

# User Manual

## MELAflash CF Card Printer

### CF Card Printer

from software version 2.008a



## EN

Dear customer,

We thank you for your confidence demonstrated by the purchase of this MELAG product. As an owner-run and operated family concern founded in 1951, we have a long history of successful specialization in hygiene products for practice-based use. Our focus on innovation, quality and the highest standards of operational reliability has established MELAG as the world's leading manufacturer in the instrument reprocessing and hygiene field.

You, our customer are justified in your demand for the best products, quality and reliability. Providing **“competence in hygiene”** and **“Quality – made in Germany”**, we guarantee that these demands will be met. Our certified quality management system is subject to close monitoring: one instrument to this end is our annual multi-day audit conducted in accordance with EN ISO 13485. This guarantees that all MELAG products are manufactured and tested in accordance with strict quality criteria.

The MELAG management and team.



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# 1 General guidelines

Please read this user manual carefully before commissioning the device. The user manual includes important safety information. The functionality and value-retention of this device depends on the care accorded to it. Please store this user manual carefully and in close proximity to your device. It represents a component of the product.

The device type is specified on the type plate on the lower side of the device.

Should the manual no longer be legible, is damaged or has been lost, you can download a new copy from MELAG download centre at [www.melag.com](http://www.melag.com).

## Symbols used

Symbol	Explanation
	Draws your attention to a dangerous situation, which if not avoided, could result in damage to the device software, data-loss or network problems.
	Draws your attention to important information.

## Formatting rules

Example	Explanation
Universal- Program	Words or phrases appearing on the display of the device are marked as display text.

## Symbols on the device



In affixing the CE mark, the manufacturer declares that this product fulfils the corresponding EU requirements.



The device may not be disposed as domestic waste. The vendor is responsible for appropriate disposal of the device - it must be delivered to the vendor to be disposed of.

## Disposal

MELAG devices are synonymous with high quality and a long life-span. When you eventually need to de-commission your MELAG device, the required disposal of the device can take place with MELAG in Berlin.

Dispose of accessories and consumption media which you no longer require in the appropriate manner. Comply with all relevant disposal specification in terms of possibly contaminated waste.

The packaging protects the device against transport damage. The packaging materials have been selected for their environmentally-friendly disposability and can be recycled. Returning the packaging to the material flow reduces the amount of waste and saves raw materials.

MELAG draws the operator's attention to the fact that they are responsible for deleting personal data on the device to be disposed of.

## 2 Safety

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When operating the device, comply with the following safety instructions as well as those contained in subsequent chapters.

### Cable and power supply

- Only operate the device with the original power supply.
- Disconnect the device from the mains during long downtimes.
- Only connect the device to those products intended for operation with this device.
- Only connect the device to a suitable power source.

### Danger of short circuit

- Liquids may not be permitted to reach the interior of the device. This could result in an electrical shock or short circuiting.

### Setup, installation and commissioning

- Check the device after unpacking for any damage suffered during transport.
- The device is not suitable for operation in explosive atmospheres.
- Install and operate the device in a frost-free environment.
- The device is conceived for use outside the patient area. The device should be located a minimum of 1.5 m radius away from the treatment area.

### Installation location and storage

- Setup the device on a stable, level surface.
- Setup the device in such a way that it is protected against strong direct sunlight and heat.
- Store and operate the device only in a dust-free environment protected against heat and damp.
- Do not place the device directly on the steam sterilizer. The steam sterilizer will become hot upon operation. Non-compliance could result in restricted function and damage to the device.

### Repair

- Never open the device housing. Incorrect opening and repair can compromise electrical safety and pose a danger to the user.
- The device may only be opened and repaired by authorised technicians. The guarantee and warranty are forfeited as soon as the device is opened by anyone other than a member of a MELAG-authorized technical customer service.

## 3 Description of the device

### Scope of delivery

Please check the scope of delivery before setting up and connecting the device.

#### **Standard scope of delivery**

- MELAflash CF card printer
- User manual
- Power supply
- MELAflash CF card
- MELAflash card reader

### Intended use

MELAflash enables the data transmission from devices with RS232 or USB interface to a computer. The CF card printer stores protocols on a CF memory card. The protocols can be transferred from the CF memory card to a computer using the card reader.

The CF card printer can be connected directly to devices with RS232 interface. The card reader is connected to a computer via USB.

### Compatibility with MELAG devices

#### **Overview of current device types**

Product class	Device type	Software version
Pro class	Vacuklav 23 B+ Vacuklav 24 B+ Vacuklav 24 B/L+ Vacuklav 30 B+ Vacuklav 31 B+	from v 3.34
Cliniklav	Cliniclav 25	from v 3.16
MELAtronic EN/EN+	MELAtronic 23 EN MELAtronic 15 EN+	from v 3.22 from v 4.06
Euroklav	Euroklav 29 VS+ Euroklav 23 VS+ Euroklav 23 S+	from v 3.34
MELAquick	MELAquick 12+/12+ p	from v 4.12
MELAseal	MELAseal Pro	---

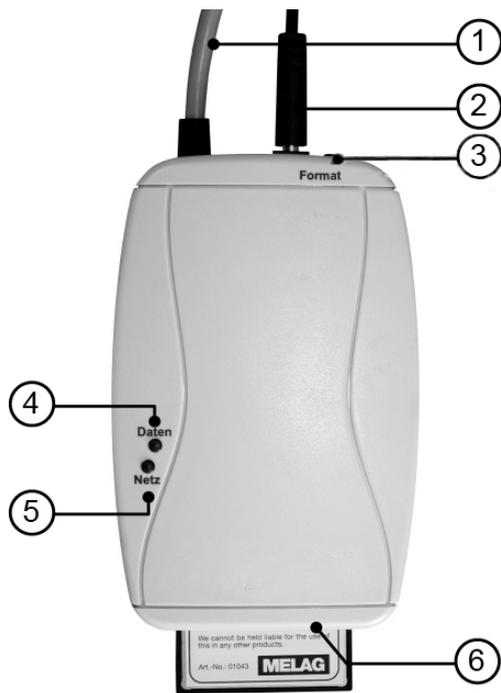
#### **Overview of older device types**

Product class	Device type	Software version
Classic	Vacuklav 23-B Vacuklav 24-B Vacuklav 24-B/L Vacuklav 30-B Vacuklav 31-B	from v 3.16

Product class	Device type	Software version
Euroklav	Euroklav 23V-S Euroklav 29V-S Euroklav 23-S Euroklav 29-S	from v 3.16
MELAtronic EN	MELAtronic 15EN MELAtronic 17EN	from v 3.22

## Views of the device

### MELAflash CF card printer



- 1 Serial cable (RS232) for connection to the steam sterilizer
- 2 Power cable for voltage supply
- 3 **Format** key to format the CF card
- 4 Data LED (red)
- 5 Power LED (green)
- 6 Card slot for MELAflash CF card
- 7 MELAflash card reader

### MELAflash card reader



## Status displays

Power LED (green)	Data LED (red)	Status/Cause	Measure
● illuminates green		CF Card Printer ready for operation	CF card can be inserted
●	●	access to the CF card	Never remove the CF card during reading or writing access (otherwise loss of data)
⚙️ flashes		CF card is almost full	Have new CF card ready or copy the data from the CF card to the practice computer
⚙️	⚙️	CF card is full	Have new CF card ready or copy the data from the CF card to the practice computer
●	⚙️	CF card ready for formatting (only 5 s)	Insert CF card within 5 s and only remove when red LED goes out
⚙️	⚙️	Log incorrect	Press the <b>Format</b> key briefly
	⚙️	CF card incorrect (e.g. wrong format) or CF card is defective	Format CF card or exchange

## 4 First steps

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### Connecting the CF Card Printer to a steam sterilizer

1. Connect the cable of the delivered power supply to the right-hand socket of the CF Card Printer.
2. Plug the power plug into the socket.
  - ↳ The power LED lights up green.
3. Connect the serial cable to the serial data connection (RS232) of the steam sterilizer.



#### PLEASE NOTE

We recommend you to tightly screw both knurled screws on the serial connection to avoid them from getting loose or inadvertently being pulled out.

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### Initialise the CF Card Printer on the steam sterilizer

In order to be able to save sterilization logs on the CF card via the CF Card Printer, you have to set the CF card printer as output medium on the steam sterilizer.

The settings you make depend on which device software is installed on your steam sterilizer.

#### From device software version 4.06

1. Switch on the steam sterilizer at the power switch.
2. Select the SETUP Menu **Function** by short simultaneous pressing of the keys '+' and '-'. The display shows **Function: Last batch number**.
3. Navigate with the '+' key in the **Function** menu until **Function: Log output** is displayed.
4. Press the 'P' key to select the **Function / Output medium** sub-menu.
5. Press the 'P' key again. The display shows **Output medium / No output medium**, in case no output medium was selected yet.
6. Navigate using the '+' key until the display shows **MELAflash** as output medium.
7. Press the 'P' key to confirm. The display changes back to the **Function / Output medium** menu.
8. Press the 'S' key twice to exit the menu and return to the initial state.

In order to save the sterilization logs on the CF card directly after the end of a sterilization program, you must activate the option **Immediate output** on the steam sterilizer.

#### Until device software version 3.34

1. Switch on the power at the steam sterilizer and wait until the display shows the initial state.
2. Select the SETUP Menu **Function** by short simultaneous pressing of the keys '+' and '-'.  
The display shows **Function: Print**.
3. Press the 'P' key to select the **Print - File transmission** sub-menu.
4. Press the 'P' key again. The display shows **File transmission / No printer**, in case no output medium was selected yet.
5. Navigate with the '+' key until the display shows **File transmission - External PC**.
6. Press the 'P' key to confirm. The display changes back to the **Print - File transmission** menu.
7. Press the 'S' key twice to exit the menu and return to the initial state.

In order to save the sterilization logs on the CF card directly after the end of a sterilization program, you must activate the option **Immediate printout** on the steam sterilizer.

## Connecting the CF Card Printer to MELAseal Pro

1. Connect the serial connection cable of the MELAflash CF Card Printer to the RS232 interface on the rear of the sealing device.
2. Connect the cable of the delivered power supply to the right-hand socket of the CF Card Printer.
3. Plug the power plug into the socket.
  - The power LED lights up green.
  - The MELAflash CF Card Printer is automatically recognised by the sealing device.
  - A daily log is saved on the CF card in the MELAflash CF Card Printer after the first sealing procedure of the day. Here a log row is written for every further sealing procedure of the same day.



### PLEASE NOTE

#### Complete documentation

Ensure that the CF card is inserted in the MELAflash CF Card Printer during every sealing procedure.

## Using the delivered CF card



### NOTICE

Incorrect insertion of the CF card can lead to damages of the CF card and/or the CF Card Printer.

- Make sure the CF card is facing the right direction and do not use force to insert it into the card slot.



### NOTICE

If the CF card is removed from the card slot whilst the red data LED lights up data saved on the card can be lost.

- Never remove the CF card out of the CF Card Printer while the red data LED is still lit up.

## Capacity



### PLEASE NOTE

Despite the high memory capacity of the CF card, we recommend that you regularly back up the protocols at least once a week on the computer.

## Formatting the CF card

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### NOTICE

All saved data on the CF card is deleted during formatting.

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At delivery the CF card is already formatted, you can use it immediately.

If it should nevertheless ever be necessary to format the CF card, always do so with the CF Card Printer. It formats the CF card in the format the device requires (FAT16).

1. Insert the CF card into the slot as far as you can before it makes contact with the limit stop, but is faced in the right direction in the slot.
2. Keep the **Format** key pressed down (about 7 s) until the red data LED begins to flash repeatedly.
3. This signifies that the CF Card Printer is in formatting mode for a short time (about 5 s).
4. While the red data LED is flashing, insert the CF card completely into the card slot of the CF Card Printer.

➔ The CF card will now be formatted. The red data LED lights up steadily during the formatting process.

➔ When the formatting is completed, the red data LED goes out.

## Inserting the CF card

The CF card is inserted on the front of the CF Card Printer.

## 5 Update

Performing updates on the CF Card Printer is possible from version 2.000.

The software version currently installed in the CF Card Printer is listed on the end of the log printout:

```

PROGRAM PROPERLY EXECUTED!

Temperature   : 135.5 +0.2 /-0.3 °C
Pressure      : 2.17 +0.02/-0.03 bar
Steriliz. time : 5 min 30 s
Time          : 19:57:47 (End)

-----
30 201402261 5.12 5.05
CRC: 0x11B9 MF V2.006A

```

In order to perform an update, proceed as follows:

1. Save the update file (11352.MOT) in the main directory of an empty CF card (FAT16).
2. Switch-off the CF Card Printer by unplugging from the mains socket.
3. Insert the CF card.
4. Re-plug the power supply of the CF Card Printer into the mains.

↳ The update will start automatically. The red data LED illuminates during the update.

↳ After completion of the update procedure, a LOG file will be written on the CF card containing the result. If the update has been performed successfully, the current software version is written in the LOG file.

### Example of a LOG file:

```

-----
Update Logfile
-----
New version firmware
V2.006A
Mar 28 2013      13:18:16
-----
Result
      No Error
-----

```

### Legend for LOG file

The following outcomes in the LOG file are possible:

Result	Explanation
No Error	The update was performed successfully.
Wrong file	The update file does not contain a MELAflash update file.
Update file corrupted	The update file could not be opened because the file or file system is damaged.
MOT chks error	The update file (file format) is damaged or invalid.
Version not found	No information about the current software version was found in the update file.
Unknown error	Unknown malfunction

## 6 Troubleshooting

Problem/Event	Possible causes	What you can do/Measures
Log directory <b>UNKNOWN</b> on the CF card; the red data LED and the green power LED flash alternately.	If a log file is not recognised, the system creates a directory <b>UNKNOWN</b> on the CF card.	To reset the error condition, press briefly on the <b>Format</b> key on the top of the CF Card Printer.
Log directory <b>ERROR</b> on the CF card; the red data LED and the green power LED flash alternately.	If there is an error in the data transmission from the steam sterilizer to the CF Card Printer, i.e. while a log file is being saved on the CF card, the system creates the directory <b>ERROR</b> .	To reset the error condition, press briefly on the <b>Format</b> key on the top of the CF Card Printer.
Red data LED flashes	CF card incorrectly formatted	Reformat the CF card (file system FAT16).
	CF card defective	In this case replace the defective CF card with a new one.
The green power LED flashes with brief interruptions.	CF card is almost full	As soon as possible, save the sterilization logs on the CF card by copying them to your computer.  You can continue to save sterilization logs on the CF card until reaching the maximum number of logs which can be stored on the card.
The green power LED and the red data LED flash together with brief interruptions.	CF card is full	Save the sterilization logs on the CF card by copying them to your computer.

## 7 Technical data

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<b>Model name</b>	<b>MELAflash CF Card Printer</b>
Suitable storage media	Compact-Flash Card (CF card), file system FAT16
Device dimensions (H x W x D)	2.3 x 7.5 x 11.5 cm
Ambient temperature	
- Operation	0-40 °C
- Storage	0-70 °C
Relative humidity	
- Operation	8-90 %
- Storage	5-95 %
Electrical connection	
CF Card Printer	DC 5 V $\pm$ 10 %, 1 A
Electrical connection	
Power supply	100-250 V, 47-63 Hz, 1.6 A
Electrical power	max. 6 W
Length of the power cable	approx. 1.4 m

## 8 Accessories

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**PLEASE NOTE**

MELAG recommends using original accessories only.

Consult your MELAG stockist regarding accessories and consumption media. When ordering consumption media, please state the serial number of your device and use the article number listed below.

Article	Art. no.
Power supply for MELAflash CF card printer, EU	ME30403
Power supply for MELAflash CF card printer, AUS/CN/UK	ME30402
Card reader for MELAflash CF card	ME01048
MELAflash CF card for documentation	ME01043

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Original instructions

Responsible for content: MELAG Medizintechnik GmbH & Co. KG  
We reserve the right to technical alterations

Your stockist

