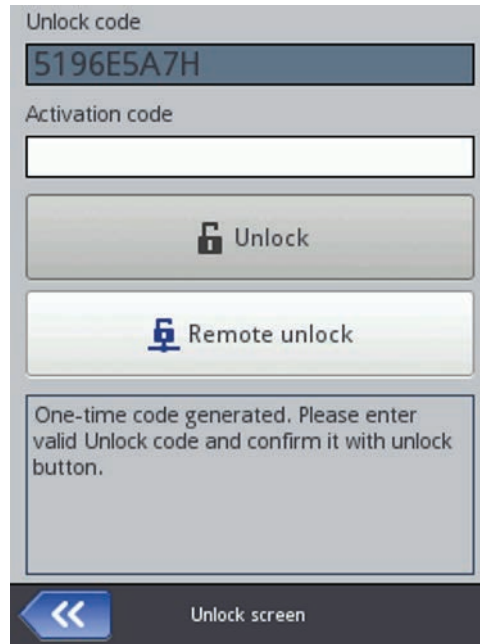
4.1.7.3. UNLOCKING OPTIONS

You can use additional options to extend printer functionality or enable the functions that have been constrained in order to protect the printer against accidental damage (e.g. which may occur when a wrong type of ink is used).






Before starting the unlocking procedure you should contact an authorized serviceperson by phone.

Touch the **Tools (O)**, **Service** and **Unlock**.



The options can be unlocked in two ways:

- standard mode – after you have given the **Unlock code**, a serviceperson gives you an activation code in return. The activation code should be typed in in the **Activation code** field via the keypad displayed and confirmed with the  button. Then the  **Unlock** button should be touched.

- remote mode – a serviceperson unlocks the printer remotely, without any need for giving a one-off code and typing in an activation code. Touch the  **Remote unlock** button and wait until the option is unlocked. The following message is displayed:

Printer sent unlock request to remote unlock server. Unlock procedure can take about 5 minutes. After successful unlock printer will show confirmation message.


The unlocking procedure may take up to 5 minutes. Remote unlocking of options requires that the printer be connected to the Internet. Unlocking the option is confirmed with following message:

Printer successfully unlocked.

4.1.7.4. RESTORING PRELIMINARY SETTINGS

Touch the  **Tools (O)**,  **Service** and  **Restore** in turn.

Preliminary settings of the printer can be restored after the password has been typed in on the screen displayed (contact your distributor to get the password). When the Restore function is used, the user projects, fonts and images as well as display, sound, language and date and time format settings are erased. The restoration of the preliminary settings is irreversible and for that reason it is recommended that data is exported beforehand – see [4.2.4.4. Export project \(p. 71\)](#).

After the password has been typed in and acknowledged with the  button, the following message is displayed:




Do you want ERASE ALL internal storage content and restore it factory defaults? All projects data and printer settings WILL BE LOST !

Acknowledge the restore-the-default-settings operation by pressing the  **Yes** button on

the screen displayed. The correct restoration is acknowledged with the below-given message:


Internal storage contents successfully restored. Restart is required. Please press “OK”, printer will be restarted.

4.1.7.5. INFORMATION

Touch the  **Tools (O)**,  **Service** and  **Information** buttons in turn.

On the **Product information** screen you can view the manufacturer’s contact details and the version of printer software.

For the user who operates the printer on a standard basis, it is important to have the information on the System version. Owing to it you can check whether you have up-to-date software version installed on the printer.

The other data, such as the version number or the serial number of the printer (available after the  **Detailed information** box has been touched) is necessary for service persons to perform diagnostic operations.

4.2. OPERATING THE PRINTER VIA MOZILLA FIREFOX WEB BROWSER

The printer can be operated via a Web Browser in two ways:

- by establishing connection with the printer via Ethernet and running EBS Web User Interface (WUI) – see [3.13. Wired Communication between the Printer and a Computer \(p. 27\)](#).
- by using Offline EBS Web User Interface (Offline WUI) after it has been installed on the computer in advance.

The Offline EBS Web User Interface installation file is available on the printer web site at <http://www.ebs-inkjet.com/ebs2600> in the Information Materials sheet tab. Follow the installation manual attached to the installation file. The [4.1.7. Service \(p. 64\)](#) and [4.2.8. Printer control \(p. 102\)](#) menus are not available in Offline WUI.

4.2.1. LOGGING IN

You are logged in automatically as Administrator by default (default password: 1). You can disable automatic logging in or change the default account - see [4.2.5.4. Users manager \(p. 96\)](#).

When the automatic logging in is disabled and EBS Web User Interface (WUI) starts running, a list of users is displayed on the startup screen. Point at the name of a user with the cursor and type in the password in the text field. After you have logged in, you will see that printer interface functions vary according to the user group you are assigned to – see [4.2.5.4. Users manager \(p. 96\)](#).

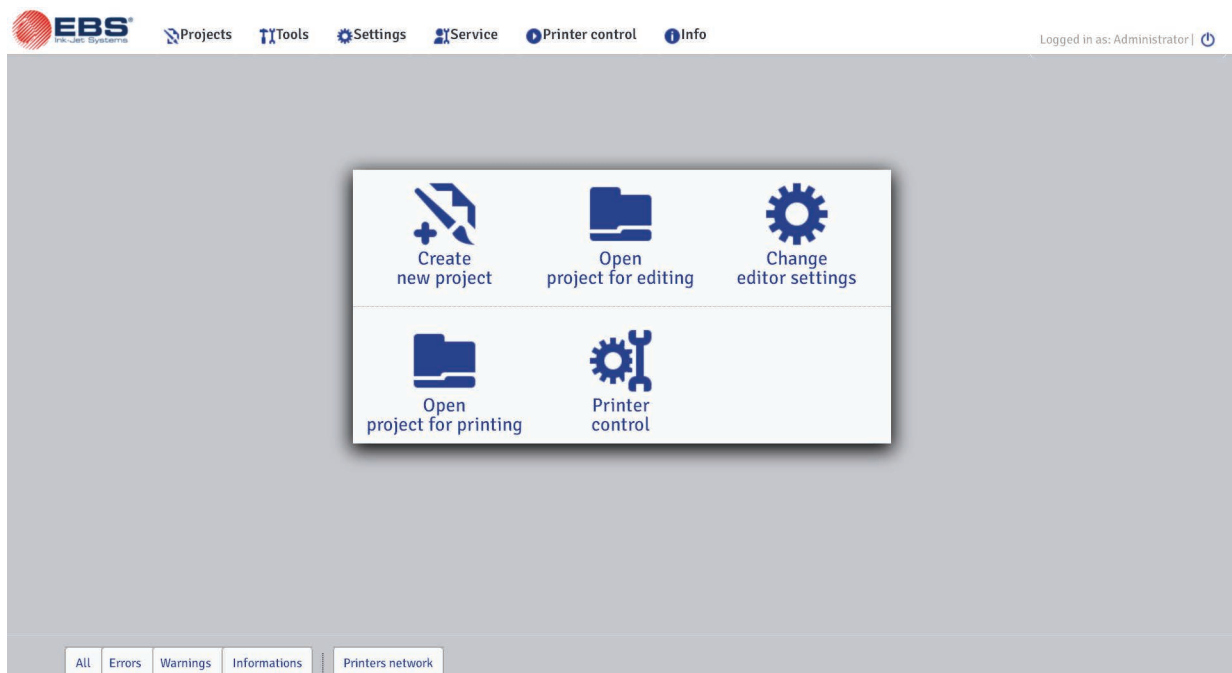
4.2.2. WORK SCREEN OF EBS WEB USER INTERFACE

The work screen consists of the following:

- WUI MENU ([4.2.4. Projects \(p. 69\)](#), [4.2.5. Tools \(p. 94\)](#), [4.2.6. Settings \(p. 99\)](#), [4.2.7. Service \(p. 101\)](#), [4.2.8. Printer control \(p. 102\)](#), [4.2.9. Info \(p. 103\)](#) and user status as well as the OFF/restart/log out button),
- WUI module ([4.2.4.1. Create new project \(p. 69\)](#), [4.2.4.2. Open and Edit a Project \(p. 70\)](#), [Change editor settings - 4.2.6.1. General settings \(p. 99\)](#)),
- Printer control module (**Open project for printing** - [5.1.2. Opening a Project for Printing via](#)

Web Browser (p. 104), 4.2.8. Printer control (p. 102)).

- Message bar – see *4.2.10. Messages (p. 103)* and a printer network.



Description of the window title bar buttons:



background view





close the window (hot key: **ESC**)

4.2.3. FILE MANAGER


You can manage file and folder names in the following windows: **Create new project**, **Open project (Open project for editing)** or **Save as....**

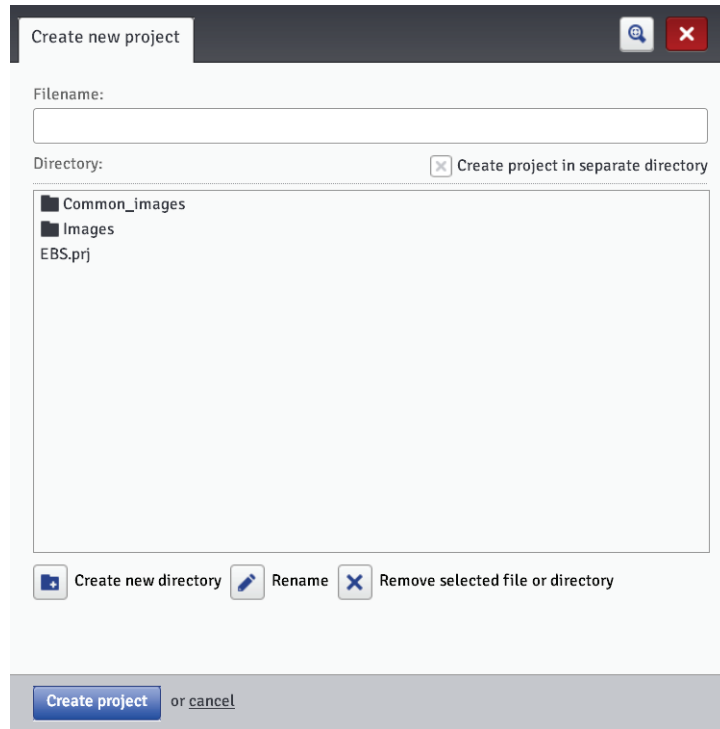
Touch the  button in order to create a new folder. Type in the name of the new folder in the window displayed and confirm with the **Create folder** button.

Highlight the name of a file or folder in the list, and then touch the  button to delete the file or folder. Highlight the name of a file or folder in the list and touch the  button in order to change the name. Type in a new name in the window displayed and confirm with the **Rename** button.


4.2.4. PROJECTS

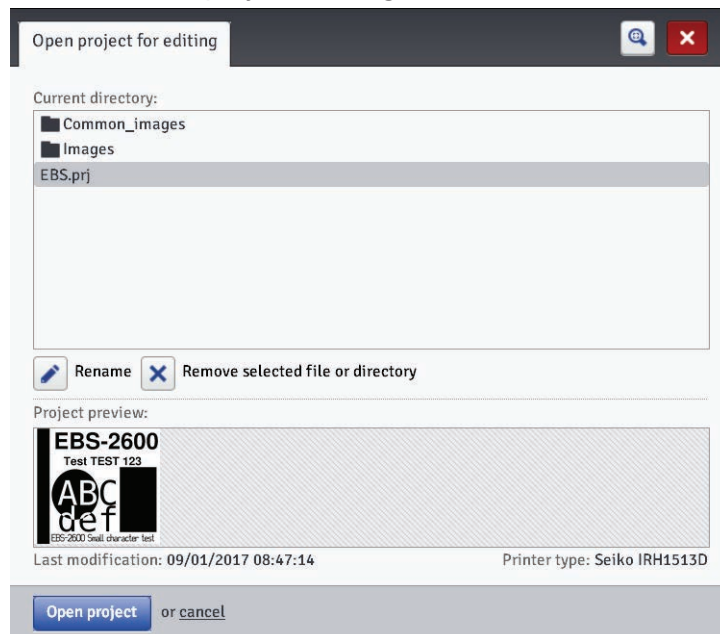
4.2.4.1. CREATE NEW PROJECT

In the  **Projects** menu, which is on the menu bar, you can choose the **Create new project** command. Type in a name for your project in the **Filename** field in the window displayed. If you tick the **Create project in separate directory** check box, a folder is created with the same name as the name of the project. In the drop-down list choose the type of the printer for which the project is designed (only when Offline WUI is used), and then touch the **Create project** button.



4.2.4.2. OPEN AND EDIT A PROJECT

In the  **Projects** menu, which is on the menu bar, choose the **Open project** command. Highlight the name of a project in the list you can see in the window displayed, and then touch the **Open project** button. When the name is highlighted, a **Project preview** section is displayed next to the project list whereas beneath the window you find the information about the project: when **Last modification** was made and with the **Printer type** option - the type of printer for which the project is designed.



If you open a project while a project is already open on the printer, the following message is

displayed:

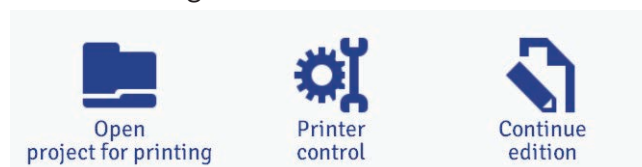
Some project is currently opened for edit on printer LCD. Do You want to force open ?

The project open on the printer must be saved before any project can be opened in WUI. Otherwise, the project is closed but not saved and any modifications made to it are lost.


If you open a project on the printer LCD while the same project is being edited by means of WUI, the WUI project is closed automatically. No project can be edited on the printer screen and in WUI at the same time. In such a situation, the following message is displayed:

Project closed because someone started edition from LCD.

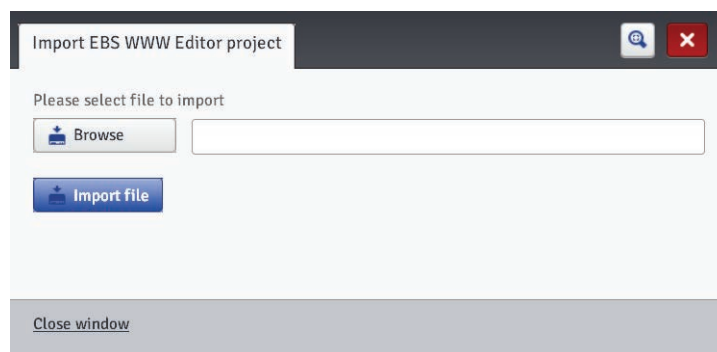
If you wish to continue editing the project that is open on the printer, touch the **Continue edition** button on the WUI working screen.




4.2.4.3. IMPORT PROJECT

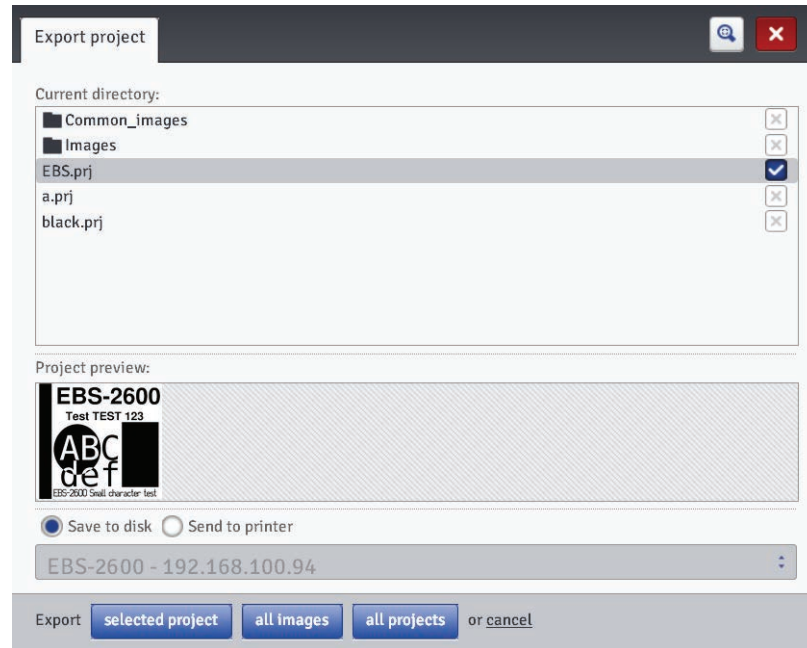
In the  **Projects** menu, which is on the menu bar, choose the **Import project** command. You can import projects that are saved on another computer or have been created and edited on the printer itself. Choose a .exp files to be imported (by touching the text field or the **Browse** button) and touch the **Import file** button. The successful import is acknowledged with the message:

Project imported



4.2.4.4. EXPORT PROJECT

In the  **Projects** menu, which is on the menu bar, choose the **Export project** command. Projects and also images that are on printer disc can be exported for use on another printer or as a backup copy.



You can copy the following:

- All images saved in the Images folder – with the **all images** button.
- One, selected project (highlighted in the list) – with the **selected project** button.
- All projects saved in internal memory of the printer – with the **all projects** button.

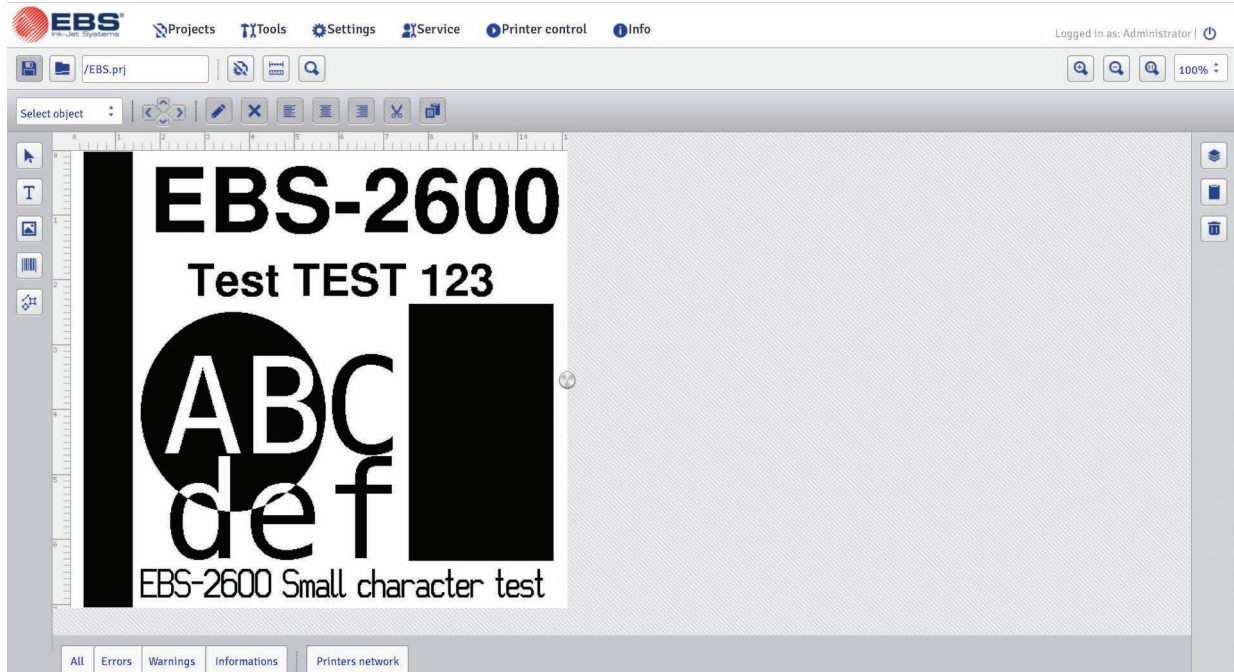
They are exported to:

- A disc file – files are exported as .exp files (choose the **Save to disk** circle),
- A printer to be chosen in the drop-down list (choose the **Send to printer** circle). If the printer you would like to export to is not in the drop-down list, you can add such a printer to the list (see [4.2.5.5. Printers network manager \(p. 97\)](#)).

4.2.4.5. PROJECT PROCESSOR









Open a project with the **Create new project** or **Open project** command – the project processor window opens.





























The project processor consists of several parts: an edit area, four tool bars and auxiliary rulers.






The edit area height is adjusted to the type of print head to be used and fits a maximum print height. The edit area width can be modified. Touch and hold the re-sizing marker, which is on the right-hand tool bar, and move it right or left. The edit area width can also be modified with the [4.2.5.8. Workspace width \(p. 98\)](#) function that is available in the **Tools** menu.



Tool bars:


first horizontal bar		save project
		open and edit project
	EBS.prj	project name
		printing parameters for project – see 4.2.4.6. Printing Parameters (p. 75)
		edit area width – see 4.2.5.8. Workspace width (p. 98)
		print preview (hot keys: CTRL+P , successive print: →, return to first printout: ←, re-scaling of print preview (real size /fit to window width): z)
		zoom in edit area (hot key: +)
		zoom out edit area (hot key: -)
		restore original size of edit area (hot key: /)
	100%	magnification scale

second horizontal bar	Text1	list of objects	
		set object position (move a selected object within edit area by 1px)	up (hot key: ↑)
			down (hot key: ↓)
			left (hot key: ←)
			right (hot key: →)
		object parameters	
		delete object (hot key: Delete)	
		justify object within edit are	left justify
			center
			right justify
		cut objects (hot key: CTRL+X)	
		copy objects (hot key: CTRL+C)	
left vertical bar		normal cursor	
	T	add text object	 type: Normal text – see 4.2.4.8. Text Object - Normal text (p. 79)
			 type: Date/Time – see 4.2.4.9. Text Object - Date/Time (p. 80)
			 type: Counter – see 4.2.4.10. Text Object - Counter (p. 83)
			 type: Communications port – see 4.2.4.11. Text Object - Communications port (p. 84)
			 type: Text file – see 4.2.4.12. Text Object - Text file (p. 88)
		add Image -type object – see 4.2.4.13. Image (p. 89)	
		add bar-code-type object – see 4.2.4.14. Bar-code (p. 90)	 Normal barcode
			 Date/Time as barcode
			 Counter as barcode
			 Data transferred via Communications Port as barcode
 Text file data as barcode			
	add shape-type object	 Line – see 4.2.4.15.1. Shape-type Object - Line (p. 91)	
		 Rectangle – see 4.2.4.15.2. Shape-type Object - Rectangle (p. 92)	
		 Ellipse – see 4.2.4.15.3. Shape-type Object - Ellipse (p. 92)	

right vertical bar		list of project objects – see 4.2.4.16. Objects list (p. 93)
		clipboard (hot key: CTRL+V) – see 4.2.4.17. Clipboard (p. 93)
		deleted objects (hot key: CTRL+T) – see 4.2.4.18. Trash (p. 94)

With the auxiliary rulers you can estimate the real size of a printout. The ruler is scaled in centimeters.

Choose **Save** (hot key: **CTRL+S**) in the  **Projects** menu in order to save a project. You can also save modifications with the  button that is on the first horizontal tool bar.

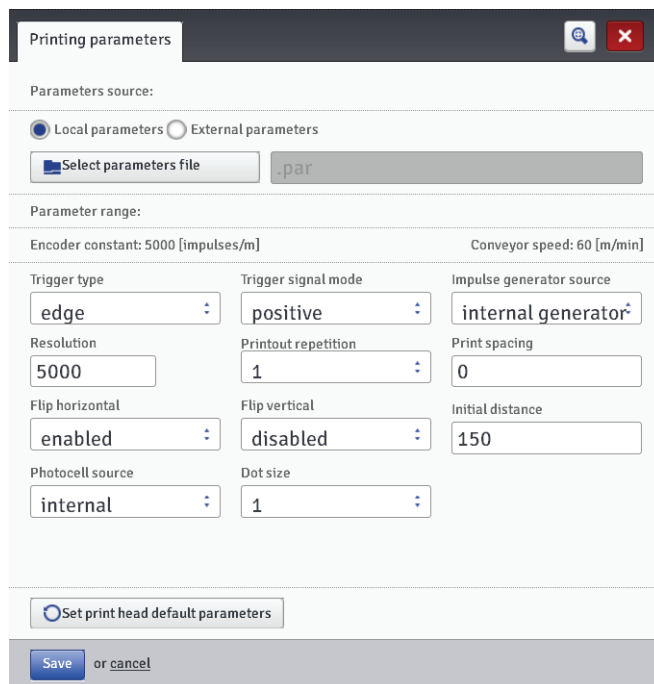
Choose **Save as...** (hot key: **CTRL+SHIFT+S**) in the  **Projects** menu in order to save a project with any name.

Choose **Close project** in the  **Projects** menu in order to close a project.

4.2.4.6. PRINTING PARAMETERS

The printing parameters window is displayed by touching the  button (see [4.2.4.5. Project Processor \(p. 72\)](#)) or choosing **Printing parameters** in the **Projects** menu (the parameters are available in the menu list, when a project is open and can be edited).

The printing parameters are set to their default settings that are specific to a given type of printer.



The printing parameters can be set in a table (**Parameters source: Local parameters**) and they are different for every project.

You can also import the parameters from a file that must be compiled in advance (**Parameters source: External parameters**). This option is very useful when a set of parameters is common for a number of projects. Any modification to the parameter file will apply at the same time to all the projects where a given parameter file is used.

Touch the **Select parameters file**, button in order to read-in parameters from an external

file; highlight a parameter file in the list in the **Browse parameters files** window, and then touch the **Select file** button.

In the **Browse parameters files** window you can save the parameter settings to a file by touching the **+ Create new file** button. Type in a name of the file and confirm with the **OK** button in the window that follows.

The ranges of the parameters are given in the upper part of the window (above the division line) after the field of a parameter has been highlighted.

You can set the following parameters:

- The **Trigger type** parameter defines the type of impulse generated by the photodetector to initiate printing. Printing can be released by:

- **Edge (Positive edge or Negative edge),**
- **Level (High level or Low level),**

The **Trigger type** parameter is used for the **Printout repetition=1, ..., 20** parameter.

- The **Trigger signal mode** parameter defines the voltage of a photodetector impulse that initiates printing. According to the setting of the **Trigger type** parameter, printing starts when the following is detected:

- **Positive edge** (when **Trigger type=Edge**), that is the transition from exposure to covering of the photodetector cell,
- **Negative edge** (when **Trigger type=Edge**), that is the transition from covering to exposure of the photodetector cell,
- **High level** (when **Trigger type=Level**), that is when the photodetector cell is covered,
- **Low level** (when **Trigger type=Level**), that is when the photodetector cell is exposed.

If the **Positive edge (Negative edge)** parameter is selected, printing starts when the photodetector state changes from exposed to covered (from covered to exposed). The printer examines the photodetector signal after printing of the last of the repeated texts has been finished. If an impulse edge is detected, printing is repeated.

If the **High level (Low level)** parameter is selected, printing starts when shading (exposure) of the photodetector cell is detected. The printer examines the photodetector signal after printing of the last of the repeated texts has been finished. If the level remains the same, printing is repeated. The level may change during printing, but it does not impact on printing – the text is printed completely the set number of times.

- The **Impulse generator source** parameter defines the source of a signal that determines when vertical columns of a project should be printed. Two sources are available:
 - **Internal generator** – impulses are generated at a constant frequency. If an internal generator is used for timing, printing speed is not synchronized with conveyor-belt travel speed,
 - **External source** – impulses are received from an external, conveyor-belt speed sensor.
- The **Resolution** parameter impacts on the visibility of the project characters after they have been printed. It decides on print resolution, which is given as a number of rows/meter. In other words, a change in the width of characters printed and in the length of the entire project are the visual effects of a change in the setting of the **Resolution** parameter.



The setting of the **Resolution** parameter is limited not only by the setting range. The real setting is controlled by the printer control program and can be constrained by the settings of other printing parameters. An automatic protection against too high a printing speed setting is applied. Therefore it may happen that certain settings are not accepted once other parameters are set.

- The **Printout repetition** parameter defines how many times a print is to be re-printed after the photodetector has been activated. It allows you to make a print repeatedly on the same article (repetition). Continuous repetition of prints can be set for continuous articles (e.g. cables, hose, tubes, pipes) (**Printout repetition=Continuous**). The distance between successive prints is set with the **Print spacing** parameter.
- The **Print spacing** parameter defines the distance between the beginnings of prints that are made repeatedly (**Printout repetition >1**). The distance is given as a number of millimeters.



If the distance set with the **Print spacing** parameter is smaller than the print length, prints are printed one just after another.

- The **Flip horizontal** parameter can be useful if you need to label articles from right to left or if you print on transparent materials and the prints should be legible from the opposite side.

- **Disabled,**



- **Enabled.**



- The **Flip vertical** parameter defines the mode of printing in the vertical direction. It can be normal (mirror image: **Disabled**) or turned upside down (mirror image: **Enabled**). The parameter is useful when an article to be labeled is turned.

- **Disabled,**



- **Enabled.**



- The **Initial distance** parameter defines the distance from the point where the print release button is pressed to the point where printing of a print should start. The distance is given as a number of millimeters, and it is measured after the photodetector has been activated and before printing starts. It enables you to adjust the print position in relation to the beginning of the article.
- The **Photocell source** parameter defines which of the photodetectors is to release printing:
 - **Internal,**
 - **External,**

- **Both.**
- The **Dot size** parameter is used in order to increase the intensity of prints on porous materials, which absorb ink heavily, on which the characters printed are not well visible due to their grainy structure. An increase in the setting of that parameter results in higher intensity of prints made, owing to a bigger size of ink drops jetted out of the printer head. Increased intensity involves higher consumption of ink.



Intensity is physically constrained by the real speed at which the head can print – it means that when the intensity is too high for a given printing speed, the printer signals an error with a sound signal (provided that an appropriate warning is set – see [3.10. Sound Settings \(p. 25\)](#)), and higher intensity also limits the printing speed.

Touch the **Save** button in order to save the settings of the parameters.


Touch the  **Set print head default parameters** button in order to set the parameters that are recommended for a given head type.

4.2.4.7. OBJECTS

In order to add a new object to a project, choose the type of object from the vertical left-hand, tool bar, and then use the cursor to point out where the object is to be placed within the edit area and press the left mouse button.

Each of the objects can be given an appropriate format, size and location by setting the right parameters. All the objects used in the project are put on the list of objects – see [4.2.4.16. Objects list \(p. 93\)](#).

4.2.4.7.1. COMMON PARAMETERS OF OBJECTS

For text objects you can change the type of font by choosing a new or another font in **Font name** drop-down list. If there is no font that you might be interested in in the drop-down list, you can add your own font by touching the  button (see [4.2.5.2. Fonts manager \(p. 95\)](#)).

When EBS built-in fonts are used, you can modify the **Row multiply** and **Letter spacing** parameters. The **Row multiply** parameter defines how many times printing of every vertical row of text is to be repeated. The multiplication of rows is used in order to increase intensity of prints on porous materials, which absorb ink heavily, on which and the characters printed (consisting of the same size dots) are not well visible due to their grainy structure or in order to increase the text width. The **Letter spacing** parameter defines the space between object characters. The space is given as a number of vertical rows (up to 1000 rows).

When True Type fonts (default and user fonts) are used, you can modify the **Font size** parameter (given as a number of pixels). The parameter is linked with the **Constrain proportions** parameter. The **Font size** (font width and height) can be modified proportionally (when the **Constrain proportions** check box is ticked) or either of the components, the width (**X**) and the height (**Y**) can be modified independently (the **Constrain proportions** check box is unticked).

With the **Line spacing** parameter you can add spaces between lines of text. The spaces are measured in pixels (dots). Up to 20 pixel spaces can be added. The space is added after every end-of-line character.

The object and object frame sizes are subject to **Scaling**. Three options are available:

- **Without scaling** – it enables you to modify the size of an object frame without

changing the size of the object.

- **Fit frame to content** – when the object frame is to be of the same size as the object.
- **Fit content to frame** (not available to text objects where an EBS built-in font is used and to barcode-type objects) – when the size of an object is to be the same as the size of the frame.

If the **Transparent** parameter check box is ticked, the object is transparent and you can see an object that is “under” it. This property is useful when a number of objects have been placed in the edit area and there is a risk that objects overlap each other.

The **Object rotation** parameter allows you to rotate the entire object clockwise (the setting of 90), counterclockwise (the setting of 270) or “upside down” (the setting of 180).

The **Position** parameter shows the coordinates of the top left-hand corner of the object frame. You can modify the coordinates and thereby change the position of the object. Place the cursor in the **Position** field and modify the coordinates in the window displayed. The first coordinate determines the location in the horizontal direction (**x coordinate**), the second one determines the location in the vertical direction (**y coordinate**). The repositioning operation can also be performed in the edit area by holding the cursor on the object and shifting it in any direction.

The **Object size** parameter defines the size of an object frame. Place the cursor in the **Object size** field and modify the size components (**width** and **height**) in the window displayed. The resizing operation can also be performed in the edit area, by holding the cursor on the bottom right-hand corner of the object and dragging it in any direction (no frame can be resized if **Scaling** is set to **Fit frame to content**).

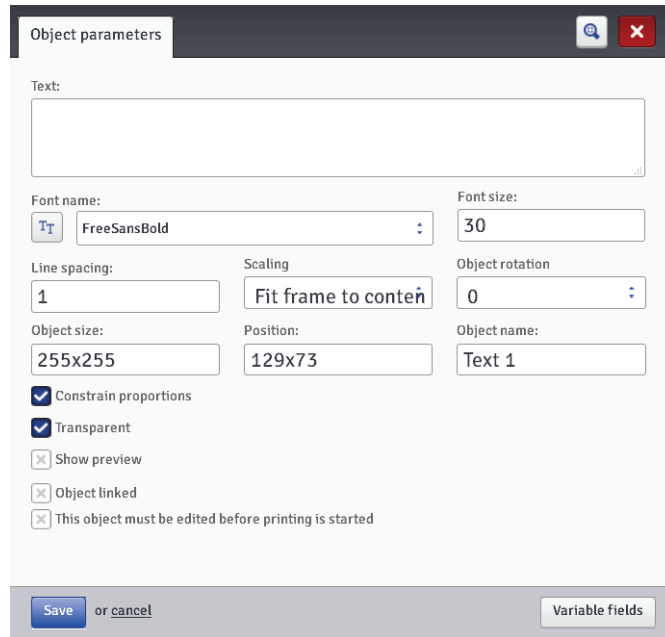
The **Position** and **Object size** parameters are particularly useful when you need to arrange or align two or more objects precisely.

The **Object name** parameter is designed for identification of an object in the object list. The type of object and a number are used as the object name, as standard (e.g. Text 1, Counter 2). You can give your own name to objects to facilitate identification, but the same names must not be used, i.e. they must be unique within one project. If you use a name that has already been used within the project, an error is reported when you try to save the parameters of the object named so.

If you tick the **Show preview** check box, an object preview is displayed in the top left-hand corner of the screen.

4.2.4.8. TEXT OBJECT – NORMAL TEXT

Touch the **T** button in project processor window and then **T** in order to add a new, **Normal text**-type text object to a project.



You can type in any characters string in the **Text** field. The division of a text into lines can be done by pressing the ENTER button on the computer keypad.

You can convert a **Normal text**-type object into another text object with the **Variable fields** button.


If the **Object linked** check box is ticked, the object assumes the setting of the object chosen in the drop-down list. Another text object or a barcode can be used as object linked.

If you need to edit your text just before it is printed, tick the check box for **This object must be edited before printing is started**. The object parameters can be modified in the window that is displayed when the **Start printing** button is touched.

Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.9. TEXT OBJECT – DATE/TIME

The **Date/Time** text object allows you to print the current date and the current time and also an expiration date automatically.

Touch the **T** button in project processor window and then the  button in order to add a new, **Date/Time**-type text object to a project.

The **Current printer date** parameter shows the current date indicated by the printer.

The **Current printer time** parameter shows the current time indicated by the printer.

The **Date offset** parameter allows you to shift the current date by a set number of days, in order to include the expiration date, for example.

The **Time offset** parameter allows you to readjust the current time by a set number of hours (up to 24). The modification can impact on date shifting. Such a change may cause a calendar day to start at a different time than 00:00 (e.g. at 6 o'clock a.m., when a morning shift in the factory starts).

By touching the  calendar or  clock button you can choose components for printing – the date, the time or both of them. With the  arrow icon you can change the order of these components.

When more advanced functions are needed, use expert mode (**Show experts settings**). In the expert mode you can modify separators and date and time format, and also choose other date and time components and separators that are not available in the standard version (with the **Formatting string** parameter).

The **Date separator** parameter allows you to choose a separator to be used between date components for a project. The **Time separator** parameter allows you to choose a separator to be used between time components for a project.

The **Date format** parameter allows you to choose the sequence of date components for a project. The **Time format** parameter allows you to choose the sequence of time components for a project.

The default settings of the date and time formats and separators for newly created **Date/Time**-type text objects can be modified in the **Settings** – see [4.2.6.1. General settings \(p. 99\)](#).

The **Formatting string** parameter is available when the relevant check box is ticked. Below there are the characters that are used to code the date and time components. Any characters that are different from the below listed, and also spaces, can precede, separate or

follow the components of the universal-date variable field. If no local name exists, an equivalent in English is displayed.

%a	local short form for the name of day of the week (Mon, ... , Sun)
%A	local full name of day of the week (Monday, ..., Sunday)
%b	local short form of the name of month (Jan, ... , Dec)
%B	local full name of month (January, ... , December)
%c	local date and time in the following format: short form for the name of day of the week, short form for the name of month, day of the month, hours, minutes, seconds, year
%C	number of century
%d	day of month (01, ... , 31)
%D	date in the format: mm/dd/yy
%e	day of month (1, ... , 31)
%F	date in the format: yyyy-mm-dd
%g	2-digit year corresponding to the number of week %V
%G	4-digit year corresponding to the number of week %V
%h	local short form for the name of month (Jan, ... , Dec)
%H	hour, in 24-hour system (00-23)
%I	hour, in 12-hour system (01-12)
%j	day of year (001, ... , 366)
%k	hour, in 24-hour system (0-23)
%l	hour, in 12-hour system (1-12)
%m	month (01, ... , 12)
%M	minute (00, ... , 59)
%p	local equivalent to AM or PM (empty on many sites)
%P	local equivalent to a.m. or p.m. (empty on many sites)
%r	time in 12-hour system in the format: hh:mm:ss [AM] or [PM]
%R	time in 24-hour system in the format: hh:mm
%s	number of seconds from 00:00:00, 1 January 1970 (extension GNU)
%S	second (00, ... , 60); 60 means a leap second
%T	time in 24-hour system in the format: hh:mm:ss
%u	day of the week (1, ... ,7); 1 means Monday
%U	number of the week in year (00, ... , 53), Sunday starts the week
%V	number of the week in year (01, ... , 53), Monday starts the week
%w	number of day of the week, 0-Sunday, 1-Monday, etc.
%W	number of the week in year (00, ... , 53), Monday starts the week
%x	local representation of the date
%X	local representation of the time
%y	two last digits of year (00, ... , 99)

%Y year in the format yyyy

%z time zone in numerical format compliant with RFC-2822 (e.g. +0100) (non-standard extension)


%Z time zone (e.g. EDT) or nothing, if no zone can be determined

You can convert a **Date/Time**-type object into a different type of text object with the **Variable fields** button.


Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.10. TEXT OBJECT – COUNTER

The **Counter** text object allows you to print automatically a consecutive number on every successive article to be labeled. The setting of the counter changes each time the photode-tector is activated.

Touch the **T** button in project processor window and then the  button in order to add a new, **Counter**-type text object to a project.

The **Counter** consists of a cascade of three identical sections. For simple counting of arti-cles, it is enough to use one, the first section and the default settings to create a counter-type object. When more advanced functions are needed, use expert mode (**Show experts settings**). All counter sections are visible in the expert mode. Each of the sections can be visible (displayed) or not. If you know the configuration of one section, you can easily con-figure the other as they are identical.

By touching  you can change the **Increment order**. The parameter defines which of the sections is considered as first and what the timing order is. The section timed first receives a timing pulse whenever a print is to be made. Every successive section receives a timing pulse from the previous section, when that section has counted to the end (that is, to the **Max** setting when the counter is incremented or to the **Min** setting when it is decremented). The timing pulse modifies the counter by a set **Step**.

Counter parameters:

- **Min** – the setting from which counting starts (for counting up), or with which counting finishes (for counting down).
- **Max** – the setting at which a counter overflows. When the counter overflows, counting starts again from the **Min** setting.
- **Start mode** – the parameter allows you to set the value from which counting starts after printer operation has been resumed. Four options are available:
 - **Min,**
 - **Max,**
 - **Start value,**
 - **Last value.**
- **Start value** – the counter setting from which counting starts after operation has been interrupted, e.g. when a power failure occur. This is effective when the **Start mode** parameter is set to **Start value**.
- **Last value** – the last setting of a counter, which is saved after the printer has been switched off in regular mode.
- **Step** – a counter increment. When the setting is a positive number, counting is incremental, and when it is a negative number, counting is decremental.
- The **Length** parameter is used to adjust the number of counter digit positions to that required by the user.
- The **Fill in** parameter is used to define a replacement for insignificant digits of a counter: 0 or space.
- **Suffix** – any character string to follow the counter printout, limited to 41 characters.
- **Event** (optional) – the parameter allows you to define printer reaction to a counter overflow.
 - **Do nothing,**
 - **Stop printing.**

With the **Reset V.F.** button you can modify **Start value** and **Last value**. The parameter is available for the counters that have their **Start mode** parameters set to **Start value**.


If you need to edit your counter just before it is printed, tick the check box for **This object must be edited before printing is started**. The value from which counting starts can be modified in the window that is displayed when the **Start printing** button is touched.

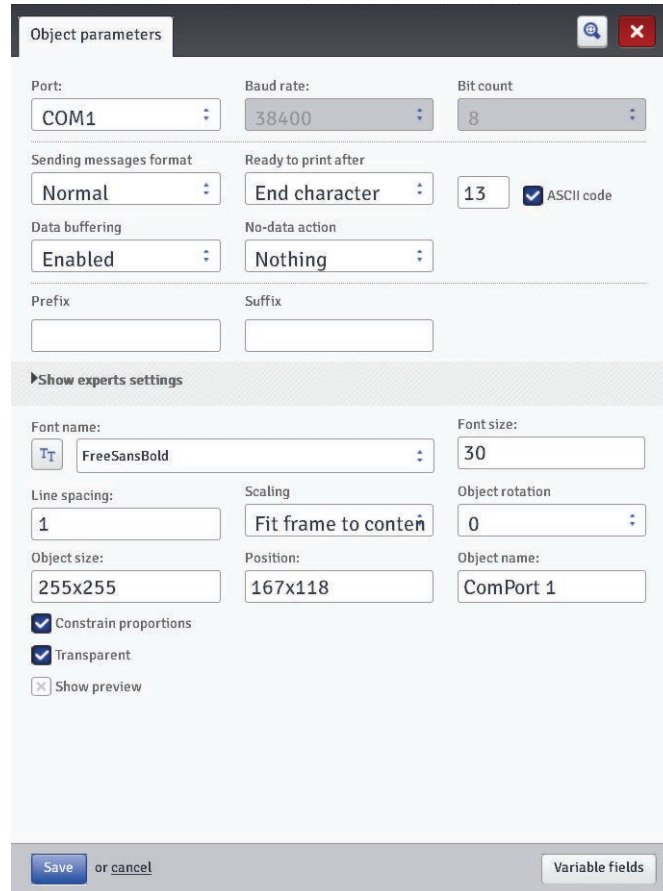
You can convert a **Counter**-type object into another type of text object with the **Variable fields** button.

Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.11. TEXT OBJECT – COMMUNICATIONS PORT

The **Communications port** text object is used to print automatically the data received by the printer from external devices (e.g. a computer, automatic scales, a barcode reader).

Touch the **T** button in project processor window and then the  button in order to add a new, **Communications port**-type text object to a project.



When added to a project, the **Communications port** object is highlighted (e.g. in blue). This means that its contents during printing depends on data transferred to the communication port. If a greater number of **Communications port** objects are used, each of them is highlighted in a different color.

For a **Communications port** object you can set the parameters that are significant for establishing communication between the printer and an external device. The printer and the device must have the same settings of the following parameters to communicate successfully:

- **Port** – it defines the name of a printer port to which an external device is connected as a source of serial transmission signals in RS–232 or RS–485 standard. You can connect an external device (a computer, automatic scales, a barcode reader, etc.) to a port **21** or with USB-RS232 Adapter to a port **14**. The list of ports is fixed and contains ports numbered from COM1 to COM9.
- **Baud rate** – it signifies a rate of transmission (a number of symbols per second) through the port. The list to choose from contains the most typical rates used for serial communication
- The **Bit count** parameter defines the number of bits in every portion of the data transferred.

Communication Parameters – they define the rules for communication between the printer and an external device:

- **Sending messages format** – this parameter defines the format of data to be transferred

from the printer to a device. Two modes are available: **Normal** and **Hexadecimal**. In the normal mode, the data is transferred as ASCII characters, whereas in the hexadecimal mode it is transferred as hex numbers.

- **Ready to print after** – it defines how the printer decides whether it has received complete data (the end condition) from an external device or not. The following modes can be set in this parameter:
 - **Time interval (ms)** – the printer waits for data over a certain time. The time is counted from the moment when a last project is printed or, if the **On processing data** field (in expert settings) is filled in – from the moment when an end-of-printing acknowledgement is sent. The time is typed in in the field next to the parameter as a number of milliseconds (between 4 and 1000 ms). If no data is received within the defined time, the printer behaves according to the **No-data action** setting.
 - **Data amount** – the printer is ready for printing a project containing a **Communications port** object when it receives a number (from 1 to 255) of characters from the external device; with the number being defined in the field next to the parameter. If printing is released although the condition is not met (the defined number of characters has not been received) the printer behaves according to the **No-data action setting**.
 - **End character** – the printer is ready for printing a project containing a **Communications port** object when it receives data ending with a defined character from an external device, with the character being defined in the field next to the parameter. In this mode you can also define an ASCII character that is to be the end of a portion of the data received. For that purpose, tick the **ASCII code** check box and type in the ASCII code in decimal notation. If printing is released when the condition is not met (a defined end-of-data character is not received) the printer behaves according to the **No-data action** setting.
- **Data buffering** – it is used for storing successive data portions in a variable field, **Communications port**. Two modes can be set:
 - **Enabled** – a successive portion of the data received by the variable field is stored if the end condition is met – see **Ready to print after**. The buffer size is 20, which means that 20 various, ready-to-print pieces of data can be received and stored. When any other data comes, it will overwrite the data at the 20th position and a long sound is heard at the same time to inform about an overflow. The buffered data forms a kind of queue, the data is printed in the same sequence in which it has been received by the variable field. If all the data buffered is printed, and another print is released, the printer behaves according to the **No-data action** setting.
 - **Disabled** – it defines printer behavior when no data has come from an external device (when the end condition is not met – see **No-data action** setting). In this mode, the printer always prints the last or latest data received.
- **No-data action** – it defines printer behavior when no data has come from an external device (when the end condition is not met – see **Ready to print after**) and printing of a project containing a **Communications port** object has been released. The following modes of operation can be set:
 - **Do nothing** – if printing is released when data is not received properly or the end condition is not met (see **Ready to print after**), the project is not printed. The message informing about this fact is displayed.
 - **Print blank object** – the project is printed as usual, with the entire **Communica-**

communications port object being empty.



If a **Prefix** and/or a **Suffix** are defined by the user, they will not be printed.

- **Print last message** – the project is printed together with the **Communications port** object, with the object being filled with the last message received successfully from the external device. If such a printout is made as a first, the project is printed but the area where the data should be is empty. The maximum number of repetitions defines how many time the last message can be printed. If the number of printouts is achieved, every successive release of printing make the printer react according to the **Do nothing** mode.



If a **Prefix** and/or a **Suffix** are defined by the user, they will be printed.

Printing Parameters – they define how the data transferred via a communications port is to be printed. The parameters are hidden by more advanced, expert mode parameters that correspond to them – see below.

- **Prefix** – a text in a **Communications port** object, which is printed before the data received from an external device.
- **Suffix** – a text in a **Communications port** object, which is printed after the data received from an external device.

Expert Settings – they define the rules for processing of the data received from an external device, and also the mode of acknowledgement of printer states transferred to the device, i.e. starting printing, stopping printing, project printed:

- **On starting printing** – it defines the data to be transferred from the printer to the external device immediately after printing has been initiated (with the **Start printing** button on the **Printer control** panel).
- **On processing data** – it defines the data to be transferred from the printer to the external device each time a project containing the **Communications port** object has been printed.
- **On finishing printing** – it defines the data to be transferred from the printer to the external device immediately after printing has been stopped (with the **Stop printing** button on the **Printer control** panel).
- **Script name** – with this field you can choose a script to which data is transferred for processing before it is printed (it allows you to search for data for printing in, for example, a database, Excel files, a csv file, etc.). Scripted files must be stored in the CustomData folder in the user partition of internal printer memory. The partition can be accessed in Network Neighborhood. The name of an added file is displayed in the list box. For more information on the subject of scripts refer to the document entitled *Managing the processing of data transferred by COMMUNICATIONS PORT in the EBS printers*.
- **Formatting string** – this is an advanced mode of formatting of the data transferred

from an external device to the printer. It describes how the incoming data is interpreted by the Printing Manager. Markers applied: %s – a character string, %d – a number.

- **Separator data count** defines to how many parts the data transferred via the communications port is to be divided. If the parameter is set to 1, everything transferred to the communications port is to be printed in the object. Otherwise, the user can choose to which of the objects each of the data portions transferred via the communications port should go, with the first part always going to that object. When the **Separator data count** parameter is set to a value greater than 1, the following options are additionally available:
 - **Separator character** – it defines the character that separates portions of the data transferred via the communications port from each other. Additionally, you can give the ASCII code of the character that is used as a separator of the data to be received. For that purpose tick the **ASCII code** check box, and type in the ASCII code of the data separator in decimal notation in the **Separator character** field.
 - **Object X** – it means the name of an object to which the separated data portion received via the port and defined by X should go. You can only choose from the objects that are used for a given project and to which this data can go. The maximum number of separated portions of data is 10 (if a project contains 12 objects, the data can be divided into 10 of them). The object containing a portion of the data transferred via the communications port is additionally highlighted in a color.

You can convert a **Communications port**-type object into another text object with the **Variable fields** button.

Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.12. TEXT OBJECT – TEXT FILE

The **Text file** text object is used for printing the data stored in a TXT file.

Touch the **T** button in project processor window and then the **File** button in order to add a new **Text file** type text object to a project.

The screenshot shows the 'Object parameters' dialog box with the following fields and options:

- File path:** A text input field with a 'Browse' button.
- Line count:** Input field with value '1'.
- Line step:** Input field with value '1'.
- Line max:** Input field with value '0'.
- Line start value:** Input field with value '1'.
- Start mode:** Dropdown menu with 'Start value' selected.
- Last value:** Input field with value '0'.
- Font name:** Input field with 'FreeSansBold' selected.
- Font size:** Input field with value '30'.
- Line spacing:** Input field with value '1'.
- Scaling:** Dropdown menu with 'Fit frame to content' selected.
- Object rotation:** Input field with value '0'.
- Object size:** Input field with value '255x255'.
- Position:** Input field with value '117x105'.
- Object name:** Input field with value 'TextFile 1'.
- Constrain proportions**
- Transparent**
- Show preview**

At the bottom, there are buttons for 'Save or cancel', 'Reset V.F.', and 'Variable fields'.

Touch the **Browse** button and choose a file name out of those listed in the window

displayed, and then touch the **Select file** button in order to roll-in the text file.

The parameters of a **Text file** object are as follow:


- **Line count** – the number of lines to be added to the object from the text file.
- **Line step** – the number of lines by which text file data moves each time a print is made. If the **Line count** is greater than the **Line step**, the data moves by the number of lines given in the **Line count**.
- **Line max** – the last line of text to be included in a printout.
- **Line start value** – the text line to be added to an object as a first one.
- The **Start mode** parameter is used to define which line of the text file is to be rolled-in after printer operation has been resumed. Two options are possible:
 - **Start value** – the line defined by the setting of the **Line start value** parameter is to be rolled-in,
 - **Last value** – the line shifted by the **Line step** in relation to the line on which printing finished is to be rolled-in.
- **Last value** indicates the line that has been last printed. The line is stored in memory provided that the printer is switched off properly – see [3.5.2. Switching the Printer Off \(p. 18\)](#).


With the **Reset V.F.** button you can modify the **Line start value** parameter. The parameter is available for the counters whose **Start mode** parameter is set to **Start value**.

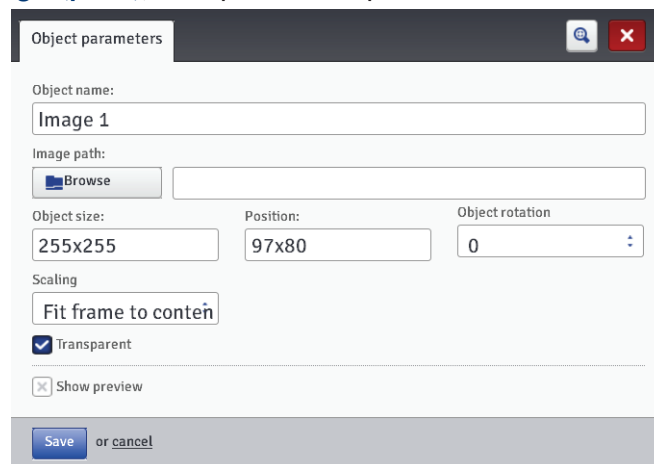
You can convert a **Text file**-type object into another type of object with the **Variable fields** button.

Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.13. IMAGE


Touch the  button in project processor window in order to add a new, **Image**-type object to a project.

Touch the  **Browse** button in order to roll-in an image from printer memory for printing, choose a file name in the window displayed, and then touch the **Select image** button (see [4.2.5.1. Images manager \(p. 94\)](#)). The printer can process PNG files.



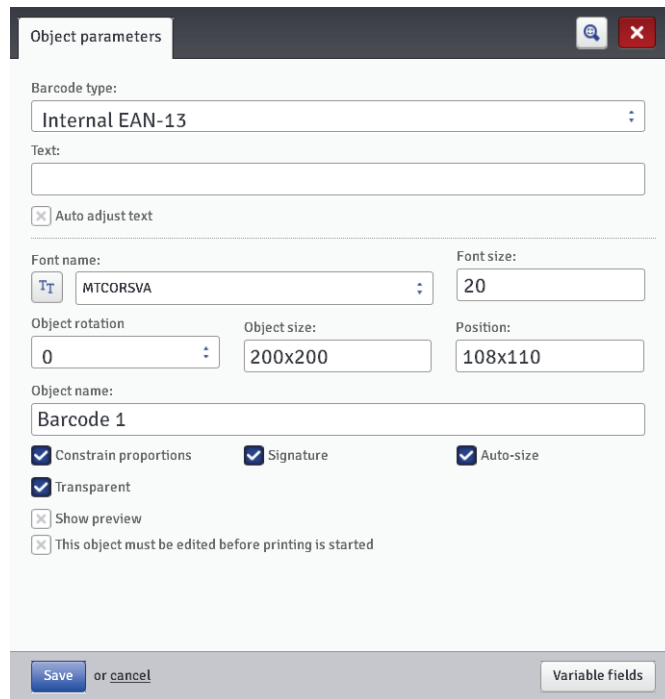
Touch the **Save** button in order to confirm the settings and to add the object to a project.

4.2.4.14. BARCODE

Touch the  button in project processor window in order to add a new, **Barcode**-type object to a project.

The barcode can have the following forms:

- **Normal barcode,**
- Barcode containing a **Date/Time, Counter, Communications port** or **Text file**-type variable field.



The following types of barcodes are available:

- Numerical: EAN-2, EAN-5, EAN-8, EAN-13, EAN-5 + EAN-2, EAN-8 + EAN-2, EAN-8 + EAN-5, EAN-13 + EAN-2, EAN-13 + EAN-5, Code 25, Code 11, Code 25 Industrial, Code 25 Interleaved, Code 25 IATA, Code 25 Data Logic, Codabar, Leticode, Identcode, GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, UPC-A, UPC-E, PostNet, MSI Plessey, Pharmacode One-Track, Pharmacode Two-Track, ITF-14, PZN.
- Alphanumerical: Code 39, Code 39 Extended, GS1-128 (UCC/EAN-128), Code 128, Code 16k, Code 93, Telepen Alpha, 2D:PDF417, 2D:PDF417 Truncated, 2D:QR Code, Australia Post 4-State, Royal Mail 4-State (RM4SCC), 2D:Data Matrix, 2D:Micro-PDF417.

Fill the **Text** field with a string of characters that are to be presented in the form of a barcode. Remember to adjust the type of code to the quantity and kind of characters. The detailed information on the format of each of the codes are displayed while the type of code is being selected. When the field changes color to red, this means that the character string typed in is not appropriate to a given code type (a wrong number or type of characters).

If the **Auto adjust text** check box is ticked, the size of the code **Signature** is adjusted to the barcode size. If the **Auto adjust text** check box is unticked, you can modify the **Font name, Font size** settings and modify the **Constrain proportions** parameter.

You can modify the following parameters in a barcode object:

- **Border type** - the type of barcode frame (it is available for selected codes, and does

not apply to internal codes); three types are available

- **none** – there is no frame,
 - **bind** – frame lines at the top and bottom of the code,
 - **box** – frame lines on each side of the code.
- **Border size** – the width of a barcode frame (it is available to selected codes and does not apply to internal codes), it allows you to modify the frame width when the **Border type** is set to **bind** or **box**.
 - If the **Constrain proportions** check box is unticked (this field is available when the **Auto adjust text** check box is unticked) **Font size X** and **Y** can be modified.
 - The **Signature** check box defines whether a given code is to have its value typed in explicitly or not. Some codes, especially 2D ones, cannot be displayed together with a description, and if the check box is ticked for that type of code, no description can be added to a code symbol.
 - If the **Auto-size** check box is ticked, the object frame is of the same size as the object size. If the check box is unticked, the frame size can be modified without any change to the object height.

If you need to edit your barcode just before it is printed, tick the check box for **This object must be edited before printing is started**. The code can be modified in the window that is displayed after the **Start printing** button has been touched.

You can convert a **Normal barcode**-type object into another type of barcode with the **Variable fields** button. This allows you to present **Date/Time**, **Counter** the date transferred from an external device via a **Communications port** and the data from a **Text file** with a barcode.




Touch the **Save** button in order to confirm the settings and to add the object to a project.

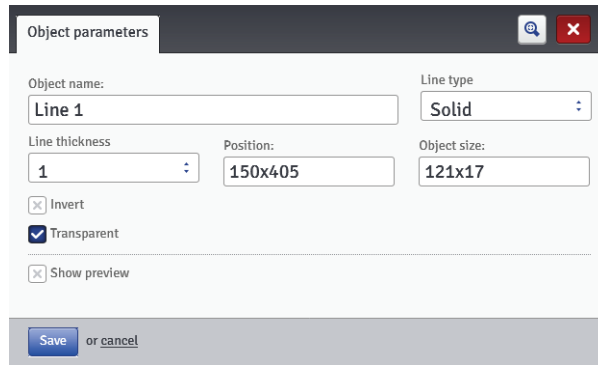
4.2.4.15. SHAPE-TYPE OBJECTS

Shape-type objects are placed in the edit area by drawing a required shape. When you click within the edit area, a first component of a shape (e.g. the end of a line, a vertex of a rectangle) is put there. Then, when you move the mouse cursor, a preview of the object to be added is generated, whereas when you click again in the edit area, the object, which was previewed while the mouse cursor was being moved after the first click, is added.

4.2.4.15.1. SHAPE-TYPE OBJECT – LINE

The **Shape**-type object – **Line** allows you to print a continuous line.

Touch the  button in project processor window and then  to add a new, **Line**-type object to a project. Highlight the object and touch the  button in order to open **Object parameters** window.






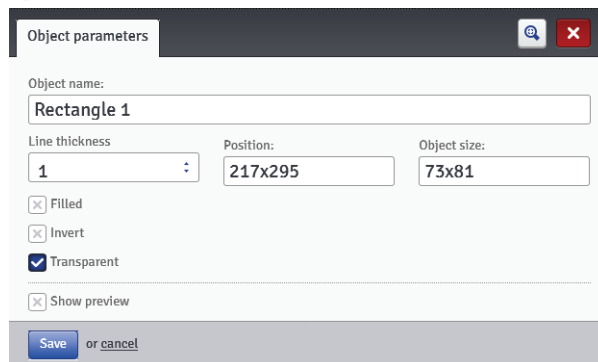
You can set the **Line thickness** in the range from 1 to 30. The **Line thickness** is given as a number of dots (pixels).

If the **Invert** check box is ticked, then where the **Line** "covers" another object that might be in a lower layer, the common section of the line and that other object is not printed. Touch the **Save** button in order to confirm the settings.

4.2.4.15.2. SHAPE-TYPE OBJECT – RECTANGLE

With the **Shape – Rectangle** object you can print any rectangle: an outline only or the entire figure (in the latter case the **Filled** check box needs to be ticked).




Touch the  button in project processor window and then  **Rectangle**, to add a new, **Rectangle**-type object to a project. Highlight the object and touch the  button in order to open **Object parameters** window.

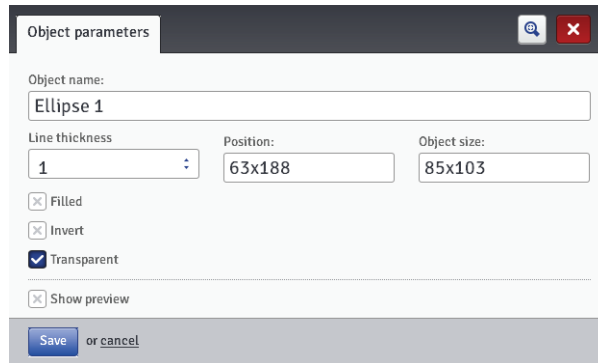


If the **Invert** check box is ticked, then where the **Rectangle** "covers" another object in a lower layer, the common section of the rectangle and another object is not printed. With the **Line thickness** parameter you can set the thickness of the rectangle outline. The parameter is disabled when the **Filled** check box is ticked. Touch the **Save** button in order to confirm the settings.

4.2.4.15.3. SHAPE-TYPE OBJECT – ELLIPSE

The **Shape – Ellipse** object allows you to print any ellipse: an outline only or the entire figure (in the latter case the **Filled** check box needs to be ticked).

Touch the  button in project processor window and then  **Ellipse**, to add a new, **Ellipse**-type object to a project. Highlight the object and touch the  button in order to open **Object parameters** window.




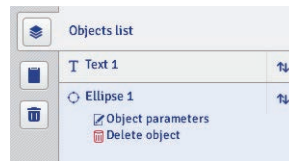
If the **Invert** check box is ticked, then where the **Ellipse** "covers" another object in a lower layer, the common section of the ellipse and that another object is not printed.

With the **Line thickness** parameter you can set the thickness of the ellipse outline. The parameter is disabled when the **Filled** check box is ticked.




Touch the **Save** button in order to confirm the settings.

4.2.4.16. OBJECTS LIST

The list of all objects used for a project is accessible with the  button on the vertical right-hand tool bar.

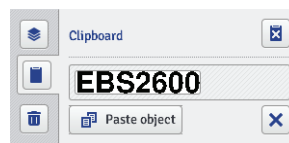


When you click with the left mouse button on the object name, the object is highlighted in blue and a drop-down menu is displayed. The menu contains the **Object parameters** and a **Delete object** button. If the object name is highlighted in red, this means an error (the type of error is displayed on the [4.2.10. Messages \(p. 103\)](#) screen in the bottom section of the Browser window). The following operations can be performed on the object list:

- You can change the sequence of objects in the list and thereby the sequence in which objects are arranged in the edit area (the last object in the list is positioned in the lowest layer, the first one – in the highest layer) with the  button,
- You can edit a highlighted object; you can touch the  button in order to open the object parameter window,
- You can delete a highlighted object with the  button – the deleted object is moved to trash – see [4.2.4.18. Trash \(p. 94\)](#).

4.2.4.17. CLIPBOARD


The **Clipboard** is accessible with the  button on the vertical right-hand tool bar.



The following operations can be performed on clipboard objects:

- You can delete one object with the  button or all objects from the clipboard with the

 button,




- You can paste an object put into the clipboard to a project with the  **Paste object** button.

4.2.4.18. TRASH

The **Trash** is accessible by touching the  button on the vertical right-hand tool bar.








The following operations can be performed on trash objects:

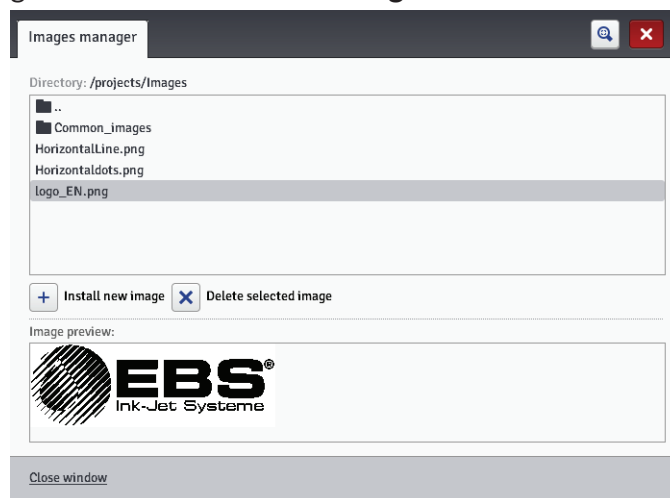
- You can delete one object with the  button or all objects from the trash with the  button,
- You can restore a highlighted object into the list of objects with the  **Restore object** button.

4.2.5. TOOLS

4.2.5.1. IMAGES MANAGER

In the  **Tools** menu, which is on the menu bar, you can choose **Images manager**. With the Manager you can do the following:

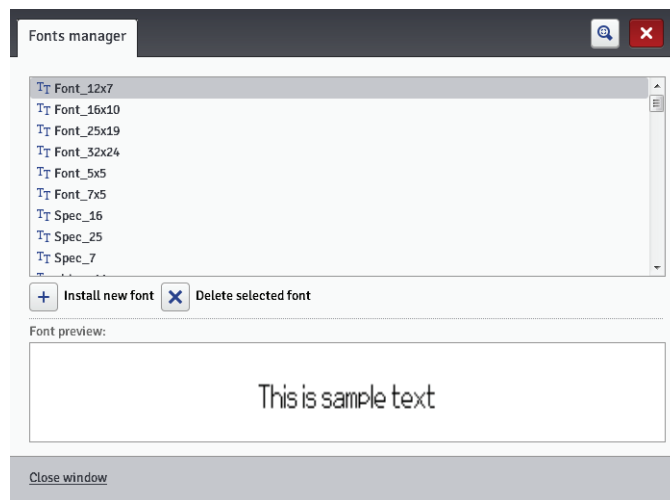
- You can save a new image in printer memory with the  **Install new image** button. In the window displayed should touch the text field or the  **Browse** button and choose an image to be installed from computer disc. Confirm the operation with the  **Install selected image** button. The number of images you can install is constrained by the printer memory available.
- You can delete an image from printer memory – by highlighting the image name in the list and touching the  **Delete selected image** button.



4.2.5.2. FONTS MANAGER

In the **Tools** menu, which is on the menu bar, you can choose **Fonts manager**. With the Manager you can do the following:

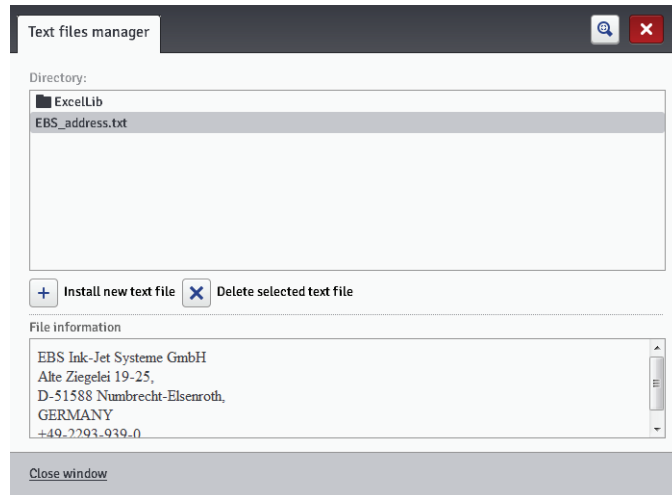
- You can add a new font with the **+ Install new font** button. In the window displayed touch the text field or the **Browse** button and choose a font to be installed from computer disc. Confirm the operation with the **Install selected font** button. Before a font is installed, it is recommend that the license for using the font be read. The number of fonts you can install is constrained by the printer memory available.
- You can delete a font from printer memory – by highlighting the font name in the list and touching the **X Delete selected font** button.



4.2.5.3. TEXT FILES MANAGER





In the **Tools** menu, which is on the menu bar, you can choose **Text files manager**. With the Manager you can do the following:

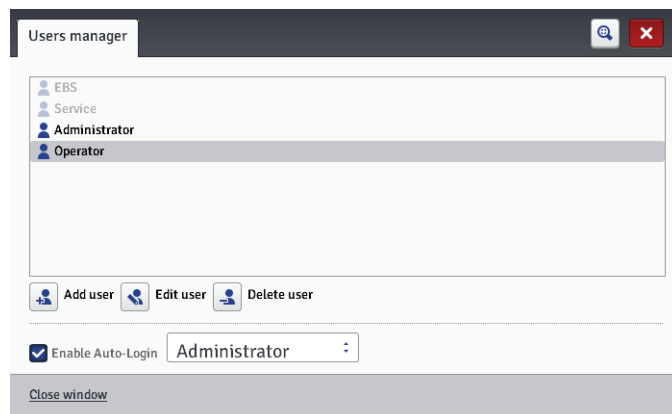
- You can add a new text file with the **+ Install new text file** button. In the window displayed touch the text field or the **Browse** button and choose a file to be installed from computer disc. Confirm the operation with the **Install selected text file** button. The number of files you can install is constrained by the printer memory available.
- You can delete a text file from printer memory – by highlighting the file name in the list and touching the **X Delete selected text file** button.



4.2.5.4. USERS MANAGER

In the **Tools** menu, which is on the menu bar, you can choose **Users manager**. The Manager functions are available for users who belong to the Administrator group. With the Manager you can do the following:


- You can add a new user by touching the  button. In the window displayed you should type in your **Login**, **Password** and **Retype password**. You can add an image to identify the user – touch the text field or the  **Select login image** button and choose a file from computer disc for reading-in. Confirm the operation with the **Select image** button. Tick the check box next to the group to which the user it to belong.
- You can edit the existing user data by highlighting the user name in the user list and touching the  button.
- You can delete a user by highlighting his name in the user list and touching the  button.
- You can enable automatic logging in of a selected user when Web User Interface starts running, by ticking the **Enable Auto-Login** check box and choosing the user name in the drop-down list.







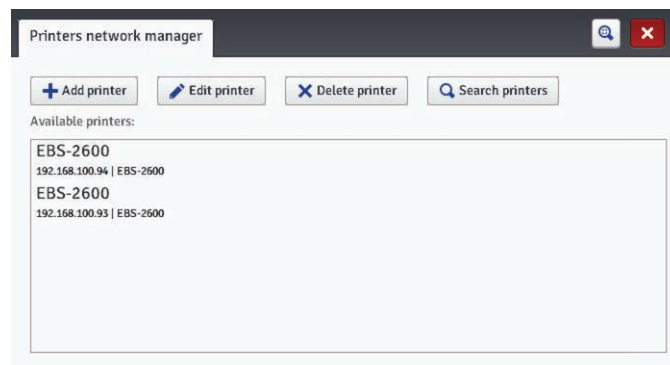
Two access groups: Administrator and Operator, are important for a printer user. Administrator and the users added to the Administrator group have access to the project and parameter processor, to the printer tools and control and they can also add new users and edit and delete existing ones.

Operator and the users added to the Operator group have access only to printer operations: they can create a project for printing, start and stop printing. The unavailable options are in gray.

4.2.5.5. PRINTERS NETWORK MANAGER

In the  **Tools** menu, which is on the menu bar, you can choose **Printers network manager**. With the Manager you can do the following:

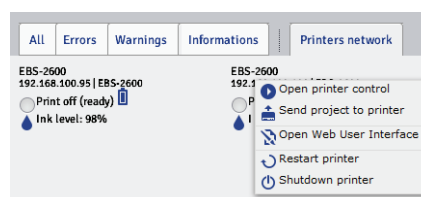
- You can add a new printer to a network by touching the  **Add printer** button. In the window displayed, type in the **Printer name** (a name that facilitates identification of the printer in the list) and the **Printer IP** and choose the **Printer model** in the drop-down list and then touch the **Add** button.
- You can add a new printer to a network by touching the  **Search printers** button. The environment is searched and the printers available are listed. You can expand you network by adding a selected printer by ticking the check box that is near the printer name or all printers by touching the **Invert selection** button and then the **Add selected printers** button.
- You can edit the data of a printer that is in the list by highlighting the printer name and touching the  **Edit printer** button.
- You can delete a printer from the list by highlighting the printer name and touching the  **Delete printer** button.



You can manage the listed printers via a **Printers network**. The printer network window is accessible by touching the **Printers network** button, which is on the WUI bottom bar – see [4.2.2. Work Screen of EBS Web User Interface \(p. 68\)](#).

In the **Printers network** window you can see the list of printers together with the following data:

- Type of printer,
- Printer IP address,
- Printing status,
- Ink container status.



Point out the name of a printer with the cursor and press the left-mouse button a pop-up or pop-down menu appears. With this menu you can do the following:

- Open the printer control window – see [4.2.8. Printer control \(p. 102\)](#),
- Transfer a project to the printer – see [4.2.4.4. Export project \(p. 71\)](#),
- Open EBS Web User Interface,
- Restart the printer,
- Switch the printer off.

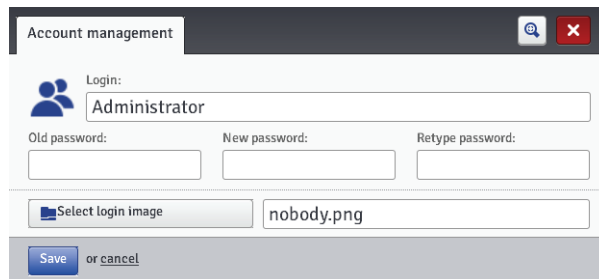
4.2.5.6. LANGUAGE MANAGER

In the **T** **Tools** menu, which is on the menu bar, you can choose **Language manager**. The processor starts running and in the window displayed you can modify the menu names, key labels and the messages that are displayed on the printer LCD and in the printer processor. Choose the language that you wish to edit in the drop-down list, and then choose Editor (EBS Web User Interface messages) or LCD (printer messages). On modifying a text touch the **Save changes** button at the bottom of the page.

4.2.5.7. ACCOUNT MANAGEMENT

In the **T** **Tools** menu, which is on the menu bar, you can choose **Account management**. With this tool you can manage the data on the account of the currently logged-in user. You can re-name the user. For that purpose delete the name used so far in the **Login** field and type in a new name.

In order to change the password of a given user, type in the **Old password** and then type in and repeat a **New password**. The new settings are available after they have been confirmed with the **Save** button.




4.2.5.8. WORKSPACE WIDTH

In the **T** **Tools** menu, which is on the menu bar, you can choose **Workspace width**. With that tool you can set the width of the edit area precisely. The setting can be made in pixels (**px**) or centimeters (**cm**) by choosing the proper field. Confirm the new setting with the **Save** button.


The tool is available when a project is open and can be edited.

4.2.5.9. SIMULATE PRINTOUT

In the  **Tools** menu, which is on the menu bar, you can choose **Simulate printout**. With this tool you can make a test printout and figure out what your project will look like in reality.

The tool is available when a project is open and can be edited. The Browser option for displaying pop-up windows should be enabled.


4.2.5.10. PRINTOUT COST

In the  **Tools** menu, which is on the menu bar, you can choose **Printout cost**. This tool can be used to determine the number of prints of a given project that can be made with 1 liter of ink (**Printouts per litre**) or with 1 ink cartridge (**Printouts per cartridge**).

The number of prints depends on the **Pixels count** project parameter and the **Dot size** printing parameter, whose value is selectable from the drop-down list.

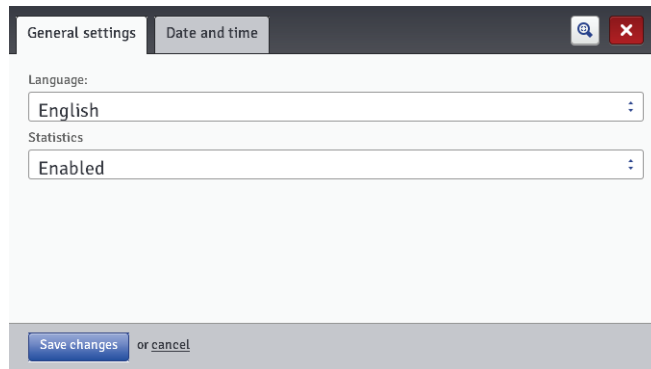
4.2.6. SETTINGS

4.2.6.1. GENERAL SETTINGS

In the  **Settings** menu, which is on the menu bar, choose **General settings**.

In the **General settings** sheet tab you can set the **Language** for communication with the

processor and enable **Statistics** (see [4.2.9.2. Operating statistics \(p. 103\)](#)). The new settings should be approved with the **Save changes** button.



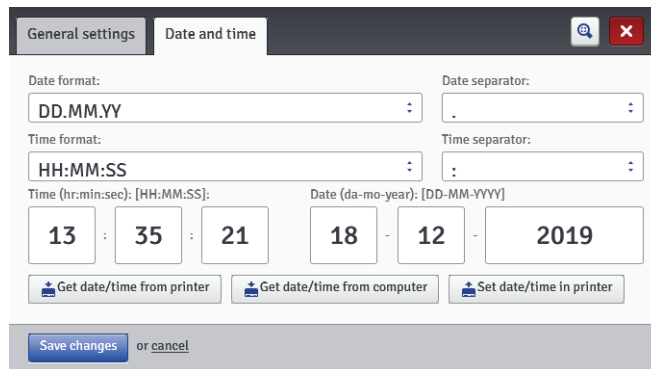
In the **Date and time** sheet tab you can set the date and time parameters (i.e. the date and the time, data and time formats and separators as the default format for newly created **Date/Time**-type text objects).

The date and time that are displayed after the **General settings** menu has appeared are the actual date and the real time generated by the printer clock.

You can save any date and any time in the printer by modifying the **Date (da-mo-year)** and **Time (hr:min:sec)** settings and transferring them to the printer with the **Set date/time in printer** button.

You can harmonize the computer and printer date and time settings by touching the **Get date/time from computer** and **Set date/time in printer** buttons in turn.

Any changes to date and time formats and to separators are confirmed with the **Save changes** button.



4.2.6.2. CONVEYOR PARAMETERS

Select **Conveyor parameters** in the **Settings** menu on the menu bar.

The printer is equipped with a practical tool for measuring conveyor-belt travel speed or speed-sensor encoder constant. Perform the following operations to take a measurement:


1. Put 2 articles on the conveyor belt at a distance of 1m from each other (the distance is measured between the leading edges of the articles). It is important that the articles are big enough to activate the photodetector when they move.
2. In the Conveyor parameters window press the **Detect encoder constant** or **Detect conveyor speed** button.
3. Set the conveyor belt moving. When the two articles move in front of the photodetec-

tor, the encoder constant or conveyor-belt travel speed is automatically displayed in the corresponding field.

4. Confirm the modification to the parameters by pressing the **Use current settings** button.

4.2.7. SERVICE


4.2.7.1. UPDATE

In the  **Service** menu, which is on the menu bar, choose **Update**.


Owing to software updates the printer always has up-to-date and improved software, which makes it function better.


New versions of the software are available from the EBS distributors. Contact your local distributor to get the software that is suitable for your printer.

The update may involve a loss of projects and user-specific settings, and also the deletion of fonts and images installed. Make sure that the projects and files you wish to save have been backed up before updating – see [3.14.2. Exporting Projects \(p. 31\)](#) via the printer (only projects are exported) or [4.2.4.4. Export project \(p. 71\)](#) via EBS Web User Interface (projects and images are exported).

Touch the  **Select update file** button. On the screen displayed choose an update file with the extension EBS in the list and touch the **Open** button.

4.2.7.2. LOG

In the  **Service** menu, which is on the menu bar, choose **Log**.

The **Log** window shows all the events (e.g. user logging in, opening and editing a project, starting printing, etc.) that took place both during printer operation, **Printer log** and when the processor was used, **Editor log**. When you switch from one option to the other touch the  **Reload log file** button in order to update the data displayed.

4.2.7.3. GENERATE SERVICE REPORT

In the  **Service** menu, which is on the menu bar, choose **Generate service report**.


This function enables you to generate an electronic report on the condition of the printer. Should a problem with the printer occur, the report shall be e-mailed to a distributor or a point where the printer can be serviced. This is a prerequisite for starting the service procedure. An analysis of report by specialist personnel facilitates identification of the problem that occurred during printer operation.

The service report can also be used for activating a new option if a problem with standard activation occurs. The information contained in the service report forms the basis for generation and transfer of a file that makes the activation of that new option possible – see [4.2.7.4. Install option \(p. 102\)](#).



When the **Report** window is displayed after the **Generate service report** command has been given, this means that the report is being generated.

When the report is generated, touch the **Click to download service report.** button in displayed window and then choose where the report file is to be saved on computer disc.


4.2.7.4. INSTALL OPTION

In the  **Service** menu, which is on the menu bar, choose **Install option**.

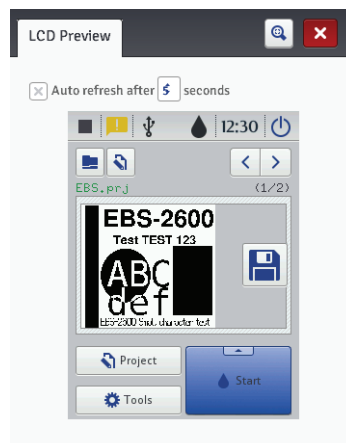
This function allows you to add various software options according to user requirements. Consult specialist personnel dealing with printer distribution and service about the possibility of adding dedicated software.

Choose a file that is on computer disc by touching the text field or the  **Browse** button in order to install an additional option. When the file is chosen, the text field box shows a path. Touch the  **Install package** button in order to add the selected option to printer software.

4.2.7.5. LCD PREVIEW


In the  **Service** menu, which is on the menu bar, choose **LCD Preview**.

Owing to the preview function you can use the processor to see what is displayed on the printer LCD and also to operate the printer with the mouse. The image is refreshed at a time interval to be chosen in the drop-down list when the **Auto refresh after** check box is ticked.




4.2.8. PRINTER CONTROL

See [5.2.2. Printing a Project via Web Browser \(p. 105\)](#).

The  **Printer control** menu is not available to Offline WUI, but you can manage operation of a selected printer via a printer network – see [Printers network \(p. 97\)](#).

4.2.9. INFO

4.2.9.1. ABOUT


In the  **Info** menu, which is on the menu bar, choose **About**.


In the window displayed you can view the manufacturer's contact details and the version of printer software.

For the user who operates the printer on a standard basis, it is important to have the information on the version of the system (System version). Owing to it you can check whether you have up-to-date software on the printer.

The other version numbers and also the serial number of the printer are necessary for service persons to perform diagnostic operations.

4.2.9.2. OPERATING STATISTICS

In the  **Info** menu, which is on the menu bar, choose **Operating statistics**.

In the window displayed you can view the data on the number of hours the printer has run (work time) and on the number of prints made, split by user report and service report (general statistics). The user report is generated for all users generally. If you wish to obtain a separate report for a given user, clear the statistics at the beginning of work. For that purpose tick the **User info report** check box and then touch the  **Clear statistics** button.

Additional statistics showing the number of prints made for each of the projects are available after the **Statistics** parameter has been set to **Enabled** – see [4.2.6.1. General settings \(p. 99\)](#).




The report is updated after printing has been disabled (see [5.2. Printing a Project \(p. 105\)](#)) and the statistics window has been closed and opened again.



4.2.10. MESSAGES

Important information about printer operation is signaled with the message window at the bottom of the *EBS Web User Interface* work screen.



The information is collected in four sheet tabs:

- All messages,
- Error messages ,
- Warning messages ,
- Info messages .

The messages are displayed one below the other. You can delete one message with the  button or all messages with the  button.

If there are no messages at any moment, the message window is pulled up.

5. PRINTING





Each time the printer is switched on, precede the target printout with a test printout in order to make sure that all printing parameters are set properly and the nozzles jet ink drops properly.


5.1. OPENING PROJECT FOR PRINTING

5.1.1. OPENING A PROJECT FOR PRINTING VIA PRINTER LCD

Open a project for printing with the  button (**G**) or choose a project with the  or  buttons to switch between projects within a given folder.

The project open for printing can be edited before printing. You can modify the following:

- The project contents – by touching the  edit button (**H**), and then the  **Project** button,
- Printing parameters (general) – by touching the  edit button (**H**), and then the  **Parameters** button.

When the editing is finished, touch the  button (**M**) if you wish to save the changes. If a change is not saved, the project can be printed with the changed contents or parameter setting only until the project is modified again or the printer is switched off.


If you modify a project open for printing or parameters of such a project via a Web Browser, the following message is displayed on the printer LCD:


Current project file has been modified. Do you want to reopen it?

If you wish to print an updated project, touch the  **Yes** button.

5.1.2. OPENING A PROJECT FOR PRINTING VIA WEB BROWSER








Open a project for printing with the **Open project for printing** button, which is in the printer control module of processor edit area (see [4.2.2. Work Screen of EBS Web User Interface \(p. 68\)](#)) or with the  **Open project for printing** button in the **Printer control** menu.

You can modify printing parameters before printing. For that purpose touch the  **Printing parameters** button. After you have finished editing, touch the **Save** button. If a modification is not saved, the project can be printed with the changed contents or parameter setting only until the project is modified again or the printer is switched off.

5.2. PRINTING A PROJECT

5.2.1. PRINTING A PROJECT VIA PRINTER LCD

Touch the  **Start** button (*P*) to initiate printing – the printing status changes to  (**Print on (waiting)**). Printing starts when the photodetector is activated – the printing status changes to  (**Print on (printing)**).

On touching the  **Stop** button (*P*) printing is disabled, and the printing status changes to  (**Print off (ready)**).

5.2.2. PRINTING A PROJECT VIA WEB BROWSER

Open a project for printing – see [5.1.2. Opening a Project for Printing via Web Browser \(p. 104\)](#).

The **Printer control** field in the **Printer status** window shows the information whether printing is initiated and the information on the printing process:

- **Print off (ready)** – the printer is ready,
- **Print on (waiting)** – the printer waits for a signal from the photodetector,
- **Print on (printing)** – the printer prints.

The **Current project** field shows the name of a project rolled-in for printing. The project last printed is stored by the printer and it is read-in automatically when the printer is restarted.



In addition, the information on ink (**Ink container status**, **Ink level** and **Ink colour**).

If the **Enable autostart** check box is ticked, the printer starts printing automatically the project that was previous printed immediately after it is has been switched on.

Touch the **Start printing** button in order to start printing – the printer status changes to **Print on (waiting)**. Printing starts when the photodetector is activated – the printer status changes to **Print on (printing)**.

When the **Stop printing** button is touched, printing is disabled, and the printer status changes to **Print off (ready)**.

Another project can be read-in for printing by touching the  **Open project for printing** button.

You can change printing parameters before you start printing. The printing parameter window is displayed with the  **Printing parameters** button. The parameters apply to the current printing, and they are not saved as the parameters for a given project. Use the  **Printing parameters** option in the project processor in order to save the parameters for a given project, and then save the changes for the project – see [4.2.4.6. Printing Parameters \(p. 75\)](#).

6. MAINTENANCE, STORAGE AND TRANSPORT

6.1. PERIODIC MAINTENANCE

Before commencing any maintenance, read the section entitled [1.2. Safety Rules \(p. 8\)](#).

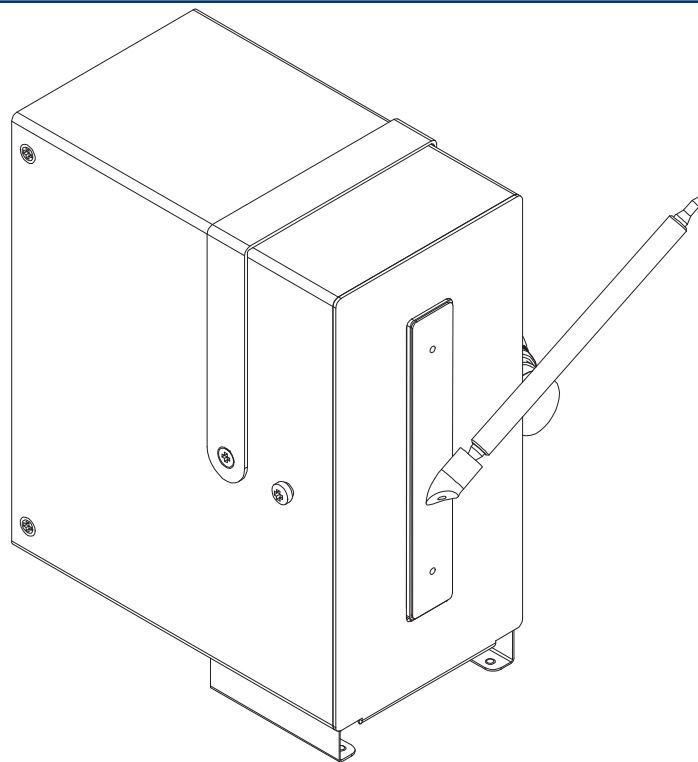
Printer maintenance by a user consists in the performance of, among other things, certain checking and service operations that are needed for keeping the printer fully operational during everyday operation. Some operations are performed every day, others – every certain number of printer run hours or after a certain amount of ink has been consumed.

Everyday operations:

- Check the level of the ink in the bottle. If the bottle is empty, replace it – see [3.6. Replacing an Ink Bottle \(p. 19\)](#).
- On finishing your work and shutting the printer down:
 - wipe the printhead face and the photodetector with a piece of cloth and printer wash-up to remove residual ink,
 - wipe nozzle plate [18](#) with a cleaner supplied by the manufacturer to remove residual ink.



The nozzle plate shall be cleaned with a cleaner kit supplied by the manufacturer only. If other materials are used for cleaning, the nozzle plate may become scratched or damaged. A foam cleaner shall be thrown away after use, the cleaner handle can be used many times.



Periodic operations:

- Check the face of printhead [18](#) for dirt (select the time for checking on a case-to-case basis, depending on the conditions in which the printer operates). Dirt on the printhead face may make ink jetting out of nozzles difficult or completely impossible.
- Check vent valve [5](#) and filter [24](#) for dirt (select the time for checking on a case-to-case basis, depending on the conditions in which the printer operates) – dirty air-inlet may cause air lock in the printhead, which in consequence leads to a printing failure. If air filter [24](#) gets dirty with ink, wash it with water and a small addition of soap. The clean filter [24](#) should have its strainer white. Before re-installing it, dry the filter with air. To re-install the filter, screw it to the limit into the hole in vent valve [5](#) (see [Fig. 1 \(p. 11\)](#)).
- Check for the level of the waste ink in bottle [11](#), where waste ink is drained to during purging; empty the bottle, if need be. Dispose of waste ink in compliance with the waste ink disposal standard. Avoid overfilling the waste-ink bottle, as otherwise the suction pump may get damaged.

6.2. VENTING THE PRINTHEAD

See [4.1.7.1. Purging \(p. 64\)](#).

6.3. STORING THE PRINTER

If the printer is not used for a longer time (over 3 months), ink may partly dry off in printer components. Therefore, secure the printer in the following way for storing:

1. Unscrew the ink bottle and screw cap **4** in place of the bottle, to ensure that the ink pot interior is airtight.
2. Start the purging function to empty the ink pot - see [4.1.7.1. Purging \(p. 64\)](#). Continue purging until the ink stops flowing out of the printhead.
3. Close valve **5** (marker **25** on valve **5** must be in the TRANSPORT position),
4. Wash the printhead face (nozzle plate **18**) with solvent.
5. Put and screw protection **8a** to nozzle plate **18**, to prevent the nozzles from getting dirty and ink drying up on them.
6. Secure the printer against dust, an impact of aggressive vapor and gases as well as an impact of weather events. The best solution is to put the printer into a polyethylen bag, remove the air from the bag, and close it tight, making sure that the printer is always in a horizontal position. Secure the printer against mechanical hazards.

6.4. TRANSPORTING THE PRINTER

The **EBS 2600** printer can only be transported when the following conditions are met:

- The printer is in a horizontal position,
 - The ink bottle is screwed out and ink-pot cap **4** is screwed in instead of it,
 - The printer is emptied of the ink (through purging it until the ink stops flowing out of the printhead - see [4.1.7.1. Purging \(p. 64\)](#)),
 - Valve **5** is closed (marker **25** on valve **5** must be in the TRANSPORT position),
 - The sealing protection **8a** is put onto the nozzle plate **18**.
1. Secure the printer in the same way as for storing - see [6.3. Storing the Printer \(p. 107\)](#).
 2. Wrap printing system components (the controller, printhead, printhead fasteners - holders) in corrugated cardboard or bubble wrap packaging
 3. Coil connecting cables around an about 20 cm diameter and secure the coil with packaging tape.
 4. Put all protected components into a cardboard box (it is advisable to use the original packaging) and secure them against movement. Close the box and secure against opening spontaneously. You can also use another packaging that will protect all components against mechanical damage.

The printer must not be subjected to shocks or vibration. Permissible hazards inside packaging are as follows: max 1g, max 2ms.


7. PROBLEMS WITH FUNCTIONING AND OPERATION OF THE PRINTER


7.1. THE PRINTER DOES NOT START

On switching on the main power switch, the printer does not start. The printer display does not show anything:

- Check whether the power cord is connected correctly or not.
- Check whether there is voltage in power outlet or not.

7.2. THE PRINTER DOES NOT PRINT IN SPITE OF THE START PRINTING COMMAND

The printer is started and the  **Start** button (*P*) is pressed but the printer does not print a selected project:

- Check whether there is any ink in the bottle or not.
- Check whether the photodetector detects moving objects or not (if the printing parameter **Printout repetition** is not set to ).
- Check whether the **Photocell source** parameter is set to **Internal** or **Both** or not – see [4.1.5. Printing Parameters \(p. 60\)](#).
- When an external photodetector is used:
 - Check whether the connection to the printer is correct or not (the cable connector must be properly inserted to socket **15**),
 - Check whether the **Photocell source** parameter is set to **External** or **Both** or not – see [4.1.5. Printing Parameters \(p. 60\)](#).
- When a shaft-encoder is used:
 - Check whether the connection to the printer is correct or not (the cable connector must be properly inserted to socket **16**),
 - Check whether the **Impulse generator source** parameter is set to **External source** or not – see [4.1.5. Printing Parameters \(p. 60\)](#),
 - Check whether the shaft-encoder axle can turn or not.

7.3. A PRINT IS CROOKED, WAVY OR JAGGED

A print is crooked, wavy or jagged.

TEST TEST

- The crooked print can be caused by vibration of the element to which the printer holder is fastened. Fasten the printer holder to a stable element that is not subjected to vibration or shocks.
- The crooked print can be caused by vibration of labeled articles while they move on the conveyor belt. Make sure that the articles move stably in front of the printer, they do not shake and are not subjected to shocks while they are labeled.

7.4. CERTAIN VERTICAL COLUMNS ARE MISSING IN A PRINT

In a print, some vertical columns are missing (this applies to the printers in which the printing of vertical columns is timed by an external shaft-encoder).

The reason for such a print defect consists in too high a printing speed when printing is timed by an external shaft-encoder (or more precisely: too high a frequency at which vertical columns are timed).

Reduce the setting of the **Encoder constant** parameter, which is available in the General settings – see [3.8. General Settings \(p. 22\)](#).

7.5. A PRINT IS DISTORTED

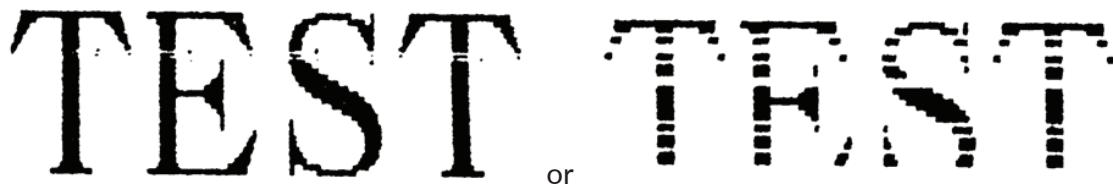
A print is distorted, as if blurred, slightly shifted.



When hit by a moving object, the printhead can become displaced. The reason for such displacement consists in too big a distance between an article to be labeled and the printhead. Push the printhead closer to the article movement plane, within a distance of from 2 to 4mm (measured from the slide).

7.6. SOME OF THE NOZZLES DO NOT JET INK

Some drops are missing on a print.



- Aim the nozzle outlet at a vessel, for example the one you use to wash the printer.
- Wash the nozzles with wash-up, if they are covered with dried ink.
- Start the purging function – see [4.1.7.1. Purging \(p. 64\)](#).
- When ink is jetted out of every nozzle regularly, stop purging.



Frequent and long-lasting use of the purge function increases ink consumption.

7.7. BOLDFACED OR BLURRED PRINTS

The print is heavily saturated with ink, ink drops blur and the entire print seems to spread over the object being labeled.

TEST

Reduce the setting of the **Dot size** parameter by modifying printing parameters – see [4.1.5. Printing Parameters \(p. 60\)](#).

7.8. QUESTIONS AND PROBLEMS

Should you have additional queries after reading this operating manual, you can:

- Browse the **EBS Ink Jet Systeme**, the printer manufacturer's web site,
- Try asking a question to the manufacturer's representative,
- Present the problem in the contact form available on the manufacturer's web site and forward the form following the instructions given therein.

8. TECHNICAL PARAMETERS

8.1. PHYSICAL PROPERTIES

Dimensions	Length: 420 mm (16.54") Width: 160 mm (6.30") Height: 210 mm (8.27")
Weight	4.8 kg (10.6 lbs) – together with a 0.5l ink bottle

8.2. TECHNICAL DATA

Number of nozzles	510
Distance between nozzles	141.1µm (about 1/180 of an inch)
Resolution in vertical direction	180dpi (dots/inch)
Print height	71.8mm (2.827 inch)
Working position in 3D space	Horizontal
Maximum distance of article to be labeled to the slide surface	4mm
Number of projects (stored in the printer's memory at the same time)	Constrained by internal memory of the printer
Maximum number of characters per project	Constrained by internal memory of the printer
Printing of graphics (logo, special graphic characters)	Texts and graphic symbols can be edited and printed with the application of True Type fonts and also by means of UTF-8 characters, as standard
Special characters	Diacritical characters, graphic characters for information, warning, transport, etc.

Variable fields (texts whose contents vary dynamically according to occurrence of a specific event)	Date and time in any format, expiration date, incremental or decremental counters, cascade counters, barcodes
Printer control, project and printing parameters processing	<ul style="list-style-type: none"> - on the printer LCD, - via Mozilla Firefox® Web Browser (EBS Web User Interface – online and offline).
Timing	Internal generator or rotation-to-impulse converter – a so called shaft-encoder (for conveyor belts with variable travel speed)

8.3. POWER SUPPLY

Power supply (integrated power pack)	IN: 100-240V~, 50-60Hz
Current consumption	<0.5A

8.4. WORKING CONDITIONS

Operating temperature range	From +5 °C to +40 °C
Humidity	Up to 80% without steam condensation - at temperatures higher than the dew point (the printer can be operated when it rains provided that the surface to be labeled is dry).
Mechanical hazards	Vibration max. 1g, max. 10Hz, Shocks max.1g, max. 2ms.

8.5. PARAMETERS OF THE INK MONITORING SYSTEM (IMS)

IMS frequency	13.56 MHz
Electric field strength, at a distance of 10m from IMS	-58.6 dBμA/m



The **EBS 2600** printer is a class 1 device, as defined in Directive 2014/53/EU Article 8.2.

8.6. CONSUMABLES

Ink	Black ink, based on oil and other substances
Ink bottle capacity	0.5 liter
Ink consumption	Up to 0.5 million prints – 500x500 dots in size, 10% filling factor to 0.5 liter of ink

9. PRINTER ACCESSORIES



Some elements may not be part of a typical delivery or other elements which are not specified below may be included, depending on your order.

- Printer (controller and printhead) 1 unit
- Power supply cable 1 unit
- Printhead slide 1 unit
- Printer stand, complete..... 1 unit
- Ethernet Crossover cable – RJ45 1 unit
- Starter bottle of ink..... 1 unit
- Waste-ink bottle 1 unit

Optional components:

- USB – RS232 Adapter,
- Photodetector - external optical sensor,
- Shaft-encoder – external, conveyor-belt speed sensor,
- Beacon, an alarm signaler,
- ALARM/STOP module.

Made by:



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