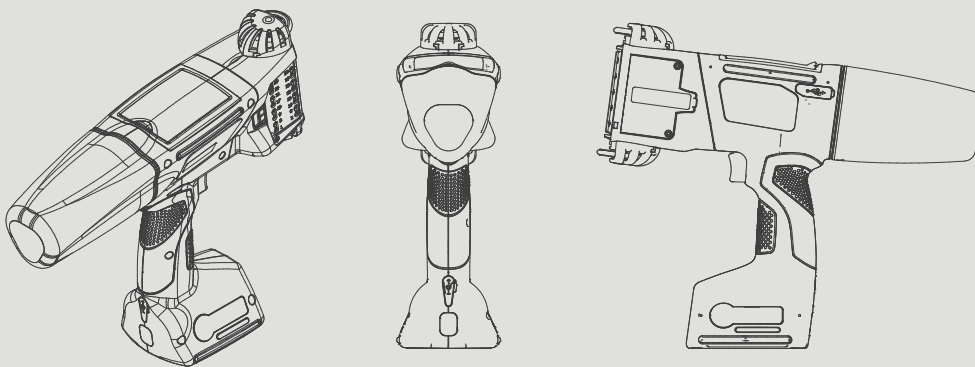


Handjet[®]

EBS-260A USER MANUAL

DROP-ON-DEMAND Handheld, Portable, Cordless Printers
Original Instructions



Part 1 of 2



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CHAPTER 1

GENERAL INFORMATION

Dear User,

Before using the **Handjet® EBS-260A** printer, please read carefully the documents attached to the printer, especially the Safety Manual and the material safety data sheets (MSDSs) of consumables in use.



The document, entitled **Safety and Important Information** (signature G2023/08/13_2EN) is an integral part of this User's Manual. The above-mentioned documents constitute a set of user documentation.



This User Manual should be easily accessible and ready to use whenever the need to do so arises.

This version of the document includes most of the modifications implemented to the EBS printers (manufactured by **EBS Ink Jet Systeme GmbH**) up to software version **1.04.06**, and the descriptions contained herein correspond to the printers on which this software version is installed.

The scope of delivery depends on the order, therefore it may happen that the actual equipment and functions of your printing system differ slightly from some descriptions or illustrations. As we need to keep pace with continual technical advancement and our customers' individual requirements we have to reserve the right to introduce changes in the design, version and technical solutions. Therefore, no data, illustrations and descriptions contained in this User Manual shall make grounds for any claims. Should your printer be provided with the details of the equipment or software that are not illustrated or described in this User Manual or should you have additional queries after having read this Manual, please contact an authorized representative of **EBS Ink Jet Systeme GmbH** for more information.

The manufacturer shall not be liable for any damage caused to the printer by improper handling or operation, that is the failure to follow this User Manual, and by the consequences of editorial or publishing errors in the Manual.

The application and use of products are beyond our control and thus you apply and use the products exclusively on your own responsibility.

Original Instructions.

The User Manual in the English language is the original instructions. In case of disputes, this language version shall prevail. The instructions in other languages are translation of the original instructions.

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1. GENERAL 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, tip, piece of information on safety. It is advisable to strictly follow the tips.



A list of tools, accessories and spare parts necessary for carrying out a given maintenance or service procedure.





Additional information on a given subject in the form of a multimedia file. Redirection to the site where more details are available and whose address is given with the QR code.

This User Manual applies to the **Handjet®** EBS-260A printer.

Regardless of the language version of the Manual, examples of printer screen dumps are presented in English.

Additional characteristics (bold face, italics, changed color) are applied to the document to highlight such items as:

- the printer name, access level or any other important information (e.g. **Handjet®** EBS-260A),
- a part number in drawings (e.g. **3**),
- a message available in the printer interface (e.g. a **message**),
- a reference to another section or drawing (e.g. see "**1.2. Application**"),
-  - to press an icon or a function key,
-  - to wait before a successive operation can be carried out.

1.1. TRADEMARKS

Windows® is a registered trademark of Microsoft Corporation.

Bluetooth® is a registered trademark of Bluetooth SIG, Inc.

Wi-Fi® is a registered trademark of Wi-Fi Alliance.

Other product names or marks referred to in this document can be the trademarks or registered trademarks of other firms and are the property of their owners.

1.2. APPLICATION

The **Handjet**[®] EBS-260A printers make firm and clear prints on:

- paper and cardboard,
- plastics,
- fabric,
- leather and leatherette,
- wood and wood-like products,
- glass and ceramic products,
- metal surfaces of any type.

The **Handjet**[®] EBS-260A printers print with inks that are based on ethanol, acetone, methyl ethyl ketone (MEK) and water.



*For detailed information about inks available for the **Handjet**[®] EBS-260A printers contact an authorized representative of EBS Ink Jet Systeme GmbH.*

CHAPTER 2

DESCRIPTION

2. DESCRIPTION

2.1. OVERVIEW

The **Handjet®** EBS-260A printer is an industrial ink-jet Drop-on-Demand (DOD) printer intended for manual, contactless labeling of objects (see [Fig. 2 on page 14](#)).

Fig. 1 shows how to make prints with a DOD printer:

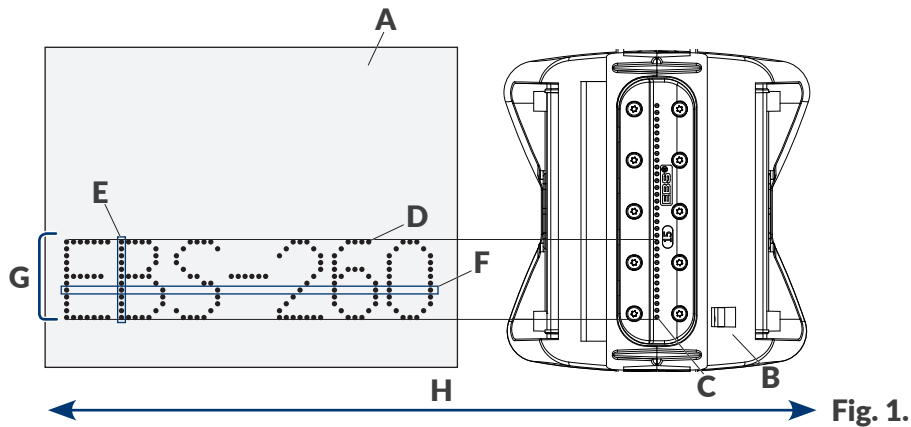


Fig. 1.

- A** Object to be labeled.
- B** Printhead.
- C** Nozzle.
- D** Print dot.
- E** Vertical row (column) of print.
- F** Horizontal row of print.
- G** Line of text.
- H** Direction in which the printer moves across an object to be labeled.

The printhead is equipped with **32 nozzles** which generate drops.
A maximum print height is about **58 mm (2.28 inch)**.

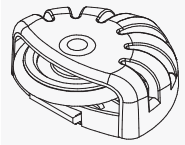
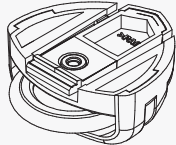
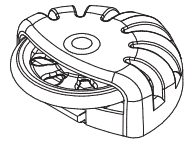
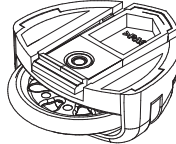
2.2. BASIC EQUIPMENT



Certain pieces of the equipment may not be included in a typical set-up or other pieces that are not listed below can be included, depending on your order.

The basic equipment of the **Handjet®** EBS-260A printer comprises:

Component part	Quantity
1 Printer	1
2 Power pack 24 V / 1.25 A	1
3 Disconnectable power cord, its version depends on the country the printer is destined for.	1
4 Guide rolls, standard (set)	1
5 Guide rolls, large (set)	1
6 Ink container.	1
7 Sprayer with cleaner.	1
8 USB memory device containing user documentation in electronic format.	1
9 Safety manual in paper version.	1
10 Carrying case.	1

Rolls	Upper roll (Part No.)	Lower roll (Part No.)
Guide rolls, standard (set, Part No. P920055) General-application rolls.	 P512364	 P512365
Guide rolls, large (set, Part No. P920050) Rolls intended for labeling soft, bending surfaces.	 P512068	 P512069

2.3. PRINTER STRUCTURE

This printer is designed to be user-friendly and to provide the user with easy access to the parts that are needed for daily use and routine maintenance. The other parts, to which access is necessary for carrying out maintenance operations, are protected and are accessible only by **instructed** or **skilled persons**.

2.3.1. LEFT SIDE AND FRONT VIEWS

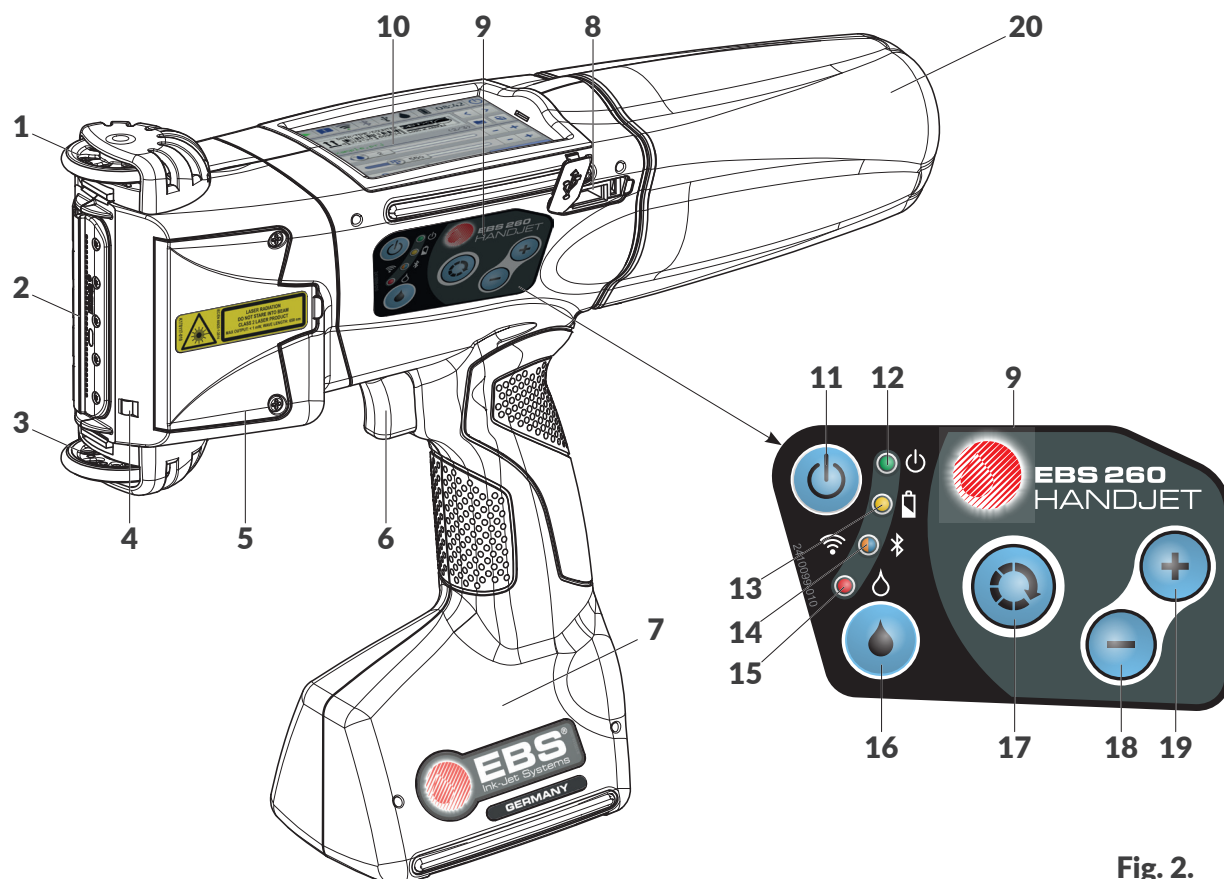








Fig. 2.

- | | | |
|----|---|---|
| 1 | Upper guide roll. | |
| 2 | Nozzle plate - front part of the printer. | |
| 3 | Lower guide roll, to synchronize printing. | |
| 4 | Laser pointer that shows the position of the lowest nozzle during printing. | |
| 5 | Cover plate, to protect printing unit adjustment screws. | |
| 6 | Trigger. | |
| 7 | Printer base with batteries pack. | |
| 8 | USB connector; secured with blanking plate. |  |
| 9 | Keypad. | |
| 10 | LCD control panel - 3.5" / 88.9 mm LCD display. | |
| 11 | Printer ON / OFF button. |  |
| 12 | Printer state LED. |  |
| 13 | Batteries state LED. |  |
| 14 | Radio communication LED. |  |

15	Printing status LED.	
16	Printing start/pause button.	
17	Function button.	
18	„+” button.	
19	„-” button.	
20	Ink container.	

2.3.2. RIGHT SIDE AND BACK VIEWS

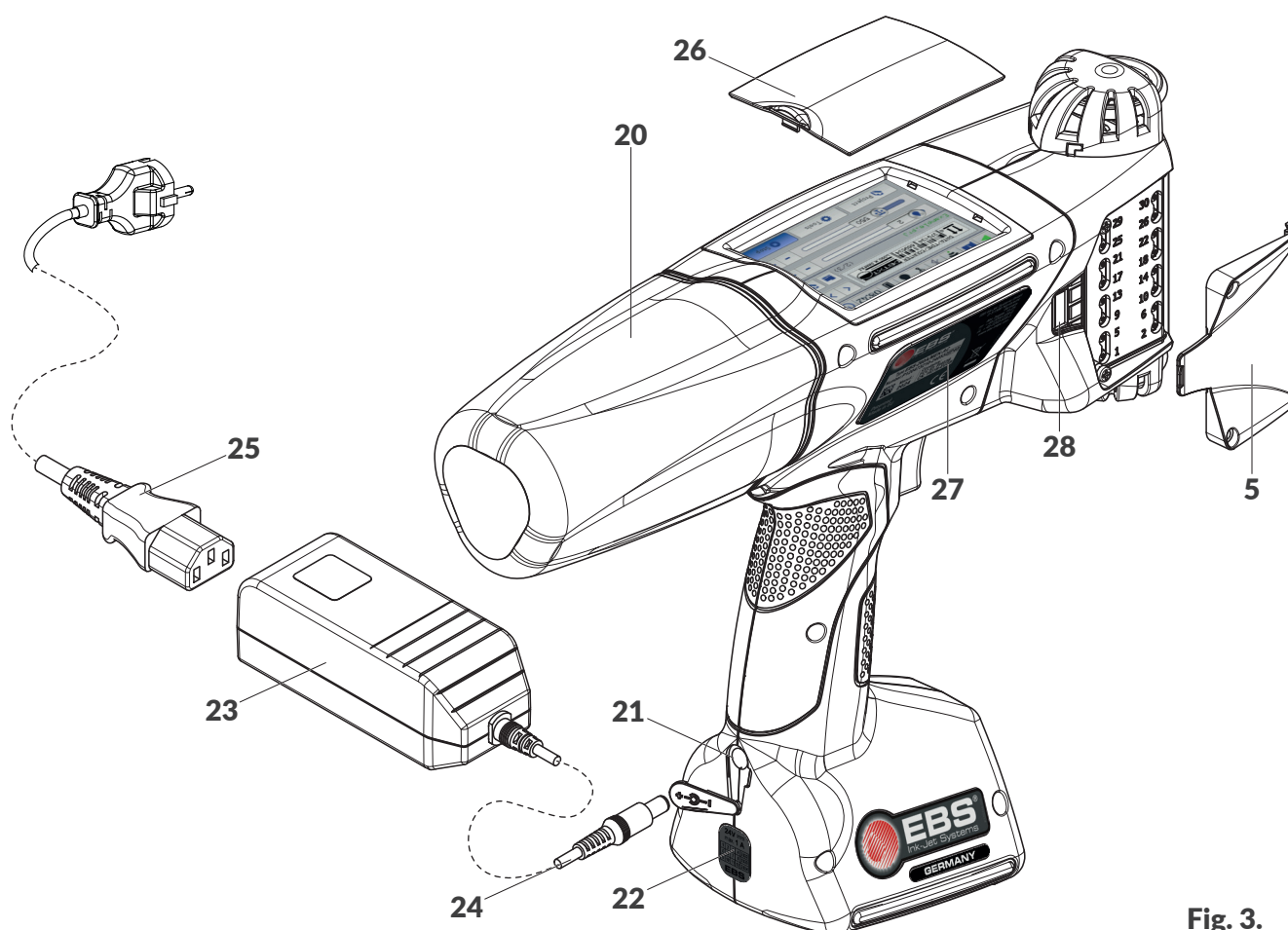



Fig. 3.

5	Cover plate, to protect printing unit adjustment screws.	
20	Ink container.	
21	Charging connector, secured with cap.	
22	Guarantee seal.	
23	Power pack, to charge printer batteries.	
24	Power pack jack plug.	
25	Disconnectable power cord with plug*.	
26	LCD screen.	
27	Nameplate.	
28	External travel sensor (encoder of printing stabilizers) connector.	



* Depending on a given country, power plug may differ from that shown in Fig. 3.

2.3.3. EXTERNAL CONNECTIONS

USB connector

An appropriate **USB** memory device connected to the **USB** port (8; see [Fig. 2 on page 14](#)) can be used to:

- Import / export data to / from the printer,
- Update the printer software.



For more information see [“7.9. Exchanging Data via a USB Port”](#).

The current efficiency of the **USB** connector is **500 mA**. The printer may not recognize a **USB** memory device whose power consumption is higher.

A **USB** memory device connected to the **USB** port will be recognized by the printer if the memory is formatted with the **FAT** or **FAT32** file system.

External travel sensor (encoder of printing stabilizers) connector

Printing stabilizers that require removal of the lower guide roll, which synchronizes printing, are connected to the connector.

The connector (28; see [Fig. 3 on page 15](#)) is accessible from the right or left side of the printer after removing cover plate 5 that protect printing unit adjustment screws.



For more details about printing stabilizers see [“2.4.1. Optional Equipment of the Handjet® EBS-260A Printer”](#).

Wireless Interfaces

The **Handjet®** EBS-260A printer is provided with wireless communication interfaces:

- **WIFI.**


The **WIFI** interface is used for linking the printer into a user network wirelessly. Owing to it, you can use the functions that are available on the printer's LCD remotely via

EBS Web User Interface. **WIFI** can also be used for transferring wirelessly the data that can be printed via a **Communications port**-type object .



For a description of how to set up the **WIFI** interface see [“7.6.1. Configuring the WIFI Interface”](#)

- **Bluetooth®.**

The **Bluetooth®** interface is used for connecting external devices to the printer wirelessly. It can also be used for transferring wirelessly the data that can be printed via a **Communications port**-type object .



For a description on how to set up **Bluetooth®** see [“7.6.2. Configuring the Bluetooth® Interface”](#).

2.3.4. ELECTRICAL CONNECTIONS

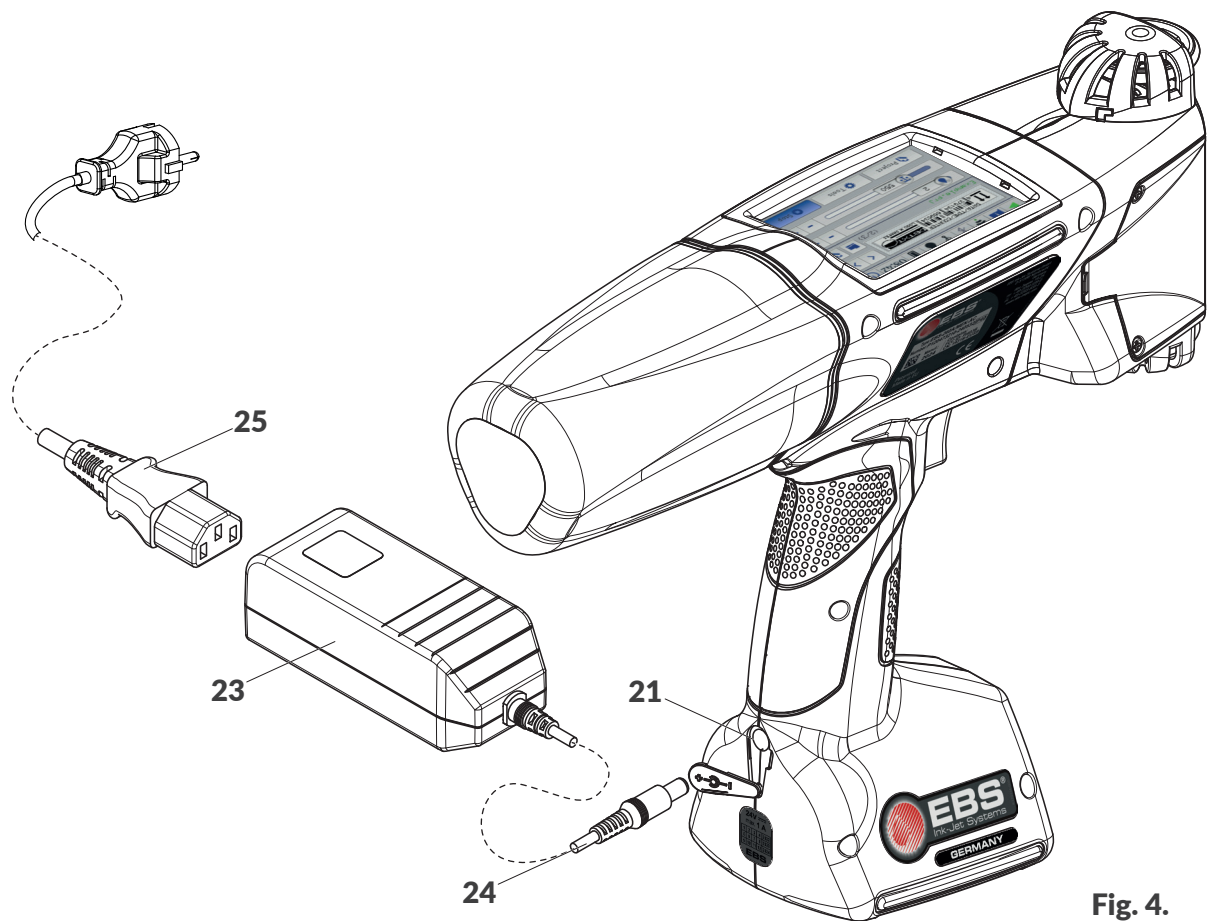


Fig. 4.

Cable / Component

- 21 Charging connector, secured with cap.
- 23 Power pack, to charge printer batteries.
- 24 Power pack jack plug.
- 25 Disconnectable power cord with plug*.



* Depending on a given country, power plug may differ from that shown in [Fig. 3 on page 15](#).

2.3.5. CONNECTING AN INK / CLEANER CONTAINER

Use the dedicated connection to connect an ink / cleaner container **20** to the printer. The construction of the connection ensures easy container replacement. The Ink Monitoring System (IMS), which is part of the connection, prevents a container of unsuitable ink / cleaner or of ink / cleaner whose expiration date has passed from getting connected.

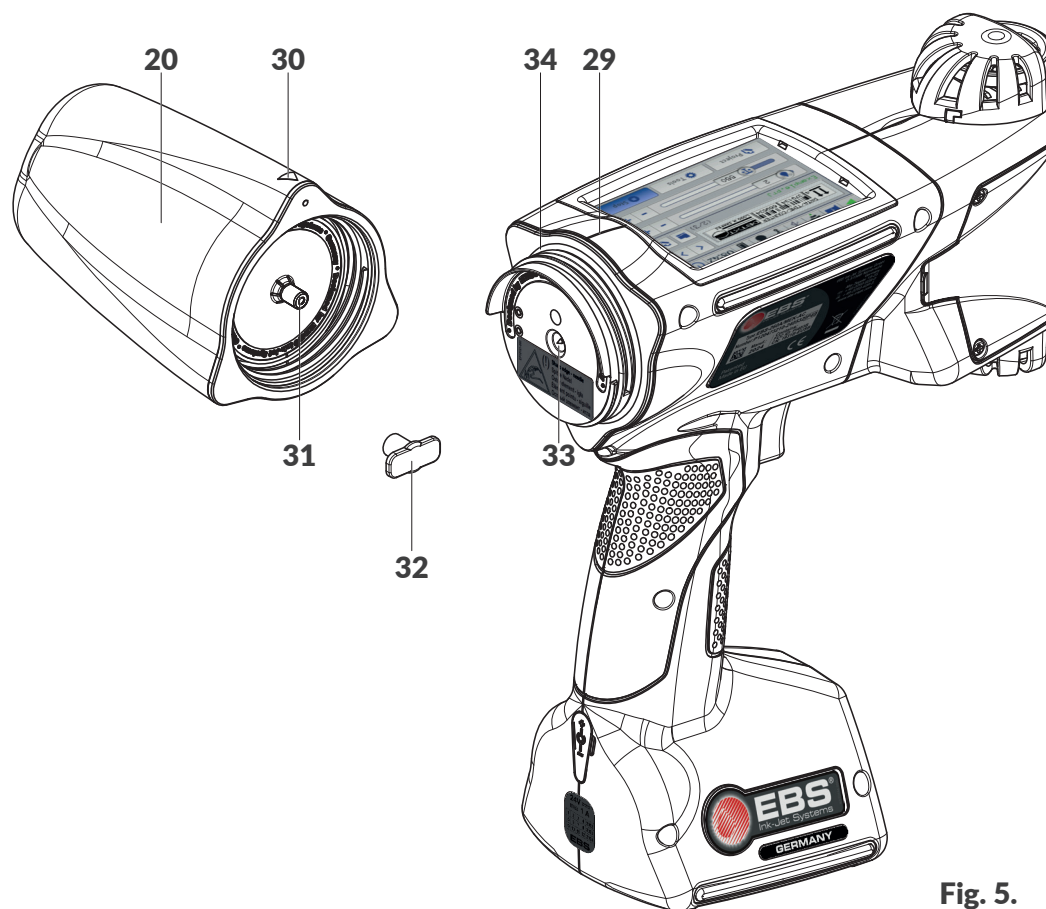


Fig. 5.

- 20** Ink / cleaner container.
- 29** Printer middle line.
- 30** OPEN-CLOSED indicator for container.
- 31** Container valve.
- 32** Transportation plug for container.
- 33** Ink system needle.
- 34** Connection gasket.

There is a connection needle among the connection elements. The connection is provided with a warning sticker as the risk of skin cutting exists.



CAUTION: Sharp Elements!

While replacing the container be careful not to get wounded with the needle **33**, which is part of the connection. **Do not touch the needle!** Avoid manipulations near the needle.



2.3.6. CONSUMABLES

2.3.6.1. INK / CLEANER CONTAINER.

The **Handjet®** EBS-260A printers are fed with the ink / cleaner container **20** (see **Fig. 6**) whose capacity is **0.2 liter**.

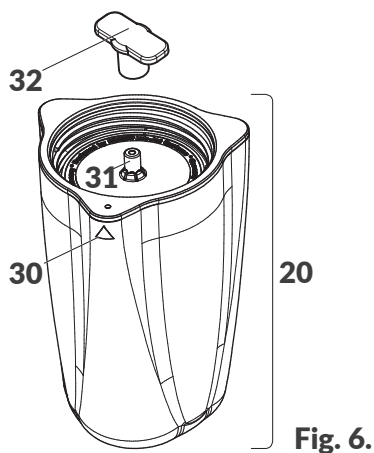


Fig. 6.

- | | |
|-----------|--------------------------------------|
| 20 | Ink / cleaner container. |
| 30 | OPEN-CLOSED indicator for container. |
| 31 | Container valve. |
| 32 | Transportation plug for container. |

Every container is provided with a valve that is secured with a transportation plug **32**. The plug must be removed before the container is installed in the printer.

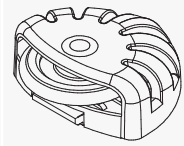
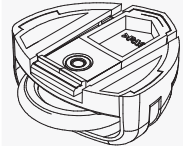
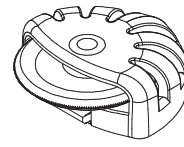
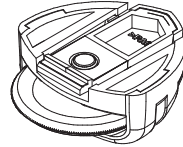
Weight of a 0.2 l ink / cleaner container: **about 0.27 kg (0.6 lbs)**.

2.4. ADDITIONAL INFORMATION

2.4.1. OPTIONAL EQUIPMENT OF THE Handjet® EBS-260A PRINTER

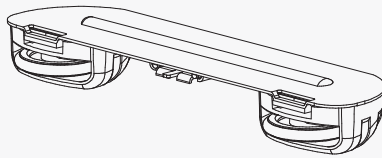
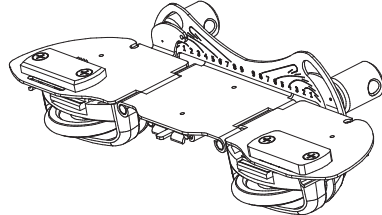
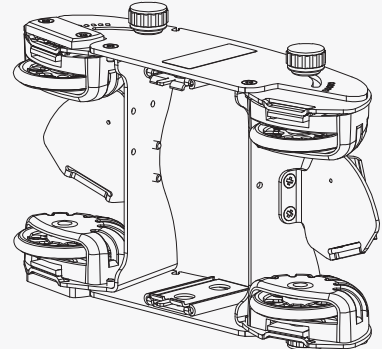


For detailed information on optional equipment contact an authorized representative of EBS Ink Jet Systeme GmbH.

Optional rolls	Upper roll (Part No.)	Lower roll (Part No.)
<p>Guide rolls, small (set, Part No. P920049)</p> <p>The rolls are intended for labeling flat, even surfaces.</p>	 <p>P512006</p>	 <p>P512007</p>
<p>Guide rolls, metal (set, Part No. P920051)</p> <p>The rolls are intended for labeling hard, rough, abrasive surfaces.</p>	 <p>P512070</p>	 <p>P512071</p>

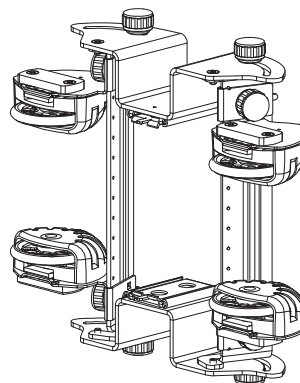


For more details on how to install rolls see [“2.4.2.1. Replacing Guide Rolls”](#).

Stabilizers	Part No.
<p>Rectilinear printing stabilizer</p> <p>It supports printing on flat surfaces along a straight line.</p>	 <p>P512130</p>
<p>Arc printing stabilizer*</p> <p>It supports printing on flat surfaces along an arc.</p>	 <p>P512163</p>
<p>Cylindrical printing stabilizer I*</p> <p>It supports axial and radial printing on cylindrical surfaces.</p>	 <p>P512151</p>

Cylindrical printing stabilizer II*

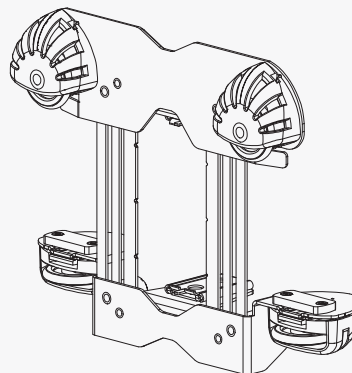
It supports axial and radial printing on cylindrical surfaces.



P513085

Edge printing stabilizer*

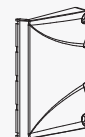
It supports printing along an edge.



P512977

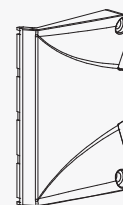


* The installation of the stabilizer involves the replacement of the cover plate that protect printing unit adjustment screws.
For more details on how to install a stabilizer see [“2.4.2. Installing Accessories”](#).



Cover plate with cutout to protect printing unit adjustment screw

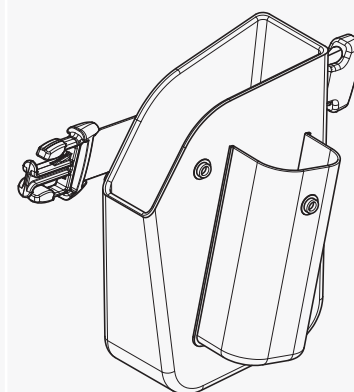
The cover plate enables you to connect the plug of the external travel sensor (encoder of the printing stabilizer) to the printer.



P581312

Holster with hip belt

The holster is designed to keep and carry the printer during operation.



2.4.2. INSTALLING ACCESSORIES

2.4.2.1. REPLACING GUIDE ROLLS



Tools required:

- standard guide rolls (Part No. **P920055**) or
- large guide rolls (Part No. **P920050**) or
- small guide rolls (an accessory; Part No. **P920049**) or
- metal guide rolls (an accessory; Part No. **P920051**).

To replace guide rolls:



For more details on how to install rolls and use them in practice see the training video whose address is available in the QR code.



1. Press the catch **35** on the upper roll toward the roll wheel and remove the roll from the printer body guide toward the nozzle plate. Remove the lower roll **3** in a similar way.
2. Put a new roll without a magnet onto the upper guide.
3. Put a new roll, which has a magnet **36** built into it near the catch, onto the lower guide.

The replacement of the rolls is complete.

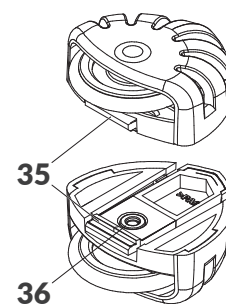


Fig. 7.

2.4.2.2. INSTALLING A RECTILINEAR PRINTING STABILIZER



Tools required:

- a rectilinear printing stabilizer (an accessory; Part No. **P512130**).

To install a rectilinear printing stabilizer:



For more details on how to install a stabilizer and use it in practice see the training video whose address is available in the QR code.



1. Press the catch **35** on the upper roll (see [Fig. 7](#)) toward the roll wheel and remove the roll from the printer body guide toward the nozzle plate. Leave the lower roll **3** in place.
2. Put the rectilinear printing stabilizer onto the upper guide.

The installation of the stabilizer is complete.

2.4.2.3. INSTALLING AN ARC PRINTING STABILIZER



Tools required:

- an arc printing stabilizer (an accessory; Part No. **P512163**),
- a #PH1 cross head screwdriver,
- a cover plate with cutout, that protect printing unit adjustment screws (an accessory; Part No. **P581312**).

To install an arc printing stabilizer:



For more details on how to install a stabilizer and use it in practice see the training video whose address is available in the QR code.



1. Press the catch **35** on the upper roll (see **Fig. 7 on page 22**) toward the roll wheel and remove the roll from the printer body guide toward the nozzle plate.
2. Use the cross head screwdriver to unscrew two screws that fasten the adjustment screws cover plate **5** situated on the right or left side of the printer.
3. Remove the cover plate.
4. Screw a cover plate with cutout using the previously removed screws.
5. Put the arc printing stabilizer onto the upper body guide.
6. Plug the stabilizer travel sensor (encoder) into socket **28**.
7. Press the catch on the lower roll toward the roll wheel and remove the roll from the printer body guide toward the nozzle plate.
8. Put the roll that you have earlier removed from the upper guide (the roll without the magnet) onto the lower guide.

The installation of the stabilizer is complete.

2.4.2.4. INSTALLING CYLINDRICAL AND EDGE PRINTING STABILIZERS



Tools required:

- a cylindrical printing stabilizer I (an accessory; Part No. **P512151**) or
- a cylindrical printing stabilizer II (an accessory; Part No. **P513085**) or
- an edge printing stabilizer (an accessory; Part No. **P512977**),
- a #PH1 cross head screwdriver,
- a cover plate with cutout, that protect printing unit adjustment screws (an accessory; Part No. **P581312**),

To install a printing stabilizer:



P513085

For more details on how to install a stabilizer and use it in practice see the training video whose address is available in the QR code.



P512977

1. Press the catch **35** on the upper roll (see **Fig. 7 on page 22**) toward the roll wheel and remove the roll from the printer body guide toward the nozzle plate. Remove the lower roll **3** in a similar way.
2. Use the cross head screwdriver to unscrew two screws that fasten the adjustment screws cover plate **5** situated on the right or left side of the printer.
3. Remove the cover plate.
4. Screw a cover plate with cutout using the previously removed screws.
5. Put the printing stabilizer onto the upper and lower printer body guides.



The cylindrical printing stabilizers I (an accessory; Part No. **P512151**) and II (an accessory; Part No. **P513085**) are symmetrical and can be installed in any direction.

6. Plug the stabilizer travel sensor (encoder) into socket **28**.
The installation of the stabilizer is complete.


2.5. STARTING THE PRINTER UP FOR THE FIRST TIME

The **Handjet®** EBS-260A printer is delivered in ready to be used condition.

Before you make a target print, make a few test prints.

2.5.1. TEST PRINTS

To make the first print:

1. Create / import a text project; it is advisable to create a very simple project which contains e.g. one **Normal text**-type text object .



*For more details on how to create projects see "5.4. Creating a Project".
For more details about importing projects see "7.9.1. Exporting / Importing Projects".*

2. Open a project you have created / imported in order to print it.



For more details see "4.3.1. Opening a Project for Printing".

3. Start printing.



For more details see "4.3.2. Starting Printing".

4. Put a sheet of paper to the face of the printer, making sure that the rolls touch the surface to be labeled, then press the trigger and move the printer to make a print.
5. Assess print quality. If the quality is unsatisfactory, carry out the purging / venting procedure for the printhead.



For more details see "8.2. Purging / Venting the Printhead".

2.6. USER TRAINING

Many operations described in this Manual can be carried out by **instructed persons** only. Therefore, a local representative of **EBS Ink Jet Systeme GmbH** is obliged to deliver relevant training. Such training shall include at least the following topics:

- Safety requirements, potential risks,
- Operating the printer,
- Replacing consumables,
- Basis of printer configuration,
- Basic maintenance, diagnostic and service operations,
- Transporting and storing the printer.

CHAPTER 3

USER INTERFACE

3. USER INTERFACE

The user interface enables the user to operate the printer easily and intuitively. This applies to both project management (editing, setting project parameters, starting / pausing printing) and printer maintenance and servicing.

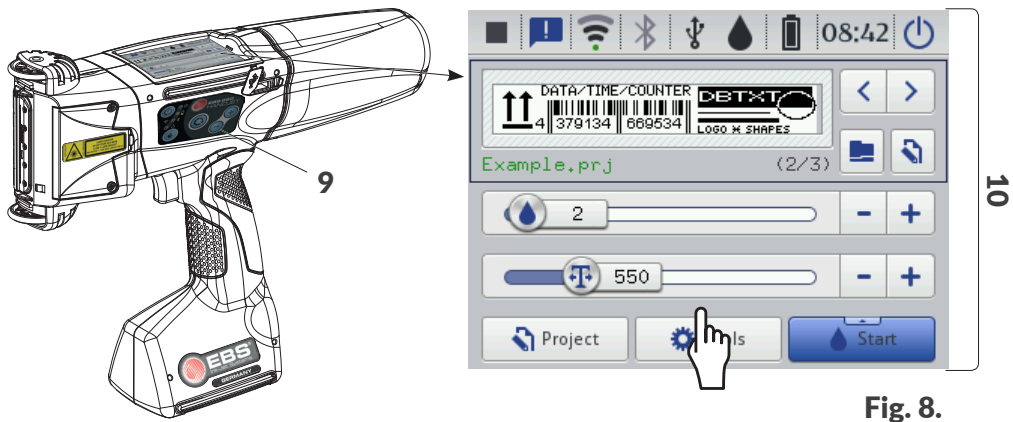


Fig. 8.

- 9 Printer keyboard.
- 10 Graphic LCD display with touch panel.

3.1. FUNCTION BUTTONS AND LED INDICATORS



Fig. 9.

Button	Function
	Start / Shut down the printer.
	Start / pause printing.
	<ul style="list-style-type: none"> - Switch between the project window B (see Fig. 10 on page 29) and basic printing parameter windows C on the main screen. The active window is framed in black. - Lock the LCD screen (by holding the button for a long time).

Button	Function
--------	----------



- Select the next project to be printed, within a single folder in the project window **B** (see [Fig. 10 on page 29](#)).
- Increase the values of the basic printing parameters **C** by 1 on the main screen.







- Select the previous project to be printed, within a single folder in the project window **B** (see [Fig. 10 on page 29](#)).
- Decrease the values of the basic printing parameters **C** by 1 on the main screen.

LED	Function	LED State	Meaning
	Printer status.		Off. Printer off.
			Solid green. Printer on.
			Blinking green. Printer initialization.
	Charging / Level of charge.		Off. Batteries charged (during operation).
			Solid yellow. Batteries fully charged (while charging).
			Blinking yellow (while charging). <ul style="list-style-type: none"> - 4x per second - batteries charged below 5%, - 2x per second - level of charge $\geq 5\%$, - every second - level of charge $\geq 75\%$.
	WIFI communications status.		Off. WIFI not connected.
			Solid orange. WIFI connected.
			Blinking orange. Establishing WIFI connection.
	Bluetooth® communications status.		Off. Bluetooth® not connected.
			Solid blue. Active connection of Bluetooth® with external device.
			Blinking blue. Establishing Bluetooth® connection.
	Start / pause printing.		Off. Printing paused.
			Solid red. Printing enabled.

3.2. MAIN SCREEN

The main screen on the LCD display is used for:

- Monitoring printer state,
- Starting / pausing / monitoring printing,
- Signaling warnings and errors,
- Displaying basic information such as the current time,
- Previewing the project that is open to be printed / being printed,
- Moving to the printer menu,
- Getting additional information or carrying out functions via icons.

Sounds may be generated while the touchscreen is being used. The sounds can be enabled / disabled by pressing     **Touchscreen audio feedback.**



The screen can be additionally configured (e.g. brightness can be modified) by pressing



Be careful not to touch the edge of the housing while pressing buttons on the LCD display – not to interfere with touch sensing.



Fig. 10.

- A Status bar.
- B Project window.
- C Basic printing parameters of project.
- D Menu bar.

3.2.1. STATUS BAR



Fig. 11.

Status bar **A** is displayed at the top of the screen.

Items available on status bar **A**

Item	Meaning
	<p>Printing status:</p> <ul style="list-style-type: none"> - printing is OFF, - printing is ON (waiting for trigger to be pressed as the source of the trigger signal), - printing is ON (making a print on an object).
	<p>Messages:</p> <ul style="list-style-type: none"> - informative, - warning, - error, no icon - all messages have been read.
	<p>WiFi status:</p> <ul style="list-style-type: none"> - connection with WiFi network (the number of black arcs shows signal strength), - WiFi unavailable, - WiFi status unknown or error, - connecting network.
	<p>Bluetooth® status:</p> <ul style="list-style-type: none"> - Bluetooth® active, - active Bluetooth® connection with external device, - Bluetooth® inactive, - Bluetooth® module error or fault.
	<p>Status of connection of memory device to USB port in the printer: no icon - no memory device connected to USB port, - <u>appropriate</u> memory device connected to <u>USB</u> port.</p> <p>Carry out USB memory operations: import files , export files , upgrade the printer software .</p> <div style="text-align: center;"> </div>



Items available on status bar A



Item	Meaning
------	---------


Estimated* ink level in container [%]:

					
0	1 to 9	10 to 30	31 to 60	61 to 80	81 to 100



The  and  icons are displayed alternately if there is:

- No container,
- An ink problem, e.g. the expiration date of the ink has passed. The information about the problem is displayed when the container icon  is pressed, and it is also shown in text form when the message icon  is pressed.
- No communication with the container controller – in that case restart the printer, and when the problem remains, contact a serviceman.

The  icon in the status bar means that the printer is in service mode (it can print over a period of **50 hours**).









* The real level of the ink in a container may differ from the indicated one. The real ink level is affected by actual ink consumption which varies depending on, among other things, the weather conditions of the environment where the printer operates or print parameters, e.g. **Dot size** or **Pressure**.


Batteries charge indicator [%]:

					
0 to 4	5 to 24	25 to 49	50 to 74	75 to 100	



While the batteries are being charged, the battery icon with a lightning bolt symbol (, , ,  or ) is displayed.





When the batteries are fully charged, the  icon is displayed.

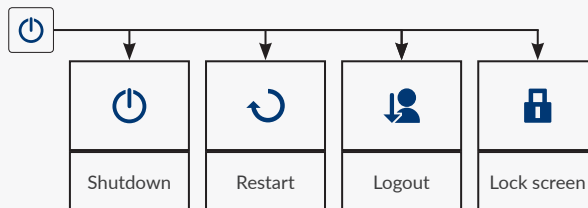
The  icon in the status bar indicates that there is no communication with the batteries controller or the batteries are damaged - in that case restart the printer, and when the problem remains, contact a serviceman.

00:00

Current Time.

Set the current date and time.

Shut down  / restart  the printer; log the user out , lock the screen .



3.2.2. PROJECT WINDOW



Fig. 12.

Items available in the project window B

Item	Meaning
	Open a project to be printed.
	Edit the project and edit parameters of the project that is open to be printed.
	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> Project </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-left: 10px;"> Parameters </div> </div>
Example.prj	Name of the project that is open to be printed. <i>If the name of a project is displayed in green, the project is ready to be printed.</i>
	Select the previous / next project to print within a folder.
(2/3)	Project number within the folder / project count within the folder.
	Preview of the project that is open to be printed.
	Save modified parameters of the project. <i>If a modification is not saved, you can print the project with the modified parameter as long as the project is not modified or the printer is not shut down.</i>

3.2.3. BASIC PRINTING PARAMETERS

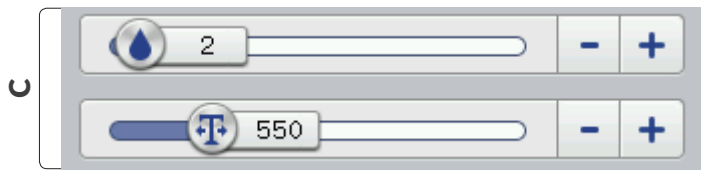


Fig. 13.

Items available in basic printing parameters window C

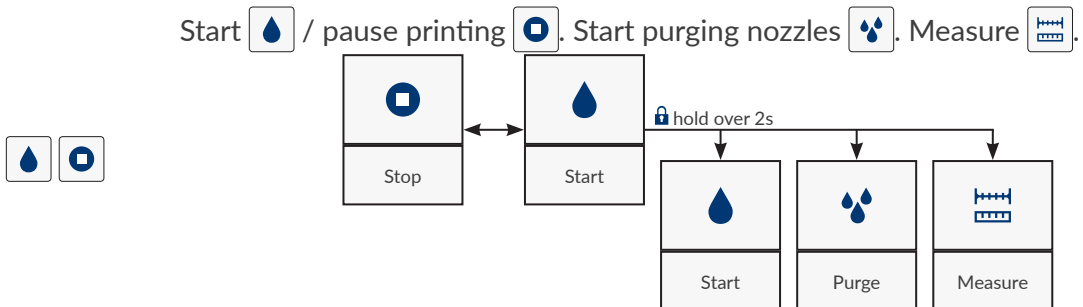
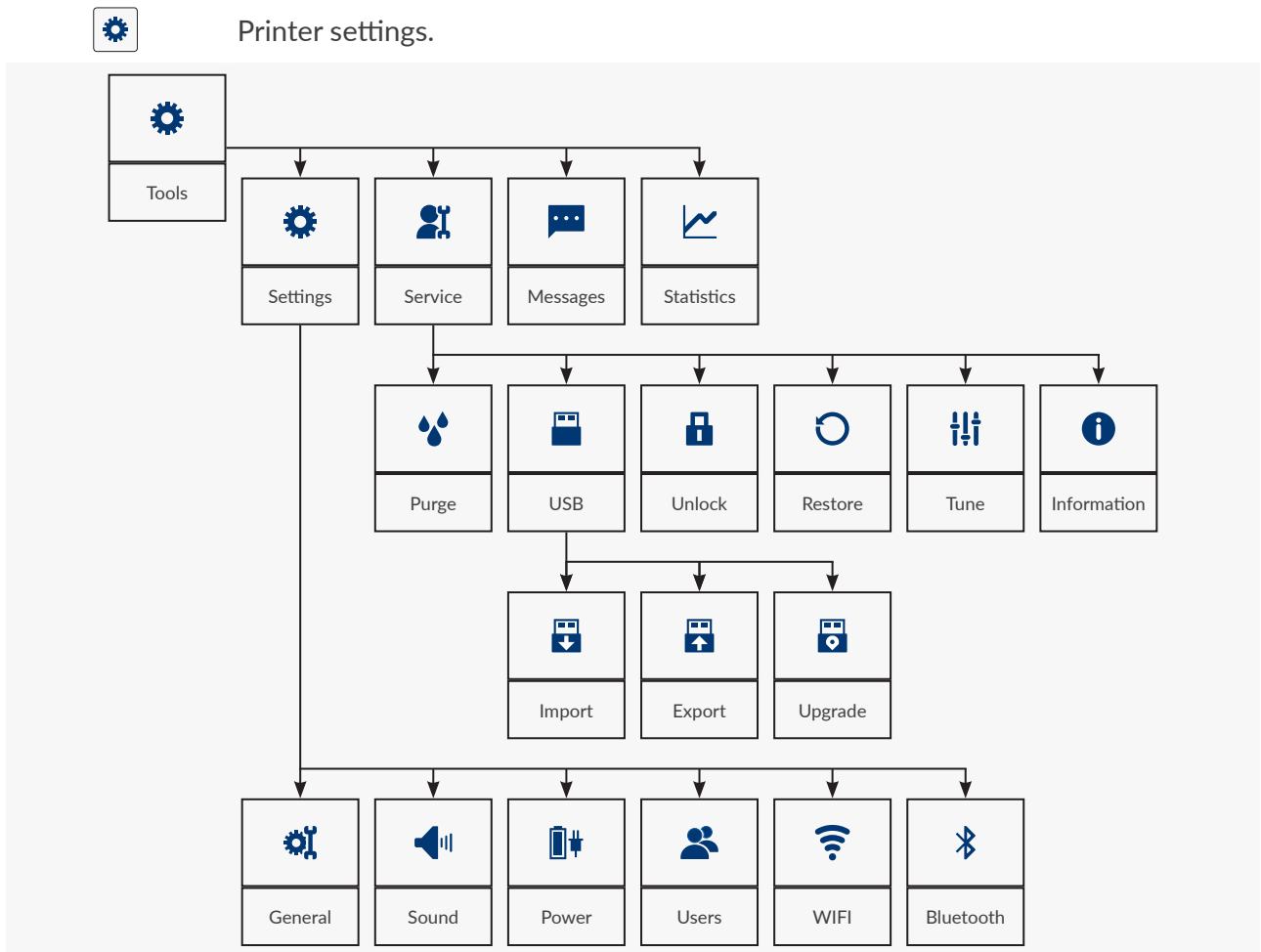
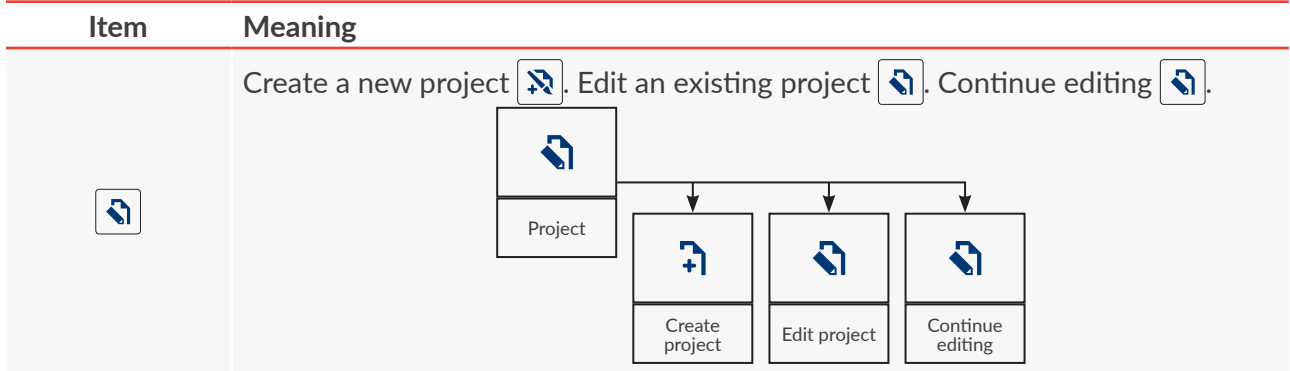
Item	Meaning
	Slider to control the Dot size parameter.
	Slider to control the Resolution print parameter.
	Decrease / increase the value of parameter.
	<i>Values of the Resolution parameter are modified with the slider or the and buttons by 50. To modify the parameter by 1, use the and buttons on the keyboard. For more information about printing parameters see "5.4.1. Project Parameters".</i>

3.2.4. MENU BAR



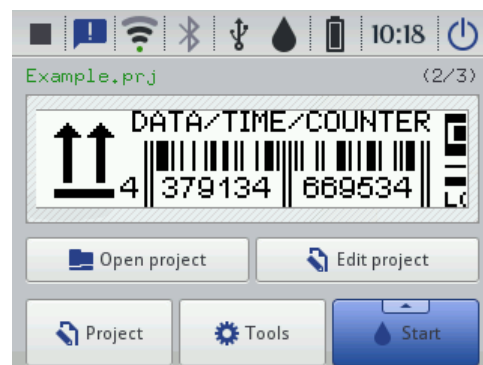
Fig. 14.

Items available in the menu bar D









3.2.5. SIMPLE MENU

You can have the main screen displayed in simplified form. A simplified menu is useful when you use projects that are ready to be printed and no modification of parameters is required. On the simplified main screen, you have access to the status bar **A**, project window **B** and menu bar **D**. The basic printing parameters window **C** is not available from the main screen level. The buttons available on the main screen are displayed in a size larger than the standard one, which may be useful when you operate the printer wearing protective gloves, for example.



To activate a simplified menu:

1. Press  ►  ►  ► |  |.
2. Change the setting of the **Simple menu** parameter to .
3. Press  to acknowledge.

The simplified display of the main screen is active.

3.3. RULES FOR USING THE USER INTERFACE

3.3.1. NAVIGATION

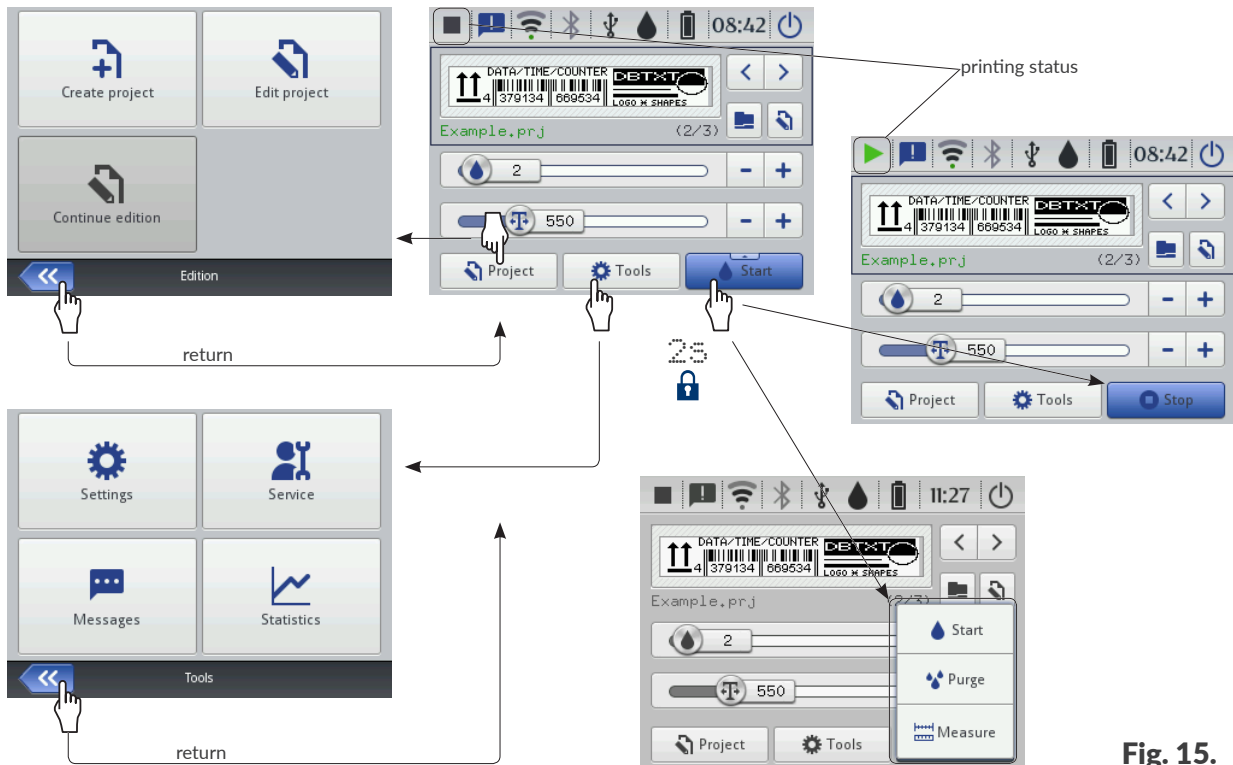


Fig. 15.

Most of printer functions are accessible with the **Project** / **Tools** icons in menu bar **D** on the main screen, e.g.



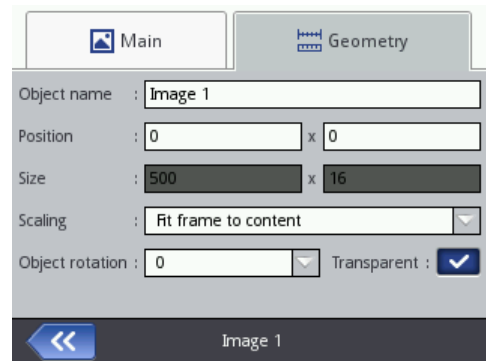
Additionally, the icon, which is used for returning to the previously displayed screen, is available in the menu.

Certain icons such as the **Start** icon on the main screen can be held over 2 seconds to display a drop-down list box with additional functions (see Fig. 15).

In certain windows, the parameters / functions are divided into groups marked with sheet tabs. If you select a sheet tab, the tab will be enclosed in the characters "|", e.g.

- | **Geometry** |,
- | |.

The tab marking described above is used further in this document.



3.3.2. DIALOG BOXES

Dialog boxes are displayed on the screen to provide the user with information or to request that a given operation be acknowledged (see Fig. 16).

What a dialog box (the icon, the background color) looks like depends on the type of message (an informative message, a warning or an error message) displayed in the dialog box.

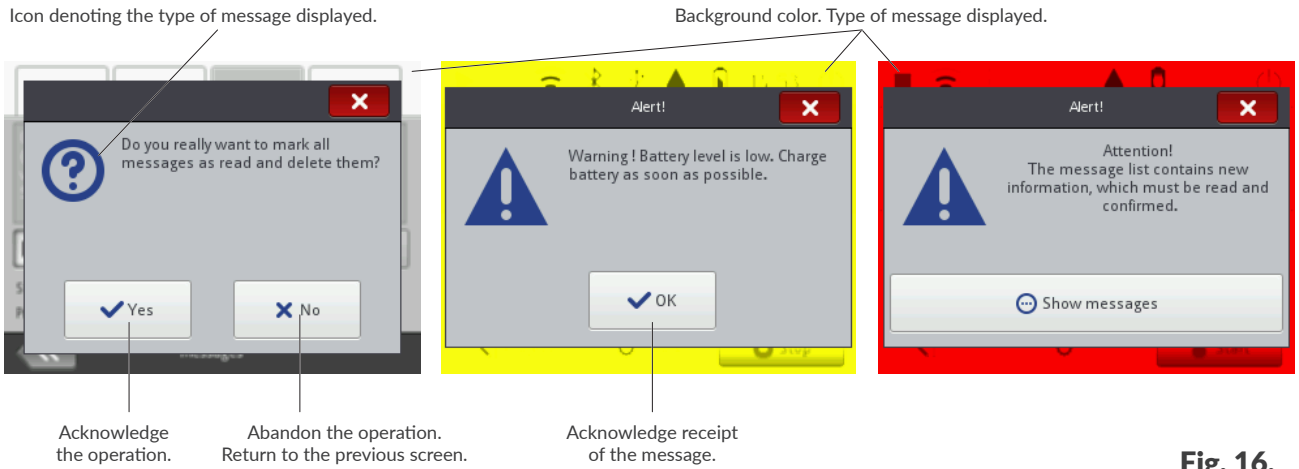


Fig. 16.

3.3.3. VIRTUAL KEYBOARD

Use the virtual keyboard to modify the values of parameters and to enter texts at the level of the printer's LCD touch screen. It is displayed on the LCD when the value box for a given parameter is selected, the password is to be entered for logging in, or a text is to be entered to a project. It is used to enter capital and small letters, national characters, digits, symbols and special characters.

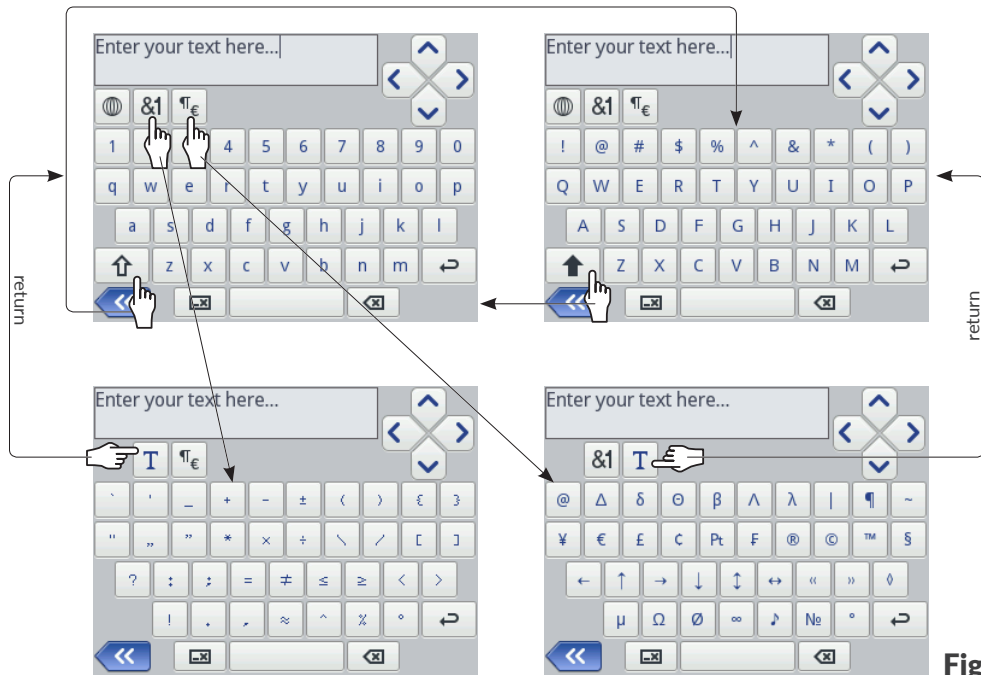
























Fig. 17.

-  Move the cursor.
-  The  /  icons are available in the keyboards displayed while multi-line text objects are edited.
-  Switch from small letters to capital letters.

	Switch from capital letters to small letters.
	Switch from letters to punctuation marks.
	Switch from letters to special symbols.
	Return to Latin or Cyrillic display.
	Change the language of the keyboard.
	Shift from Latin alphabet to Chinese characters (using pinyin). The icon is available after pressing the  icon.
	Shift from Latin letters to Cyrillic letters. The icon is available after pressing the  icon.
	Move to the beginning of the next line.
	Delete the character that is on the left of the cursor position.
	Delete the whole text (clear the edit area).
	Reverse (undo) the deletion of the whole text. The icon is available after pressing the  icon.
	Return to the previous screen.
	Save the text contained in the text box and close the keyboard. The icon is available after text entering has started.
	Close the keyboard without making any text changes. The icon is available after text entering has started.

If a selected Latin character (e.g. e, r, t, y, u, i, o, a, s, d, g, l, z, c, n) is pressed and held, the list of diacritical characters (accents) associated with the selected Latin character becomes available.



If numeric values (e.g. values of selected parameters) are entered, the numeric keypad is displayed (see [Fig. 18](#)).

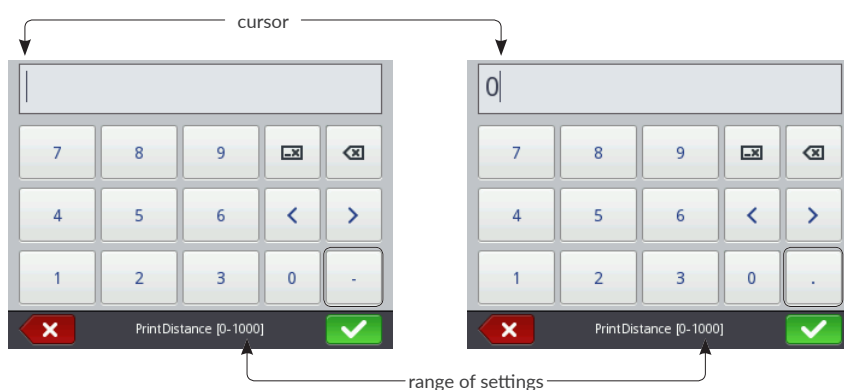



Fig. 18.

When a value is entered via the numeric keypad, a check is made to see whether it is within the setting range of a given parameter.

The  /  keys (or no key) are displayed depending on the position of the cursor in the edit area.

3.4. TYPES OF PRIVILEGES / USERS

Every user can have an individual access account that offers them access to project editor and printer settings; the access level varies according to the type of privilege.

In the printer, there are three different types of privileges (groups of users):

- **operator**,
- **administrator**,
- **serviceman**.

The **Handjet**[®] EBS-260A printer can be operated in two ways at the same time:

- locally: via the built-in LCD display,
- remotely: with the **EBS Web User Interface (WUI)** editor.

If local control and remote control take place at the same time, the type of privileges (access level) is used to establish which should take priority. The user who is at a higher level will take priority.

The accounts of **operator**-type users are protected with passwords.

Any number of **operator**-type user accounts can be defined, named and protected with passwords.

Every **operator**-type user account can be deleted.

The **administrator**-type users have full access to the printer except specialist service commands available to **serviceman**-type users only.

The accounts of **administrator**-type users are protected with passwords.

Any number of **administrator**-type user accounts can be defined, named and protected with passwords.

All **administrator**-type user accounts can be deleted except one.

The accounts of **serviceman**-type users are designed for use by **skilled persons** only.

Two **serviceman**-type users named “**EBS**” and “**Service**” are defined in the printer. These users must not be deleted, modified or marked with ★.

3.4.1. CHANGING A USER

The printer is started up with a logged-in user by default. The user is marked with ★ in the user manager.



For more details see [“7.7. Configuring Users”](#).

To change the logged-in user:






1. Press   .

The currently logged-in user is logged out.

A list of users defined in the printer is displayed on the screen.

2. Select a user to be logged in.
3. Enter the user password.

The password of the **administrator**-type user named **“Administrator”** is **“1”** by default.

Passwords can be modified by pressing     .

4. Press  to acknowledge.

The selected user is logged in.

3.5. REMOTE CONTROL

The **Handjet®** EBS-260A printer can be operated via a Web browser in two ways:

- by connecting with the printer directly or via an **WIFI** network and using the **EBS Web User Interface (WUI)** editor,
- using the **Offline EBS Web User Interface (Offline WUI)** editor, which shall be installed on a **PC** with the **Windows®** operating system in advance.







Operation of the **EBS Web User Interface** editor is not described in this document. For information about available options contact an authorized representative of **EBS Ink Jet Systeme GmbH**.

3.5.1. EBS WEB USER INTERFACE (WUI)

The **Handjet®** EBS-260A printer can be operated via the **EBS Web User Interface (WUI)** editor.

With it the printer can be conveniently operated without the necessity of using the printer's built-in LCD display. This is particularly important when direct access to the printer at the workstation is restricted.

Operation of the printer via the **EBS Web User Interface (WUI)** editor creates the same possibilities as operation via the built-in LCD display described in this Manual, but it opens up additional possibilities such as:

- Transferring projects between the printer and a **PC**,
- Creating / editing bar / matrix codes with dynamic contents, which are graphic interpretation of text objects such as **Date/Time** , **Counter** , **Communications port**  and **Text file** ,
- Managing images in the printer via the **Image Manager**,
- Managing fonts in the printer via the **Font Manager**,
- Managing text files in the printer via the **Text File Manager**,
- Estimating costs of printout,
- Operating a network of printers.

To run the **EBS Web User Interface (WUI)** editor in the Web browser window on a **PC**:

1. Start the printer up.








For more details see **"4.1. Starting the Printer up"**.

2. Set up a network connection.



For more details see **"7.6.1. Configuring the WIFI Interface"**.

For the information on how to set up your network connection contact your network administrator.

3. Read the **IP address** of the printer by pressing      (the **IP address** parameter in the figure on the right).



4. Enter the following address in the Web browser on the **PC**: **http://IP address**, where **IP address** is the printer's **IP address** read at the previous point.

The EBS Web User Interface (WUI) editor runs in Web browser window (see [Fig. 19](#)).

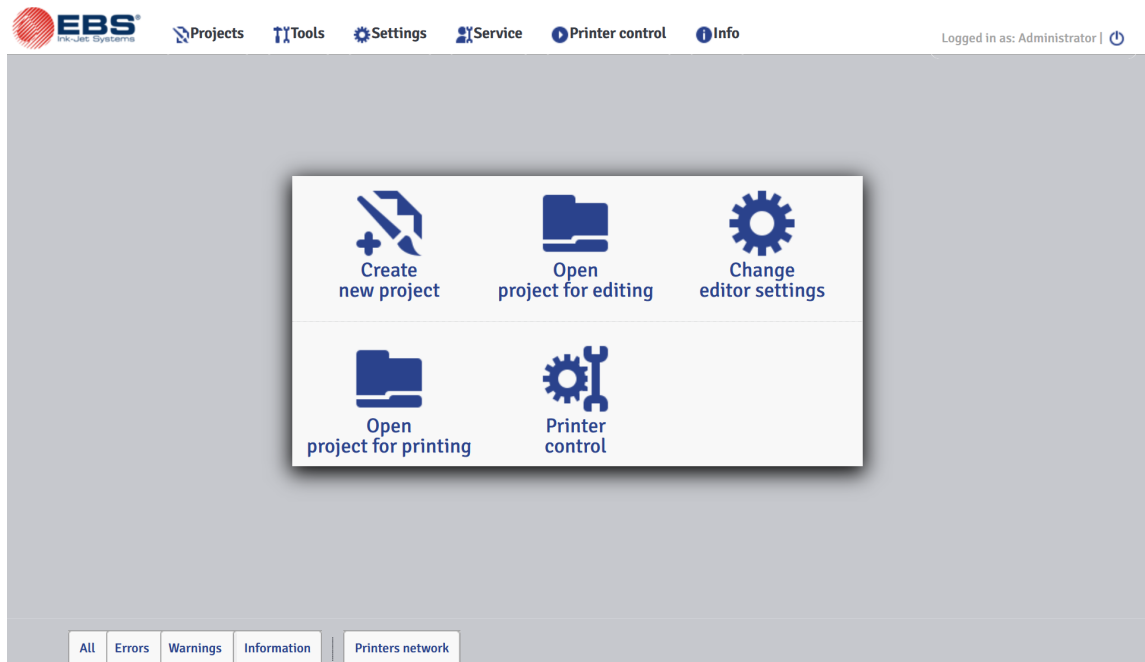


Fig. 19.

3.5.2. OFFLINE EBS WEB USER INTERFACE (OFFLINE WUI)

Projects for the **Hi-Res** EBS-2600 printers can be prepared with the **Offline EBS Web User Interface (Offline WUI)** editor installed on a **PC** in the **Windows®** environment in advance. Owing to it, projects can be conveniently edited without the necessity of using the printer's built-in LCD display. There is also no need for connecting a **PC** with the printer (directly or via an **Ethernet** network).

Projects prepared with the **Offline EBS Web User Interface (Offline WUI)** editor can be imported to the printer:

- remotely, with the **EBS Web User Interface (WUI)** editor after prior connection of a **PC** with the printer (directly or via an **Ethernet** network),
- via a **USB** memory device.



For more details see [“7.9. Exchanging Data via a USB Port”](#).

CHAPTER 4

OPERATION


4. OPERATION

4.1. STARTING THE PRINTER UP



The batteries in your printer must be charged. For more details on how to charge batteries see “4.5. Charging Printer Batteries”.

To start the printer up:

1. Press the  button on the printer keyboard.

The LED   glows.


The welcome screen is displayed on the LCD.

A series of sound signals are heard.

2.  Wait several dozen seconds.

The main screen is displayed on the LCD.

The printer is started up and ready to print an open project.

The user that is marked with  in the user manager is logged in by default.



For more details on how to change the logged in user see “3.4.1. Changing a User”.

Depending on the value of the parameter     |   **Autostart current project:**

- printing of the open project is enabled immediately after printer startup, the printer waits for the trigger to be pressed, and when a move of the lower roll (travel of the printer across an object to be labeled) is detected, the printer starts making a print

or

- printing has to be started manually.

4.2. SHUTTING THE PRINTER DOWN

The printer can be shut down regardless of the state it is in, e.g. during printing. In such a case, printing pauses.





When filled with ink, the printer can remain in the OFF state over a period not longer than 3 weeks (2 weeks, if pigment ink is used).

4.2.1. SHUTTING DOWN IN REGULAR MODE

To shut down the printer in regular mode:

1. Press    on the LCD display.


or

press the  button on the printer keyboard and then  on the LCD.

The LED   does not glow.

The goodbye screen is displayed on the LCD display.

A series of sound signals are heard.

2.  Wait a few seconds.

The LCD display is blank.

The printer is shut down.



A sound signal can also be used to signal that the printer is shut down. The sound can be turned on / off by pressing | | **Printer off sound signal.**

4.2.2. SHUTTING DOWN IN EMERGENCY SHUTDOWN MODE

The printer can be shut down in emergency shutdown mode only if a printer failure occurs, when shutting down in regular mode, which lasts longer, could cause further damage, e.g. ink spilling.

The printer can be shut down in emergency shutdown mode in two ways.

Press the button on the printer keyboard and hold it for 4 seconds

or

press and hold the button and the trigger at the same time.

If the printer is shut down in emergency mode, the values of the counters and unsaved projects are lost. Shutting down the printer in emergency mode too often may lead to printer damage (e.g. a file system may get damaged).

4.2.3. RESTARTING THE PRINTER

The printer can be restarted (i.e. shut down and started up again) regardless of the state it is in, e.g. during printing. In such a case, printing pauses.

To restart the printer:

1. Press .

The goodbye screen is displayed on the LCD.

2. Wait a few seconds.

The LCD display is blank.

3. Wait a few seconds.

The welcome screen is displayed on the LCD.

A sound signal is heard.

4. Wait several dozen seconds.

The main screen is displayed on the LCD.

The printer is restarted and ready to print the open project.

The user that is marked with ★ in the user manager is logged in by default.



For more details on how to change the logged in user see **“3.4.1. Changing a User”**.

Depending on the value of the parameter | | **Autostart current project:**

- printing of the open project is enabled immediately after printer startup, the printer waits for the trigger to be pressed, and when a move of the lower roll (travel of the printer across an object to be labeled) is detected, the printer starts making a print
- or
- printing has to be started manually.


4.3. PRINTING

The printer is ready for printing when an appropriate project is open for printing.

4.3.1. OPENING A PROJECT FOR PRINTING

The name and preview of the project currently open for printing (the so called active project) are displayed on the main screen.


To open a project for printing:

1. Press  on the main screen.

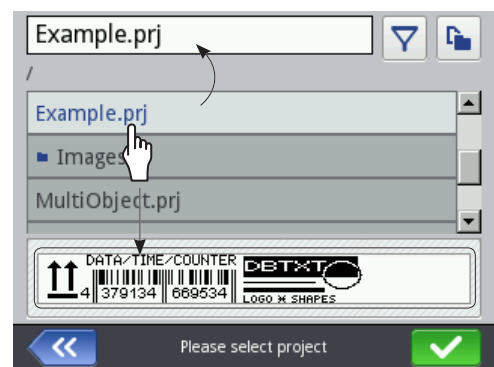
The project library is displayed.



For more details about the project library see "5.9. Managing Projects".

2.  Select a project that you wish to print or enter the name of such a project in the white text box at the top of the window.

The selected project is highlighted in a lighter color, its name is displayed at the top of the window while its preview is displayed in the lower part of the window.





3. Press  to acknowledge.

The selected project is open for printing.

The main screen is displayed and it shows the preview of the project that is open for printing.





If the project open for printing is correct, the project name is displayed on the main screen in green.







The project that is open for printing (within one folder only) can be modified by means of the  /  icons on the main screen, too.

4.3.2. STARTING PRINTING








To start printing the open project:

1. Press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen.



If the parameter |  | ► **Edit text before printing is started** or |  | ► **Edit counter before starting printing** is active in any project object, then before printing starts, the request to enter initial values is displayed. Initial values can be saved as the default values for a given object. A sound signal can be used to signal that printing has started, too. The sound can be turned on / off by pressing  ►  ►  ► |  | ► **Start printing sound signal**.

The printer enters printing mode in which:

- the LED  glows,
- the  icon in the status bar on the main screen is replaced with the  icon, the printer waits for the trigger to be pressed as the source of the trigger signal,
- when a move of the lower roll (travel of the printer across an object to be labeled) is detected, the printer starts making a print, and the  icon is replaced with the  icon,
- when printing finishes, the  icon is replaced with the  icon.




4.3.3. PAUSING PRINTING

To pause printing:

1. Press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen.



A sound signal can be used to signal that printing has paused, too. The sound can be turned on / off by pressing  ►  ►  ► |  | ► **Stop printing sound signal**.

The  /  icon in the status bar on the main screen is replaced with the  icon.

The LED  does not glow.

The printer stops printing the project.

The printer enters printing pause mode.

4.4. PREVIEWING A PROJECT

The preview of the project that is open for printing / being printed is displayed on the main screen. If the width of a project exceeds the width of the preview window, the project can be shifted within the preview window (see [Fig. 20](#)).

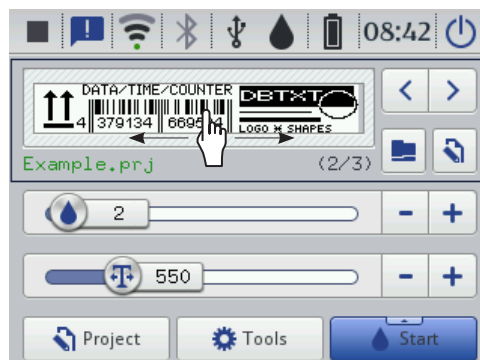



Fig. 20.

4.5. CHARGING PRINTER BATTERIES

A LI-ION battery pack of top quality is applied to the printer. Detailed information about the batteries (battery status, voltage, current, charge level, temperature) is available after pressing the  indicator in the status bar **A** (see [Fig. 11 on page 30](#)) on the main screen.

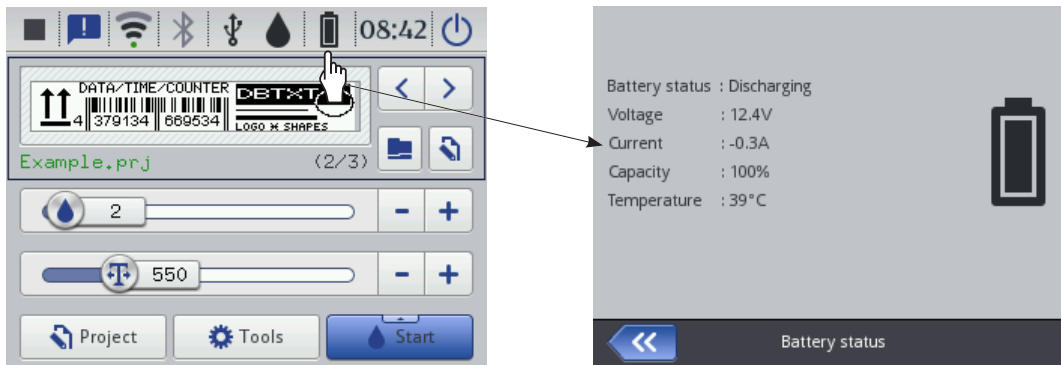


Fig. 21.







The **Handjet®** EBS-260A printer is not equipped with a disconnecting mechanism (a power switch), therefore the power outlet to which it is connected to charge the batteries should be easily accessible.



Charge the batteries using only the power pack that comes together with the printer. The printer is not designed for use while the batteries are being charged. It is advisable to charge the batteries at ambient temperatures of below +40°C (+104°F) to avoid undesirable effects of battery overheating.











To charge the printer batteries:

1. Pull the cap out of the charging connector **21** (see [Fig. 3 on page 15](#)) and turn it aside.
2. Connect the power pack jack plug **24** into the connector **21**, and the power plug **25** of the power pack to a power outlet.
3. While the batteries are being charged, the LED  flickers, and the battery icon with a lightning bolt symbol  is displayed on the printer panel **10**. Do not turn the power off or take the jack plug out of the connector **21** while the batteries are being charged. Wait until the batteries are fully charged, i.e. until the LED  starts glowing steadily and the  icon is displayed.
4. Take the jack plug **24** out of the connector **21** and cap the connector. Take the power plug **25** out of the power outlet, and put the power pack and the cable into the carrying case.
5. Recharge the batteries when the charge level drops to about 15-20% to ensure they operate efficiently for a long time. Do not get the batteries completely discharged.



When the printer is stored, the batteries should be charged to about 75%. For more details on how to store the printer see [“8.4.1. Storing the Printer”](#).


Signaling while the batteries are being charged [%]:

					
0 to 4	5 to 24	25 to 49	50 to 74	75 to 99	100
LED  flickers 4x per second	LED  flickers 2x per second			LED  flickers every second	LED  glows steadily





The battery is not replaceable as standard.

4.6. USING AN INK CONTAINER

Every container of ink is provided with a transponder, which stores the information on the type of ink and the date of manufacture. The Ink Monitoring System (IMS) that is built into the printer reads the transponder-stored data and checks for correctness of the ink in use.




The  indicator in the status bar **A** (see [Fig. 22](#)) on the main screen offers access to the following information:


- An estimate* of the amount of the ink remaining in the ink container [%],

					
0	1 to 9	10 to 30	31 to 60	61 to 80	81 to 100



* The real level of the ink in a container may differ from the indicated one. The real ink level is affected by actual ink consumption which varies depending on, among other things, the weather conditions of the environment where the printer operates or print parameters, e.g. **Dot size** or **Pressure**.

- A problem with the ink (e.g. the ink has passed its expiration date, the number of printouts exceeded a limit, an incorrect container or no container is installed) or with the IMS system - the icons  and  are displayed alternately,
- Service mode is activated (printing is enabled over a period of 50 hours) - the  icon is displayed.

For detailed information about the container of ink installed in the printer press indicator  in status bar **A** on the main screen.

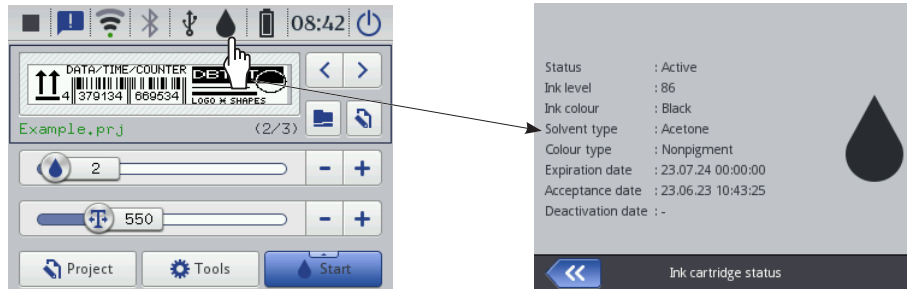


Fig. 22.


The time needed to use up the ink contained in an ink container depends on parameters such as the number of dots in the projects printed, ink pressure, intensity, etc.





* If a **correct** container of ink is installed but the printer cannot recognize it successfully, you can contact an authorized representative of **EBS Ink Jet Systeme GmbH** to activate service mode. In this mode printing can continue over another 50 hours until a new bottle of ink is installed or a service intervention is made. For more information see "[9.3.1. Releasing Protections](#)".

4.6.1. REPLACING THE INK CONTAINER



Contact an authorized representative of **EBS Ink Jet Systeme GmbH** to order a new container of ink of an appropriate type. The necessary information is available on the label of the container installed in the printer or by pressing the indicator  in the status bar **A** on the main screen.

If parts of printouts are missing, and the carrying out of the venting procedure does not improve print quality and the ink level indicator on the main screen takes the form of  or , the ink container needs to be replaced with a new one.

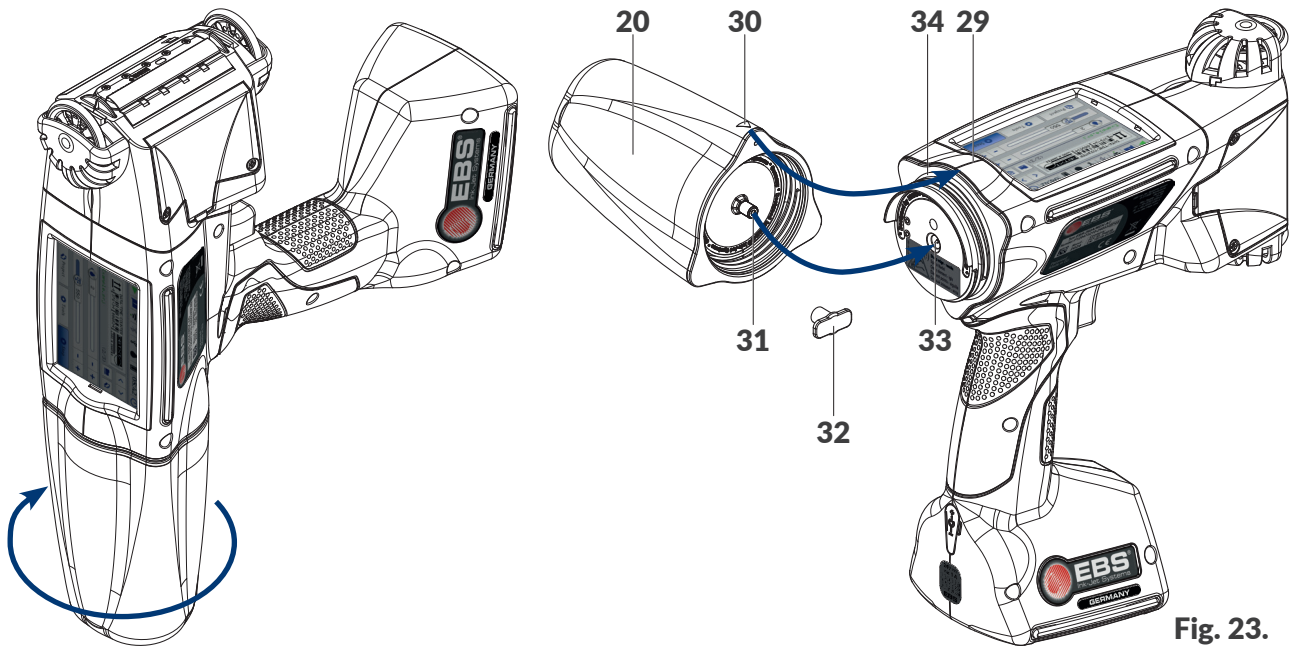


Fig. 23.



To replace the container:



Tools required:

- a container of ink of an appropriate type,
- protective gloves that are resistant to ink / cleaner,
- a sprayer with cleaner whose type is compatible with the type of ink in use (optionally),
- safety goggles.



1. If the printer is printing, press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to pause printing.

The LED   does not glow.

2. To remove the container, place the printer with the container facing downward.
3. Turn the container **20** left and keep it in place for about 3 seconds to balance the pressure in the container.



CAUTION: Sharp Elements!

While replacing the container be careful not to get wounded with the needle **33**, which is part of the connection. **Do not touch the needle!** Avoid manipulations near the needle.



Replace the container in dust-free conditions, as far as possible, to minimize the penetration of contaminants and dirt into the printer's ink system. Do not leave the printer with an ink container removed for longer than it is necessary to replace the container. Dispose of the empty container following the selective waste collection principles.

4. Remove the container carefully.
5. If the gasket **34** is dirty, use a cleaner to remove ink remains from it.
6. Remove a new container of ink from the packaging.
7. Remove the transportation plug **32** from the valve **31** of the new container and use it to secure the valve in the container you have just removed to avoid ink remains flowing out in and of itself.
8. Position the container relative to the back part of the printer so that the triangular mark **30** is in front of the printer middle line **29** and the hole in the non-return valve **31** can be pulled over the printer needle **33**.
9. Press the container to the printer and turn it right through 270 degrees.

The new container is installed.

When a new container of ink is accepted, the relevant icon and the message **(I99000) New ink container successfully accepted.** are displayed on the LCD.



A sound signal may also be heard after a container has been accepted. The sound can be enabled / disabled by pressing



Ink accept sound signal.


10. Acknowledge the message saying that the ink container has been accepted.
11. Press the button on the keyboard or the icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to start printing.
The LED glows.
12. Make a test print.
13. If print quality is poor, follow the purging / venting procedure.



For more details about the printhead purging / venting procedure see ["8.2. Purging / Venting the Printhead"](#).

4.6.2. USING INK OF ANOTHER COLOR



Your **Handjet®** EBS-260A printer is designed to print in ink of a specific type of ink base and therefore you can use ink of a different color only when the base of the new ink is the same as that of the ink you wish to replace. The **Solvent type** and **Ink colour** are available in the ink status window after pressing the  indicator in the status bar **A** on the main screen. If a container is reinstalled in the printer several times, it can start leaking in the printer as the rubber gasket of the container valve **31** is subject to wear and tear. Avoid reinstalling a given container too frequently.



Instructed persons are authorized to replace the ink container with a container of ink of a different color.

You can change the color of the ink in use in the **Handjet®** EBS-260A printer by replacing the ink container and purging remains of the ink to be replaced out of the ink system components.




To use ink of a different color:



Tools required:

- a container of ink of an appropriate type,
- a container of cleaner of an appropriate type,
- protective gloves that are resistant to ink / cleaner,
- safety goggles,
- a metal vessel for collecting waste or absorbent material.



1. If the printer is printing, press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to pause printing.
The LED  does not glow.

2. Remove the ink container.



For more details see [“4.6.1. Replacing the Ink Container”](#).

3. In place of the ink container install a container of cleaner to clean the printer's ink system.
4. Start nozzle purging. Continue the purging until the ink is completely superseded by the cleaner.



For more details see [“8.2. Purging / Venting the Printhead”](#).

5. Remove the cleaner container.
6. Move to the option unlock setting and enable ink color to be changed.






For more details see [“9.3.1. Releasing Protections”](#).

7. Install a container of ink of the color you require. If the new container is correct, the following message is displayed: **(I99000) New ink container successfully accepted.**



A sound signal may also be heard after a container has been accepted. The sound can be enabled / disabled by pressing       |  |  **Ink accept sound signal.**

8. Press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to start printing.
The LED  glows.

9. Make a test print.

10. If print quality is poor, follow the purging / venting procedure.



After ink of a new color has been applied, the first several or a dozen or so printouts can be of low quality. This depends on how precisely the previous ink has been washed out of, and the cleaner removed from, the printer's ink system.

4.7. OPERATING THE PRINTER THAT PRINTS IN PIGMENT INK

The pigment inks are characterized by the fact that the pigment, or their coloring matter, deposits on the bottom or the walls of the ink container always when the ink is not subject to movement that could stir the pigment into the ink.



*If the printer prints in pigment ink, it is advisable to set the **Pressure** parameter at its maximum value and the value the **Dot size** parameter should be as high as possible.*

In the **Handjet**[®] EBS-260A printer that prints in pigment ink, this phenomenon can cause the following effects:

- The pigment settles on the bottom of the container from which the ink is pumped to the printhead. If the ink in the container is not homogeneous, then depending on the position the printer has been in before, the ink supplied to the printhead may:
 - contain a dense pigment, which may make the printing unit malfunction or may intensify the effects described below,
 - be highly diluted, with little or no pigment.
- The pigment settles on the bottom of the nozzle chamber in the printing unit, which at first, when the printer is switched on after a prolonged idle period, the color of printouts is of low intensity. The nozzles eject the ink that contains less pigment.
- In the long term, the pigment settles on the walls of ink tubes and the filter inside the printing unit, thereby causing a reduction in the tubes' internal diameter and in consequence, a reduced ink flow. The effects are similar to reduced ink pressure - no ink drops are ejected from the nozzles, the ink flows down the nozzle plate, the ink is ejected from some of the nozzles only, printouts are unclear. The effects can occur after a dozen or so or even after several months of operation when the ink is seldom stirred before the printer is used and during printer operation.

4.7.1. EVERYDAY OPERATION OF THE PIGMENT INK PRINTER

Before starting using the printer, you should shake it intensively several times while holding it in your hands, in order to stir the ink in the ink chamber and in the container.

During operation, it is advisable to tilt the printer in various directions periodically, so that the ink pigment mixes with the ink base.

When you finish your work, clean the printer following the instructions given in **"8.1. Cleaning the Nozzle Plate"**.

If the printer is not used for a period longer than 2 weeks, secure it in an appropriate way - see **"8.4.1. Storing the Printer"**.

4.7.2. WHEN REGULAR INK STIRRING IN THE PIGMENT INK PRINTER IS NEGLECTED



Any service operations that require that protective covers in the printer be opened or removed should be carried out by **skilled persons** only.
For more information on how to service the printer contact an authorized representative of **EBS Ink Jet Systeme GmbH**.

If everyday shaking of the printer to stir the pigment ink is neglected and additionally the following occurs:

- no drops jet from the nozzles,
- the ink flows down the nozzle plate,
- the ink jets from some of the nozzles only

and if tilting and shaking of the printer bring no improvement, you should take the printer in for a service, because the ink tubes need detaching and removing obstructions or replacing. In addition, it may be necessary to replace the ink filter through which ink is supplied to the printing unit.

CHAPTER 5

EDITING

5. EDITING PROJECTS AND PROJECT PARAMETERS

The **Handjet®** EBS-260A printers can process dedicated projects. Project contents as well as project parameters can be modified in the printer and with the **EBS Web User Interface (WUI)** editor.

5.1. PROJECT EDITOR

The project editor starts when any function designed to create / edit projects is selected:


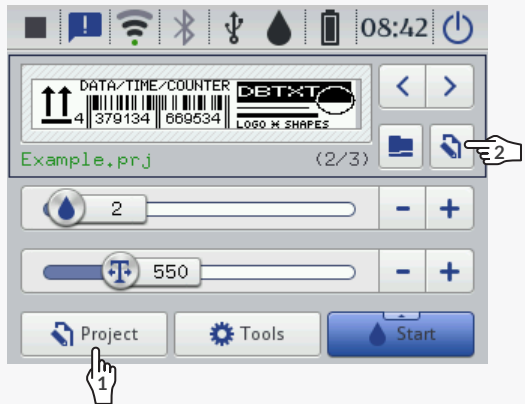






Icons	Function	
	Create a new project.	
	Edit an existing project.	
	Edit the project that is open for printing / being printed.	


















Fig. 24.


- E** Project preview.
- F** Object. The currently selected object is displayed on a gray background and framed in red.
- G** Project name.

The following functions are available in the project editor window:


Icon	Function
	Save the project with its existing name or a different name.
	Edit parameters of the project that is being edited.
	Object manager.
	Copy the selected object to the clipboard (the icon is visible when an object is selected in the project editor window).

Icon	Function
	Paste the object from the clipboard (the icon is visible only when objects are stored in the clipboard and none of the objects in the project editor window is selected).
	Increase the scale of the project preview.
	Decrease the scale of the project preview.
	Restore initial values of Counter -type objects  and Text file -type objects  .
	Add an object.
	Edit contents and parameters of the selected object.
	Delete the selected object.
	Restore an object from the project trashcan (the icon is visible only when there are objects in the trashcan and none of the objects in the project editor window is selected).
	Change the position of an object in a project.
	Change the size of an object.
	Exit the project editor without saving the project that has been edited.
	Save the project with its exiting name and exit the project editor.
	Move to the previous screen when no modifications have been made.

Color-coding in the project editor window

- The currently selected object is displayed on a gray background and framed in red (see [Fig. 24 on page 55](#)).
- Project name **G** (see [Fig. 24 on page 55](#)) changes its color to yellow if project contents have been modified in any way. When the project is saved, its name changes back to white.
- **Communications port**-type text objects and bar / matrix* codes  are displayed on multi-colored backgrounds.







* **Communications port**-type bar / matrix codes  can be created by means of the *EBS Web User Interface* editor only.

Basic notions and rules applied to project editing and printing

- A **project** is created / edited by the user with the **project editor**; it consists of **objects**.
- When printing of a prepared **project** is enabled, a **printout** is made on an object.
- The appearance of a **printout** on an object depends on **project parameters** and **parameters of the objects** included in the **project**.
- A **print** is made of **dots**.
- **Printed dots** form **columns** and horizontal **rows**.
- **Print** resolution in the vertical direction is defined as a number of **rows** (or **dots**) per unit of height.
- **Print** resolution in a horizontal direction is defined as a number of **columns** (or **dots**) per unit of length.
- For adequate legibility and proportionality of prints, it is recommended that resolution in a horizontal direction be equal to resolution in the vertical direction of **550 dots/meter**.


5.1.1. ADDING AN OBJECT

To add an object to the project:

1. Press .
2. Select the object group that contains a required type of object:
 - |  | - text objects,
 - |  | - shapes,
 - |  | - the other objects.
3. Select a type of object.







For more details about objects see [“5.2. Types and Parameters of Objects”](#).


4. Set the parameters that are relevant to a given type of object.
5. Press  to acknowledge.
The object is created in the left top corner of the project.

5.1.2. EDITING THE SELECTED OBJECT

To edit an object in the project:



1. Select an object you wish to edit in the project editor window.
2. Press .
3. Modify contents or parameters of the object.


Contents or parameters of objects can also be edited by pressing  ► |  ► |  in the object manager.


4. Press  to acknowledge.
The project editor is displayed.

5.1.3. CHANGING THE POSITION OF AN OBJECT IN A PROJECT

The position of an object in a project can be changed in two ways:

- by modifying elements of the object parameter |  | ► **Position**, that is the coordinates of the left top corner of the object frame,
- by using the  function.

The position of an object in a project can be changed with the  function within the project area only. No project can be extended beyond the project area.

An object can be extended beyond the project area if elements of the parameter |  | ► **Position** are modified.





To change the position of an object in a project:


1. Select an object whose position you wish to change in the project editor window.

2. Press .




The color of the frame of the object changes to green.

Navigation icons are displayed:



-  - to move the object by one pixel to the left,
-  - to move the object by one pixel to the right,
-  - to move the object by one pixel up,
-  - to move the object by one pixel down.

3. Use navigation icons or indicate the position of the object directly in the project area.
4. Press  to acknowledge the position of the object.
The position of the object is changed.

5.1.4. CHANGING THE SIZE OF THE OBJECT FRAME


The size of the frame of text objects |  | and of **Image**-type objects  can be changed only when the value of the parameter |  | ► **Scaling** is different from **Fit frame to content**. Otherwise, the object frame will not change its size.

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

- by modifying elements of the object parameter |  | ► **Size**,
- by using the  function.









The object cannot be shifted beyond the project area while the size of the object frame is being changed.


To change the size of the object frame:

1. Select an object whose size you wish to change in the project editor window.
2. Press .

The color of the frame of the object changes to violet.




Navigation icons are displayed:

-  /  - to move the left edge of the frame by one pixel to the left / right,
-  /  - to move the right edge of the frame by one pixel to the left / right,
-  /  - to move the top edge of the frame by one pixel up / down,
-  /  - to move the bottom edge of the frame by one pixel up / down.

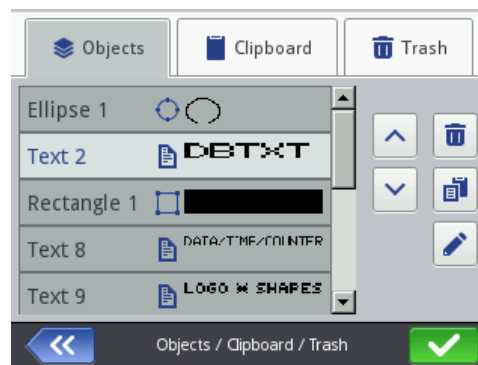
3. Use navigation icons or indicate the position of the right bottom corner of the object frame directly in the project area.
4. Press  to acknowledge the size of the object frame.
The size of the object frame is changed.

5.1.5. USING THE OBJECT MANAGER

The object manager consists of three parts (sheet tabs):

- |  | : List of all objects in the project,
- |  | : Clipboard,
- |  | : Trashcan.

Press  in the project editor window to start the object manager.



List of objects






Press |  | in the object manager window to display the list of objects.

The list contains all objects used in the project, including the objects that are invisible in the editor window because:


- Their position in the project expands beyond the editor window,
- They are veiled by objects that are not set to be transparent.


The position of an object on the list relative to other objects defines whether the object is “on top” or “beneath”.

The following functions are available on the list of objects in the object manager:

Icon	Function
	Delete the selected object (move the object to the trashcan).
	Copy the selected object to the clipboard.
	Edit contents or parameters of the selected object.
	Move the selected object on the list by one position up.
	Move the selected object on the list by one position down.



Clipboard

Press |  | in the object manager to display the clipboard.

The clipboard contains all objects that have been copied to it with the  function in the project editor. The clipboard has global reach, that is, it shows objects copied to any project. Owing to that, the clipboard can be used for copying objects from one project to another.

The clipboard is emptied automatically each time the printer is shut down.

The following functions are available in the clipboard:

Icon	Function
	Delete the selected object from the clipboard.
	Paste the selected object into the project.



Trashcan

Press |  | in the object manager window to display the trashcan.

The trashcan contains all objects that have been deleted **from the currently edited project.**

The trashcan is automatically emptied when the project editor closes.

The following functions are available in the trashcan:

Icon	Function
	<u>Permanently</u> delete the selected object from the trashcan.
	Restore the selected object from the trashcan to the project.


5.1.6. DELETING AN OBJECT

When an object is deleted, it is moved to the trashcan. This means that deletion is reversible; an object can be restored only by the time that the project editor closes, the object is removed from the trashcan or the trashcan is emptied.



For more details about trashcan management see [“5.1.5. Using the Object Manager”](#).

To delete an object from a given project:

1. Select an object you wish to delete in the project editor window.
2. Press .

A dialog box with the request to acknowledge the operation is displayed.

An object can also be deleted by means of the  ▶ |  | ▶  function in the object manager.

3. Press  to acknowledge.

The selected object is deleted (moved to the trashcan).

The project editor is displayed.


5.1.6.1. RESTORING A DELETED OBJECT



The objects deleted while the project is being edited are stored in the trashcan. Therefore objects can be restored back to the project. An object can be restored only by time that the project editor closes, the object is removed from the trashcan or the trashcan is emptied.



For more details about trashcan management see [“5.1.5. Using the Object Manager”](#).

To restore a deleted object:

1. Press  to restore a deleted object. The icon is visible only when there are objects in the trashcan and none of the objects in the project editor window is selected.


You can restore an object using the function  ▶ |  | ▶  in the object manager.

The list of the objects that are in the trashcan is displayed.

2. Select an object you wish to restore to the project.

3. Press .

The selected object is restored to the project and thereby deleted from the trashcan.

4. Press  to exit the trashcan and return to the project editor.

5.1.7. COPYING OBJECTS

Owing to the clipboard, every object included in a project can be copied and pasted into the given or another project. Objects are stored in the clipboard until the printer shuts down. Therefore an object can be pasted from the clipboard by the time that the printer shuts down or the object is removed from the clipboard.






For more details about clipboard management see [“5.1.5. Using the Object Manager”](#).


To copy an object:




1. Select an object you wish to copy in the project editor window.

2. Press .

The object is copied to the clipboard.

You can also copy an object to the clipboard using the function  ► |  | ►  in the object manager.

3. Press  to paste the object that has been copied to the clipboard. The icon is visible only when there are objects in the clipboard and none of the objects in the project editor window is selected.

You can paste objects from the clipboard into the project also using the function  ► |  | ►  in the object manager.

The list of the objects that are in the clipboard is displayed.

4. Select an object you wish to paste to the project.














5. Press .





The selected object is pasted into the project but it remains in the clipboard and can be pasted again to the same or another project.

6. Press  to exit the clipboard and return to the project editor.


5.2. TYPES AND PARAMETERS OF OBJECTS

The objects that are available while projects are being edited via the built-in LCD display belong to three groups:


























Group	Object
T Text	 Normal text
	 Date/Time
	 Counter
	 Communications port
	 Text file
 Shapes	 Line
	 Rectangle
	 Ellipse
	 Barcode
 Other	 Image
	 Line divider

The use of the **EBS Web User Interface (WUI)** editor to operate the printer allows the user to create / edit bar / matrix codes whose contents are dynamic and which are graphic interpretation of text objects such as **Date/Time** , **Counter** , **Communications port**  and **Text file** .

5.2.1. COMMON PARAMETERS OF ALL OBJECTS

After pressing the  icon, the parameters of the selected object are available in the project editor window. The list of the parameters available depends on the type of object.

The following parameters are common to all types of objects:

Parameter	Range of settings
  Object name	
Name of an object, given automatically while the object is being created. It can be modified but it must be unique within the project.	
  Position	
Coordinates (X, Y) of the left top corner of the frame of an object. They can be modified manually or by means of the  function in the project editor. For Line divider -type objects  only the horizontal coordinate (X) can be modified.	
  Size	
Size (width, height) of the frame of an object. The values can be modified manually or by means of the  function in the project editor. The size of the frame of text objects  and of Image -type objects  can be changed only when the value of the parameter  Scaling is different from Fit frame to content . The parameter is not available for Line divider -type objects  .	
  Scaling	Without scaling, Fit frame to content, Fit content to frame
Mode of adjusting the size of the frame of an object to the frame contents. The list of settings available for the parameter depends on other settings, e.g. the type of object or the selected font. The parameter is not available for shapes  as well as for Line divider -type objects  .	
  Object rotation	0, 90, 180, 270
Rotation of an object through 90°. The parameter is not available for shapes  as well as for Line divider -type objects  .	
  Transparent	<input checked="" type="checkbox"/> / <input type="checkbox"/>
When this option is enabled for an object, the object becomes transparent, i.e. the objects that are under it can be seen. The parameter is not available for Line divider -type objects  .	
The sequence of objects in a project can be changed with the object manager  .	



For more details see "5.1.5. Using the Object Manager".

5.3. EDITING A PROJECT

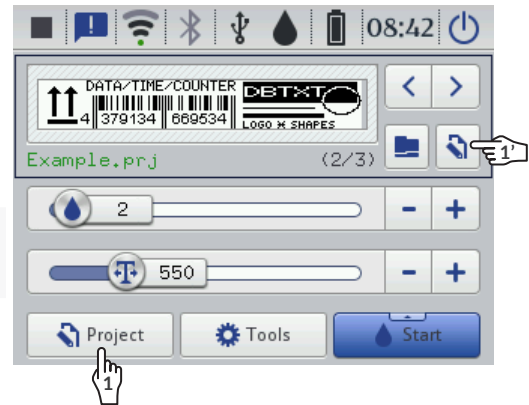
To edit any project stored in the project library:

1. Press  **Project** ►  **Edit project**.

The project library is displayed.



For more details about the project library see “5.9. Managing Projects”.







2. Select a project that you wish to edit or enter the name of such a project in the white text box at the top of the window.

The selected project is highlighted in a lighter color, its name is displayed at the top of the window while its preview is displayed in the lower part of the window.

3. Press  to acknowledge.




The project editor window is displayed; the selected project is open and can be edited.



-  Press the  icon on the main screen to start editing either the project that is open for printing / being printed ( **Project**) or project parameters ( **Parameters**).

If you save the project open for printing / being printed, this may mean that the project is reloaded and if that is so a relevant message is displayed in the dialog box.

The projects that are in the printer's project library can also be edited using the **EBS Web User Interface** editor.

-  Press  **Project** ►  **Continue editing** to continue editing the project open for editing using the **EBS Web User Interface**.

5.4. CREATING A PROJECT


To create a new project:

1. Press  **Project** ►  **Create project**.

The project library is displayed.



For more details about the project library see “5.9. Managing Projects”.

2. Enter the name of a new project in the white text box in the upper part of the window.
3. Press  to acknowledge.
The project editor window is displayed; the new (empty) project is open and can be edited.
4. Create project contents and define project parameters.
5. Save the project.





For more details see “5.5. Saving a Project”.


The project is created.

5.4.1. PROJECT PARAMETERS

The project parameters can be accessed in two ways:

-  ►  **Parameters** - to temporarily modify parameters of the project that is open for printing / being printed,



If parameters of the project open for printing / being printed have been modified, the  icon is displayed on the main screen to allow the user to save the temporarily modified parameters as project parameters.

-  **Project** ►  **Edit project** ► **Project name** ►  ►  ►  - to modify parameters of the project that is being edited.

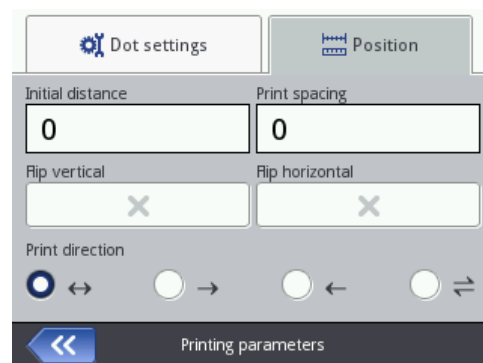
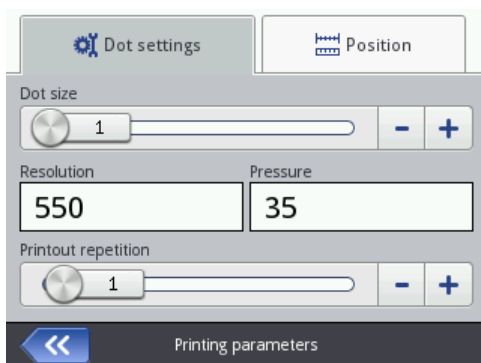
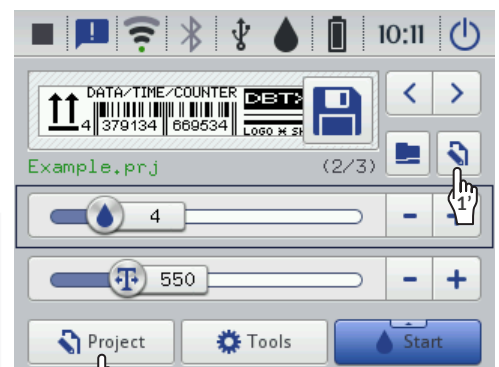




Fig. 25.

The values of project parameters are modified as follows:



Numerical parameters

Parameter values can be modified using:

- the numeric keypad available when you click on a value,
- the  /  icons to increment / decrement the values,
- a slider.

Binary (bistable) parameters

Values can be modified by means of icons:

-  - the parameter is inactive; press to activate,
-  - the parameter is active; press to deactivate.



Parameters whose values are included in a list


Values can be modified:

- by selecting an item from the parameter setting list available when you click on a value.



If the value of a given parameter is incorrect, it is highlighted on a red background and must be corrected before the parameter is saved.


Project parameter	Range of settings
Project width [cm / px]	max. about 727 cm (for  ▶  ▶ Resolution = 550 dots/meter) max. 4000 px

The parameter is available only after the  icon has been pressed in the project editor window. The width of a project is given in the unit defined in the **Size unit** parameter. The real width of a project may differ from that set with the **Project width** parameter because it is limited to the last column containing at least one dot. The blank space after the last column is removed.

















*Example of the use of the **Project width** parameter is given further in this chapter.*

Size unit	[cm], [px]
------------------	------------

The parameter is available only after the  icon has been pressed in the project editor window. A unit of width for a project.

Project parameter

Range of settings

  Dot size	1 to 20 (recommended value: 4)*
<p>Print intensity level.</p> <p>Adjust print quality to the type (hygroscopicity) of surface to be printed on.</p> <p>If you raise the value of the parameter, the intensity of prints increases as the volume of the ink drops jetted from the printhead increases. An increase in intensity involves higher ink consumption.</p> <p>A maximum achievable print intensity is dependent on print resolution. If an intensity level is too high for given print resolution, the printer signals an error by generating a sound signal (provided that a relevant warning is set – see “7.5. Sound Signal Settings”) and reduces the print resolution, too).</p>	
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>* The range of values that guarantee an acceptable print quality depends on the type of ink, the type of surface to be labeled and the value of the Pressure parameter, among other things. Each time the value of the Dot size parameter is modified, test prints should be made to assess print quality.</p> <p>The Dot size parameter can be set from the main screen level, as well. See “3.2.3. Basic Printing Parameters”.</p> </div> </div>	
  Resolution [dots/meter]	100 to 2000 (recommended value: 550)
<p>Resolution in a horizontal direction given as a number of dots or vertical rows (columns) per meter. A modification to the parameter Resolution visually results in a change in the width of the printed characters and in the width of the entire print.</p> <p>To get equal width and height of objects such as a circle, a square or a two-dimensional (2D) code set print resolution in a horizontal direction (the parameter Resolution) at the same value as resolution in the vertical direction. The print resolution in the vertical direction is 550 dots/meter.</p>	
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>The Resolution parameter can be set from the main screen level, as well. See “3.2.3. Basic Printing Parameters”.</p> <p>The printer is equipped with a practical tool, Measure, which is designed to adjust print resolution to the length of a surface to be labeled. For more details see “6.5. Adjusting Print Resolution to the Length of a Surface to be Labeled”.</p> </div> </div>	
  Pressure [kPa]	15 to 45 (recommended value: 35)*
<p>Ink-drop ejection force.</p> <p>The Pressure parameter is used for adjusting ink ejection force to the type of surface to be labeled. Lower values of pressure are recommended for smooth, non-absorbing surfaces, and higher values should be used for porous, absorbing materials. If a pressure setting is too low, ink may congeal on nozzles. If a pressure setting is too high, irregular splashes of ink (so called satellites) may occur.</p> <p>Detach the container from the printer to reduce the pressure of the ink in the container to print a project that has the pressure setting lower than the project previously printed.</p>	
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>* The range of values that guarantee an acceptable print quality depends on the type of ink, the type of surface to be labeled and the value of the Dot size parameter, among other things. Each time the value of the Pressure parameter is modified, test prints should be made to assess print quality.</p> </div> </div>	
  Printout repetition	 1, ..., 20
<p>Number of project repetitions which form a single printout.</p> <p>All repeated printouts of a project have always the same contents, even if the project contains objects that provide dynamic contents.</p> <p>If Printout repetition > 1, the distance between the beginnings of consecutive reprints is defined with the parameter  Print spacing.</p> <p>Continuous objects (e.g. pipes) can be labeled in <u>continuous printing mode</u> (Printout repetition = ).</p>	

Project parameter

Range of settings



 ► **Initial distance** [mm]

0 to 1000 mm

Initial distance for a printout.

Space between the point where the trigger is pressed and the printer moves and the point where printing is to start. The distance is given in millimeters. It is used for positioning a print relative to the beginning of an object to be labeled.

The initial distance is part of a print and consists of empty columns added at the beginning of the print.



Example of the use of the **Initial distance** parameter is given further in this chapter.




 ► **Print spacing** [mm]

0 to 1000 mm

Space (in millimeters) between the beginnings of consecutive reprints (of a project) that form one printout.



Example of the use of the **Print spacing** parameter is given further in this chapter.

If the space set with the parameter  ► **Print spacing** is smaller than the print length, the repeated prints will be made one after another.



 ► **Flip vertical**
 /

Vertical direction of printing: normal () or upside down ():

- **Flip vertical:** ; normal printout:

TEST 1234567

- **Flip vertical:** ; reversed printout:

TEST 1234567

The parameter can be useful when an object to be labeled is upside down.



 ► **Flip horizontal**
 /

Horizontal direction of printing: normal () or "opposite" ():

- **Flip horizontal:** ; normal printout:





TEST 1234567

- **Flip horizontal:** ; printout flipped along the x-axis (a mirror image):

7654321 TEST

The parameter can be useful when you have to label objects from right to left, e.g. if prints are made on transparent materials and should be legible from the opposite side.







The parameter defines the direction in which the printer should travel to make a print.

-  - the printer prints when it moves left and right.
-  - the printer prints when it moves right. The system automatically detects the printer's backward movement and interrupts printing. When the printer returns to the rightward movement, printing is resumed from where the backward move occurred.
-  - the printer prints when it moves left only. The system automatically detects the printer's backward movement and interrupts printing. When the printer returns to the leftward movement, printing is resumed from where the backward move occurred.
-  - the printer prints when it moves left or right. The direction of printing is selected by the first move of a roll. Printing continues in the direction originally selected only. The system automatically detects the printer's backward movement and interrupts printing. When the printer returns to the original movement, printing is resumed from where the backward move occurred.



The lower roll in the printer must be permanently in contact with a surface to be labeled to ensure that ink is ejected precisely at the point where the backward move occurred and printing paused.

Examples of applications of selected project parameters:

- **A** - width of a project in the project editor window (the project parameter **Project width**),
- **A'** - real width of a project (when the blank space after the last column is removed),
- **B** - initial distance for a print (the project parameter   **Initial distance**),
- **C** - space between the beginnings of consecutive project reprints (the project parameter   **Print spacing**),
- The number of project reprints (the project parameter   **Printout repetition**) is 3,
- **Px** - project reprints (e.g. **P1, P1, P1**) of exactly identical contents.

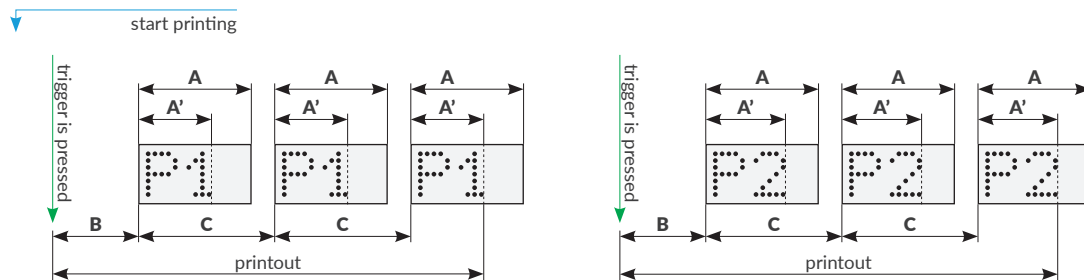



Fig. 26.

5.4.2. CREATING / EDITING A TEXT OBJECT

Text objects | **T** | are sets of alphabetic characters (including national characters), digits and additional characters.




5.4.2.1. COMMON PARAMETERS OF TEXT OBJECTS



The following parameters are common to text objects | **T** |, including **Normal text** , **Date/Time** , **Counter** , **Communications port**  and **Text file** -type objects:

Parameter	Range of settings
 ► Font name	List of available fonts

The font that is used for generating a text object | **T** |.


Text objects | **T** | can be generated using the following fonts:

- **matrix fonts (*.xml)**; marked with  on the font list,
- **TrueType (*.ttf)**; marked with the sign  (default fonts) or  (user fonts) on the font list.

The fonts that are used most frequently can be marked as “favorite” . Owing to that they will be displayed at the beginning of the font list. Use the  icon to add / delete the selected font to / from the “favorite” list.



Additional fonts can be imported to the printer using the **font manager** available in the **EBS Web User Interface**.

 ► Line spacing	0 to 20
---	---------



Space (a number of rows) between text lines within one text object | **T** |.

 ► Pre-print processing script	none, list of available scripts
--	---------------------------------


Select a script to process contents of a text object | **T** | before a project is printed.



Before it is used in a project, a script must be saved to the folder at `\\printer's_IP_address\UserDisk\CustomData` in the printer's internal memory. The internal memory is accessible via the SMB protocol.

The **printer's_IP_address** is available when you press  ►  ► .

For matrix fonts  only:


Parameter	Range of values
 ► Letter spacing	

Number of empty columns between characters within one text object | **T** |.

 ► Row multiplicity	
---	--

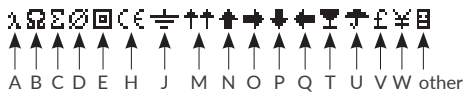
The number that defines how many times every column in an object is to be repeated.

The parameter is used for increasing intensity of prints on porous materials, which easily absorb ink, on which printed signs are scarcely visible due to their granular structure.

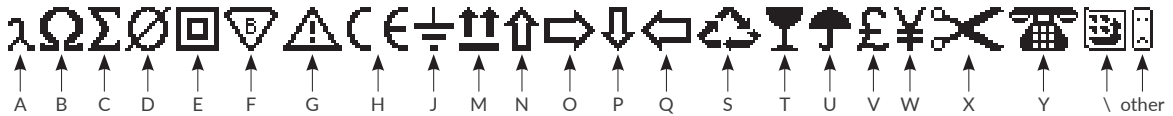
If matrix fonts  are used for generating special characters (**Spec_7**, **Spec_16**, **Spec_25**), the creation of a given character requires that the capital letter corresponding to that character be entered while object contents are added.

The following table contains the list of special characters and corresponding letters.

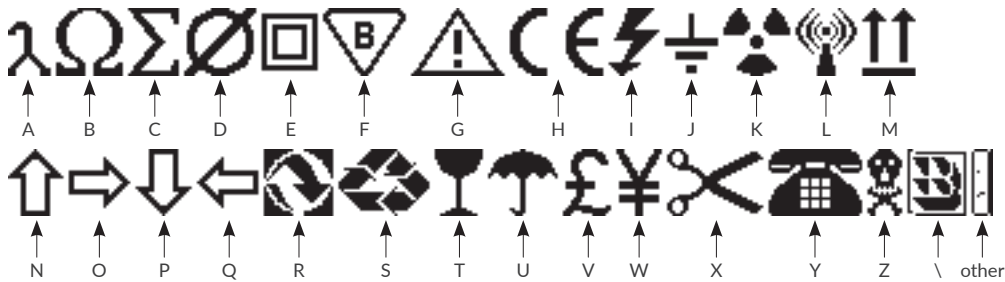
Spec_7



Spec_16



Spec_25



For TrueType fonts / only:

Parameter	Range of settings
Font size	
If Constrain font proportions: <input checked="" type="checkbox"/> the parameter Font size is used for setting font height (or a number of horizontal rows). To keep the dimensions in proportion, the font width is determined automatically.	
If Constrain font proportions: <input type="checkbox"/> , the font width (a number of vertical rows) and the font height (a number of horizontal rows) are set separately.	
Constrain font proportions	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Proportional character scaling, <i>i.e.</i> keeping the character width and height in proportion.	


For **Normal text**-type objects only:

Parameter	Range of settings
Object linked	No, list of text objects or Barcode
You can clone the value of an object selected from the drop-down list box. Another text object or a barcode, which is created in a given project, can be an object linked.	
Edit text before printing is started	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Data can be entered immediately before the project is printed.	





For **Counter**-type objects only:

Parameter	Range of settings
Edit counter before starting printing	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Data can be entered immediately before the project is printed.	

5.4.2.2. CREATING / EDITING A **NORMAL TEXT**-TYPE TEXT OBJECT


A **Normal text**-type text object  enables the user to add to a project an **ASCII** character text whose content is invariable.

To create a **Normal text**-type text object :


1. Press  ► |  | ► .
2. Enter contents of the object (|  | ► **Text**).
3. Set object parameters.




For more details about the parameters that are common to all objects see “[5.2.1. Common Parameters of All Objects](#)”.

For more details about the parameters that are common to text objects |  | see “[5.4.2.1. Common Parameters of Text Objects](#)”.

4. Press  to acknowledge.

The **Normal text** -type text object is created in the left top corner of the project.


5.4.2.3. CREATING / EDITING A **DATE/TIME**-TYPE TEXT OBJECT






The following can be added to a project using a **Date/Time**-type text object :

- The current date and / or time,
- A time that is set back or forward by a certain offset relative to the current time,
- A date that is shifted by a certain offset, or a so called **expiration date**.

To create a **Date/Time**-type text object :

1. Press  ► |  | ► .

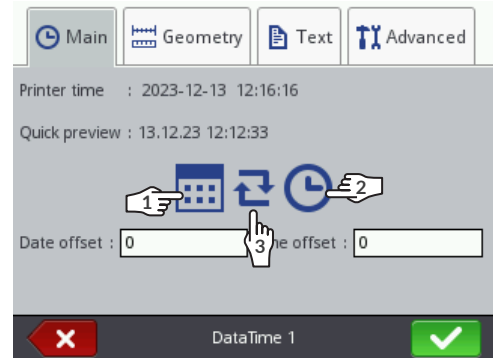
In the sheet tab |  |, the following are displayed in sequence:

- The date and time currently set in the printer,
 - A quick preview of the contents of the **Date/Time**-type object ,
 - The composition of the object and the sequence of object items (only date, only time, date and time, time and date).
2.  Press  to turn the date on / off.
 3.  Press  to turn the time on / off.




At least one of the above-mentioned items (date, time) must remain turned on.

4.  Press  to change the sequence of items.




5. Set the parameters that are specific to the **Date/Time**-type object .

Parameter	Range of settings
-----------	-------------------

|  | ▶ **Date offset** -7300 to 7300

Date offset relative to the current date (to define an expiration date).

If the value of 0 is entered, the current date is printed.


|  | ▶ **Time offset** -24 to 24


Time offset relative to the current time.

If the value of 0 is entered, the current time is printed.

A time offset can involve a date offset. If you move the time back or forward, the calendar day may change at a time different from 00:00 (e.g. at 6 am, when the shift changes in a factory).

|  | ▶ **Allow formatting string editing** /






Advanced modification of date and time formats to customize the object using the |  | ▶ **Formatting string** parameter.

|  | ▶ **Date separator** „.”, „.”, „-”

The parameter is available only if |  | ▶ **Allow formatting string editing**: .

Character that separates consecutive date items from each other.



The default date separator for newly created **Date/Time**-type objects  can be set by pressing  ▶  ▶  ▶ |  | ▶ **Date separator**.






|  | ▶ **Date format**

DD:MM:YY, MM:DD:YY, DD:MM:YYYY, MM:DD:YYYY, YYYY:DD:MM, YYYY:MM:DD, YY:DD:MM, YY:MM:DD

The parameter is available only if |  | ▶ **Allow formatting string editing**: .

Select one of predefined date formats.



The default date format for newly created **Date/Time**-type objects  can be set by pressing  ▶  ▶  ▶ |  | ▶ **Date format**.






|  | ▶ **Time separator**

„.”, „.”

The parameter is available only if |  | ▶ **Allow formatting string editing**: .

Character for separating successive time items from each other.



The default time separator for newly created **Date/Time**-type objects  can be set by pressing  ▶  ▶  ▶ |  | ▶ **Time separator**.






|  | ▶ **Time format**


HH:MM:SS, HH:MM

The parameter is available only if |  | ▶ **Allow formatting string editing**: .



Select one of predefined date formats.



The default time format for newly created **Date/Time**-type objects  can be set by pressing  ▶  ▶  ▶ |  | ▶ **Time format**.

Parameter	Range of settings
 ► Formatting string	


The parameter is available only if |  | ► **Allow formatting string editing:** .

With the |  | ► **Date format** and |  | ► **Time format** parameters, you can only select predefined date and / or time formats. A formatting string enables the user to precisely customize date and / or time formats using date and time items. The date and time items that can be used as part of formatting strings are described further in this chapter.


6. Set the other parameters of the text object |  |.



For more details about the parameters that are common to all objects see “5.2.1. Common Parameters of All Objects”.

For more details about the parameters that are common to text objects |  | see “5.4.2.1. Common Parameters of Text Objects”.

7. Press  to acknowledge.

The **Date/Time** -type text object is created in the left top corner of the project.

Formatting string: date and time items


A formatting string can consist of the date and time items described in the following table and of any other characters. The date and time items are replaced with relevant values during printing. The other characters are printed unchanged.

The names of days of the week and the names of months are printed in English.

Item	Meaning
%a	3-letter abbreviation for the name of a day of the week (Mon, ..., Sun).
%A	Full name of a day of the week (Monday, ..., Sunday).
%b	3-letter abbreviation for the name of a month (Jan, ..., Dec).
%B	Full name of a month (January, ..., December).
%c	Date and time in the format: 3-letter abbreviation for the name of a day of the week, 3-letter abbr. for the name of a month, number of a day of the month, hours, minutes, seconds, a year.
%C	Number of a century.
%d	2-digit number of a day of the month (01, ..., 31).
%D	Date in mm/dd/yy format.
%e	Number of a day of the month (1, ..., 31).
%F	Date in yyyy-mm-dd format.
%g	Last two digits of the year.
%G	4-digit number of a year.
%h	3-letter abbreviation for the name of a month (Jan, ..., Dec).
%H	2-digit hour in 24-hour system (00 to 23).
%I	2-digit hour in 12-hour system (01 to 12).
%j	3-digit number of a day of the year (001, ..., 366).
%k	Hour in 24-hour system (0 to 23).
%l	Hour in 12-hour system (1 to 12).
%m	2-digit number of a month (01 to 12).
%-m	Number of a month (1 to 12).















Item	Meaning
%M	2-digit minute (00 to 59).
%p	Local equivalent to AM or PM (empty for many languages).
%P	Local equivalent to am or pm (empty for many languages).
%r	Time in 12-hour system in the format of hh:mm:ss [AM] or [PM].
%R	Time in 24-hour system in hh:mm format.
%s	Unix timestamp, <i>i.e.</i> the number of seconds counted since the beginning of 1970.
%S	2-digit second (00, ..., 60); 60 means a leap second.
%T	Time in 24-hour system in hh:mm:ss format.
%u	Number of a day of the week (1, ..., 7); 1 means Monday.
%U	2-digit number of a week in the year (00, ..., 53); Sunday begins the week.
%V	2-digit number of a week in the year (01, ..., 53); Monday begins the week.
%w	Number of a day of the week (0, ..., 6); 0 means Sunday.
%W	2-digit number of a week in the year (00, ..., 53); Monday begins the week.
%x	Local representation of the date.
%X	Local representation of the time.
%y	Last two digits of the year; as for %g.
%1y	First digit of a 4-digit number of the year.
%2y	Second digit of a 4-digit number of the year.
%3y	Third digit of a 4-digit number of the year.
%4y	Fourth digit of a 4-digit number of the year.
%Y	4-digit number of a year; as for %G.
%z	Time zone in numerical format (<i>e.g.</i> +0100).
%Z	Name of the time zone (<i>e.g.</i> EDT).

5.4.2.4. CREATING / EDITING A **COUNTER**-TYPE TEXT OBJECT

With a **Counter**-type text object  you can provide a project with automatic customized numbering.

A counter may consist of up to three identical sections connected in cascade. Each of the sections may be visible or hidden. The sequence of section incrementation can be changed, that is you can define which section shall be timed first and in what sequence the following sections shall be timed.




To create a **Counter**-type text object :


1. Press  |  | .
2.  Press |  |  |  / |  |  |  to select a sequence of incrementation of counter sections.
3.  In sheet tab |  |, select the counter sections that shall be visible ( / ).



Although a given section is not displayed / printed, it is included in the count anyway.




4. Set parameters of each of the counter sections (|  | ►, |  | ►, |  | ►).

A **Counter**-type object  consists of three sections. Each section has an identical set of parameters which can be modified independently.

Parameter	Range of settings
Min	-2147483648 to 2147483647
The parameter has the following meanings:	
<ul style="list-style-type: none"> - Value from which the incremental counter starts recounting (after an overflow), - Value at which decremental counting finishes and the counter overflows, - Value from which counting starts if Start mode = Min. 	
Max	-2147483648 to 2147483647
The parameter has the following meanings:	
<ul style="list-style-type: none"> - Value from which the decremental counter starts recounting (after an overflow), - Value at which incremental counting finishes and the counter overflows, - Value from which counting starts if Start mode = Max. 	
Start mode	Min, Max, Start value, Last value

Select a value to start counting from:


- **Min**: counting starts from the value given with the **Min** parameter both when project printing starts for the first time and when printing is resumed.
- **Max**: counting starts from the value given with the **Max** parameter both when project printing starts for the first time and when printing is resumed.
- **Start value**: counting starts from the value given with the **Start value** parameter both when project printing starts for the first time and when printing is resumed.
- **Last value**: when project printing starts for the first time, counting starts from the value given with the **Start value** parameter, and when printing is resumed, counting continues, *i.e.* it starts again from the sum of the values given with the **Last value** and **Step** parameters.

Parameter	Range of settings
Start value	-2147483648 to 2147483647
The parameter has the following meanings:	
<ul style="list-style-type: none"> - Initial value of the counter if Start mode = Start value, - Value from which counting starts when project printing starts for the first time if Start mode = Last value. 	
Last value	information parameter
Last printed value of the counter.	
The Last value parameter can be restored to its initial value by pressing the  icon in the project editor window.	
Step	-2147483648 to 2147483647
Counter step; if	
<ul style="list-style-type: none"> - A positive number is entered, counting up takes place (an incremental counter). - A negative number is entered, counting down takes place (a decremental counter). 	
Length	1 to 9
Number of counter positions, e.g. if Length = 3 , the counter uses three positions to do the counting (... , 003, 004, ..., 999, ...).	
Fill in	0, Space
Character that replaces meaningless counter digits, e.g. "002" or "_ _2" (the character _ means a space).	
Suffix	
Any character string to be printed after the counter section.	

5. Set the other parameters of the text object |  |.



For more details about the parameters that are common to all objects see ["5.2.1. Common Parameters of All Objects"](#).

For more details about the parameters that are common to text objects |  | see ["5.4.2.1. Common Parameters of Text Objects"](#).

6. Press  to acknowledge.

The **Counter** -type text object is created in the left top corner of the project.

5.4.2.5. CREATING / EDITING A **COMMUNICATIONS PORT**-TYPE TEXT OBJECT

Use a **Communications port**-type text object  to add the data received from an external device (e.g. a computer, automatic scales, a bar code reader) to a project via:

- **Bluetooth**®,
- **RS-232** (via a **USB** port). There is no physical **RS-232** connector in the printer therefore to connect an external device you need to apply a **USB to RS-232** converter,



For detailed information about optional equipment contact an authorized representative of **EBS Ink Jet Systeme GmbH**.

- **WIFI**.





Data can be transferred from an external device to the printer when:


- The device is connected to the connector of an appropriate printer interface,
- The interface is correctly set up.



For more details on how to configure communications interfaces see **"7.6. Configuring Communication Interfaces"**.

To create a **Communications port**-type text object :





1. Press  |  | .
2. Set the parameters that are specific to the **Communications port**-type object .

Parameter	Range of settings
  Port	Bluetooth, COM, Socket1 to Socket9


The interface through which data is transferred from an external device:

- **Bluetooth**: data is transferred via **Bluetooth**®,
- **COM**: data is transferred by means of a **USB to RS-232** converter (via a **USB** port),
- **Socket1 to Socket9**: data is transferred by means of a selected **TCP/IP** socket (via **WIFI**).



The printer offers 9 different sockets, for transferring data via **WIFI**. This means that up to 9 separate **Communications port**-type objects  can be added to a project and the objects can be used for printing various data. The information about **WIFI** (such as the **IP** address of the printer) that is necessary for correct transfer of data to the printer is available by pressing  |  | .

  Baud rate [bps]	1200 to 230400
--	-----------------------


The parameter is available only if  |  **Port** = **COM**.

Rate at which data is transferred.

  Bit count	7, 8
--	-------------

The parameter is available only if  |  **Port** = **COM**.

The number of data bits.


Parameter	Range of settings
 ► Expert settings	<input checked="" type="checkbox"/> / <input type="checkbox"/>

Activate advanced settings for a **Communications port** object .

If |  | ► **Expert settings**: then:

- The additional sheet tabs |  **Advanced**| and |  **Separators**| are available,
- The parameters |  | ► **Prefix** and |  | ► **Suffix** are not available.

|  | ► **Prefix**

The parameter is available only if |  | ► **Expert settings**: .

Any character string to be printed before the data received from an external device.

|  | ► **Suffix**

The parameter is available only if |  | ► **Expert settings**: .

Any character string to be printed after the data received from an external device.

|  **Communication**| ► **Messages format** Normal, Hexadecimal


Format of data transferred from an external device:


- **Normal**: data is transferred as **ASCII** codes.
- **Hexadecimal**: data is transferred as hexadecimal codes.



|  **Communication**| ► **Data buffering** Enabled, Disabled

Gather successive data portions received from an external device:

- **Enabled**: consecutive, complete data portions (see the description of the **Ready to print after** parameter) received from an external device are stored in printer buffer.
The buffered data is printed in the order in which it is stored (the FIFO queue). When all buffered data is printed out, the printer responds according to the setting of the **No-data action** parameter.
- **Disabled**: every consecutive, complete data portion (see the description of the **Ready to print after** parameter) received from an external device overwrites the previous data portion that has not been printed yet.
If there are no successive data portions, the printer responds according to the setting of the **No-data action** parameter.


|  **Communication**| ► **No-data action** Do nothing, Print blank object, Print last message

Response of the printer to triggering printing of a project that contains a **Communications port**-type object  if no data has been received from an external device or the data received is incomplete (see the description of the **Ready to print after** parameter):

- **Do nothing**: the project is not printed; an error message is displayed.
- **Print blank object**: the project is printed; the **Communications port**-type object  remains empty.
- **Print last message**: the project is printed; the **Communications port**-type object  is filled with the last, correct data portion, or if the project is printed for the first time, the object remains empty.

Parameter	Range of settings
 Communication ▶ Ready to print after	Time interval [ms], Data count, End character, Separators data collected

Mode by which the printer confirms whether a data portion received from an external device is complete or not:

- **Time interval [ms]**: the printer receives a data portion over a certain period defined in the **Time interval [ms]** parameter.
- **Data count**: the printer receives a data portion consisting of characters whose number is given with the **Data count** parameter.
- **End character**: the printer receives a data portion until the character given with the **End character** parameter is obtained.
- **Separators data collected**: the printer receives a data portion until it obtains separators whose number is defined with the parameter |  **Separators** | ▶ **Separator data count**.

 Communication ▶ ASCII code	<input checked="" type="checkbox"/> / <input type="checkbox"/>
--	--

The parameter is available only if **Ready to print after** = **End character**.

Decide whether the end-of-data mark is defined by the code of an **ASCII** character or by the **ASCII** character.

 Separators ▶ Separator data count	1 to 13
---	---------

The parameter is available only if |  | ▶ **Expert settings**: .

Number of data separators to be expected.

 Separators ▶ Separator character	
--	--

The parameter is available only if |  | ▶ **Expert settings**: .

Character defining a data separator.

 Separators ▶ ASCII code	<input checked="" type="checkbox"/> / <input type="checkbox"/>
---	--

The parameter is available only if |  | ▶ **Expert settings**: .


Decide whether the separator symbol is defined by the code of an **ASCII** character or the **ASCII** character.

 Advanced ▶ On print start	none, string
---	--------------

The parameter is available only if |  | ▶ **Expert settings**: .

Data sent from the printer to an external device when you **start printing** a project that contains a **Communications port**-type object , i.e. immediately after you press the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen:


- **none**: the printer sends no data,
- **string**: the printer sends the data that is in the box **On print start**.



Parameter	Range of settings
 Advanced ► On data process	none, string



The parameter is available only if |  | ► **Expert settings:** .

Data sent from the printer to an external device when you **trigger printing** of a project that contains a **Communications port**-type object .


- **none**: the printer sends no data,
- **string**: the printer sends the data that is in the box **On data process**.



 Advanced ► On print finish	none, string
--	--------------

The parameter is available only if |  | ► **Expert settings:** .

Data sent from the printer to an external device when you **pause printing** of a project that contains a **Communications port**-type object  i.e. immediately after you press the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen:

- **none**: the printer sends no data,
- **string**: the printer sends the data that is in the box **On print finish**.

 Advanced ► Formatting string	
--	--


The parameter is available only if |  | ► **Expert settings:** .

Advanced way of formatting data transferred from an external device to the printer; the parameter defines how the transferred data shall be interpreted by the printer.

Marks used by a formatting string:

%d - number,

%s - character string.


 Advanced ► Script name	none, list of available scripts
--	---------------------------------

The parameter is available only if |  | ► **Expert settings:** .

Select a script to process data received by the communications interface.




Before it is used in a project, a script must be saved to the folder at `\\printer's_IP_address\UserDisk\CustomData` in the printer's internal memory. The internal memory is accessible via the SMB protocol.

The **printer's_IP_address** is available when you press  ►  ► .


3. Set the other parameters of the text object |  |.




For more details about the parameters that are common to all objects see [“5.2.1. Common Parameters of All Objects”](#).

For more details about the parameters that are common to text objects |  | see [“5.4.2.1. Common Parameters of Text Objects”](#).

4. Press  to acknowledge.

The **Communications port** -type text object is created in the left top corner of the project.





5.4.2.6. CREATING / EDITING A **TEXT FILE**-TYPE TEXT OBJECT






































With a **Text file**-type text object  you can add the contents of a text file to a project.



Before a text file is used in a project, it must be imported to the printer via the **text file manager** available in the **EBS Web User Interface**.

To create a **Text file**-type text object :

1. Press  |  | .
2. Set the parameters that are specific to the **Text file**-type object .

Parameter	Range of settings
  File path	
Indicate the name of a text file from among those available in the printer.	
  Line count	1 to 10, All
Number of text lines to be added to an object from a text file.	
If All is selected, all text lines limited with the values of the   Line start value and   Line maximum value parameters are added to the object.	
  Line step	1 to 50
Number of lines, by which the text file data shifts each time a consecutive print is made.	
If the value of the Line step parameter is smaller than the value of the   Line count parameter, the data shifts by the value of the   Line count parameter.	
  Line maximum value	1 to 1000000
Number of the last text-file line to be printed.	
  Start mode	Start value, Last value
Indicate which text-file line is read in after printing resumption:	
<ul style="list-style-type: none"> - Start value: the line whose number is given with the   Line start value parameter is read in, <i>i.e.</i> printing starts from the beginning. - Last value: the line whose number is the sum of the values given with the   Line last value and   Line step parameters is read in, <i>i.e.</i> printing continues. 	
  Line start value	1 to 1000000
The parameter has the following meanings:	
<ul style="list-style-type: none"> - Number of a line to be read in from a text file when project printing starts for the first time regardless of the value of the   Start mode parameter, - Number of a line to be read in from a text file when the end of the file is reached or when the value of the   Line maximum value parameter is reached if that value is smaller than the number of the lines in the file, - Number of a line to be read in from a text file after printing resumption, if   Start mode = Start value. 	
  Line last value	information parameter
Number of a line printed as the last. The parameter is used when printing is resumed, if   Start mode = Last value .	
The Line last value parameter can be restored to its initial value by pressing the  icon in the project editor window.	

- Set the other parameters of the text object | **T** |.



For more details about the parameters that are common to all objects see “5.2.1. Common Parameters of All Objects”.

For more details about the parameters that are common to text objects | **T** | see “5.4.2.1. Common Parameters of Text Objects”.

- Press to acknowledge.

The **Text file** -type text object is created in the left top corner of the project.

5.4.3. CREATING / EDITING A SHAPE

The group of shapes | | includes the following objects:

- Line** ,
- Rectangle** ,
- Ellipse** .

5.4.3.1. CREATING / EDITING A LINE-TYPE SHAPE

To create a **Line**-type shape :

- Press | | .
- Set the parameters that are specific to the **Line**-type object .

Parameter	Range of settings
Line width	1 to 30
Thickness of a line to be drawn; given as a number of dots.	

- Set the other parameters of the object.



For more details about the parameters that are common to all objects see “5.2.1. Common Parameters of All Objects”.

- Press to acknowledge.

The **Line** -type shape is created in the left top corner of the project.


5.4.3.2. CREATING / EDITING A RECTANGLE-TYPE SHAPE

To create a **Rectangle**-type shape :

- Press | | .
- Set the parameters that are specific to the **Rectangle**-type object .

Parameter	Range of settings
Filled	/
Define whether the rectangle shall be filled or only its outline shall be printed.	
Invert	/
Define whether the common parts of the rectangle and the objects that are under the rectangle shall be printed or not.	



Parameter	Range of settings
 ▶ Line width	1 to 30

Thickness of the rectangle outline; given as a number of dots.

- Set the other parameters of the object.







For more details about the parameters that are common to all objects see [“5.2.1. Common Parameters of All Objects”](#).

- Press  to acknowledge.

The **Rectangle** -type shape is created in the left top corner of the project.


5.4.3.3. CREATING / EDITING A **ELLIPSE**-SHAPE

To create an **Ellipse**-type shape :

- Press  ▶ |  | ▶ .
- Set the parameters that are specific to the **Ellipse**-type object .

Parameter	Range of settings
 ▶ Filled	<input checked="" type="checkbox"/> / <input type="checkbox"/>

Define whether the ellipse shall be filled or only its outline shall be printed.

 ▶ Invert	<input checked="" type="checkbox"/> / <input type="checkbox"/>
---	--

Define whether the common parts of the ellipse and the objects that are under the ellipse shall be printed or not.



 ▶ Line width	1 to 30
---	---------

Thickness of the ellipse outline; given as a number of dots.

- Set the other parameters of the object.




For more details about the parameters that are common to all objects see [“5.2.1. Common Parameters of All Objects”](#).

- Press  to acknowledge.


The **Ellipse** -type shape is created in the left top corner of the project.

5.4.4. CREATING / EDITING THE OTHER OBJECTS





The other objects |  | are of the following types:



- **Barcode** ,
- **Image** ,
- **Line divider** .

5.4.4.1. CREATING / EDITING A **BARCODE**-TYPE OBJECT

Use a **Barcode**-type object  to add to a project: a 1-dimensional (**1D**) bar code or a 2-dimensional (**2D**) matrix code whose content is static.



The **EBS Web User Interface** can also be used for creating bar / matrix codes whose content is dynamic and that are graphic interpretation of text objects such as **Date/Time** , **Counter** , **Communications port**  and **Text file** .

To get a 2-dimensional (**2D**) matrix code whose width and height are equal set resolution in a horizontal direction (the project parameter  |  | ► **Resolution**) at the same value as resolution in the vertical direction i.e. at about **550 dots/meter**.



For more details see sections "[5.4.1. Project Parameters](#)".


To create a **Barcode**-type object :


1. Press  ► |  | ► .
2. Select a type of code (|  | ► **Barcode type**).

The following types of codes are available:


- **1D** codes: EAN-13, EAN-8, EAN-8 + EAN-2, EAN-8 + EAN-5, EAN-13 + EAN-2, EAN-13 + EAN-5, Code25 Industrial, Code 25 Interleaved, GS1-128 (UCC/EAN-128), Code 128, ITF-14, EAN-2, EAN-5, EAN-5 + EAN-2, Code 11, Code 25 IATA, Code 25 Data Logic, Code 39, Code 39 Extended, Codabar, Leitcode, Identcode, Code 16k, Code 93, GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, Telepen Alpha, UPC-A, UPC-E, PostNet, MSI Plessey, Pharmacode One-Track, Pharmacode Two-Track, PZN, Australia Post 4-State, Royal Mail 4-State (RM4SCC),
- **2D** codes: 2D:Data Matrix, 2D:PDF417, 2D:PDF417 Truncated, 2D:QR Code, 2D:MicroPDF417.




When a type of code is selected, an example of the code of the selected type is displayed in the sheet tab |  |, together with basic information such as:
- a set of characters / signs that can be used in the code of the selected type,
- code length,
- basic description of the code.

3. Enter a content of the code (|  | ► **Text**).

The code content must meet the requirements of the selected type of code (characters / signs out of an applicable set, a required code length). If the entered code content

is unsuitable for the selected type of code, the background of the text box changes its color to red. In such a case, the code content must be corrected to allow you to create a **Barcode**-type object .

4. Set the parameters that are specific to a **Barcode**-type object .

Parameter	Range of settings
 ► Enable resizing	<input checked="" type="checkbox"/> / <input type="checkbox"/>


The parameter is available for selected bar / matrix codes.

Code scaling.

 ► Signature	<input checked="" type="checkbox"/> / <input type="checkbox"/>
--	--

The parameter is available for selected bar codes.

Add a caption under a 1-dimensional bar code. The caption is part of the code contents.

 ► Border type	none, bind, box
--	-----------------

The parameter is available for selected bar / matrix codes.

Type of code frame; the parameter is available to selected codes:

- **none**: no frame,
- **bind**: frame lines on the top and bottom of the code only,
- **box**: frame lines around the code.

 ► Border size	0 to 10
--	---------

The parameter is available only if |  | ► **Border type** is different from **none**.

Thickness of the code frame lines; given as a number of dots.

 ► Edit text before printing is started	<input checked="" type="checkbox"/> / <input type="checkbox"/>
---	--

Possibility of entering data just before the project is printed.

5. Set the other parameters of the object.




For more details about the parameters that are common to all objects see ["5.2.1. Common Parameters of All Objects"](#).

6. Press  to acknowledge.

The **Barcode**-type object  is created in the left top corner of the project.







5.4.4.2. CREATING / EDITING AN **IMAGE**-TYPE OBJECT

With an **Image**-type object  you can add a graphics file containing any graphics, drawing or logo to a project.






*Before a graphics file is used in a project, it must be imported to the printer via the **image manager** available in the **EBS Web User Interface**. Only a graphics file in ***.png** format can be added to a project. It is recommended that monochromatic (black and white) images be used.*

To create an **Image**-type object :


1. Press  |  | .
2. Select a graphics file from among those available in the printer (|  | ► **Image path**).
A preview of the selected graphics file is available in the graphics file manager window.
3. Press  to acknowledge the selection of the graphics file.
The preview of the selected graphics file is displayed in the sheet tab |  |.
4. Set the other parameters of the object.







*For more details about the parameters that are common to all objects see **"5.2.1. Common Parameters of All Objects"**.*


5. Press  to acknowledge.
The **Image** -type object  is created in the left top corner of the project.




5.4.4.3. CREATING / EDITING A **LINE DIVIDER**-TYPE OBJECT

A **Line divider**-type object  enables you to make prints of several texts in consecutive lines or in various places on a surface quickly. The project section that follows a line divider is printed after the trigger has been pressed.


To create a **Line divider**-type object :

1. Press  |  | .
2. Set the parameters that are specific to the **Line divider**-type object .

Parameter	Range of settings
 ► Position	
Position of an object in a project; the horizontal coordinate (X). Point at which printing pauses and then resumes when the trigger is pressed again.	



3. Press  to acknowledge.
The **Line divider**-type object  is created in the project and its position is defined by the parameter |  | ► **Position**.




*The **Line divider**-type object  is shown in the project editor window as a vertical, light blue line of maximum height.*

5.5. SAVING A PROJECT




The currently edited project can be saved in the editor in two ways:

-  - save the project with its existing name or a new name; the project editor is not exited,
-  - save the project with its existing name and exit the project editor.




The  icon is available only when contents of the project being edited or project parameters have been modified. If modifications are made, the project name is displayed in yellow.

To save the project with a different name:

1. Press  in the project editor window.
The project library is displayed. The project with the name currently displayed is selected by default.
2. Enter a new project name or leave the current name unchanged.
3. Press  to acknowledge.
If the current name is still to be used, a dialog box is displayed where you are requested to acknowledge that the project should be overwritten.
4. Press  to acknowledge.
The project editor window is displayed again.
The project is saved with the selected name.

To save the project with its current name and exit the project editor:

1. Press  in the project editor window.
The project editor is closed.
The window from which the project editor has been called is displayed.
The project is saved with its current name.

On saving the project open for printing / being printed, you are requested to acknowledge in the dialog box displayed whether the project open for printing / being printed shall be reloaded or not.

5.6. PROJECT RECOVERY

If the printer shuts down (e.g. in emergency shutdown mode) while an unsaved project is being edited, the recovery tool starts running after printer restart and opening of the project for editing.

With the tool you can decide which version of the project shall be saved:

- original version,
- rescue copy.

If the original version is selected, the rescue copy is deleted and the original project remains unchanged.

If the rescue copy is selected, it can be saved as a project with any name.

5.7. CHANGING A PROJECT NAME



To change a project name:

1. Press  or  **Project** ►  **Create project** or  **Project** ►  **Edit project**.

The project library is displayed.



For more details about the project library see "5.9. Managing Projects".

2. Press  to move to the file and folder manager.
3. Select a project whose name you wish to change; a project can be selected in both the left and right manager windows.
4. Press .



The name of the project that is open for printing / being printed cannot be changed, of which is the message in the dialog box informs.

The virtual keyboard and the current name of the project are displayed.

5. Enter a new project name.

If a new project name is the same as the name of an existing project, then the existing project is replaced with the current one.

6. Press  to acknowledge.

The file and folder manager is displayed again.

The name of the selected project is changed.

5.8. DELETING A PROJECT

The function is used for deleting permanently a selected project (or selected projects) from printer memory.



To delete a project:

1. Press  or  **Project** ►  **Create project** or  **Project** ►  **Edit project**.

The project library is displayed.



For more details about the project library see "5.9. Managing Projects".

2. Press  to move to the file and folder manager.
3. Select a project that you wish to delete; a project can be selected in both the left and right manager windows.
4. Press .



The project that is open for printing / being printed cannot be deleted, of which the message in the dialog box informs.

A dialog box with the request to acknowledge the operation is displayed.

5. Press  to acknowledge.

The file and folder manager is displayed again.

The selected project is deleted.

5.9. MANAGING PROJECTS

Projects are managed via the project library, which is called by pressing:



or



or

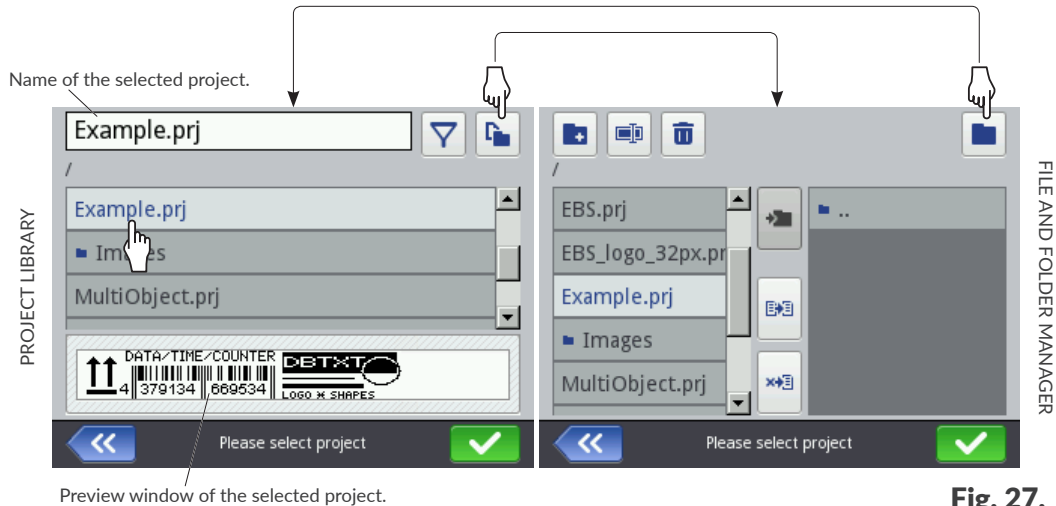


Fig. 27.

All folders and projects (*.prj files) stored in printer memory are displayed in the project library window.

You can switch between the project library and the file and folder manager using the and icons.

The icons that are available in the project library:



The list of projects displayed in the project library can be narrowed down with the filter (see Fig. 27 on page 92). If the filter contains a text, then the projects whose names match the filter are displayed in the library and the filter icon is displayed in inverted colors .



- exit the project library,



- acknowledge an operation (such as open a project for printing, edit a project).

The icons that are available in the file and folder manager:



- create a new folder,



- change the name of the selected project or folder,



- delete a selected project or folder,



- move to the project library,



- move to the contents of the selected folder or return to the parent folder,



- copy the selected project or folder,



- carry the selected project or folder,



- exit the file and folder manager,



- acknowledge an operation (such as open a project for printing, edit a project).







CHAPTER 6

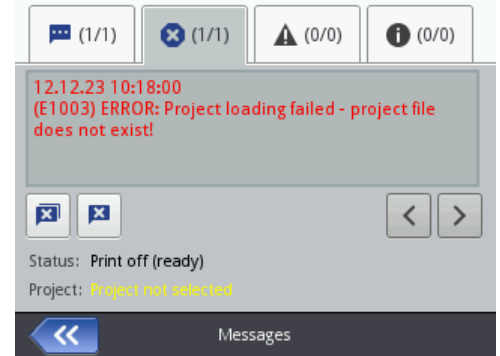
INFORMATION





6. INFORMATION

6.1. MESSAGE HISTORY





To get access to message history:




1. Press   
or
press  /  /  on status bar **A** (see [Fig. 11 on page 30](#)) on the main screen.



2. Select the group of messages you wish to view:
 - |  |: all messages.
 - |  |: error messages; the messages are displayed in red.
 - |  |: warning messages; the messages are displayed in yellow.
 - |  |: informational messages; the messages are displayed in green.

Messages are handled with the following icons:

-  Display the previous message.
-  Display the next message.
-  Delete a single message.
-  Delete all messages.

If there are no messages at a time, the message icons are inactive. The icon  /  /  on status bar **A** on the main screen is not displayed, either.

Every entry contains the following information:



For more information about messages see “9.1. Message Handling”.

- Unique message identifier independent of the selected interface language, e.g. E3000,
- Message content displayed in the interface language,
- Date of the first occurrence of the message.

6.2. STATISTICS

To get access to statistics:

1. Press  ►  ► |  |.

The following information is available in the window displayed:

- User report (number of hours worked, number of prints made),



The user report summarizes data for all users together. To get the report for a given user, the user report must be cleared after printer startup.

- Service report, i.e. general statistics (number of hours worked, number of prints made).





	Worktime	Printouts
User	102.75h	707
Service	329.11h	3299

Exploitation statistics

To clear the user report press |  | ►  **Clear user report.**

A wider scope of statistics is offered by the **EBS Web User Interface** editor.



*The scope of statistics available in the EBS Web User Interface editor can be modified by pressing  ►  ►  ► |  | ► **Statistics**. For more details see **"7.1. General Settings"**.*

6.3. PRINTER INFORMATION

To get printer information:

1. Press  ►  ► .

The following information is available in the window displayed:

- The manufacturer's address,
- The printer's serial number,
- System version.





HANDJET® EBS-260
 EBS Ink-Jet Systeme GmbH
 GERMANY • Alte Ziegelei 19-25
 D-51588 Nümbrecht-Elsenroth
 www.ebs-inkjet.com

Serial number : P120438000-246408
 System : 1.04.06
 New version : -

 Detailed information

Product Information

 For more detailed information about the printer press  **Detailed information**. Such information can be useful for diagnosing the printer, for example.

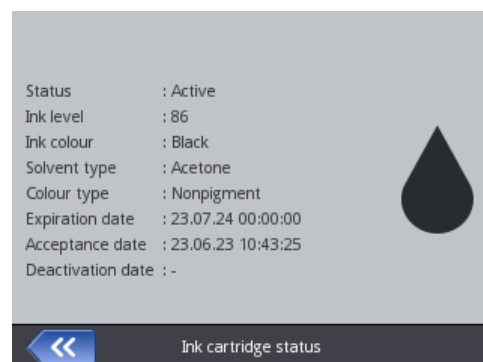
6.4. INK BOTTLE INFORMATION

To get access to information about the ink bottle in use:

1. Press  on status bar **A** (see [Fig. 11 on page 30](#)) on the main screen.

The following information is available in the window displayed:



- Container status,
- Approximate amount of the ink in the container [%],
- Color of the ink,
- Type of solvent (base),
- Type of coloring matter,
- Expiration date,
- Acceptance date,
- Deactivation date.



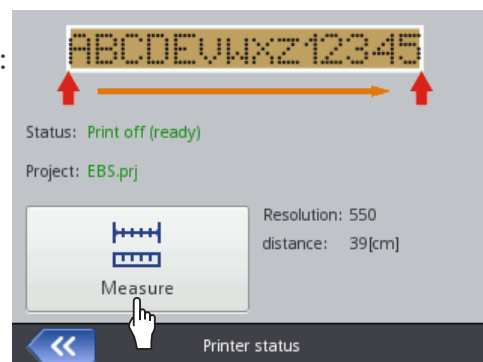
6.5. ADJUSTING PRINT RESOLUTION TO THE LENGTH OF A SURFACE TO BE LABELED



The printer is equipped with a practical tool, **Measure**, which is designed to adjust print resolution to the length of a surface to be labeled.

To adjust print resolution to the length of a surface to be labeled:


1. Open a project to be printed whose length needs adjusting.
2. Press and hold the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen, and when a drop-down menu occurs press .

The measuring tool is displayed (see the figure on the right).



3.  Press  to start measuring.
4. Put the printer to the place where a print is to start and press the trigger **6**.
5. Move the printer to the place where the print is to finish (the lower roll **3** must be in contact with the surface to be labeled all the time) and again press the trigger **6**.

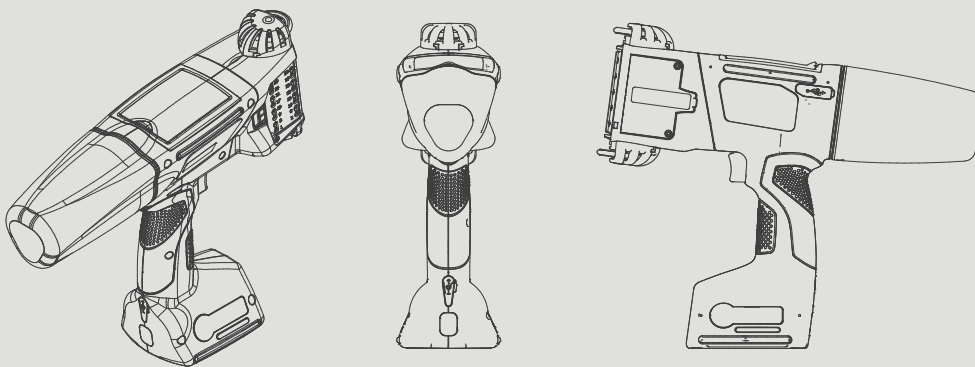
The measurement window shows the computed resolution of a printout to be made and the project length given in centimeters (the **distance** parameter).

6. Press  to save the settings.

Handjet[®]

EBS-260A USER MANUAL

DROP-ON-DEMAND Handheld, Portable, Cordless Printers
Original Instructions



Part 2 of 2



CHAPTER 7

PRINTER

CONFIGURATION




7. PRINTER CONFIGURATION


7.1. GENERAL SETTINGS

To modify general settings:

1. Press  ►  ►  ► |  |.

The general settings involve the following parameters:

Parameter	Range of settings
Autostart current project	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Decide whether immediately after startup the printer goes automatically into a Print on (waiting) state for the project that is open to be printed (<input checked="" type="checkbox"/>) or printing is to be started manually (<input type="checkbox"/>) .	
Skip line on trigger	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Decide whether the double pressing of the trigger causes skipping a project section that follows a mark or not while a project containing a Line divider -type object  is being printed.	
Laser	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Decide whether the laser that indicates the position of the lowest nozzle is to be turned on (<input checked="" type="checkbox"/>) or turned off (<input type="checkbox"/>) . The laser remains active from when a project is sent to be printed and the trigger is pressed until when printing of the project finishes.	
Statistics	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Decide whether the scope of statistics available in the EBS Web User Interface editor shall include the number of printouts of every project (<input checked="" type="checkbox"/>) or not (<input type="checkbox"/>) .	
Simple menu	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Decide whether the main screen is to be displayed in simplified form or not.	
	For more information see “3.2.5. Simple menu” .
	
Change the current date and time.	

2. Modify the selected parameter.
3. Press  to acknowledge.





The general settings are modified.


7.2. LOCAL SETTINGS

To modify local settings:


1. Press  ►  ►  ► |  |.

The local settings involve the following parameters:

Parameter	Range of settings
Language	
The language in which the user interface is displayed.	
Date format	DD:MM:YY, MM:DD:YY, DD:MM:YYYY, MM:DD:YYYY, YYYY:DD:MM, YYYY:MM:DD, YY:DD:MM, YY:MM:DD
Default date format for Date/Time -type text objects  .	
Date separator	„.”, „.”, „-”
Default date separator, that is the character that separates date items from each other in Date/Time -type text objects  .	
Time format	HH:MM:SS, HH:MM
Default time format for Date/Time -type text objects  .	
Time separator	„.”, „.”
Default time separator, that is the character that separates time items from each other in Date/Time -type text objects  .	

2. Modify the selected parameter.
3. Press  to acknowledge.



If the value of the parameter **Language** has been modified, then the user interface is restarted directly after the modification has been acknowledged with the  icon.

The local settings are modified.

7.3. SETTING THE CURRENT DATE AND TIME

To set the current date and time:

1. Press  ►  ►  ► |  | ► 

or

press the clock icon on status bar **A** on the main screen (see [Fig. 10 on page 29](#)).

2. Set date and time items using:

– the  /  icons

or

– the numeric keypad.

3. Press  to acknowledge.

The date and time are set.



7.4. CONFIGURING THE DISPLAY

To configure the display:

1. Press     .

The following parameters need setting to configure the display:

Parameter	Range of settings
Normal screen brightness	10, ..., 100 [%]

Brightness of the screen during the printer's normal operation.

Turn off screen after	never, 10 s, ..., 5 min
------------------------------	-------------------------

Idle time after which the display is off.



*If the printer is in an error state, the display is not turned off.
If the printer enters an error state while the display is blank, the display wakes up.
To wake up the blank screen touch the display in any place or press any key on the keyboard.*

Dim screen after	never, 10 s, ..., 5 min
-------------------------	-------------------------

Idle time after which the display will be dimmed to the percentage given with the **Dimmed screen brightness**.

Dimmed screen brightness	It is dependent on the value of the Normal screen brightness parameter
---------------------------------	---

Brightness of the screen after the expiration of the idle time given with the **Dim screen after** parameter.

When you press any point on the screen, brightness returns to normal.

Enable screen lock	<input checked="" type="checkbox"/> / <input type="checkbox"/>
---------------------------	--


Decide whether the protection of the screen against accidental touch is active () or not () , together with the screen going blank after the time defined with the parameter **Turn off screen after**.



For more details about the screen lock see "7.10. Screen Lock".

Printer turn off time	15 min, 30 min, 45 min, 60 min
------------------------------	--------------------------------

Idle time after which the printer shuts down.

2. Modify the selected parameter.
3. Press  to acknowledge.




The display is configured.


7.5. SOUND SIGNAL SETTINGS

To modify sound signal settings:

1. Press   .

The sound signal settings involve the following parameters:

Parameter	Range of values
  Enable sound	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Activate (<input checked="" type="checkbox"/>) / deactivate (<input type="checkbox"/>) sound signaling in the printer. When sound signaling in the printer is deactivated (<input type="checkbox"/>), the sound is totally turned off and detailed signaling settings are not available.	
  Error sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated when an error occurs.	
  Keyboard audio feedback	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated while any of the keyboard keys 9 are used (see Fig. 2 on page 14).	
  Touchscreen audio feedback	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated while the touch screen is used.	
  Message sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Activate (<input checked="" type="checkbox"/>) / deactivate (<input type="checkbox"/>) sound signals in sheet tab  .	
  Ink accept sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated after a bottle of ink has been approved.	
  Printer off sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated while the printer shuts down.	
  Start printing sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated while the first vertical row (column) of a project is being printed.	
  Stop printing sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated after the last vertical row (column) of a project has been printed.	
  Warning sound signal	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Activate (<input checked="" type="checkbox"/>) / deactivate (<input type="checkbox"/>) sound signals in the tab sheet  .	
  Battery low level warning sound	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated when the batteries are discharged to 4%.	
  Too fast printing sound warning	<input checked="" type="checkbox"/> / <input type="checkbox"/>
Sound signals generated when a maximum printing speed is exceeded.	

2. Set a value of the selected parameter.
3. Press  to acknowledge.


The sound signals are modified.

7.6. CONFIGURING COMMUNICATION INTERFACES



7.6.1. CONFIGURING THE WIFI INTERFACE

The printer can be linked into a user network via a wireless facility, **WIFI**.





WIFI can be used for, e.g.:

- remote application of functions that are available on the printer's LCD via **EBS Web User Interface**,
- transferring data from an external device; the data can be added to a project via a **Communications port**-type text object or bar / matrix code .










For more details on how to create / edit a **Communications port**-type text object  see "5.4.2.5. **Creating / Editing a Communications port-type Text Object**".
Bar / matrix codes with dynamic contents may constitute a graphic interpretation of a **Communications port**-type text object  and as such they can be created via **EBS Web User Interface** only.


To configure the **WIFI** network interface:

1. Press  in the status bar **A** (see [Fig. 11 on page 30](#)) on the main screen
or
press   .
2. Press the **On** button.
3. Press the **Manage** button.

The list of available **WIFI** networks is displayed.

The name of a network on the list is accompanied by icons, which inform you:

-  /  /  /  - on how strong the **WIFI** signal is,
-  - that the **WIFI** network is password protected,
-  - that the connection with the given **WIFI** network is active.
-  - that the connection with the given **WIFI** network is inactive.

4. Select the network you wish to link to from the list and press .
5. Configure a user network.

Use the following parameters to configure the **WIFI** interface:

Parameter	Range of values
 Basic ▶ BSSID	information parameter
Basic Service Set Identifier (BSSID) of a wireless network.	
 Basic ▶ Security	None, WPA2/PSK, WPA/PSK
Type of securities for the user network to which the printer is linked.	
 Basic ▶ Key type	ASCII, HEX
Type of characters to be used for create the wireless network password.	
 Basic ▶ Pre-Shared Key	
Pre-shared key for the wireless network.	

Parameter	Range of values
 Basic ▶ Do not connect to this network	<input checked="" type="checkbox"/> / <input type="checkbox"/>

Activate / deactivate automatic connection with the network previously added.

The parameter is useful when the list contains several networks of similar signal strength (the printer may switch among the networks, then).

 Advanced ▶ Configuration method	Automatic (DHCP), Manual (Static)
--	--

WIFI interface configuration mode:

- **Automatic (DHCP):** network connection parameters are set automatically while a network connection is being established,
- **Manual (Static):** network connection parameters are set manually with **IP, Netmask, Gateway, DNS** parameters which are available in the tab sheet **|Advanced|**.



For the information on how to set up your network connection contact your network administrator.

6. Press to acknowledge the settings you have made.

The network you have set up is added to the available networks list and a connection to the network is established automatically.

If the connection with the selected network is successful, the icon is displayed next to the network name and the LED glows.

The **WIFI** interface is configured.

If the network previously added to the list is selected, the following buttons are available:



- to edit the configuration of the selected user network,




- to link into the selected user network,



- to delete the selected user network from the list.


7.6.2. CONFIGURING THE BLUETOOTH® INTERFACE

An external device can be connected to the printer via wireless technology **Bluetooth®**.







Bluetooth® can be used for receiving data from an external device; this data may then be entered to a project via a **Communications port**-type text object .



For more details on how to create / edit a **Communications port**-type text object  see “5.4.2.5. **Creating / Editing a Communications port-type Text Object**”.

Bar / matrix codes with dynamic contents may constitute a graphic interpretation of a **Communications port**-type text object  and as such they can be created via **EBS Web User Interface** only.

To configure the **Bluetooth®** interface:

1. Press  in the status bar on the main screen
or
press  ►  ► .
2. Press the **On** button.
3. Press the **Manage** button.
4. Press  to search for the **Bluetooth®** devices that are available. The available external devices are displayed on the list.
5. On the list, highlight the device you wish to connect the printer with.
6. Press  to connect with the selected external device.
7. Pair the printer with the device, e.g. by entering the **Bluetooth PIN** code in both of the devices.
The paired device is added to the available devices list.
The **Bluetooth®** interface is configured.

If the **Bluetooth®** device previously added to the list is selected, the following buttons are available:






- to establish a connection with the **Bluetooth®** device selected,




- to finish the connection with the selected **Bluetooth®** device,



- to delete a **Bluetooth®** device from the available devices list.

If a connection with the selected device is correctly established, the **Connected** state is displayed on the **Bluetooth®** settings screen, the  icon is shown in the status bar, and the LED   glows.

The **Bluetooth®** settings screen, which is available after you press  in the status bar on the main screen, shows the connection **Status**, the **Bluetooth friendly name** and the **Bluetooth address** of the printer's **Bluetooth®** module. The **Bluetooth®** name can be changed when you press the white box where the name is. If the printer is connected with an external device, the address (**Remote address**) of the device is displayed, too.

7.7. CONFIGURING USERS

In the printer, there are three different types of privileges (groups of users):

- operator,
- administrator,
- serviceman.



For more information about the types of users and on how to change the type of user see “3.4. Types of Privileges / Users”.

7.7.1. CHANGING THE USER PASSWORD

Every **administrator**-type user can change his / her password and the password of every user who is at the same or lower access level.

To change the user password:

1. Press  ►  ► .

2. Select the user whose password you wish to change.

3. Press .

If the  icon is inactive, you are not authorized to change the selected user's password.

4. Enter a new password.

5. Re-enter the new password.

6. Press  to acknowledge.

The password of the selected user is changed.

7.7.2. ADDING A USER

Administrator-type users can add a user who is at the same or lower access level.

To add a user:

1. Press  ►  ► .

2. Press .

3. Enter a name of the user.

The user name must be different from any name of the users defined in the printer.

4. Select a type of user (the name of a group of users).

5. Select a user icon.

6. Enter the user password.

7. Re-enter the password.

8. Press  to acknowledge.

The user is added.

7.7.3. DELETING A USER


Administrator-type users can delete a user who is at the same or lower access level except the user currently logged-in.

To delete a user:

1. Press  ►  ► .

2. Select the user that you wish to delete.

3. Press .

If the  icon is inactive, you are not authorized to delete the selected user.

In the dialog box displayed you are prompted to acknowledge the operation.

4. Press  to acknowledge.

The user is deleted.

7.7.4. CHANGING AN ACCESS LEVEL

Administrator-type users can change the access level of every user at the same or lower access level.

No access level can be changed to a level higher than the access level of the currently logged-in user.

To change an access level:

1. Press  ►  ► .

2. Select the user whose access level you wish to change.

3. Press .

If the  icon is inactive, you are not authorized to change the access level of the selected user.

4. Change the access level (group name).

5. Press  to acknowledge.

The access level of the selected user is changed.

7.7.5. CHANGING THE USER NAME

Administrator-type users can change the name of every user at the same or lower access level.

To change the user name:

1. Press  ►  ► .

2. Select the user whose name you wish to change.

3. Press .

If the  icon is inactive, you are not authorized to change the selected user's name.

4. Change the user name.

The user name must be different from any name of the users defined in the printer.


5. Press  to acknowledge.

The name of the selected user is changed.

7.7.6. SELECTING A USER FOR AUTOMATIC LOGGING IN

Administrator-type users can select every user at the same or lower access level to be logged in automatically after printer startup.

The user selected for automatic logging in after printer startup is marked with .

The **administrator**-type user whose user name is "**Administrator**" is marked with  by default.



If none of the users defined in the printer is marked with , then immediately after printer startup the screen is displayed where a user to be logged in can be selected.

To select a user for automatic logging in / change the user who is logged in automatically:


1. Press  ►  ► .

2. Select a user you wish to be logged in automatically.

3. Press .

If the  icon is inactive, you are not authorized to select a given user for automatic logging in.




The  icon is used for both selecting a user for automatic logging in and deleting such functionality.

The user who will log in automatically after printer startup is selected.


7.8. GLOBAL DATA

7.8.1. IMAGES

An image is a graphics file in *.png format. An image can be applied to every project where an **Image**-type object  is used.




It is recommended that monochromatic (black and white) images be used.

*For more details on how to create / edit a **Image**-type object  see “5.4.4.2. Creating / Editing an Image-type Object”.*


Before a graphics file is used, it must be imported to the printer via the **image manager** available in the **EBS Web User Interface**. The **object manager** can also be used for deleting selected graphics files from printer memory.

7.8.2. TEXT FILES

A text file can be applied to every project where a **Text file**-type text object or bar / matrix code  is used.






*For more details on how to create / edit a **Text file**-type text object  see “5.4.2.6. Creating / Editing a Text file-type Text Object”.*

*Bar / matrix code with dynamic contents can be graphic interpretation of a **Text file**-type text object  and as such they can be created by means of the **EBS Web User Interface** only.*

Before a text file is used in a project, it must be imported to the printer via the **text file manager** available in the **EBS Web User Interface**. The **text file manager** can also be used for deleting selected files from printer memory.

7.8.3. SCRIPTS

A script can be applied to:

- Every text object | **T** |: to process object contents before a project is printed (|  | ► **Pre-print processing script**),
- **Communications port**-type text objects or bar / matrix codes : to process data after the data has been received by a communications interface (|  **Advanced** | ► **Script name**).




** Bar / matrix codes with dynamic contents may constitute a graphic interpretation of a **Communications port**-type text object  and as such they can be created via **EBS Web User Interface** only.*

Before it is used in a project, the script must be saved to the folder at \\printer's_IP_address\UserDisk\CustomData in the printer's internal memory. The internal memory is accessible via the SMB protocol.

You can obtain the **printer's_IP_address** by pressing  ►  ► .

7.8.4. FONTS


All text objects |  | are generated on the basis of fonts:

- **matrix fonts (*.xml)**; marked with the sign  on the font list (available in object parameters),
- **TrueType fonts (*.ttf)**; marked with the sign  (default fonts) or  (user fonts) on the font list.

The **Handjet®** EBS-260A printers are provided with a set of built-in fonts (default fonts). The set of fonts can be extended because user fonts can be added.

Before user fonts are used in a project, they must be imported to the printer via the **font manager** available in the **EBS Web User Interface**. The **font manager** can also be used for deleting selected fonts from printer memory.


7.9. EXCHANGING DATA VIA A USB PORT


Data can be exchanged between devices by means of an approved **USB** memory device plugged in to the connector  in the control unit.




For **USB** memory specifications see “2.3. Printer Structure” ► “2.3.3. External Connections”.

To get access to data exchange functions:

1. Plug in an approved **USB** memory device to the connector  (8; see [Fig. 2 on page 14](#)) in the control unit.

The  icon on status bar **A** on the main screen (see [Fig. 10 on page 29](#)) is active.

2. Press  on the status bar on the main screen

or

press  ►  ► .

The **USB** memory window is displayed. The following function icons are available in the window:



- import projects,



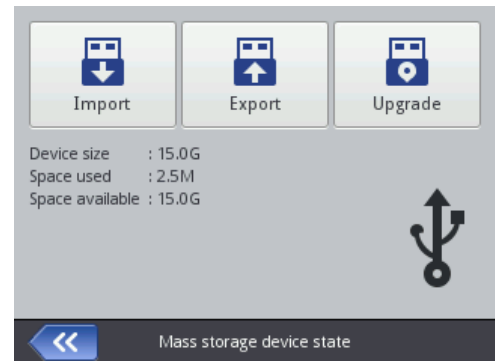
- export projects,



- update the printer software.

The following information is available in the **USB** memory window:

- **Device capacity:** total capacity of the **USB** memory device,
- **Space used:** occupied space of the **USB** memory,
- **Space available:** space available in **USB** memory.



7.9.1. EXPORTING / IMPORTING PROJECTS

Projects can be transferred between:

- printers,
- the printer and a **PC** (e.g. to use the **Offline EBS Web User Interface** editor).

The project files (packets) are:

- in ***.exp** format,
- saved in a **USB** memory device in the main folder.

Regardless of the number of projects to be exported, one ***.exp** file is created while the projects are being exported.

If a project contains external items such as a font, an image, a text file or a script, the items are imported / exported together with the project.

To export a selected projects to a **USB** memory device:

1. Press  ►  ►  ►  ►  or  ►  ► .

The library containing the projects available in printer memory is displayed.

2. Select a project (a ***.prj** file) that you wish to export to a **USB** memory device.



*A project to be exported to a **USB** memory device can be selected from the list or the name of a project can be entered in the text box in the upper part of the window.*


The preview of the selected project is displayed in the lower part of the window.

3. Press  to acknowledge.

The selected project is exported to a **USB** memory device and a relevant message is displayed in the dialog box.

The file named **EBS260_YYYYMMDD_HHMMSS.exp** is created in the main folder in the **USB** memory device.

In the file name, **YYYYMMDD** means the date (year, month, day) and **HHMMSS** means the time (hour, minute, second) when the file was created.

4. Press  to finish the procedure under which the selected project is exported to the **USB** memory device.

To export all projects to a **USB** memory device:

1. Press  ►  ►  ►  ►  or  ►  ► .







All project are exported to the **USB** memory device and a relevant message is displayed in the dialog box.

The file named **EBS260_YYYYMMDD_HHMMSS.exp** is created in the main folder in the **USB** memory device.

In the file name, **YYYYMMDD** means the date (year, month, day) and **HHMMSS** means the time (hour, minute, second) when the file was created.

2. Press to finish the procedure under which all projects are exported to the **USB** memory device.

To import projects from a **USB** memory device to the printer:

1. Press  ►  ►  ►  or  ► .
2. Select the folder in the **USB** memory device and the ***.exp** file that contains a project / projects that you wish to import to the printer.

Files in other formats are not visible.



The file that contains a project / projects to be imported to the printer can be selected from the list or the name of the file can be entered in the text box in the upper part of the window.

3. Press to acknowledge.
The project(s) included in the selected ***.exp** file are imported to the printer and a relevant message is displayed in the dialog window.
4. Press to finish the procedure under which projects are imported from the **USB** memory device to the printer.

7.9.2. UPDATING SOFTWARE

The function is used for updating the system software to a newer version.






NOTE: A risk that the printer gets damaged!

The updating procedure must not be interrupted. Otherwise, the printer may get damaged. Before you start updating the software, charge the batteries to at least 75%.

Before you start updating the printer software:


- Check what the current software version is,



The version of the printer software (system) can be viewed by pressing  ►  ► .

- Contact an authorized representative of **EBS Ink Jet Systeme GmbH** to obtain an update package; the update package is a file in ***.ebs** format,
- Export all projects to a **USB** memory device; if projects contain external items such as a font, an image, a text file or a script, the items are exported together with the projects.

To update the printer software:

1. Copy the installation package to the **main folder** in a **USB** memory device.
2. Plug in the **USB** memory device that contains the update package to the connector  in the control unit.

The software update function is active.



The software update function **is not** active if:

- the version of the printer's software is too early; before the latest version can be installed, it is required that the previous update package be installed,
- the printer software is up to date,
- the version of the printer software is later than the selected update.

3. Press  ►  ►  ►  or  ► .

The list of update packages available in the main folder in the **USB** memory device is displayed.

4. Select the ***.ebs** file that contains a suitable update package.

Files in other formats are not visible.

5. Press  to acknowledge.

The message is displayed.

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!

6. Follow the on-screen instructions.

The printer shuts down while the updating procedure is carried out.

7. Press the  button on the printer keyboard to start the printer up.

The update report is displayed.





8. Press  to finish the procedure.

The software update procedure is finished.








7.10. SCREEN LOCK

The function is designed to secure the control panel against accidental access and modification of the settings of printing parameters during operation, for example.

To activate the screen lock on a one-off basis:

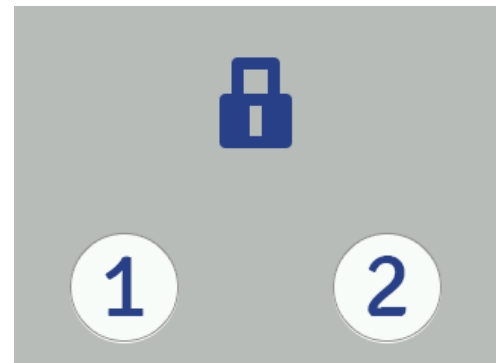
1. Press   .
- or
- press and hold the  button on the printer keyboard.
- The screen lock is activated.

To activate the screen lock automatically:

1. Press     .
 2. Change the setting of the **Enable screen lock** parameter to .
 3. Press  to acknowledge.
- The automatic screen lock is activated.

The screen lock activates automatically when the **Turn off screen after** parameter is set at a setting different from **never**. Additionally, when the **Dim screen after** parameter is set at a setting different from **never**, the screen is not locked until the sum of the times after which the screen is blanked and dimmed elapses.

To lift the lock (enable the screen), press the two buttons (1 and 2) displayed on the screen quickly and consecutively.



CHAPTER 8

PERIODIC MAINTENANCE

8. PERIODIC MAINTENANCE

The objective of periodic maintenance is to ensure reliable operation of the printer.

8.1. CLEANING THE NOZZLE PLATE



CAUTION: The risk of damaging the nozzle plate!

No tools must be used while the nozzle plate is being cleaned as otherwise the plate may get damaged.



The nozzle plate can be cleaned by **instructed persons**.






Tools required:

- protective gloves that are resistant to ink / cleaner,
- safety goggles,
- a sprayer with cleaner whose type is compatible with the type of ink in use,
- lint-free cloth,
- a metal vessel for collecting waste or absorbent material.



The nozzle plate is cleaned to remove dry ink residues and dirt, which may be the reason for impaired print quality.



To clean the nozzle plate:

1. If the printer is printing, press the  button on the keyboard or the  con in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to pause printing.
The LED  does not glow.
2. Tilt the printer to the side and direct the printer face slightly downward (see [Fig. 28](#)); such a position enables the dirty cleaner to flow out.



CAUTION: The risk of damaging the printer!

Washing the printer face in any other way than that presented above can cause unintentional penetration of the cleaner into bearing-mounted moving parts or internal electronic components of the printer. This can lead to seizure or even permanent blockage of the guide rolls, damage to the travel sensor (encoder) and other electronic components of the printer.

3. Put a metal vessel for waste or absorbent material under the nozzle plate.
4. Spray a cleaner over the nozzle plate.
5. Use lint-free cloth to wipe the nozzle plate.
6. Press the  button on the keyboard or the  icon in the menu bar **D** on the main screen to start printing again.

The LED  glows.

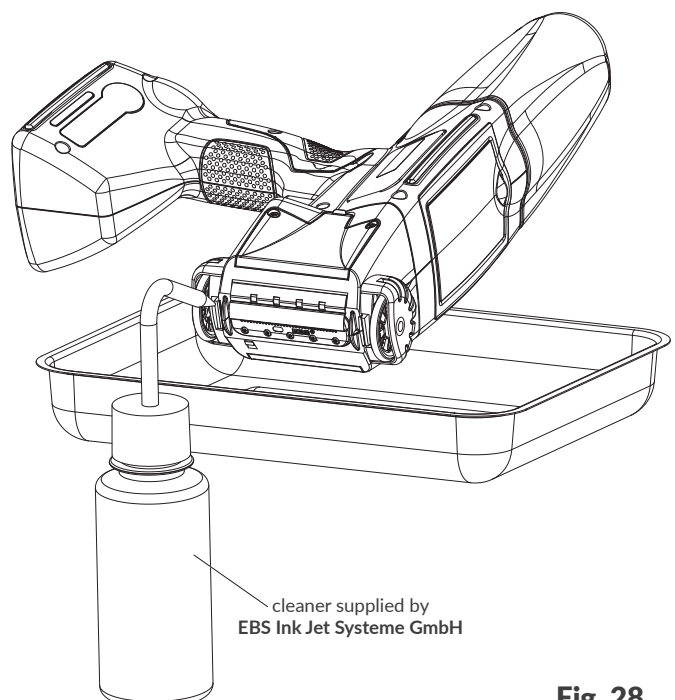


Fig. 28.

8.2. PURGING / VENTING THE PRINTHEAD



CAUTION: The risk of getting splashed with ink!

While the purging / venting procedure is being followed, the ink flows out of nozzles at pressure. Be careful not to get splashed and not to soil the printer environment.



The printhead purging / venting can be done by **instructed persons**.



Tools required:

- a sprayer with cleaner whose type is compatible with the type of ink in use,
- protective gloves that are resistant to ink / cleaner,
- safety goggles,
- a metal vessel for collecting waste or absorbent material.



The objective of printhead purging / venting is to:

- Improve print quality by clearing slightly clogged nozzles and cleaning the nozzle plate in the print-head,
- Vent the printer after the container has been replaced,
- Fill the ink system with ink / cleaner,
- Use ink of another color,
- Purge the printer after a container of cleaner has been connected.

The printhead purging procedure should be followed when:











- Some of the dots are missing in the first printouts made after an idle period,
- Dots in printouts vary in size.

The purging / venting consists of the opening of all nozzles at the same time and jetting of ink through the nozzles at pressure.

To follow the printhead **purging** procedure, direct the ink outlet in the printhead (the nozzle plate) to a metal vessel.


To follow the printhead **venting** procedure, direct the ink outlet in the printhead (the nozzle plate) **upward** and secure it with absorbent material.

To start purging / venting the printhead:

1. If the printer is printing, press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to pause printing.
The LED  does not glow.
2. Secure the ink outlet in the printhead in a way that corresponds to the operation (purging or venting) you are carrying out.
3. Press and hold the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen, and when a drop-down menu occurs press  **Purge**
or
press     .

A warning signal is heard.

Press the trigger to start purging / venting and hold the trigger as long as the purging is to take.

To finish the purging procedure press .

4. Press the  button on the keyboard or the  icon in the menu bar **D** (see [Fig. 14 on page 33](#)) on the main screen to start printing again.

The LED   glows.

5. Assess print quality.

If print quality has not improved sufficiently, repeat the purging / venting procedure.

If print quality is still insufficient although the above-mentioned procedure has been repeated, carry out the nozzle plate cleaning procedure.



For more details about the nozzle plate cleaning procedure see [“8.1. Cleaning the Nozzle Plate”](#).

8.3. REPLACING THE INK FILTER



*Any service operations that require that protective covers in the printer be opened or removed should be carried out by **skilled persons** only.*

*For more information on how to replace the ink filter contact an authorized representative of **EBS Ink Jet Systeme GmbH**.*

If you start printing and make an attempt to generate printouts, you can hear solenoid valves in nozzles working but ink droplets are not always ejected from nozzles correctly. Print quality reduces or no prints are made, and purging and tuning do not produce an improvement.

The situation may be caused by the clogged ink filter. Check and replace, if need be, the ink filter in the printer after about 50 ink containers (more than 10 liters of ink) have been consumed, however not less frequently than every 4 years.

8.4. STORING AND TRANSPORTING

8.4.1. STORING THE PRINTER

The printer shall be stored in a dry place. It is recommended that the printer be stored in its original package.

The printer can be stored in any position.

Climatic conditions and permissible mechanical hazards in storage:

- temperature: **from 0°C to +50°C (from +32°F to +122°F)**,



*The use of certain inks may reduce the range of temperatures (see the technical data of a given ink).
Owing to the printer batteries, the optimum temperatures for storing the printer range from +20°C to +25°C (from +68°F to +77°F).*

- relative humidity: **from 10 to 95% without condensation**,
- impacts: **max. 1g, max 2 ms**.

The procedure for preparing the printer for storing depends on the period over which the printer is not to be used.

There are two types of preparation for storing:

- for a period of **up to 3 weeks (2 weeks if pigment ink is used)**,
- for a period of **over 3 weeks (2 weeks if pigment ink is used)**.

Storing for up to 3 weeks (2 weeks if pigment ink is used)

To prepare the printer for storing during a period of **up to 3 weeks (2 weeks if pigment ink is used)**:

1. Shut the printer down in regular mode.



*For more details see **“4.2.1. Shutting down in Regular Mode”**.*

No additional operations are required.

Do not detach the ink container during the storage period.

When the printer that is planned to be stored over **up to 3 weeks (2 weeks if pigment ink is used)** is taken out of storage, it can be restarted with no additional operations, but it is advisable to make a few test prints to assess print quality.



*For more details about printer startup see **“4.1. Starting the Printer up”**.*

It may also be necessary to carry out the purging / venting procedure for the printhead once or several times.



*For more details about printhead purging / venting procedures see **“8.2. Purging / Venting the Printhead”**.*

Storing for a period of over 3 weeks (2 weeks if pigment ink is used)



NOTE: Sharp Elements!

While replacing a container be careful not to get wounded with the needle that is part of the connection. **Do not touch the needle!** Avoid manipulations near the needle.



CAUTION: The risk of damaging the container!

If a container is reinstalled in the printer several times, it can start leaking in the printer as the rubber gasket of the container valve **31** is subject to wear and tear. Avoid reinstalling a given container too frequently.



Only **instructed persons** can prepare the printer for storing over a period longer than **3 weeks (2 weeks if pigment ink is used)**.



Tools required:

- protective gloves that are resistant to ink / cleaner,
- safety goggles,
- a metal vessel for collecting waste or absorbent material,
- a container of cleaner whose type is compatible with the type of ink in use.



If the **Handjet®** EBS-260A printer is to be stored for a period of over 3 weeks (2 weeks if pigment ink is used), it should be emptied of the ink and filled with cleaner. The type of cleaner you apply should correspond to the type of ink in use. The applicability of a type of cleaner to the ink in use in the printer is checked by the **IMS** system.

To prepare the printer for storing during a period of **over 3 weeks (2 weeks if pigment ink is used)**:

1. Unscrew the ink container.



For more details see **"4.6.1. Replacing the Ink Container"**.

2. Connect a container of cleaner in place of the ink container you have removed and do not disconnect it during the whole storage period.
3. Follow the purging procedure.



For more details about printhead purging / venting procedures see **"8.2. Purging / Venting the Printhead"**.

Continue purging until cleaner starts flowing out of the nozzles instead of ink.

The printer is filled with cleaner.

4. Shut the printer down in regular mode.



For more details see **"4.2.1. Shutting down in Regular Mode"**.

When an **over 3 weeks' (2 weeks if pigment ink is used)** storage period expires, do the following:

1. Start the printer up.



For more details about printer startup see **"4.1. Starting the Printer up"**.

2. Unscrew the cleaner container.



For more details see **"4.6.1. Replacing the Ink Container"**.

3. Connect a container of ink in place of the cleaner container you have removed.

4. Follow the purging procedure.



For more details about printhead purging / venting procedures see "[8.2. Purging / Venting the Printhead](#)".

Continue purging until ink starts flowing out of the nozzles instead of cleaner.

The printer is filled with ink.

5. Make a few test prints to assess print quality.

Charging printer batteries periodically

The printer should be stored with the batteries charged. If the printer is stored over a long period (of 6 months or longer) and the printer batteries are not recharged during that period, the printer lifetime may reduce or the printer may even not continue to operate in certain circumstances. This is caused by the battery properties that lead to a self-discharge process. The self-discharge of the batteries and the storing of the batteries for a long time in a discharged state may result in a reduction of the batteries' maximum capacity or complete damage.

To avoid the above-mentioned consequences, you should recharge the **Handjet®** EBS-260A printer batteries at least twice a year (not less frequently than every 6 month) to a level of about 75%. Otherwise, the time of printer operation after batteries recharge may reduce drastically.

8.4.2. STORING CONSUMABLES

Consumables should be stored in a dry place, not be exposed directly to sunlight, and far from sources of heat, radiation and stationary electric charges or fields.

Climatic conditions for storing:

- Temperature: **from 0°C to +50°C (from +32°F to +122°F)**,
Optimum temperature: **from +10°C to +25°C (from +50°F to +77°F)**,
- Relative humidity: **from 10 to 95% without condensation.**

8.4.3. TRANSPORTING THE PRINTER

Printer transportation involves the necessity to move the printer to another place.

The printer can be transported in any position.

While transporting the printer be careful not to damage the nozzle plate or the LCD screen.

It is advisable to transport the printer in its original packaging (a carrying case).

Overall weight of the printer with a **0.2 l** ink container: about **1.58 kg (about 3.48 lbs)**.

Permissible mechanical hazards inside the package: impacts: **max. 1g, max 2 ms.**




CHAPTER 9

TROUBLESHOOTING







9. TROUBLESHOOTING

9.1. MESSAGE HANDLING

Important information concerning printer operation is signaled in the following way:

- The icon  /  /  is displayed on status bar **A** (see [Fig. 10 on page 29](#)); the color of the icon indicated a type of message,
- The relevant message is displayed in the dialog box:
- **Attention! The message list contains new information, which must be read and confirmed.**








The list of messages is displayed when the icon  /  /  on status bar **A** is pressed.

All the types of messages are displayed in dialog boxes and saved in message history, which is available after pressing    or the icon  /  /  on status bar **A**.



For more details see [“6.1. Message History”](#).

Message history is divided into four tab sheets:

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

9.1.1. ERROR MESSAGES

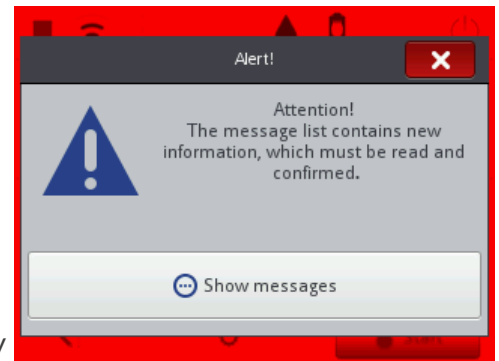
Error messages (see drawing) are displayed in the dialog box when a fault or an error occurs.

When the dialog box containing an error message is displayed, the display background flickers red.

Error messages concern:





- Errors that make printing impossible, e.g. an empty ink container.

The printer **goes** into an error state, in which printing may pause.



If an error message is displayed, the handling procedure depends on the reason.

If an error message is displayed due to an error in the printer (e.g. the empty ink container) and the printer automatically goes into an error state:

- View the contents of the error message.
- Press  to confirm that you have learned the message or  to display more details about the error.
- Take an action that is adequate for the message, e.g. install a new container of ink.
- Press  to delete a single message or  to delete all messages.
The printer goes out of the error state.
- If the error pauses printing, resume printing.

9.1.2. WARNING MESSAGES

Warning messages (see drawing) are displayed in the dialog box when a condition that requires user intervention occurs.

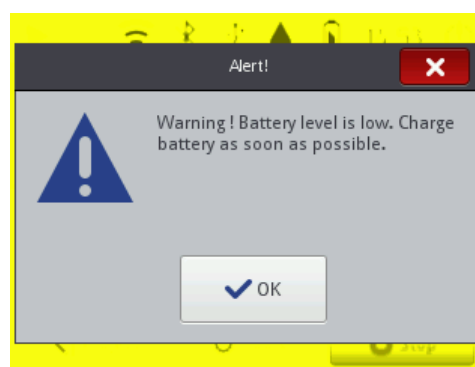
When the dialog box containing a warning message is displayed, the display background flickers yellow.

Warning messages concern:

- A situation that has occurred in the printer and requires user intervention, e.g. a low level of the ink in the container.





The printer **goes** into a warning state, in which printing may be enabled / continued,

- A situation that may arise from the operation currently carried out by the user.
The printer **does not go** into a warning state.



If a warning message is displayed, the handling procedure depends on the reason.

If a warning message is displayed due to a situation that has occurred in the printer and requires user intervention (e.g. a low level of the ink in the container) and the printer automatically goes into a warning state:

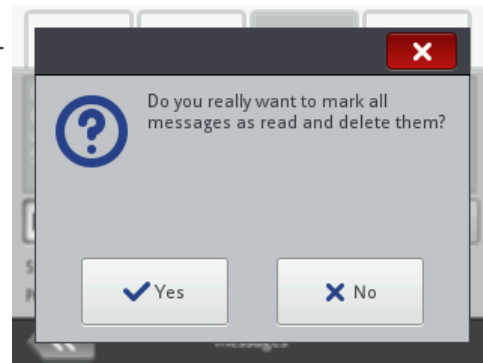
- View the contents of the warning message.
- Press  to confirm that you have learned the message or  to display more details about the warning.
- Take an action that is adequate for the message, e.g. replace the ink container.
- Press  to delete a single message or  to delete all messages.
The printer goes out of the warning state.

9.1.3. INFORMATIONAL MESSAGES

Informational messages (see drawing) are displayed in the dialog box when the necessity to inform the user of the existent situation arises or when the user is expected to decide on further actions.

Printing may be turned on / continue.

The printer does not change its status.



The handling of an informational message depends on whether the occurrence of the message involves the necessity for the user to decide on further actions or not.

If an informational message is displayed to inform the user of the existent situation:

- View the contents of the message.
- Press to confirm that you have learned the message or to display more details about the message.

If an informational message is displayed to prompt the user to make a decision on further actions:

- View the contents of the message.
- Make a decision on further actions by pressing the relevant button, e.g. or .
- The printer carries out an appropriate operation, e.g. restarts itself.

9.2. DIAGNOSTIC

9.2.1. PRELIMINARY CHECKS

Before you proceed to locate a faulty component, it is advisable to conduct preliminary checks such as:

- Visual inspection, to detect problems such as dirty parts, ink leaks, or damaged / disconnected cables / tubes,
- Verification of messages, information about the printer, consumables and settings, which can help identify the source of the problem.


9.2.1.1. VISUAL INSPECTION

Part to be checked	Potential problems
Printer	<ul style="list-style-type: none"> - Dirty nozzle plate. - Leakage of ink from nozzle plate. - No ink container. - Ink container is not screwed in completely. - Damaged LCD.
Cabling / accessories.	<ul style="list-style-type: none"> - Damaged power pack cable. - Damaged power cord. - Plug of power pack cable detached from the printer. - Plug of power cord removed from the mains electricity. - Improper lower guide roll that synchronizes printing (no magnet). - Plug of travel sensor detached from socket when printing stabilizer is in use.

9.2.1.2. VERIFICATION OF MESSAGES, INFORMATION AND SETTINGS

To facilitate diagnostic, verify the following:

- Contents of the project that is open for printing / being printed.

You can start editing the project that is open for printing / being printed by pressing  ►

 **Project.**






- Parameters of the project that is open for printing / being printed.

You can start modifying parameters of the project open for printing / being printed by pressing  ►  **Parameters.**


- The printer's general settings.

You can start editing the printer's general settings by pressing  ►  ►  ► |  |.

- Messages.

The list of messages can be displayed by pressing    or  /  /  on status bar **A** (see [Fig. 10 on page 29](#)).

- Information about consumables.

Access to information about consumables can be gained by pressing the icon  on status bar **A**.

9.2.2. PROBLEM SOLVING DIAGRAM

The problem solving diagram contains a list of potential irregularities and a list of recommended actions that should be taken after a given irregularity has occurred.

Before you proceed with further diagnostic, it is necessary that preliminary checks be made.








For more details see [“9.2.1. Preliminary Checks”](#).

Then, identify the irregularities on the list and take the actions that are given in the following diagram.

After solving the problem, acknowledge the message displayed.

If you have not managed to solve the problem by yourself, contact an authorized representative of **EBS Ink Jet Systeme GmbH**.

Irregularity	Recommended action
The printer does not start. The LCD display is blank.	Discharged batteries. <ul style="list-style-type: none"> - Connect power pack cable to charging connector in the printer. - Connect power cord to the mains electricity. - Check power pack cable and whether it is plugged into the printer or not. - Check power cord and whether it is plugged into the mains electricity. - Check voltage of the mains electricity.
Touch screen is not working.	<ul style="list-style-type: none"> - Contact an authorized representative of EBS Ink Jet Systeme GmbH.
System time or date are incorrect.	<ul style="list-style-type: none"> - Set the correct date and time in the printer.
Printing cannot start.	<ul style="list-style-type: none"> - Open a correct project to print.
Existing project is not shown in the project list.	<ul style="list-style-type: none"> - Make sure that no filter is active in the project library.
Incorrect project contents.	<ul style="list-style-type: none"> - Review and correct project contents.

Irregularity	Recommended action
No proportional square, circle or 2D code can be obtained.	<p>The setting of print resolution in a horizontal direction does not equal print resolution in the vertical direction.</p> <ul style="list-style-type: none"> - Set the project parameter   ► Resolution to 550 dots/meter.
Prints are too pale or too bold.	<ul style="list-style-type: none"> - Adjust print legibility to the type of surface by setting the project parameter   ► Dot size.
Print quality is unsatisfactory. Irregular print distortions or fading.	<p>Dirty nozzle plate in the printhead / Unvented print-head (also through lack of ink).</p> <ul style="list-style-type: none"> - Carry out the nozzle plate cleaning procedure. - Carry out the purging / venting procedure for the printhead. - Replace the ink container. - Contact an authorized representative of EBS Ink Jet Systeme GmbH.
Prints are incorrectly positioned on objects.	<ul style="list-style-type: none"> - Review and correct project parameters and the printer's general settings.
Empty ink container.	<ul style="list-style-type: none"> - Replace the ink container.
No prints although no error is signaled.	<ul style="list-style-type: none"> - Review and correct the contents of the project that is open for printing. - Make a test print. - Check whether the lower guide roll, which synchronizes printing, is provided with a magnet or not. - Check whether the travel sensor plug is connected to socket if a printing stabilizer is applied.
Ink container or IMS (Ink Monitoring System) errors.	<ul style="list-style-type: none"> - Replace the ink container with a correct one. - Contact an authorized representative of EBS Ink Jet Systeme GmbH to enter service mode (in which printing can continue for a period of 50 hours).
The printer does not recognize the USB memory device connected to connector  .	<p>USB memory device is formatted to an unsupported file system (e.g. NTFS).</p> <ul style="list-style-type: none"> - Format USB memory device to the FAT or FAT32 file system. <p>USB memory device is damaged.</p> <ul style="list-style-type: none"> - Use another USB memory device.

9.3. SERVICING

9.3.1. RELEASING PROTECTIONS

By releasing printer protections with a one-off unlock code, **OTP** (One Time Password), and a one-off activation code, **OTA** (One Time Answer), you can carry out basic service operations without serviceman intervention.

Owing to this function the printer enters service mode (to continue printing for a period of **50 hours**).



To obtain a one-off activation code (**OTA**) contact an authorized representative of **EBS Ink Jet Systeme GmbH**.

To release the selected protection:

1. Contact an authorized representative of **EBS Ink Jet Systeme GmbH** and describe the operation you wish to carry out:
 - Enter service mode, that is enable printing for a period of **50 hours** or
 - Use ink of another color.
2. Press ► ► .

The protection release screen is displayed, together with an automatically generated one-off unlock code **OTP (Unlock code)**.



NOTE: The risk that the OTP code becomes invalid!
Do not exit the protection release screen while this procedure is carried out as otherwise the **OTP code** becomes invalid. If the protection release screen is displayed again, a new **OTP code** is generated.





3. Make the one-off unlock code **OTP** available to the authorized representative of **EBS Ink Jet Systeme GmbH**:
 - Give the code directly during the call or
 - Scan the **QR** code that contains the link to the site where you can make a request for further printing, giving printer data and the **OTP** code, and open the link in a web browser. Your request will be sent.
 4. The authorized representative of **EBS Ink Jet Systeme GmbH** generates a one-off activation code (**OTA**).
 5. Enter the **OTA (Activation code)** code you have obtained.
 6. Press .
- The selected protection is released.

If the **Handjet®** EBS-260A printer is linked into a **WIFI** network, the selected protection can be unlocked remotely without the need for giving the **OTP** and **OTA** codes. To release the protection press on the protection release screen. An authorized representative of **EBS Ink Jet Systeme GmbH** will release the protection remotely at his / her earliest convenience.

9.3.1.1. ENTERING SERVICE MODE


If a **correct** container of ink is installed but the printer cannot identify it correctly, printing cannot continue. In such a case, service mode can be entered and printing can continue over a period of 50 hours, until a new container of ink is installed or a service intervention is made.

The situation described above is signaled with the icons  and  displayed alternately on status bar **A** (see [Fig. 10 on page 29](#)).




For more details see [“4.6. Using an Ink Container”](#).

To enter service mode, follow the protection release procedure described in [“9.3.1. Releasing Protections”](#).

When the above procedure finishes, the icon  is displayed on status bar **A** (see [Fig. 10 on page 29](#)).



If the printer is in service mode, the icon  is displayed each time it starts up. On pressing it, you can learn how much time has remained till service mode expires.

The signaling of the allotted time for printing is displayed until a new, correct container of ink is installed or until the allotted time for printing elapses (and then the error is signaled again).

9.3.1.2. USING INK OF ANOTHER COLOR

If you need to make prints of a color different than the color of the ink in use in the printer, you can install a container of ink of the different color.



For more details see [“4.6.2. Using Ink of Another Color”](#).

To use ink of another color, follow the protection release procedure described in [“9.3.1. Releasing Protections”](#).

When the above-mentioned procedure is finished, the ink of a different color is approved.

9.3.2. RESTORING THE DEFAULT SETTINGS



The procedure for restoring the default settings requires that a password be obtained. To obtain the above-mentioned password, contact an authorized representative of EBS Ink Jet Systeme GmbH.

The function restores all settings of the printer to their default values.



NOTE: User data will be lost!

When the default settings are restored, all projects, printer settings, user databases, statistics and imported files such as images, text files, scripts or user fonts are deleted.


It is advisable to copy all projects to a **USB** memory device before the system recovery procedure is followed. For more details see **“7.9.1. Exporting / Importing Projects”**.

The recovery procedure must not be interrupted. Otherwise, the printer may get damaged.

To restore the default settings:

1. Press     .

The virtual keyboard is displayed and should be used to enter the password obtained from an authorized representative of **EBS Ink Jet Systeme GmbH**.

2. Enter a password.
3. Press  to acknowledge.

The following message is displayed.

Do you want to ERASE ALL internal memory contents and restore the default settings? All projects data and printer settings WILL BE LOST !

4. Press  to continue restoring the default settings.

The printer's default settings are restored, and that fact is acknowledged by the message:

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

5. Press  to restart the printer.

The printer starts up again.

The default settings restoration procedure is completed.

If all projects are copied to a **USB** memory device before the default settings restoration procedure starts, you can restore these projects following the description given in **“7.9.1. Exporting / Importing Projects”**.

9.3.3. TUNING THE PRINTING UNIT



The printing unit should be tuned by **instructed persons**.



Tools required:

- protective gloves that are resistant to ink / cleaner,
- safety goggles,
- a #PH1 cross head screwdriver,
- a #T6 **Torx** screwdriver,
- a metal vessel for collecting waste or absorbent material.



Dirt on the nozzle plate or air trapped in the printer may impair print quality. Therefore, before tuning the printing unit in the printer, it is advisable to:

- Clean the nozzle plate in the printer



For more details see **“8.1. Cleaning the Nozzle Plate”**.

and

- Carry out the purging procedure for a short time.



For more details see **“8.2. Purging / Venting the Printhead”**.

Then test prints should be made and the impact of the cleaning and purging on print quality should be assessed.

Tune the printing unit in the printer only when the above-mentioned actions do not improve print quality. The tuning procedure should be carried out especially when the size of dots jetted by one of the nozzles is different than the size of dots jetted out by the other nozzles.

Fig. 29 shows an example of a print made by the printhead in which nozzle **number 2** needs tuning.



To carry out the tuning procedure for the printing unit in the printer:

1. Use the cross head screwdriver to unscrew the screws that fasten the cover plates **5** on both sides of the printer (see **Fig. 30**).

2. Remove the cover plates **5**.

By removing the cover plates **5**, you gain access to the slots where adjustment screws are. The number of the adjustment screws equals the number of the nozzles in the printhead, or 32.

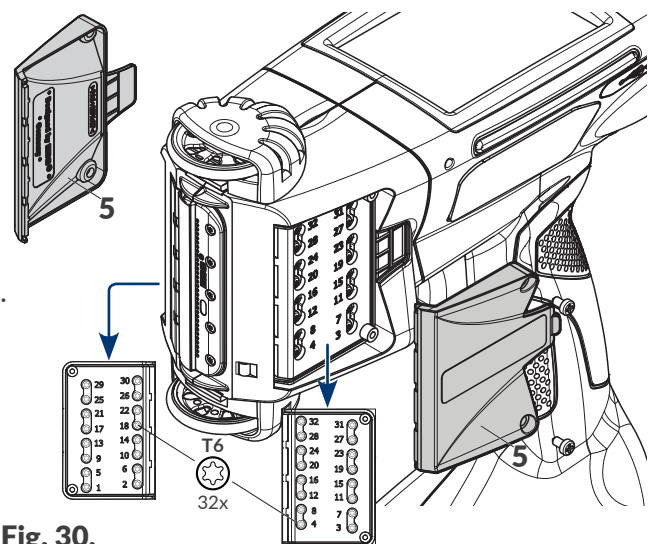



Fig. 30.

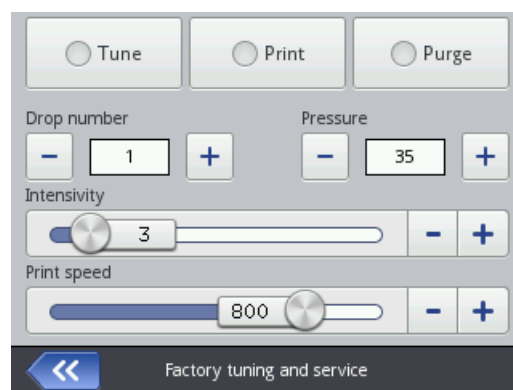
The adjustment screw numbers are given next to the slots. They correspond to the values of the **Drop number** parameter (which is available in the tuning window). The nozzles are numbered consecutively starting from the bottom.

3. Press     .









The virtual keyboard is displayed to enable you to enter the password obtained from the authorized representative of **EBS Ink Jet Systeme GmbH**.

4. Enter the password.
5. Press  to acknowledge.

The tuning and service window is displayed.



The following functions and parameters are available in the tuning window:

Function/Parameter	Range of values
Tune	 , 
Enable / disable tuning, or printing with a selected nozzle (the Drop number parameter) and set the printing parameters (Pressure , Intensity , Print speed).	
Print	 , 
Enable / disable printing of a test printout defined by the settings of the printing parameters (Pressure , Intensity , Print speed).	
Purge	 , 
Enable / disable purging.	
Drop number	1 to 32
Number that identifies the nozzle to be tuned.	
The sequence in which successive nozzles are selected for tuning with the  and  icons is aimed at ensuring that tuning is as convenient as possible, i.e. the nozzles situated on one side of the printhead are tuned at first and then those on the other side (following the adjustment screw sequence): 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29, 30, 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28, 31, 32.	
Pressure [kPa]	15 to 45
Ink-drop ejection force. It is advisable to set the intensity with which prints are made most frequently.	
Intensity	1 to 20
Print intensity level. It is advisable to set the intensity with which prints are made most frequently.	
Print speed [dcm/min]	100 to 1000
The speed at which ink is jetted by the nozzle that is being tuned or the speed at which a test print is made.	

6. Put a sheet of paper in front of the nozzles outlet, and place a vessel or absorbent material under the printer face.

7. Press **Tune**.



CAUTION: The risk of getting splashed with ink!

Ink is jetted from nozzles at pressure while the tuning procedure is being followed. Be careful not to get splashed and not to soil the printer environment.

The color of the button LED changes to green.

The nozzle whose number is given with the **Drop number** parameter can be tuned.

8. Set the **Pressure** and **Intensivity** parameters at values that are as close to the real working values as possible.
9. Use a #T6 Torx screwdriver to adjust the electromagnet that is responsible for correct operation of the nozzle whose number is given with the **Drop number** parameter. The number of the corresponding adjustment screw is given on the sticker next to the slot.
10. On assessing print quality, set the required dot size. The dot must look like an undeformed circle, with no satellites and splashes.
11. Repeat the tuning procedure for other nozzles, if need be, changing the value of the **Drop number** parameter.

Finish the tuning when the drops jetted by each of the nozzles are identical in size.

12. Press **Print**.



CAUTION: The risk of getting splashed with ink!

Ink is ejected from nozzles at pressure while the test print procedure is being carried out. Be careful not to get splashed and not to soil the printer environment.

The color of the button LED changes to green.

The printer enters printing mode automatically, without trigger release, and prints test prints in a loop.

13. Move a sheet of paper in front of the printer face to get a clear printout.
14. Review the print and assess whether any of the nozzles need(s) additional tuning or not. If further tuning is needed, repeat the tuning procedure for the selected nozzle(s).
15. If the quality of printouts is satisfactory, finish the tuning procedure and re-install the cover plates **5** (see [Fig. 30 on page 133](#)).



If the tuning procedure does not result in prints of a satisfactory quality, contact an authorized representative of EBS Ink Jet Systeme GmbH.

CHAPTER 10

TECHNICAL SPECIFICATIONS

10. TECHNICAL SPECIFICATIONS

Physical properties

Weight

Complete printer (with full container, without power pack or cable):

- about 1.58 kg (3.48 lbs)

Carrying case with printer and accessories:

- about 3.7 kg (8.16 lbs)

Container of ink:

- 0.2-liter container: about 0.27 kg (0.6 lbs)

Dimensions, mm (printer in standing position)

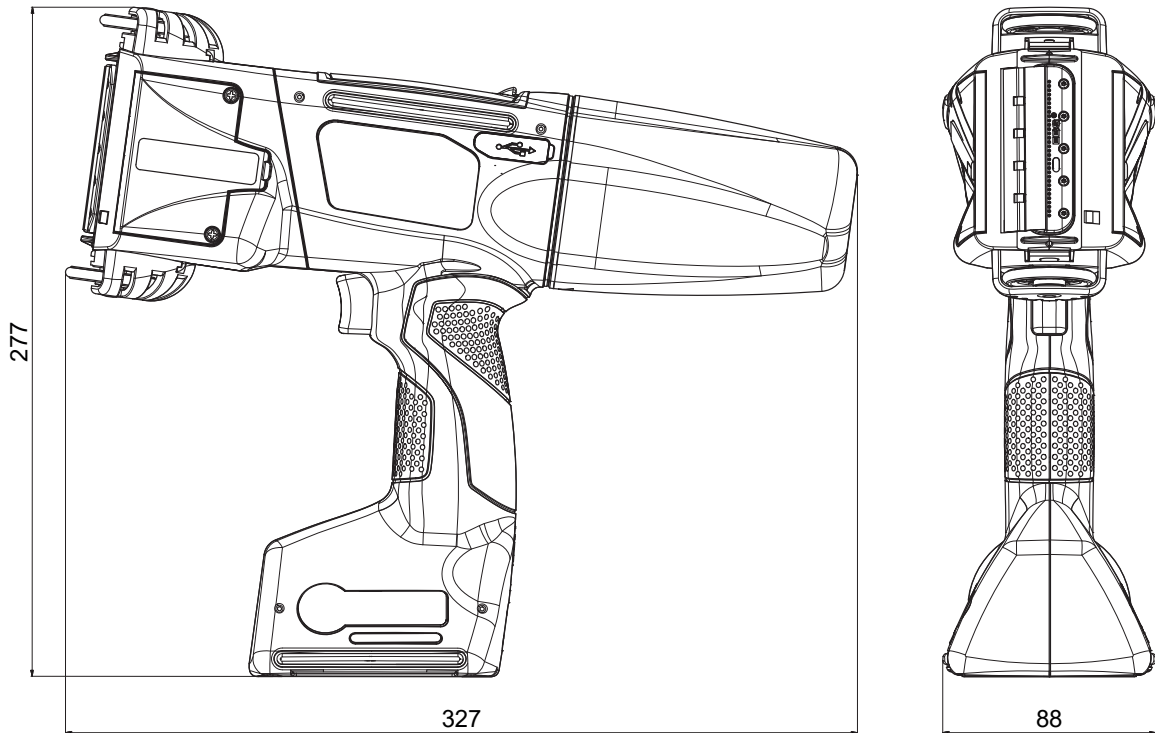


Fig. 31.

Dimensions, mm (printer in working position)

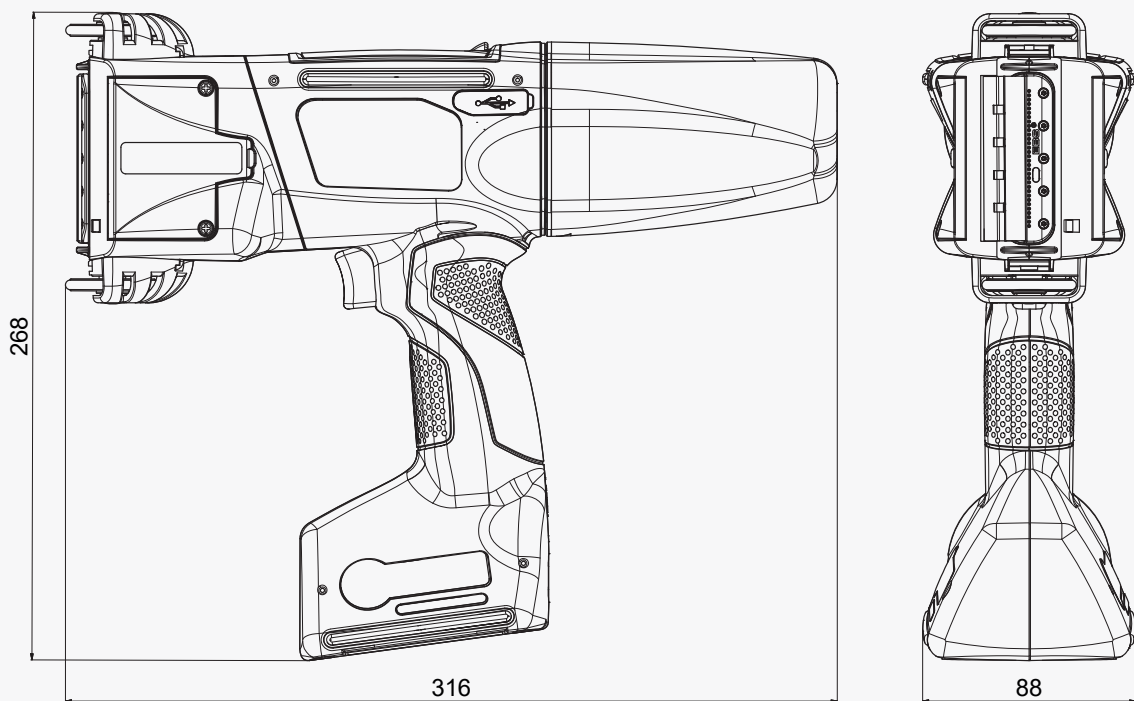


Fig. 32.

Physical properties

Dimensions, mm (ink / cleaner container)

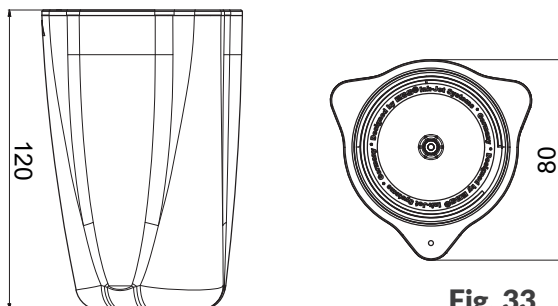


Fig. 33.

Material for housing - Polyamide

Technical data

Project width	- Maximum width: 4000 pixels (vertical rows) , i.e.: about 727 cm / 286.24 in. (at resolution in horizontal direction of 550 dots/m)
Maximum print height	- about 58 mm (2.28 in.)
Height of objects to be labeled	- from 115 mm (contact with both rolls) - from 39 mm (contact with the lower roll to print with for example 7 nozzles only)
Print intensity range	- 20 levels - Homogeneous for whole printout
Ink pressure	- 15 - 45 kPa
Printhead	- Number of nozzles: 32 - Distance between nozzles: 1.8 mm (about 0.07 in.)
Ingress protection rating	- IP40
Max. noise level	- < 70 dBA

Connections

Wired	- USB ; current efficiency 500 mA - Travel sensor (encoder) connector
Wireless	- WIFI interface - Bluetooth® interface

Functions

Control	- Built-in 3.5" / 88.9 mm LCD with touch panel - EBS Web User Interface (WUI) : to edit projects and control the printer remotely (online) via Ethernet (or direct connection to a PC) with any Web browser - Offline EBS Web User Interface (Offline WUI) : a project editor for a PC with a Windows® operating system
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Power supply

Supply voltage while charging	<ul style="list-style-type: none"> - IN: 100 ÷ 240 V \sim, 50 / 60 Hz, OUT: 24 V \equiv / 1.25 A - The power supply circuit of the printer shall be secured with a cut-out device whose rated current is: max. 13 A for Great Britain and Ireland max. 16 A for the EU countries max. 20 A for the USA and Canada in accordance with the regulations in the other countries. - The printer is designed to be supplied from a TN-type supply system
Connection to the mains electricity	<ul style="list-style-type: none"> - AC / DC power pack
Power pack cable	<ul style="list-style-type: none"> - Length: 150 cm (59.1 in.);
Power cord	<ul style="list-style-type: none"> - Length: 150 cm (59.1 in.); depending on a given country - Plug: depends on a given country - Type: portable power cord
Type of batteries	<ul style="list-style-type: none"> - LI-ION
Batteries capacity	<ul style="list-style-type: none"> - 64.8 Wh (6.0 Ah at working voltage of 10.8 V)
Batteries charging takes	<ul style="list-style-type: none"> - from 0 to 80% of capacity: 4.5 h - from 0 to 100% of capacity: up to 6.8 h
Estimated operating time when batteries are fully charged	<ul style="list-style-type: none"> - Printer operating time, when a 1 m-long text is printed every minute in cycles: 17.5 h. - The pinter can make 1050 printouts, when operated continually over at least 2 eight-hour shifts.
Overvoltage category	<ul style="list-style-type: none"> - II
Electric shock protection class	<ul style="list-style-type: none"> - II (while batteries are being charged) - III (during operation)
Inks	
Types	<ul style="list-style-type: none"> - Ethanol-based - Acetone-based - Methyl ethyl ketone (MEK)-based - Water-based
Color	<ul style="list-style-type: none"> - Black - Red - Blue - White - Brown - Colorless (UV)
Ink container capacity	<ul style="list-style-type: none"> - 0.2 liter

Inks

Ink consumption	- about 200 000 characters (7×5 matrix) with 1 (200 ml) container of ink
-----------------	--

Working conditions

Working position of the printer	- Any
Print triggering	- by trigger
Timing	- Synchronized with rotational speed of lower guide roll
Ambient conditions	- Working temperature: from +5°C to +40°C (from +41°F to +104°F) - Relative humidity: from 10 to 95% without condensation - Maximum altitude (above sea level): 2000 m - Vibration: max. 1 g, max. 10 Hz - Shocks: max. 1 g, max. 2 ms - Operation in tropical climates: no - Pollution degree (PD): 2

Storage conditions	- Temperature: from 0°C to +50°C (from +32°F to +122°F) - Relative humidity: from 10 to 95% without condensation - Shocks: max. 1 g, max. 2 ms
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Technical data on EBS-IMS Ink Monitoring System (RFID@13.56MHz, ISO/IEC 14443 B)	- Working frequency: 13.56 MHz - Max. magnetic field strength of receiver at 10 m from the printer: -41.7 dBμA/m
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Technical data on WIFI module (interface / standard: IEEE 802.11 b / g / n)	- Working frequency: 2400 - 2483.5 MHz - Max. value of effective isotropic radiated power (e.i.r.p.) measured in the printer: 9.9 dBm @ 11b; 7.8 dBm @ 11g; 5.3 dBm @ 11n
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Technical data on Bluetooth® module (interface / standard: IEEE 802.15.1 Bluetooth 2.0 + EDR)	- Working frequency: 2400 - 2483.5 MHz - Max. value of effective isotropic radiated power (e.i.r.p.) measured in the printer: -1.3 dBm
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Working environment - electromagnetic compatibility	The Handjet® EBS-260A printer is a class A device as defined by EN 55032:2015 (an industrial environment). It can cause radio interference in a residential environment and in such cases, appropriate remedial measures can be demanded from its users.
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Specifications

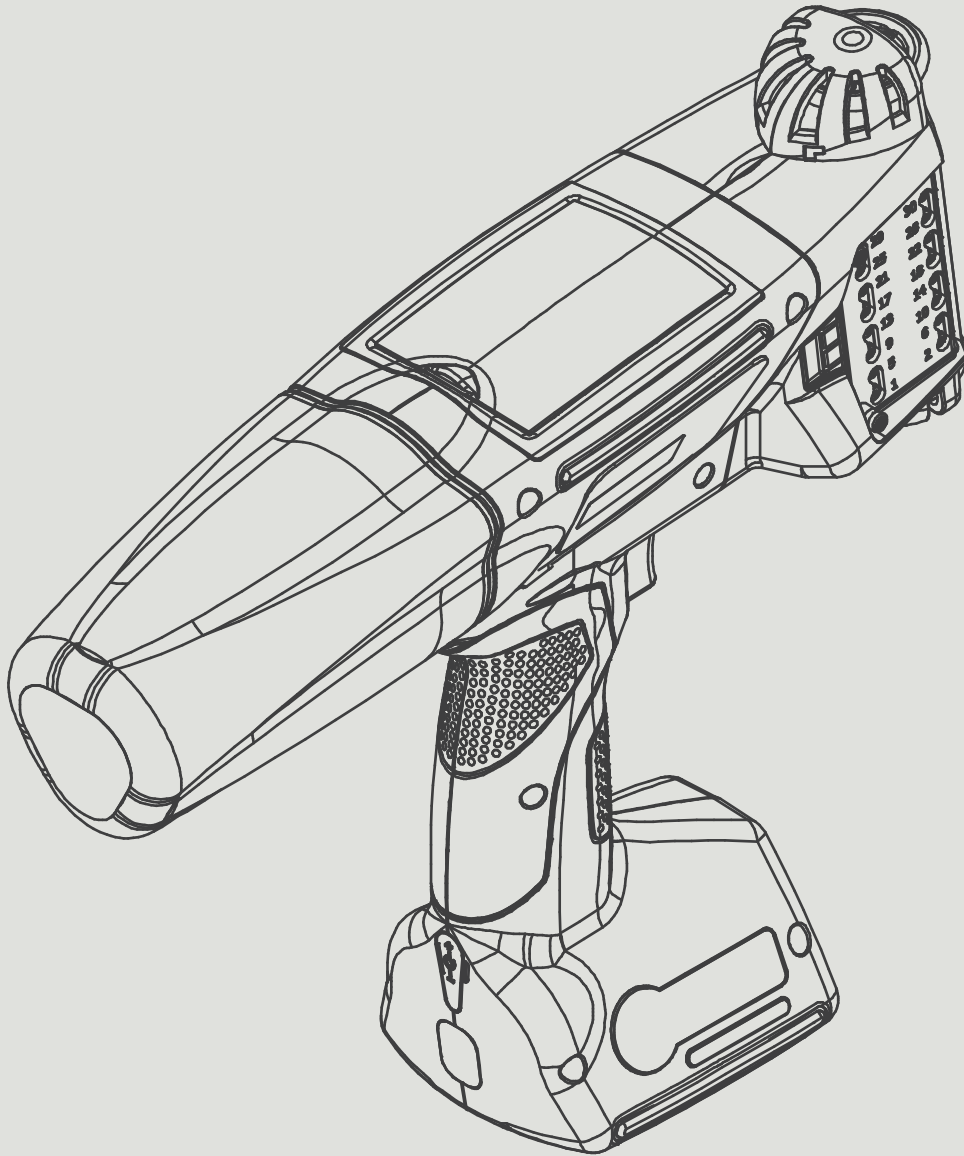
Objects	<p>Object are available when processed by both the printer's LCD and EBS Web User Interface:</p> <ul style="list-style-type: none"> - Text objects: Normal text, Date/Time, Counter, Communications port, Text file - Shapes: Line, Rectangle, Ellipse - Other objects: Barcode, Image, Line divider <p>Object are available only when processed by EBS Web User Interface:</p> <ul style="list-style-type: none"> - Codes: Date/Time, Counter, Communications port, Text file
Fonts	<ul style="list-style-type: none"> - Types of fonts: matrix, TrueType - Additional TrueType fonts in *.ttf format or matrix fonts in *.xml format can be installed
Bar / matrix codes	<ul style="list-style-type: none"> - 1D codes: EAN-13, EAN-8, EAN-8 + EAN-2, EAN-8 + EAN-5, EAN-13 + EAN-2, EAN-13 + EAN-5, Code25 Industrial, Code 25 Interleaved, GS1-128 (UCC/EAN-128), Code 128, ITF-14, EAN-2, EAN-5, EAN-5 + EAN-2, Code 11, Code 25 IATA, Code 25 Data Logic, Code 39, Code 39 Extended, Codabar, Leitcode, Identcode, Code 16k, Code 93, GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, Telepen Alpha, UPC-A, UPC-E, PostNet, MSI Plessey, Pharmacode One-Track, Pharmacode Two-Track, PZN, Australia Post 4-State, Royal Mail 4-State (RM4SCC) - 2D codes: 2D:Data Matrix, 2D:PDF417, 2D:PDF417 Truncated, 2D:QR Code, 2D:MicroPDF417
Graphics	<ul style="list-style-type: none"> - Graphics files in *.png format can be imported
Scripts	<ul style="list-style-type: none"> - Scripts in *.php format can be imported
Import / export via USB port	<ul style="list-style-type: none"> - Projects
User files	<ul style="list-style-type: none"> - Fonts (font manager in EBS Web User Interface) - Images (image manager in EBS Web User Interface) - Text files (text file manager in EBS Web User Interface) - Scripts

CHAPTER 11

VERSION CONTROL

11. VERSION CONTROL

Version of manual	Date of issue	System version
20140704#1.0EN	2014.07.04	1.02.08
20150330#1.0EN	2015.03.30	1.02.08
20191017#1.1EN	2019.10.17	1.02.08
20191021#1.1EN	2019.10.21	1.02.08
20230825#1.2EN	2023.08.25	1.02.08
G2023/12/10_1EN	2024.08.12	1.04.06
G2023/12/10_1EN	2024.09.16	1.04.06



EN

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