

evOLIS

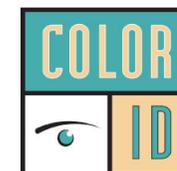


ZENIUS

# USER GUIDE

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Ref no. KU-ZEN1-038-ENG Rev. B1



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COLORID.COM



## ZENIUS

## COPYRIGHT

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## COPYRIGHT NOTICE

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Evolis cannot be held liable for any errors that may be found in this manual, nor for any loss or damage arising accidentally or as a result of dissemination or use of this manual.

## TRADEMARKS

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**Zenius**, Evolis Premium Suite® and Evolis High Trust® are trademarks of Evolis. All other trademarks belong to their respective holders.

## WARRANTY

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Please refer to the warranty notice supplied with your printer for the terms and conditions and limitations.

## ENVIRONMENTAL INFORMATION

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Evolis is committed to helping the environment by reducing the energy consumption of its products.

## RECYCLING END-OF-LIFE PRODUCTS

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Manufacturing the equipment that you have purchased required the extraction and use of natural resources. This equipment may contain materials that are hazardous to health and the environment.

To prevent the dispersal of such materials into our environment and reduce pressure on our natural resources, we recommend that you use existing collection facilities. These systems will re-use or recycle most of the materials in your end-of-life equipment in an appropriate way.



The crossed-out dustbin symbol on your device is a reminder to use these facilities.

For further information on collection, re-use, or recycling systems, please contact your local or regional waste management organization.

You can contact us to find out more either by visiting our website [www.evolis.com](http://www.evolis.com) or by writing to the following address: [info@evolis.com](mailto:info@evolis.com).



## ZENIUS

## ABOUT YOUR NEW PRINTER

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Using your new Evolis printer, you can create a wide variety of high-quality, customized cards, and badges, which can be printed in various thicknesses, colors, and styles. This printer uses consumables and accessories available from Evolis. For further details, please visit our website at [www.evolis.com](http://www.evolis.com)

## WARRANTY REGISTRATION

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Please register online at [www.evolis.com](http://www.evolis.com) to receive our special offers and general information.

On the website, click **Drivers and Support** then **Register your card printer** and fill out all the fields, specifying the model and serial number found on your printer.

## GETTING STARTED

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The purpose of this user guide is to support you, step by step, in discovering your printer and how it works. Please take some time to read it, to learn more about your printer and its features, and to save time during installation and utilization.

As with all Evolis products, a great deal of care has been taken over this manual. If, however, you find an error in these pages, please let us know by emailing us at [info@evolis.com](mailto:info@evolis.com).

## CONTENTS

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The bookmarks found at the top left of your screen can be used to navigate between the various chapters in this user guide.

## ICONS

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The following icons are used in this manual to highlight important information:



Information providing further details about certain points in the main text.



Indicates that failing to take the recommended action is likely to damage your printer.



This symbol indicates that a video showing the procedure is available on the [www.evolis.com](http://www.evolis.com) website and clicking on it takes you straight to online help.



This symbol links to Evolis Print Center, accessible from your computer, which you can use to administer and manage your printer and change its settings.



## ZENIUS

# 1 – GETTING STARTED

## UNPACKING

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Your printer is supplied with several accessories that should be checked on receipt. The list of accessories may vary depending on your location.

The printer is shipped in special packaging designed to prevent any damage in transit. If you notice any visible damage, please contact the shipping company and immediately inform your Evolis reseller, who will tell you the procedure to follow.

Evolis takes great care over the quality of its packaging and we ask that you keep this packaging somewhere clean and dry.



You will be asked for the full original packaging (outer box, inner wedges, and protective bags) in the event that the printer is returned.

If the printer is returned without its original packaging and the components are damaged in transit, these components will no longer be covered by the warranty. You will be charged for new packaging to ship the printer back to you.

### Accessories supplied with your printer:

- Power supply unit – CWT type KPL-065M-VI
- Mains power cable.
- USB cable.
- Installation, documentation, and software CD-ROM.
- Starter cleaning kit.
- Quick installation guide.
- Warranty notice.



If any of these components are missing, please contact your Evolis reseller.

Use only the power supply unit provided with your Evolis printer.

CWT Type KPL-065M-VI.

Use only the USB cable supplied with your Evolis printer.

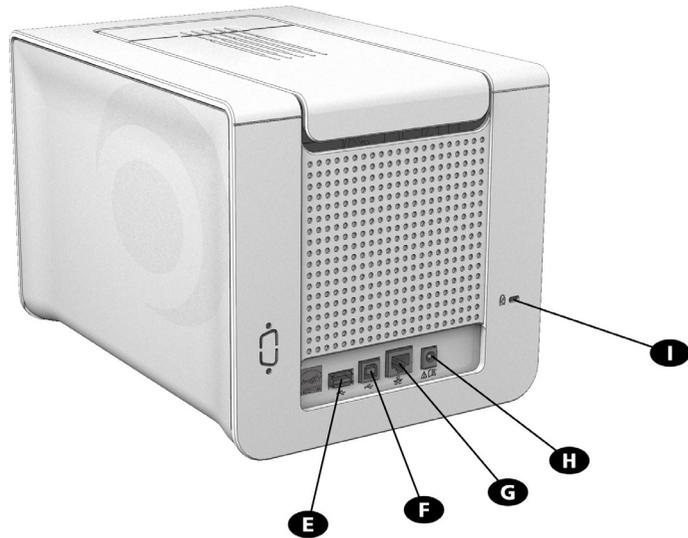
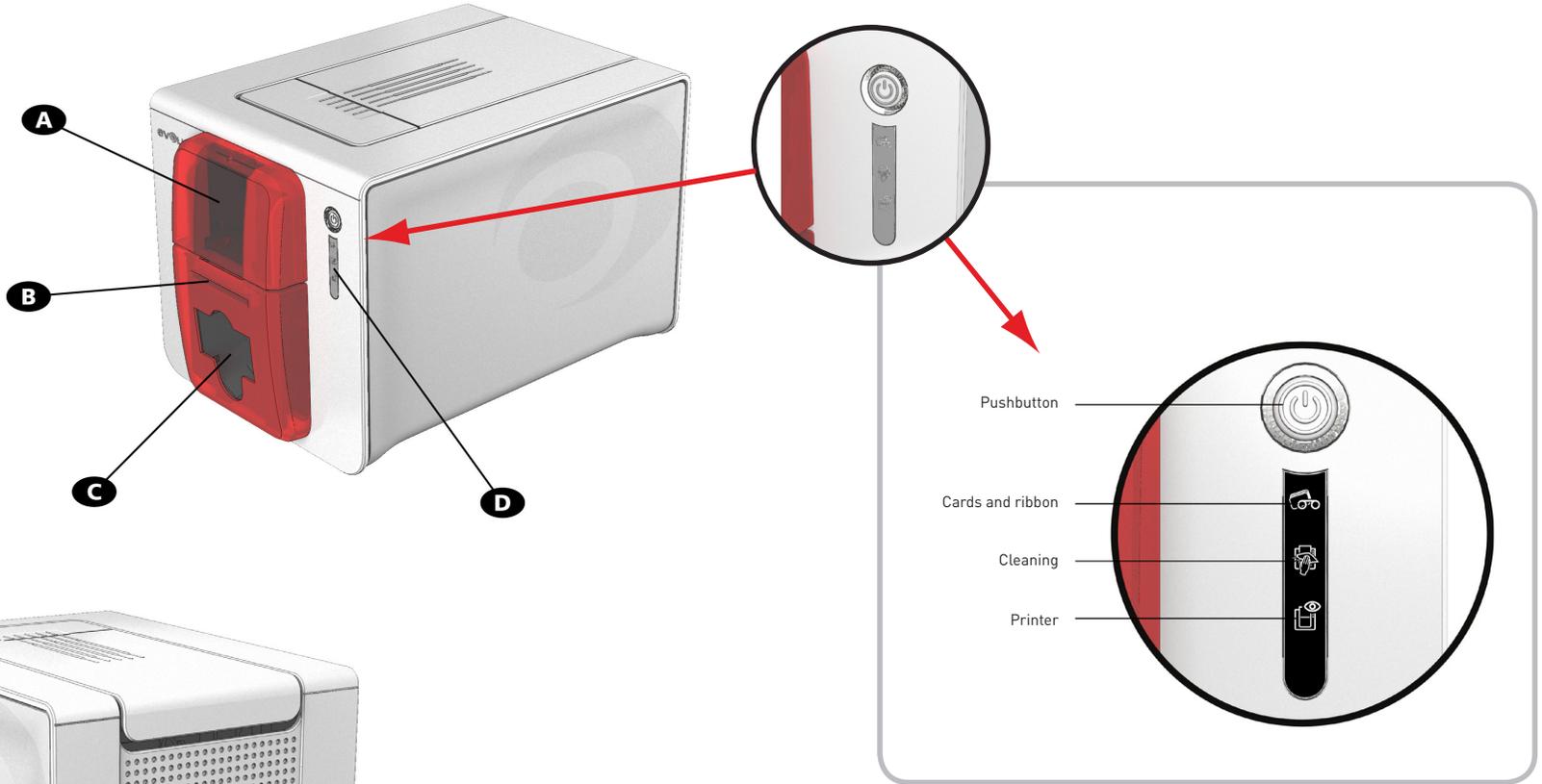


The Evolis printer must be placed in a dry location, protected from dust and drafts, and well-ventilated. Please ensure you keep your printer on a flat, solid surface able to bear its weight.



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# DESCRIPTION OF THE PRINTER AND ITS FUNCTIONS

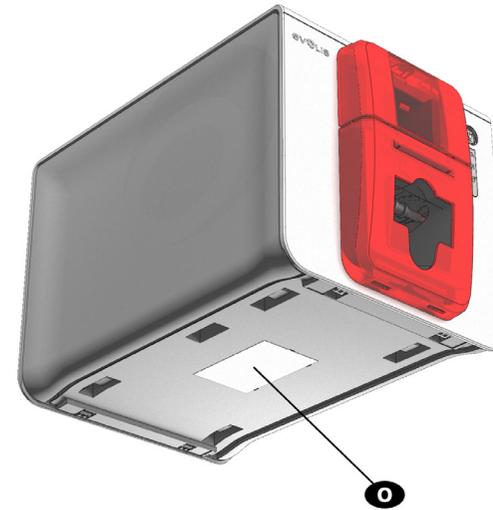
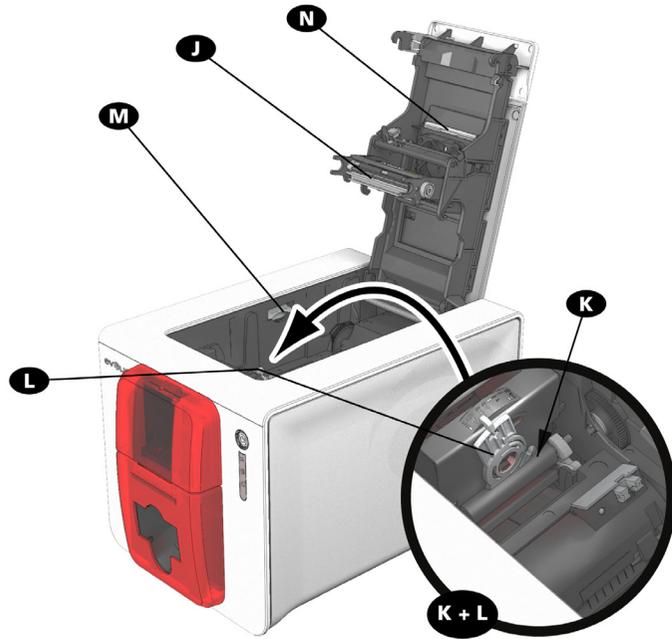


- A - Card feeder
- B - Manual feeder
- C - Output hopper
- D - Control panel
- E - USB connector (optional)

- F - USB connector (standard)
- G - Ethernet connector (optional)
- H - Power cable socket
- I - Space for Kensington lock



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- J - Thermal print head
- K- Cleaning roller
- L- Card thickness adjustment gauge

- M- Side panel opening mechanism
- N- Dust filter
- O - Serial number label



Access to the side panels of the machine and the option module installation/removal areas is restricted to your retailer/installer or to experienced users. The printer should always be disconnected from the power supply (unplugged) before carrying out any work on it.



Please watch the getting started video described in the following chapter.



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## INSTALLATION

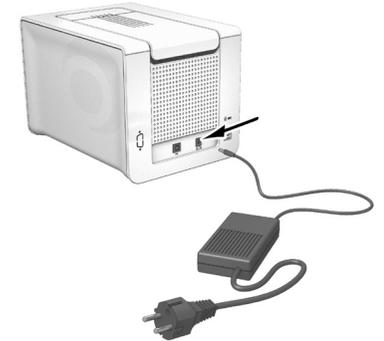
### Connecting the Printer

#### Connection to the power supply



The printer must be connected to a properly protected and grounded electrical installation.  
FI: Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan.  
NO: Apparatet må tilkoples jordet stikkontakt.  
SE: Apparatens skall anslutas till jordat uttag.  
DK: Printerens skal tilsluttes til en korrekt beskyttet og jordforbundet el-installtion.

- Connect the power cable to the power supply unit, then plug the power cable jack into the printer.
- Next, plug the end of the power cable into an earthed power socket.
- The printer is powered on: the control panel lights up showing that the printer is working properly. If the control panel does not light up, then either the installation has not been carried out correctly or the printer is not working properly. Check the installation.



Before attempting any maintenance, always ensure that the power cable is unplugged. For your personal safety, ensure that the cable and power supply unit can be easily accessed, especially in the event of an emergency.



To save energy, the printer will automatically switch itself to standby mode after 10 minutes of inactivity. It will switch to sleep mode after 30 minutes in standby mode.  
The standby times can be configured in the Evolis Print Center. In standby mode, sending a print request restarts the printer, and briefly pressing the control button (for 1 second) takes the printer out of sleep mode.

#### Connecting the USB cable



Under no circumstances should you connect the USB data cable before the installation of the printer driver is complete.

Please refer to the section on printer driver installation in this chapter for further details, and follow the instructions carefully.



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### Ribbons

Evolis original High Trust® ribbons optimize the operation of your printer and avoid causing damage to it. The use of ribbons from other suppliers is likely to damage your printer and will void the manufacturer's printer warranty.

For optimum print quality, Evolis recommends that the printer is fully cleaned every time the ribbon is changed. See the Servicing and Maintenance chapter of this manual.

#### Fitting the ribbon



The printer automatically recognizes the ribbon inserted.



Open the cover



Insert the ribbon as shown.



Close the cover and press until you hear a click.



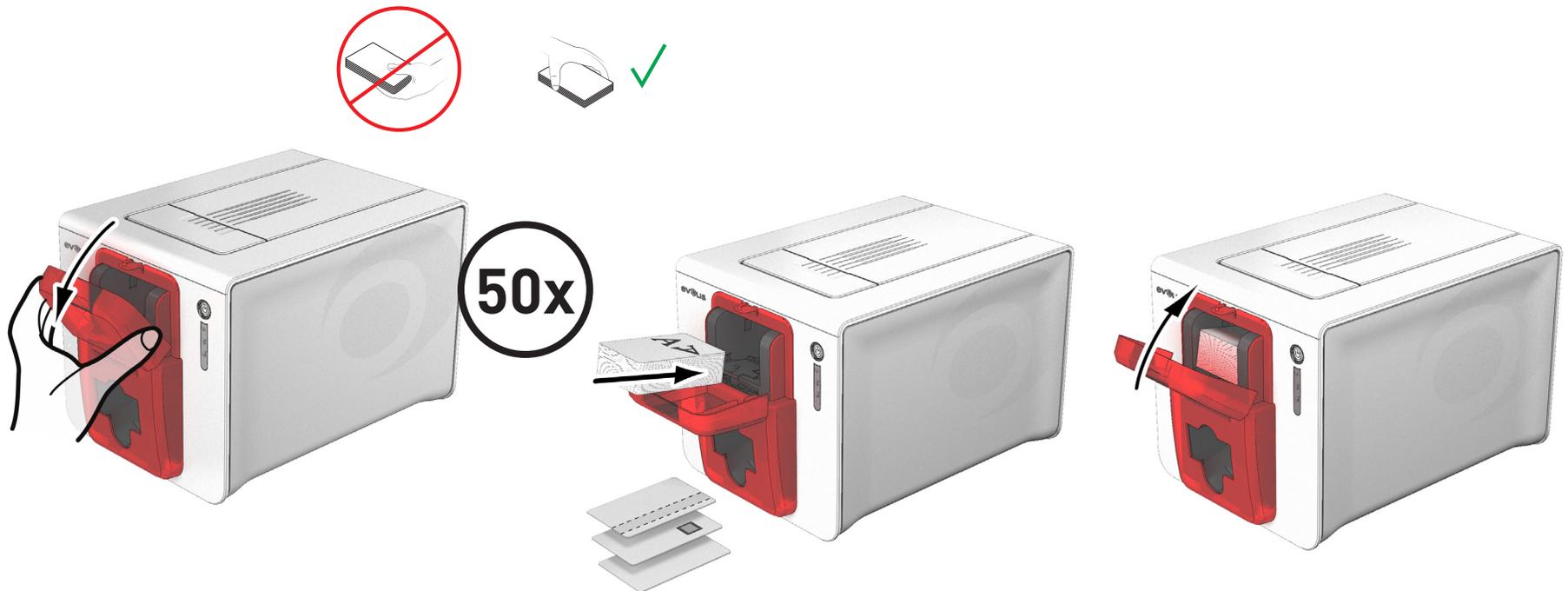
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## Cards



For optimum quality, the cards used must be ISO 7810 certified.  
Use only the card types recommended by Evolis.  
Avoid touching the printable surface of the cards in order to preserve print quality.  
Do not use cards that have been damaged, folded, embossed, or dropped on the floor.  
Keep your cards protected from dust.

## Loading the cards



Open the card feeder.

Insert the cards, 50 cards maximum with 0.76 mm thickness. Hold and insert the cards as illustrated in the diagram.

Close the feeder.



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### Removing printed cards

Once the print cycle is complete, the card is issued into the output hopper below the card feeder. This output hopper is designed to collect printed and/or encoded cards. The printer is equipped with an output hopper with a maximum capacity of 20 x 0.76 mm cards.



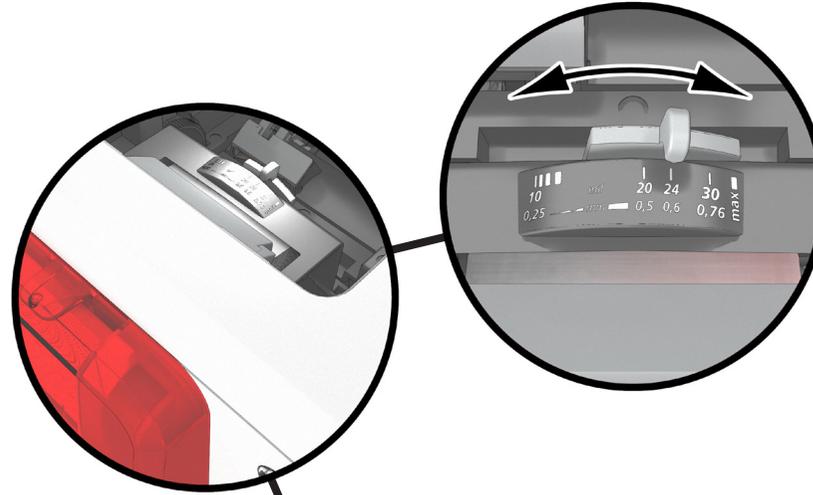
### Adjusting the card thickness

The printer is equipped with a manual card thickness adjustment mechanism, which can be reached through the inside of the printing unit when the cover is open. The printer accepts cards of between 0.25 mm and 0.76 mm. The factory setting for card thickness is 0.76 mm.



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To adjust the card thickness:



Open the printer cover by pressing on the opening lever, and lifting it up.



Adjust the thickness of the cards used by moving the gauge from right to left to the desired card thickness.



Then close the cover.



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### Inserting cards manually

Cards may be inserted one by one into the manual feeder. Manual insertion must be configured beforehand in the Evolis Print Center (see chapter 2-2, Managing the Print Settings).



After starting your print task, insert a card into the manual feeder. The card will emerge automatically when printing is complete.



Ejection of the printed card can be set in the Evolis Print Center under output, either into the manual feeder or into the output hopper.



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# 2 – PRINTING

## INSTALLING THE PRINTER DRIVER

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Advanced functions automate the complete printer setup after the printer driver has been installed.

Your printer is supplied with a CD-ROM including the Evolis Premium Suite® software, which contains the printer drivers for the Windows and Mac OS platforms.

Evolis Premium Suite® is an all-in-one software solution for printer drivers that enriches the user experience by making interaction between the printer and the computer more intuitive.

It is also:

- A print center that monitors the printers: indicating the printer status, remaining ribbon capacity, etc.
- A powerful tool to support printer setup
- A notification center that alerts users when their intervention is required
- A printer maintenance and administration point
- A series of wizards to guide you through the cleaning and encoding operations, etc.
- An encoding system (magnetic encoding, etc.)
- A diagnostic tool

To install the printer driver:

**On PC:** insert the CD-ROM into your computer and select the printer driver menu. A program will guide you through the entire installation process.

**On Mac:** insert the CD-ROM into your computer and double-click on the .pkg format that will launch the driver installation on your computer.



Do not connect your USB cable to your computer until prompted to do so by the installation program. For the connection procedure, see the section on Connecting the Printer in this chapter.



Follow the installation procedure carefully. All versions of Windows require the user to have administrator rights to install the driver.



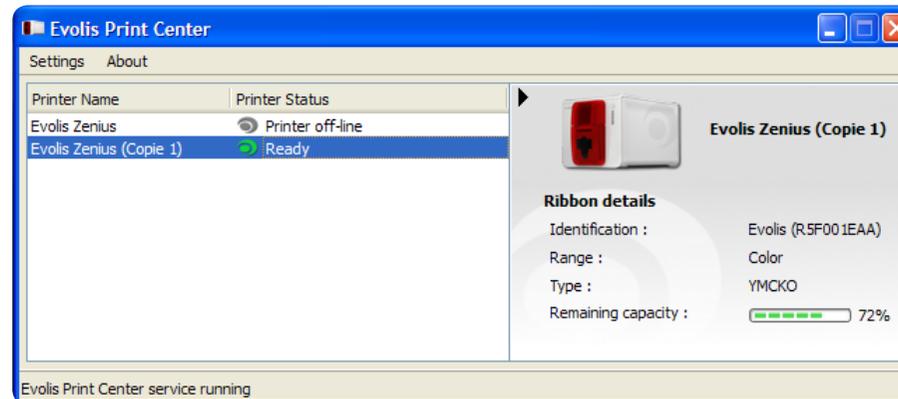
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## MANAGING PRINT SETTINGS

Once the ribbon has been installed, your Evolis printer will automatically adapt its parameters and settings to suit the ribbon. A graphic application called Evolis Print Center is available to help you if necessary to change certain predefined settings.

To access this application:

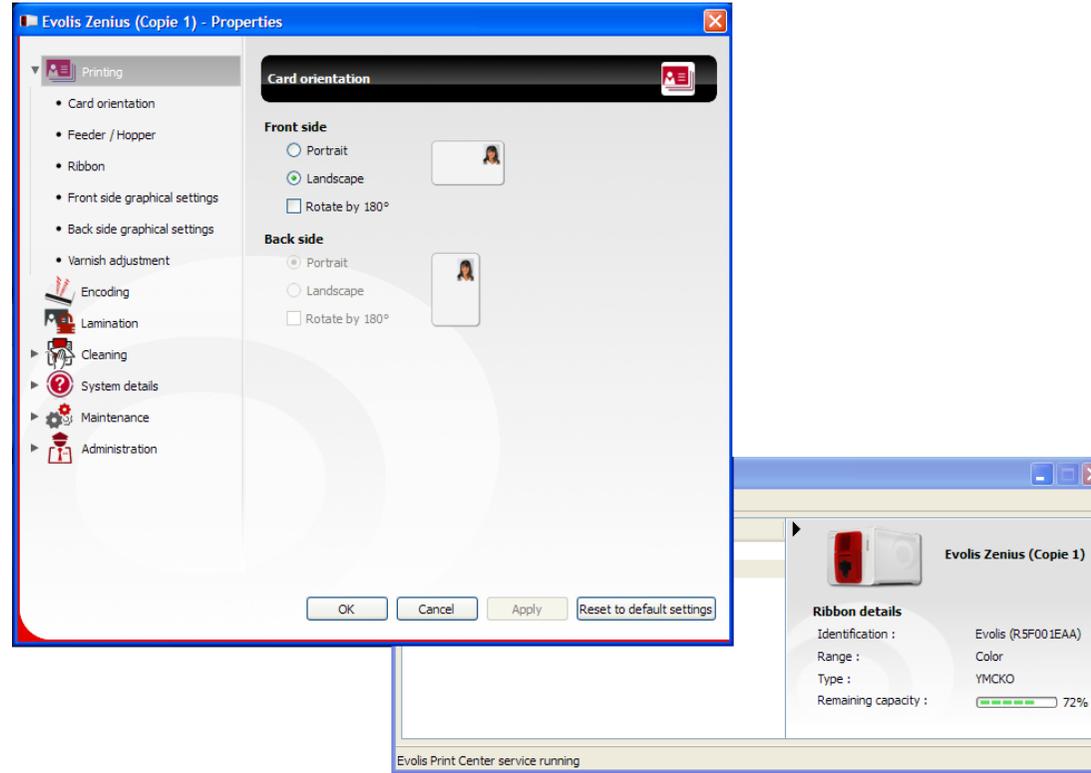
- From the **Start** button on the bottom left of your screen in the Windows task bar, select **All Programs, Evolis Card Printer, Evolis Premium Suite, Evolis Print Center**.
- The application displays all of the Evolis printers installed.





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- Select the desired printer.
- Right-click the name of the printer, select **Properties** to access the setup area or double-click the printer name.



Pay attention to the settings defined under the printer driver properties and do not hesitate to contact your Evolis reseller for any advice and assistance needed before making any changes.



Please refer to the Evolis Print Center manual for more details of what each of the settings means.



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# NOTIFICATION OF MESSAGES AND WARNINGS

The Evolis Printer Manager has an additional function allowing the printer to communicate with the user through notifications.

There are several types of notification:

- Messages about printer servicing.
- Messages and alerts associated with the ribbons, their compatibility with your printer, and the nature of your print requests.
- Alerts about problems that have prevented printing.

When the **Evolis Printer Manager** is active, a small icon is displayed in the bar on the bottom right of your screen:



The color of the icon varies according to the status of the printer:

- Green: Printer ready
- Orange: Information message issued – printing stopped
- Red: Warning message issued – printing stopped
- Grey: Printer in Sleep mode, disconnected, or communication interrupted.

When a notification is issued, it is displayed in a window of the following type:



The **Evolis Printer Manager** can be disabled by right-clicking the Evolis icon in the status bar.



Interrupting the Evolis Printer Manager service is not recommended unless there is a conflict with other applications installed on your computer. The Evolis Printer Manager is the best way of monitoring your printer activity effectively from your workstation.



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# PRINTING A CARD

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A large number of Windows applications allow documents to be printed (for example the tools in the Microsoft Office suite: MS-Word, MS-Access, MS-Excel, MS-PowerPoint).

To familiarize yourself with the layout of a card and how to set up its format and printing, we provide the following example.

### In Microsoft® Word

After having set the Evolis printer as the default:

- Start the MS-Word application.
- Under Orientation, select **Landscape**.
- Change the size of your document by selecting type **CR80** (or by customizing the document to the dimensions of 8.6 cm x 5.4 cm).

You are ready to customize your card by adding the various items that go to make up a card:

- Logo and illustration
- Identification photo
- Fixed and variable texts
- Barcodes, etc.

When it is ready, click on **File** then **Print**.



Your printer is supplied with the cardPresso software that allows you to create and customize your cards.



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# CONNECTING TO A NETWORK (ETHERNET AND WI-FI)

All Evolis printers have the benefit of a TCP/IP network connection solution. This functionality is available as standard with Primacy.

Out of the box, the printer comes configured in DHCP mode (Dynamic Host Configuration Protocol), which means that its IP address is supplied by the network. In addition to these basic settings, the network administrator has the option of configuring the printer differently in order to comply with the constraints imposed by the corporate LAN:

- Printer connected in a subnet, in DHCP
- Printer connected in a subnet with fixed IP address, and WINS resolution
- Printer connected in a subnet with fixed IP address, and no WINS resolution

The printer may be identified on the network in two ways:

- By its Hostname (NETBIOS)
- By its IP address

In addition, the Ethernet connection wizard will automatically detect all the Evolis printers installed.

The configurable settings are:

- Printer IP address
- Subnet mask
- Gateway
- WINS server



Evolis printers with a TCP/IP network interface have an http server on board.



Changing the printer's basic settings, without prior knowledge of the layout of the LAN in question or without genuine technical knowledge may result in a malfunction of the printer, and may even extend to a more widespread failure of all or part of the LAN. Please contact your System and Network Administrator before connecting to or changing the settings for your local area network.



For further details, please refer to the manual "Configuration of Evolis Printers on a TCP/IP (Ethernet) LAN."



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## 3 – SERVICING

### GENERAL WARRANTY INFORMATION

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Your Evolis printer has been designed for long service and requires only minimal and regular servicing. Please comply with the instructions given below to ensure that it runs satisfactorily.

#### Keep your warranty cover!



The manufacturer's warranty is subject to strict adherence to the routine servicing and maintenance instructions, and in particular the printer cleaning cycles.

**Any failure to follow the servicing procedures described in this chapter will void the print head warranty.**

Evolis declines any liability where there has been a failure to carry out required maintenance on the printer.

The print head is a wearing part and an extremely sensitive printer component. Its useful life can be seriously curtailed by the presence of dust, liquids or solids in the printer's immediate environment, on the print head or on the cards. The user must take all necessary precautions to insert into the printer only clean, dust-free cards that are free of foreign bodies.

The frequency and quality of cleaning are decisive factors enabling users to extend the print head's useful life and to ensure excellent print quality. Particular care must therefore be taken with cleaning. Users must comply with the servicing and maintenance instructions provided in this chapter.

In addition, the use of Evolis brand ribbons (Evolis High Trust®) also ensures that your equipment operates properly. Use of ribbons not approved by Evolis may affect the quality and reliability of print jobs, produce low quality printing, and even affect how the printer operates. The manufacturer's warranty does not cover physical damage or quality problems caused by using non-Evolis approved ribbons.

Evolis supplies the maintenance items and consumables. You can find them on the website [www.evolis.com](http://www.evolis.com).



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## ROUTINE PRINTER CLEANING

### Printer Servicing



The print head warranty is directly linked to routine cleaning of your printer. If you do not carry out this cleaning at the required times, the print head warranty will cease to be valid.



Recommended cleaning cycle: whenever the ribbon is changed  
Mandatory cleaning cycle: when the cleaning warning is triggered  
Servicing accessory: adhesive cleaning card.



Your printer is fitted with a cleaning warning system, which is triggered after a certain number of cards have been inserted. You should proceed with the routine cleaning of your printer as soon as the warning is triggered. If you continue to run the printer despite the warning and if the warning light remains lit, the print head warranty will be automatically voided because of failure to comply with contractual maintenance obligations.

Printer	Printer cleaning required after: (warning light flashing)	Number of cards remaining before warranty voided: (warning light flashing)	Warranty invalid after: (warning light steady)
ZENIUS	1000 cards	200 cards	1200 cards



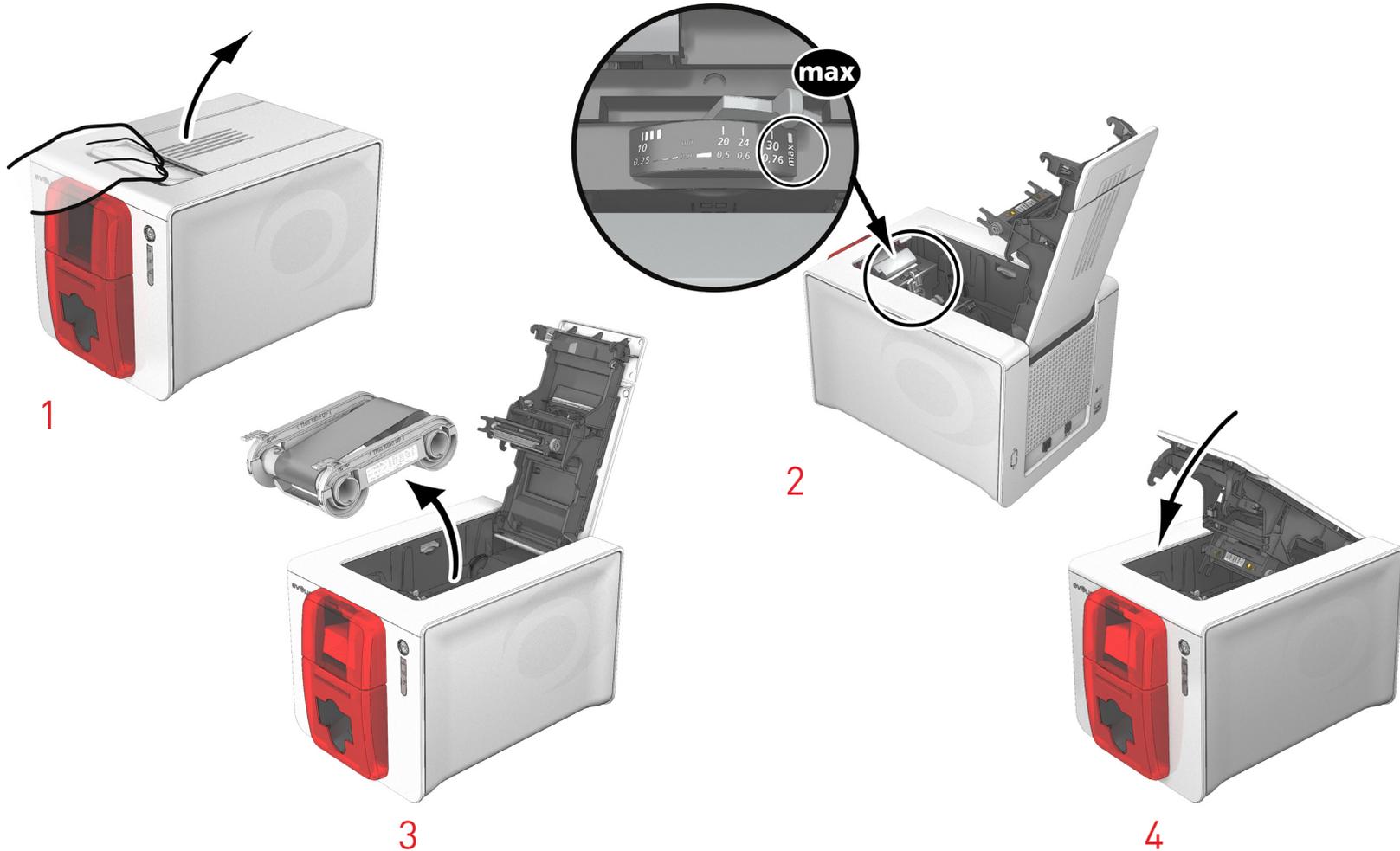
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**Follow the procedure below to validate your routine cleaning:**

Repeatedly running the "T" shaped card through the printer cleans the cleaning roller in order to maintain print quality and extend the service life of the print head.



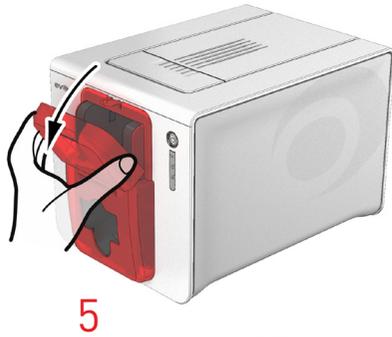
- 1 Remove the cover from the printer as shown.
- 2 Using the gauge, adjust the card thickness to the MAX position.
- 3 Remove the ribbon as shown in the diagram.
- 4 Close the cover and make sure it has clicked shut.



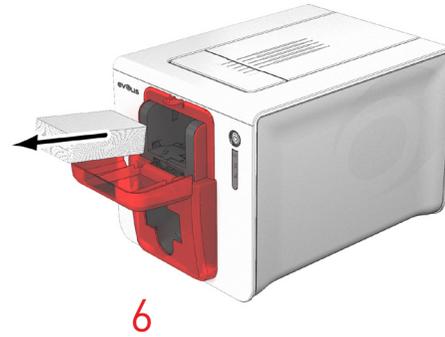


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- 5 Open the feeder.
- 6 Remove any cards in the feeder if necessary.
- 7 Close the feeder.
- 8 Double-click the control button on the control panel before inserting the cleaning card.
- 9 Remove the film from the adhesive card **1** and insert the cleaning card into the feeder as shown, adhesive side up **2**. Cleaning starts.
- 10 The used cleaning card will be automatically ejected into the output hopper.



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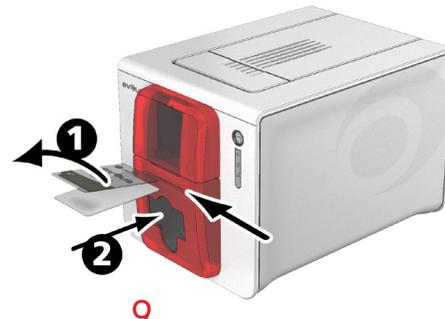
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Routine cleaning may also be launched from the Evolis Print Center by clicking on "Start cleaning."



Before using your printer, remember to readjust the gauge to the desired card thickness.



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### Servicing the Print Head



Recommended cleaning cycle: whenever the ribbon is changed.  
Servicing accessory: Special cotton swab soaked in isopropyl alcohol.

However, to maintain the original print quality and to absorb surplus ink on the print head, we recommend that you regularly clean the print head (whenever the ribbon is changed and during routine cleaning) using the swabs supplied by Evolis. You must also protect the print head and its components from any electrostatic discharge.



Unplug the printer from its power supply before cleaning the print head.  
Follow the cleaning cycles scrupulously.  
Avoid any contact between the print head and any metal or sharp objects.  
Avoid touching the print head directly with your fingers, as this could affect print quality or permanently damage the print head.

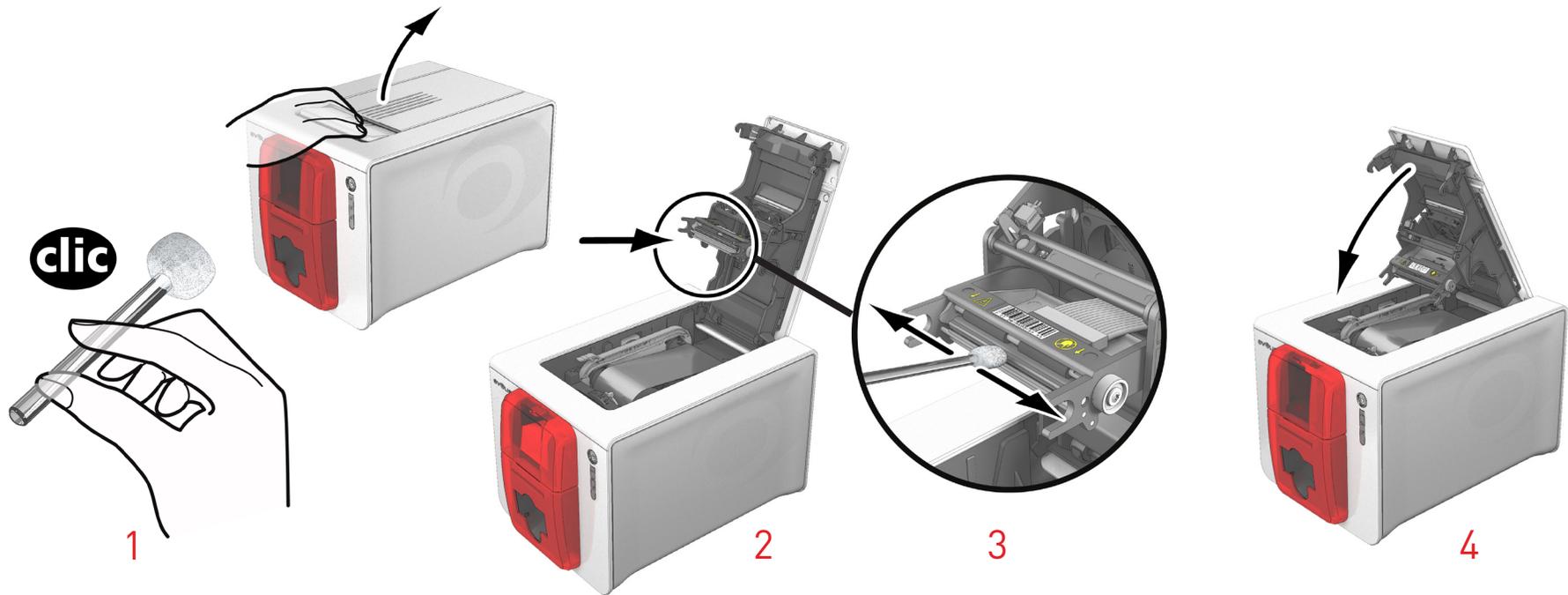


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Follow the procedure below:



- 1 Take an Evolis cotton swab and press the middle of the tube until the end of the swab is soaked in alcohol.
- 2 Unplug the power supply, open the cover, and find the print head.
- 3 Gently rub the swab from left to right along the print head for a few seconds.
- 4 Close the cover. Reconnect the printer.



Wait for 2 minutes after cleaning before using your printer.



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# ADVANCED CLEANING

For a deeper clean, we recommend carrying out an advanced clean every 5 routine cleaning cycles.

To do this, Evolis provides an Evolis High Trust® maintenance kit consisting of 2 adhesive cards, 2 pre-soaked "T" shaped cards, a cleaning pen, and a box of wipes. The "T" shaped card is used to clean the transport rollers and the head of the magnetic encoder. To ensure advanced cleaning is carried out properly, the procedure given below must be followed.

### Printer servicing

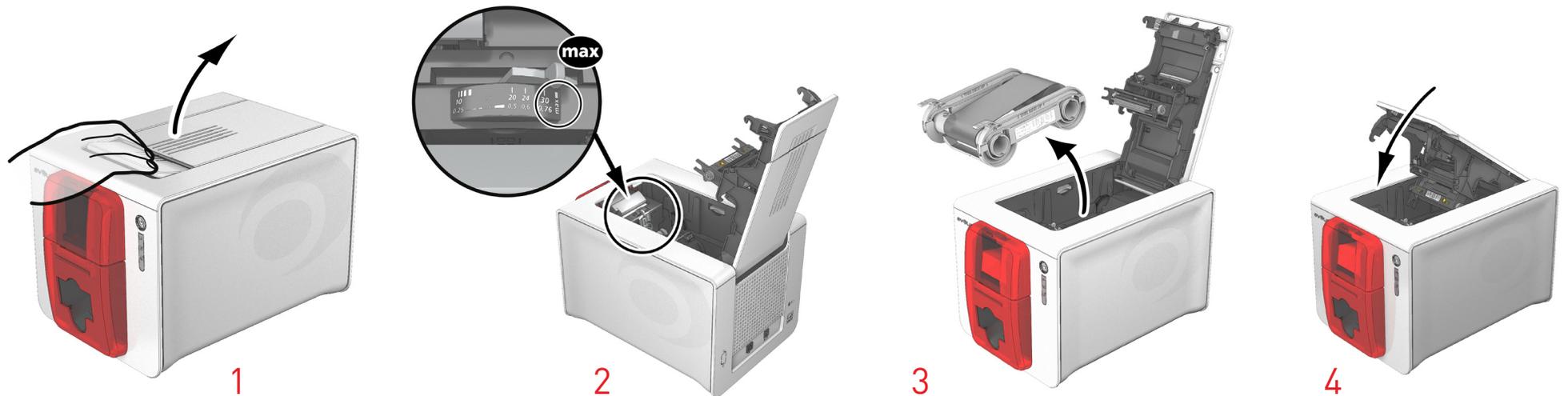


Recommended cleaning cycle: every 5 routine cleaning cycles.  
Servicing accessory: pre-soaked "T" shaped card and adhesive card.

### Follow the procedure below:



- 1 Open the printer cover.
- 2 Using the lever, set the card thickness to the MAX position.
- 3 Remove the ribbon as shown on the diagram.
- 4 Close the cover and make sure it has clicked shut.





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- 5 Remove any cards in the feeder if necessary.
- 6 Double-click the control button before inserting the cleaning card.
- 7 Take the "T" shaped cleaning card and insert it in the feeder as shown. Cleaning starts.



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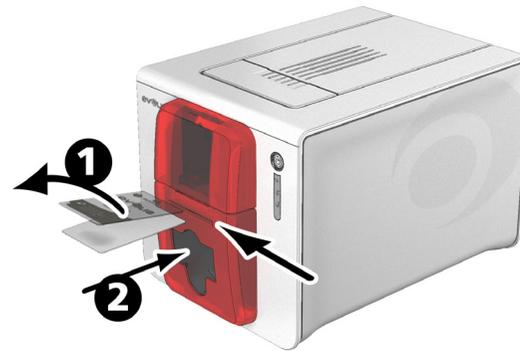


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- 8 Remove the "T" card then remove the film from the adhesive cleaning card ① and insert it into the feeder as shown, adhesive side up ②. Cleaning starts.
- 9 The used cleaning card is ejected automatically by the manual feeder.



8



9



Advanced cleaning can also be launched from the Evolis Print Center by clicking on "Start cleaning."



Please note the "T" shaped card must be used immediately after the bag is opened.



Wait for 2 minutes after cleaning before using your printer. Remember to readjust the gauge to the desired card thickness.



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### Servicing the Print Head



Recommended cleaning cycle: every 5 routine cleaning cycles.  
Servicing accessory: cleaning pen.



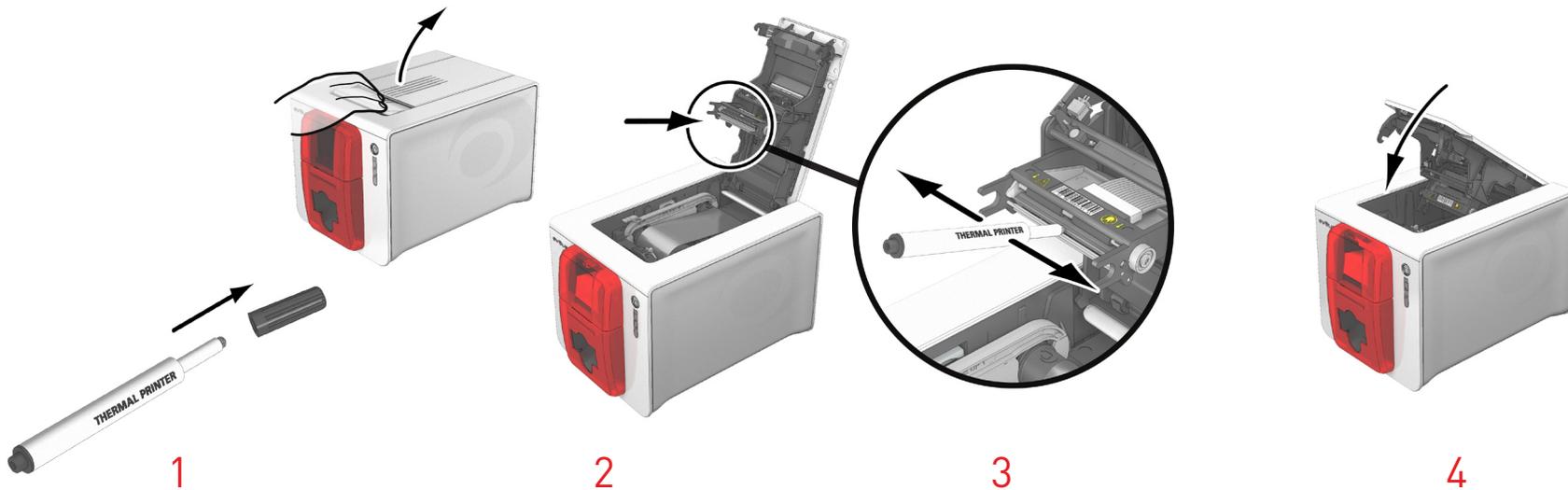
Unplug the printer from its power supply before cleaning the print head.  
Follow the cleaning cycles scrupulously.  
Avoid any contact between the print head and any metal or sharp objects.  
Avoid directly touching the print head with your fingers, as this could affect print quality or permanently damage the print head.

The cleaning pen can be used up to 8 times for cleaning the print head.

**Follow the procedure below:**



- 1 Take the cleaning pen and remove the lid.
- 2 Unplug the power supply, open the cover, and find the print head.
- 3 Gently rub the pen from left to right along the print head as indicated for a few seconds.
- 4 Close the cover. Reconnect the printer.



Wait for 2 minutes after cleaning before using your printer.



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## Servicing the Dust Filter

The dust filter is located above the ventilator for the print head. This filter can get dirty over time. We recommend cleaning it once a year or after 10,000 cards, depending on your work environment.



- 1 Open the printer cover. Locate the dust filter.
- 2 Remove the filter by pulling it up and sliding to release it completely.
- 3 Once the filter has been removed from its place, take one of the cleaning wipes supplied by Evolis.
- 4 Clean the filter by brushing it with the wipe on each side.
- 5 To put it back, insert it in place (groove facing you) and push it down until it clicks into position.
- 6 Close the cover.



1



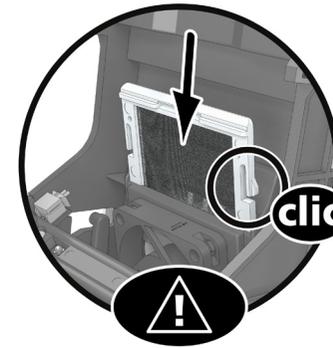
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## 4 - HELP

This chapter provides suggestions for identifying problems that may arise when using your printer. If you do not manage to solve your problem, this chapter also explains how to contact Evolis technical support.

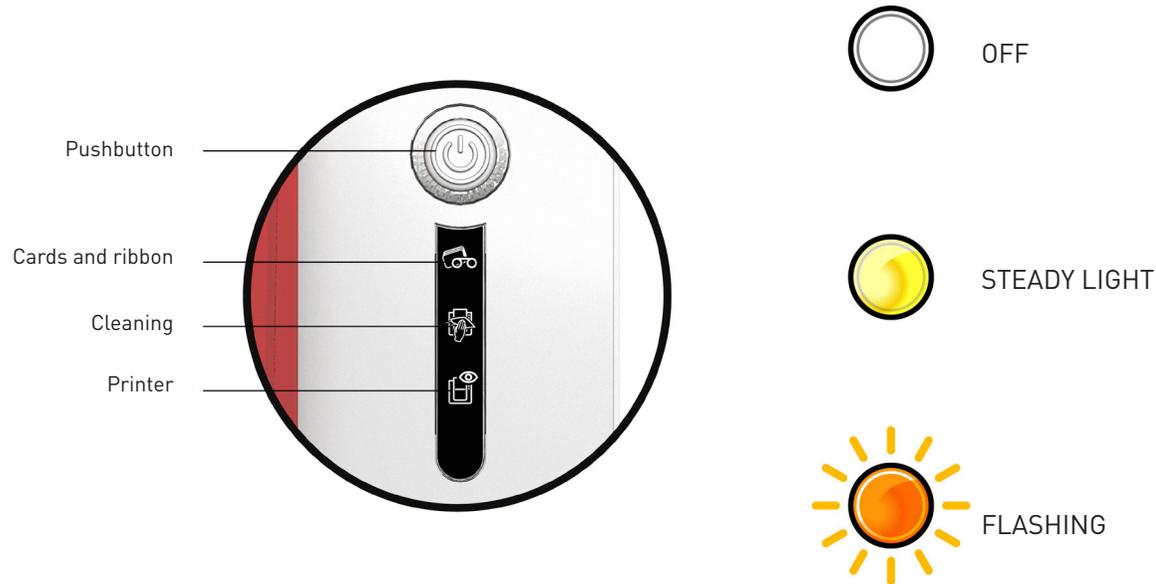
### WARNINGS AND DIAGNOSTICS

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Although the Evolis printer was designed to work independently, keeping user involvement to a minimum, it may prove useful to be aware of the main warnings.

#### Control panel alerts

See **Chapter 1 – Description of the printer and its functions (page 5)** for further details about the control panel.





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## PRINTER READY

- The printer is ready to receive data.



## PROCESSING

- The printer is receiving data.



## RIBBON

- No ribbon in the printer.
- End of ribbon.
- The ribbon is not correctly fitted.
- The ribbon is torn.
- The ribbon is not recognized.

**Check the condition of the ribbon in the printer. If you have a print job in progress, this restarts with a new card.**

## CARDS

- No cards in the card feeder.

**Place cards into the feeder - the process restarts.**

- Error loading cards.

**Check the cards are loaded. For any other problems, contact your Evolis reseller.**



## PRINTER COVER OPEN

- The printer cover is open.
- Close the cover. The printer restarts.**

## MECHANICAL ERROR

- Card jammed in the printer.
- Mechanical component fault.

**Open the cover and hold down the control button to eject the jammed card. For more details, refer to page 38.**

**If the problem persists, contact your Evolis reseller for assistance.**



## ZENIUS



### ROUTINE CLEANING (after 1000 cards inserted)

- The printer must be cleaned.  
(See page 21)



### ADVANCED CLEANING

- The printer requires advanced cleaning.  
(See page 20)



### COOLING MODE

- The cooling system has been activated.



**The printer pauses for a few seconds and restarts once it has returned to its normal operating temperature.**



### WAITING FOR A CARD TO BE INSERTED OR REMOVED

- The printer is waiting for a card to be inserted or removed.

**Insert or remove a card from the manual feeder  
(See page 4)**



### CLEANING (after 1,200 cards inserted)

- The printer must be cleaned for the warranty to remain valid.  
(See page 20)



### FIRMWARE UPDATE

- The printer is updating its firmware.

**The printer is operational again following the update.**





## ZENIUS

# DIAGNOSTIC HELP

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In this chapter, you will find all the information you need to carry out a few simple checks that you may be asked to run by your Evolis reseller to help you as effectively as possible.

## Printing a Technical Test Card

The technical test card must be printed when you receive the printer to ensure that your printer is working properly. This card shows various items of technical information about the printer (serial number, firmware, cleaning operations, print head, etc.). You may be asked for these by your reseller.

### Printing a technical test card

- 1 Wait for all print jobs to finish.
- 2 Check that there is a ribbon and card in the printer.
- 3 Press the control button for four to five seconds until it goes out.
- 4 Press the control button again and hold.
- 5 The control button lights up.
- 6 Release the control button once the light flashes.
- 7 The test card is printed (in color if a color ribbon is fitted in the printer, or monochrome if the ribbon is monochrome).
- 8 The printed card is ejected into the hopper.



Printing the technical test card can also be launched from the Evolis Print Center.

## Printing a Graphical Test Card

The graphical test card is used to confirm the print quality in monochrome, the absence of any potential offsets, and whether the ribbon is synchronized correctly.

To print the graphical test card, check first of all that a ribbon and card are in the printer.

Go to **Evolis Print Center**, select **System information** and click the **Test cards** tab. Then click on the **Graphical test card** button. The card is printed and the printed card is ejected into the output hopper.



Printing the graphical test card can only be launched from the Evolis Print Center.



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## Identifying Installed Versions

You can directly identify the system versions installed (printer driver, setup, etc.):

- 1 From the **Evolis Print Center**, double-click on the printer name to access its **Properties**.
- 2 Click **System details**, then **System details**.



ZENIUS

## TROUBLESHOOTING



Do not attempt to use tools or other items to repair your printer in the event of problems, in case major damage is caused.

### Printing Problems

#### No printing

- 1 Check the printer driver**  
Check that there is a printer driver for your printer in the Windows settings.  
Check that the printer is selected as the default printer.
- 2 Check the printer power supply**  
Check that the power cable is correctly connected to the printer and to a working electrical socket.  
Check that the printer is on and that the control button is lit.  
Make sure you are using the power supply unit provided with the printer.
- 3 Check the USB cable**  
Check that the printer is connected to your computer via the USB cable.
- 4 Check the ribbon**  
Check that the ribbon is fitted correctly and that the cover is closed.
- 5 Check the cards**  
Check that there are cards in the card feeder.  
Check that no cards are jammed in the printer.
- 6 Print a test card**  
See elsewhere in this chapter for the procedure to be followed.

#### Blank card ejected

- 1 Check the ribbon**  
Check that the ribbon is not finished or damaged. Replace it or re-install it if necessary.
- 2 The print head may be damaged**  
Print a test card.

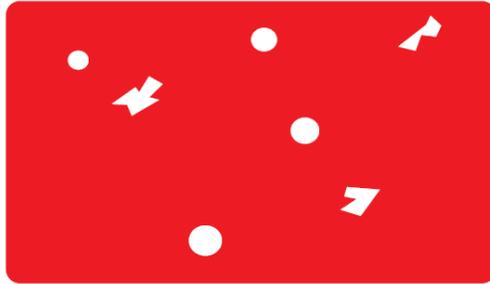
If the test card does not print, contact an Evolis reseller for technical support or visit the website at [www.evolis.com..](http://www.evolis.com..)



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### Poor print quality

Small blemishes on the card



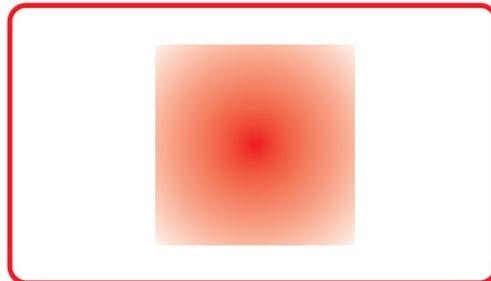
- **The card surface may be dirty.**  
Check that your cards are perfectly clean.  
Use new cards.
- **Cleaning roller or print head dirty.**  
Launch a cleaning cycle.

Horizontal white lines



- **The ribbon is not correctly fitted.**  
Check that there are no wrinkles on the surface of the ribbon.
- **Print head dirty or damaged.**  
Clean or replace the print head.

Blurred image



- **The ribbon is not correctly fitted.**  
Check that the ribbon is correctly positioned in the printer.
- **Poor ribbon synchronization.**  
Open and close the printer cover to synchronize the ribbon.
- **Dirty printer or cleaning roller.**  
Clean the printer.
- **Use of incompatible cards.**  
Check that the cards used match the specifications.



We recommend that you obtain your cards from an Evolis reseller.  
Use of third party cards is likely to adversely affect print quality and/or damage the print head.



## ZENIUS

### Partial or incorrect printing

- 1 Check the print settings**  
Check that no area of the card design to be printed is outside the print margins.  
Check the document orientation (portrait or landscape) in the Evolis Print Center configuration.
- 2 Check the interface cable**  
If irregular characters are printed, check that you are using the USB cable supplied with your printer.  
Check the connection between the computer and the printer.  
Try using another cable of the same type.
- 3 Check that the printer is clean**  
Clean the printer, especially the cleaning roller.  
See the servicing chapter.
- 4 Check that the cards are clean**  
Keep your cards protected from dust.
- 5 Check the ribbon**  
Check that the ribbon is installed correctly.  
Check that the ribbon spools freely.
- 6 Check the print head**  
If straight horizontal lines appear on the printed cards, the print head is probably dirty or damaged.

See the chapters on servicing and troubleshooting. If the problem persists, contact an Evolis reseller or visit the website at [www.evolis.com](http://www.evolis.com).



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## Freeing jammed cards

Control panel displays:



### MECHANICAL ERROR

- Card jammed in the printer. Print jobs are interrupted.



Do not turn your printer off, as this cancels pending print jobs in the printer memory.

### Remove the card as follows:

- 1 Open the printer cover and remove the ribbon.
- 2 Press the control button to activate the card transport rollers. If the card is still stuck inside the printer, slide it manually towards the printer output. If there is more than one card, always push the top one first.
- 3 Replace the ribbon, then close the printer cover.

### To prevent card jams:

- 1 Check that the card thickness gauge is correctly adjusted.
- 2 Check that the thickness of the cards used matches the specifications in Appendix A "Technical Specifications" in this manual.
- 3 Check that the cards are not bent. Keep them in a horizontal position.
- 4 Check that the cards are not stuck together. Shuffle the cards before loading them.



## ZENIUS

### Replacing the print head

The print head is a sensitive component of your equipment. It determines the print quality. The immediate environment should be free from dust or other particles and the print head should be regularly serviced to ensure durability. However, it may sometimes need to be replaced. Evolis has designed a unique device for carrying out such replacement with no tools needed, simply by following the instructions very carefully.

Before you do, please contact your Evolis reseller in order to check the advisability of replacing the print head. The reseller will supply a new print head if required.



For more information about the print head warranty, see the Evolis warranty booklet.



## ZENIUS

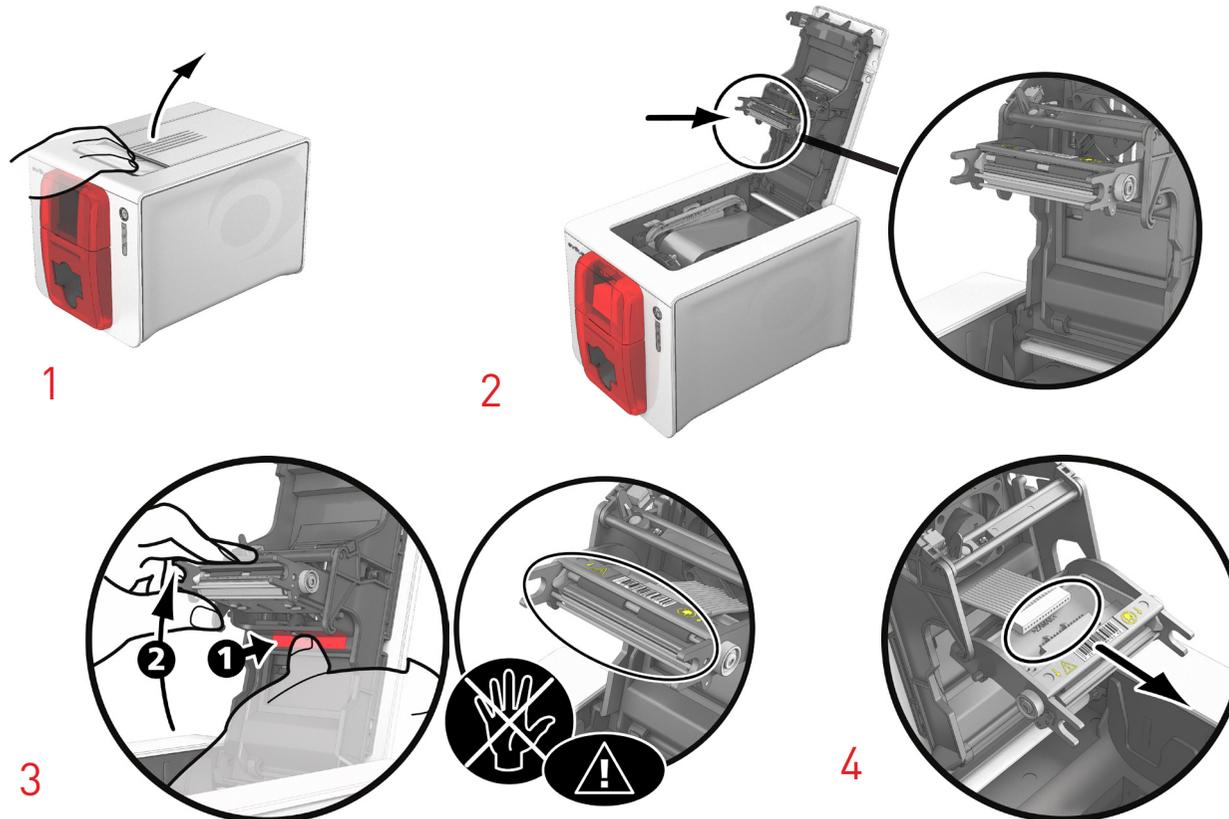
To replace the print head, please proceed as follows:



Before changing the print head, make sure you unplug the power cable.

### Step 1 - Removing the defective print head

- 1 Open the printer cover.
- 2 Locate the print head.
- 3 Press on the plastic part behind the head (pressure plate) and pull the head with your other hand as shown in the diagram in order to free the lugs from the holding fork, then remove the lugs from their slots.
- 4 Tilt the head carefully downward and disconnect the connector linked to the cable without forcing the mechanism.

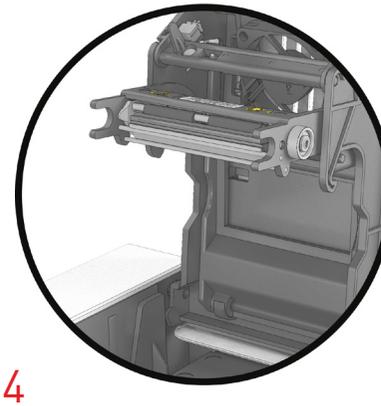
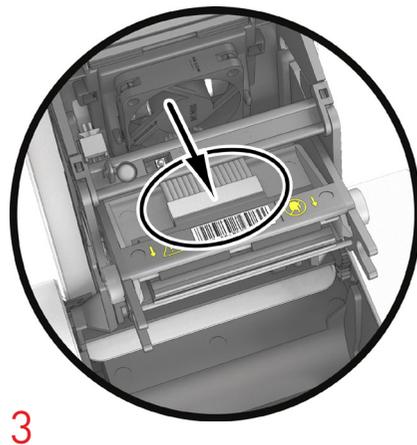
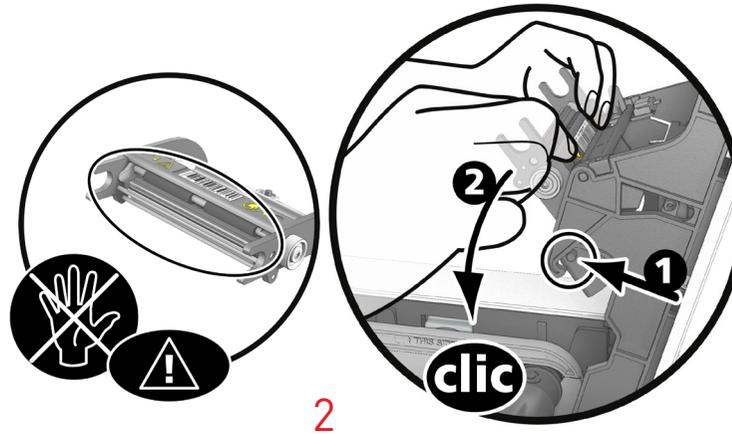
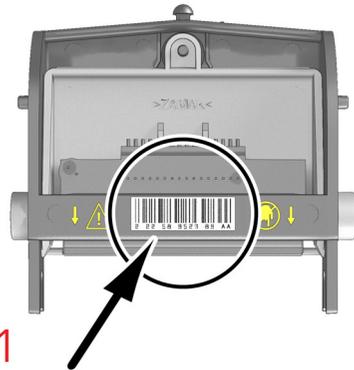




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## Step 2 – Installing the new print head

- 1 Note down the code shown on the white label stuck on the print head. You will be asked for this code in Step 3.
- 2 Take the new head and insert it vertically (white connector upward) raising it in the two guides so as to trap the lugs on the fork into their slots **1**. Then lower it by pressing on the two forks **2**; you will hear a click.
- 3 Connect the cable into its socket, making sure it is the right way round. Do not force the mechanism because this part is comparatively fragile. Press down on each side of the connector to ensure the connection is made.
- 4 The head is back in position.
- 5 Close the cover. The print head is now installed.





## ZENIUS

### Step 3 – Setting up the new print head

- 1 Power up the printer and check that it is properly connected to a computer on which Evolis Print Center is installed.
- 2 Under the **Maintenance** heading of the Evolis Print Center, click the **Change Print Head** tab.
- 3 Enter the PKN number of the print head kit under **Enter PKN no.**, the number you noted down in step 2. Then click **Confirm**.



If the print head kit number is not entered correctly, printer malfunctions may occur and the warranty may be voided.

### Step 4 – Cleaning the printer

On your printer's control panel, the **CLEANING** light is lit:



CLEANING



Cleaning is essential after changing the print head. No print jobs can be run until cleaning has finished. Refer to chapter 3 – Servicing to carry out this operation.

Once cleaning has been carried out, your printer is once again ready to customize your cards.



Wait for 2 minutes after cleaning before using your printer.



## ZENIUS

### Updating the Firmware (for Windows)

Updating the firmware is a simple operation but one which, if not properly completed, can result in your printer breaking down.

Before any update, please contact your Evolis reseller for guidance on the advisability or otherwise of carrying out an upgrade. In general, these updates are only required in the event of a problem or malfunction that has been clearly identified by your Evolis reseller.

The firmware is updated through the Evolis Print Center.

The update can be done automatically or manually.

We recommend using the update verification wizard. This wizard will first find the available updates for the software suite. Once the software suite has been updated, run this wizard again to verify the updates of the printer firmware. To launch this wizard, go to **Evolis Premium Suite > Tools > Update verification wizard**. An Internet connection is required for the wizard to run.

If you wish to update your firmware manually, you can run the update wizard for the printer firmware.

Before starting, you should download the firmware update file from the [www.evolis.com](http://www.evolis.com) website:

- 1 Go to **Support**, then select your printer model.
- 2 Under **Printer drivers** and **Firmware**, click the file for the corresponding Firmware.
- 3 Accept the download then save the file in a directory on your hard drive.
- 4 Now open the Evolis Print Center and double-click on the name of your printer. The **Properties** window opens.
- 5 Then go to '**Maintenance > Firmware update**' and click '**Launch the firmware update wizard**.' This wizard will help you in the process of updating your printer firmware.
- 6 When prompted by the program, follow the instructions and select the **".firm"** file that you have just downloaded to your computer.
- 7 This operation can take up to 1 minute. When the firmware is installed on your printer, it will restart. The update is complete and your equipment is ready for use.
- 8 If the printer is not showing the **"Ready"** status, this means that the update was not carried out correctly or that the printer may not be working properly. Check the connection cables and run a new update.

The update is complete, and your equipment is ready to customize your cards.

However, if you experience problems while updating the firmware with Evolis Print Center, please contact your Evolis reseller who can provide a new file to install the firmware.



Never interrupt the transfer between the computer and printer during the download phase (powering off the printer or computer, unplugging a cable). This would result in a complete inability to restart the printer. Should such an incident occur, please contact your Evolis reseller, who will replace your printer's processing board.



The update of the firmware can be carried out from the Evolis Print Center.



## ZENIUS

### Updating the Firmware (for Mac)

Updating the firmware is a simple operation but one which, if not properly completed, can result in your printer breaking down.

Before any update, please contact your Evolis reseller for guidance on the advisability or otherwise of carrying out an upgrade. In general, these updates are only required in the event of a problem or malfunction that has been clearly identified by your Evolis reseller.

- 1 Before starting, you should download the firmware update files from the [www.evolis.com](http://www.evolis.com) website. Go to **Support**, then select your printer model.
- 2 Under **Printer drivers** and **Firmware**, click the file for the corresponding Firmware.
- 3 Accept the download then save the file in a directory on your hard drive.
- 4 Then go to **Menus & Preferences**, Printers and Scanners, and choose your printer. Go to **Options & Supplies**, Utility, and click on **Open Printer Utility**. The Evolis Card Printer window will open. All you need to do is click on **Upgrade**. Select the folder where you extracted the downloaded file and open the firmware file (.firm).
- 5 When prompted by the program, follow the instructions to select the printer and start the operation. The firmware transfer is in progress.
- 6 After about thirty seconds, the firmware has been transferred to the printer and the operation is complete.
- 7 You can check the firmware version by clicking Identify.
- 8 If the printer is not showing the "Ready" status or the number of the latest version, this means that the update was not carried out correctly or that the printer may not be working properly. Check the connection cables and run a new update.

If you experience problems while updating the firmware with Evolis Print Center, please contact your Evolis reseller who can provide a new file to install the firmware.

Once the update is complete, your equipment is ready for use.



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## Updating the Printer Driver

Updating the driver is a task that is required in order to fix malfunctions or gain the benefit of new options.



Before any update, please contact your Evolis reseller for guidance on the advisability or otherwise of carrying out an upgrade.

Updates can be downloaded from the website [www.evolis.com](http://www.evolis.com):

- 1 Go to **Drivers & Support**, then select your printer model, and click the **Printer Drivers & Firmware** link.
- 2 Then click on the file for the corresponding printer driver.
- 3 Accept the download then save the file in a directory on your hard drive. The file is stored in compressed format as a zip file. You will need to extract it.
- 4 Then double-click on the file (Setup.exe for Windows, or the .pkg file for Mac) that you have just downloaded in order to run the installation program.



The printer driver can also be updated in the Evolis Premium Suite with the update verification wizard.



For more details about this procedure, please refer to the chapter Installing the Printer Driver.



## ZENIUS

# TECHNICAL SUPPORT

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If you are having difficulties configuring or using your printer, read this manual carefully.

If you do not manage to solve your problem, you can obtain further information and help from the Evolis partner network.

## Evolis Partner Network

For any unresolved technical problem, contact an Evolis reseller. If you do not know any Evolis resellers, visit the [www.evolis.com](http://www.evolis.com) website and send us your question. Evolis will pass on the contact details of your nearest Evolis reseller. When calling an Evolis reseller, you will need to be close to your computer and ready to provide the following information:

- 1 The printer model and serial number
- 2 The configuration and operating system that you are using
- 3 A description of the incident that has occurred
- 4 A description of the steps that you have taken to resolve the problem

In addition, to enable you to find answers to your questions 24/7, the [www.evolis.com](http://www.evolis.com) website includes lots of aspects related to the day-to-day use of your printer.

## Get more information at [www.evolis.com](http://www.evolis.com)

If you need additional technical help, you will find a great deal of information on using and troubleshooting Evolis printers under the **Drivers and Support** section on the Evolis website at [www.evolis.com](http://www.evolis.com).

This section offers downloads of the latest versions of firmware, printer drivers, and user manuals, videos about using and maintaining Evolis printers, and an FAQ\* section giving answers to the most frequently asked questions.

\*FAQs: Frequently Asked Questions



## ZENIUS

# APPENDIX A

## TECHNICAL SPECIFICATIONS

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This section presents your printer's technical printing properties.

### General features

- Single or double-sided print module, edge-to-edge printing
- Color sublimation and monochrome thermal transfer
- Standard resolution 300 x 300 dpi (11.8 dots/mm)
- 16 million colors
- Zenius Classic: 16 MB (RAM)
- Zenius Expert: 32 MB (RAM)

### Print speed

Full card print

- YMCKO 120 cards/hour
- Monochrome 400 cards/hour

Maximum speed (under special conditions)

- Color up to 150 cards/hour
- Monochrome up to 500 cards/hour

### Card management and features

- Automatic or manual card feeder
- Feeder capacity: 50 cards (0.76 mm – 30 mil)
- Hopper capacity: 20 cards (0.76 mm – 30 mil)
- Card thickness: 0.25 to 0.76 mm (10 to 30 mil), adjustment using the gauge
- Card types: PVC and composite PVC cards, PET, recycled PET cards, ABS<sup>1</sup> and special varnished cards<sup>1</sup>
- Card format: ISO CR80 – ISO 7810 (53.98 mm x 85.60 mm)

<sup>1</sup> Under specific conditions



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### Ribbons

To maximize the quality and life cycle of the printed cards, the service life of your print head and the overall reliability of your printer, use Evolis High Trust® ribbons.

- Automatic recognition and setup
- Ribbon inserted in a cassette for easier handling
- Graphical notifications of the ribbon level (almost finished, finished)
- Integrated ribbon saver for monochrome printing
- Ribbon:

- YMCKO:	200 prints/roll	- KO:	300 prints/roll
- Hologram ribbon:	400 prints/roll	- Monochrome ribbons:	1000 prints/roll <sup>1</sup>

<sup>1</sup> Under specific conditions

### Ports/connectivity

- USB (1.0, 1.1, 2.0, 3.0)
- Ethernet available as an option

### Display

- LEDs
- Graphical printer notifications<sup>1</sup>:
  - Feeder empty
  - Cleaning alerts
  - Ribbon nearly finished/finished warning
  - Etc.

<sup>1</sup> Dependent on your version of Windows

### Software

- Supplied with Evolis Premium Suite® for Windows:
  - Printer driver
  - Evolis Print Center for the administration, management, and configuration of the printer
  - Evolis Printer Manager for two-way graphical notification<sup>1</sup>
  - Compatible with Windows<sup>2</sup> (from XP SP3)
- Supplied with cardPresso XXS
- Supplied with the Mac OS X printer driver (from 10.6)
- Linux platform on request
- Evolis Premium SDK available on request

<sup>1</sup> Requires .net 4.0 client profile version

<sup>2</sup> For older versions of Windows, you will only be able to use the printer through the printer driver (there is no Print Center or Printer Manager)



## ZENIUS

### Warranty conditions

- 2 years' warranty (printer and print head)<sup>1</sup>
- Extended warranty available (contact your Evolis reseller)

<sup>1</sup> Warranty subject to strict compliance with specific usage and maintenance conditions and use of Evolis High Trust<sup>®</sup> ribbons

### Dimensions and weight

- Dimensions (H x W x L): 195 x 205 x 310 mm
- Weight: 3.3 kg

### Security

- Space for Kensington<sup>®</sup> security lock
- Data encryption for magnetic encoding<sup>1</sup>

<sup>1</sup> Available for the Expert range and above

### Eco-design and certification

- Standby mode and reduced power consumption

### Packaging contents

- Printer
- CD-ROM with printer driver, user manuals, cardPresso XXS
- eMedia CS card designer: 30-day trial version can be downloaded from the Mediasoft website
- Cleaning equipment
- USB cable
- Power supply unit
- Power supply lead (differs according to region)



## ZENIUS

### Options & accessories

- Colors available: Flame Red and Taupe Brown
- Ethernet TCP-IP<sup>1</sup>
- Encoding options<sup>1</sup>
  - Can be combined, and fitted on site using additional modules<sup>1</sup>
  - Magnetic stripe encoder
  - Chip contact station
  - Smartcard encoder
  - Contactless card encoder
  - Others on request

<sup>1</sup> Available for the Expert range and above

### Certifications and declaration of conformity

- CE, FCC, ICES, VCCI, CCC, KC, BIS, EAC
- ROHS
- ISM band from 13.553 to 13.567 MHz, transmission power lower than 10 dB $\mu$ A/m at 10 m

### Power supply

- Power supply unit: 100-240 Volts AC, 50-60 Hz, 1.8A
- Printer: 24 volts DC, 3 A

### Environment

- Min./max. operating temperature: 15°/30° C (59°/86° F)
- Humidity: 20% to 65% non-condensing
- Min./max. storage temperature: -5 °C / +70 °C (23 °F / 158 °F)
- Storage humidity: 20% to 70% non-condensing
- Ventilation while in operation: free air circulation

### Miscellaneous

- Installed fonts
  - Arial 100, Arial bold 100
  - Barcodes: Code 39, Code 128, EAN 13, 2/5 interleaved

The following icons on the printer label are used to highlight important information:



Evaluation for apparatus only based on altitude not exceeding 2000m, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used at altitude above 2000m.



Evaluation for apparatus only based on temperate climate condition, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used in tropical climate region.



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# APPENDIX B

## DECLARATIONS OF CONFORMITY

In this section, you will find the certifications for your Evolis printer.

### Declarations of Conformity

Concerning the Safety and Electromagnetic Compatibility of Radio Equipment (Directives RED 2014/53/EU, LVD 2014/35/EU, EMC 2014/30/EU)

Manufacturer name: Evolis  
Manufacturer address: 14, avenue de la Fontaine  
Z.I. Angers Beaucouzé  
49070 Beaucouzé, France

Equipment name: Zenius  
Year of fabrication: January 2019

I, the undersigned,  
Mr. **Serge Olivier**,

Declare under my own responsibility that the product described above is in conformity with the essential applicable requirements of the **RED 2014/53/EU, LVD 2014/35/EU, EMC 2014/30/EU, and (RoHS2) 2011/65/EU Directives:**

Article 3.1 a: (electromagnetic compatibility protection requirement)

Safety standard applied **EN60950-1: 2006 + A11 + A1 + A12 + A2  
EN50364: 2010**

Article 3.1 b: (electromagnetic compatibility protection requirements)

EMC standard applied **EN55032: 2012  
EN55024: 2010  
EN61000-3-2: 2014  
EN61000-3-3: 2013  
EN 301489-3: 2013 (V1.6.1.)**



Article 3.2: (effective use of the radio frequency spectrum to avoid damaging interference)

EMC standard applied **EN300 330-2 V1.6.1**

Full name: Serge Olivier  
Title: R&D Director  
Date: 3rd January 2019

Signature:

**EUROPE - Norway Only:** This product is designed for an IT power system with phase-to-phase voltage of 230 V. Earth grounding is via the polarized, 3-wire power cord.  
FI: "Laitte on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan"  
SE: "Apparaten skall anslutas till jordat uttag"  
NO: "Apparatet må tilkoples jordet stikkontakt"  
DK: "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord".

### FCC Federal Communications Commission notice Radio frequency interference in the United States



The Zenius model complies with the following specification: FCC Part 15, Subpart A, Section 15.107(a) and Section 15.109(a) Class B Digital device

#### Additional information:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try the following measures:

- Reorient or relocate the receiving antenna.
- Move the equipment away from the radio or television.
- Connect the equipment to a circuit other than that to which the receiver is connected.
- Consult the supplier or an experienced radio/TV technician.

Use of a shielded twisted pair cable is necessary to comply with the restrictions laid down by part 15 of the FCC Rules for Class B digital devices.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications made to this equipment without the express, written consent of the company Evolis may cause harmful interference and void the FCC authorization to operate this equipment.

We recommend keeping a distance of 20 cm between the user and the RFID module when it is in operation. This device is compliant with the RSS of Industry Canada applicable to radio devices exempt from licensing. Its use is authorized under the following two conditions: (1) The device must not cause jamming and (2) the device user must accept any radio-electrical jamming it experiences, even if this comprises its operation.

### Japanese radio frequency interference (VCCI)



This equipment is Class B information technology equipment based on the rules laid down by the Voluntary Control Council For Interference by Information Technology Equipment (VCCI). Its use in or close to a residential area may cause radio interference. In which case, you must take appropriate steps.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
取扱説明書に従って正しい取り扱いをして下さい。



이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.



ZENIUS

## APPENDIX C

### ENCODING OPTIONS

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Some models of Evolis printers are equipped with encoding systems that are used to customize magnetic stripes, and contact and contactless smartcards.

You can install up to three types of encoder in the printer (magnetic, contact and contactless).

#### Magnetic Stripe Encoding

A printer fitted with a magnetic encoder works in exactly the same way as a basic card printer.

The Evolis encoder encodes the magnetic stripes in one go then runs a data check.

Configurable as high coercivity (HiCo) or low coercivity (LoCo) by a simple click in the Evolis Print Center, Evolis magnetic encoders are shipped with a default setting of high coercivity (HiCo).

#### Placement of the magnetic encoder

The magnetic encoder is a module that is either fitted in the factory or on site by your Evolis reseller. The read-write head is located under the path taken by the cards and in front of the print head. The encoding sequence for a card is always carried out before printing.



Use only magnetic stripe cards that comply with the ISO 7810 and ISO 7811 standards.  
To function correctly, the magnetic stripe must be molded into the card.  
Never use cards with a glued-on magnetic stripe.

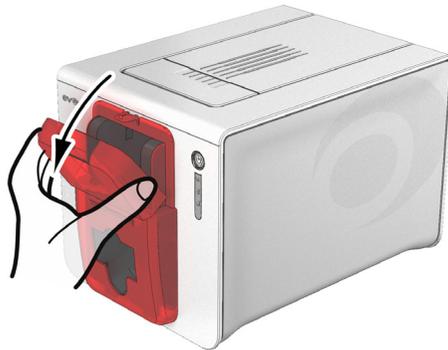
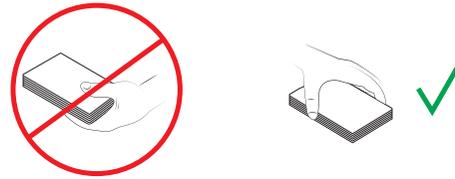


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### Card positioning

Magnetic stripe cards must be placed in the card feeder so that the magnetic stripe is facing downward as shown below:

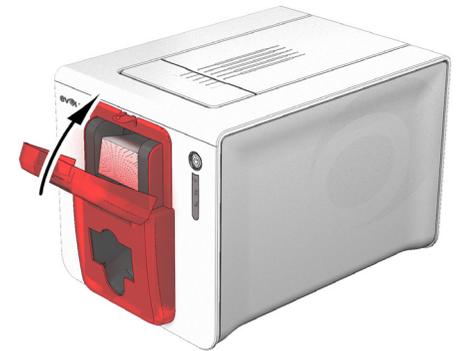
- 1 Open the card feeder as shown.
- 2 Insert up to 50 magnetic cards maximum, of 0.76 mm. Ensure the cards are positioned as illustrated in the diagram (magnetic stripe facing down).
- 3 Close the feeder.



1



2



3

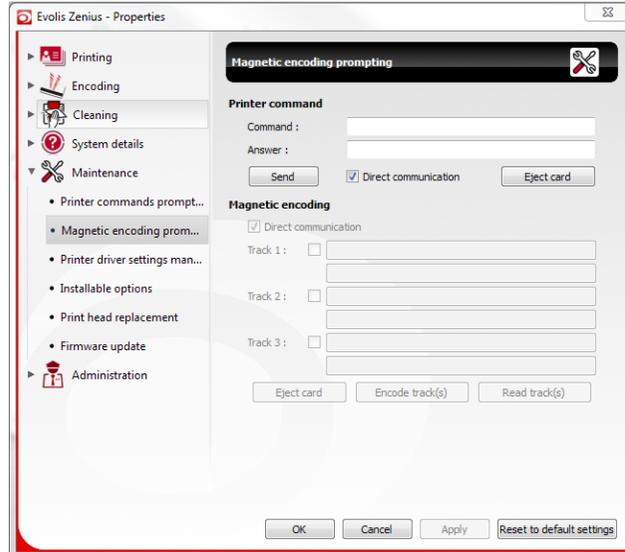
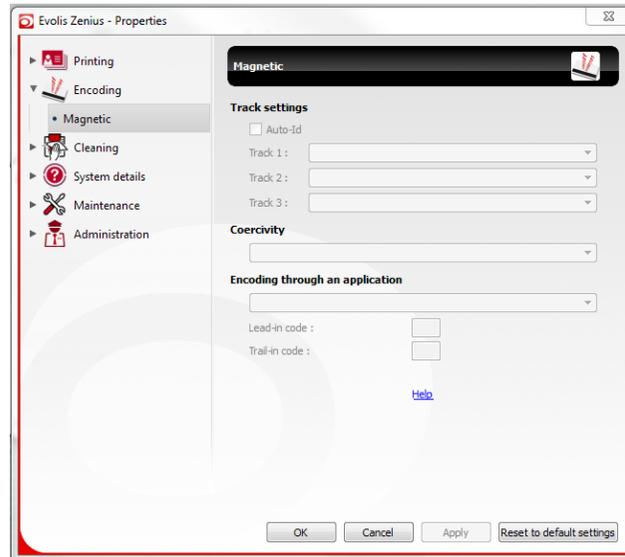


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## Configuring the Evolis Print Center

When first installing the **Evolis Print Center**, the magnetic encoder functions may need to be configured. The magnetic encoder functions are accessible from the Evolis Print Center by right clicking on the printer name, then clicking on **Properties**.

### "Magnetic Encoder" dialog box



The **Magnetic Encoder** dialog box is opened by selecting **Encoding** then **Magnetic**. **Configure stripes** allows you to select the desired format for each stripe. See the table in this Appendix for information regarding ISO 7811 standards.

**Coercivity** sets the magnetic encoding to high (HiCo) or low (LoCo) coercivity. A magnetic stripe encoded with high coercivity is more resistant to external disturbances than a magnetic stripe encoded with low coercivity.

**Encoding via an application** allows cards with magnetic stripes to be encoded from Windows applications (such as Word for example). A text field enclosed within "|" and "|" characters (or some other character which the user can define) will be interpreted as an encoding command by the printer driver.

Under **Maintenance** then **Magnetic encoder dialog**, **Magnetic encoding** is used to directly encode one or more magnetic stripes from this window simply by selecting them and entering the data to be encoded according to the stripe settings. Click on the **Encode stripe(s)** button to run the encoding cycle.



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### Cleaning the magnetic encoder

The magnetic encoder head requires regular servicing in order to ensure the integrity of the data encoded onto cards. Cleaning of the magnetic encoder is carried out when the printer runs an advanced cleaning cycle with pre-soaked "T" cards (see the "Servicing" chapter of this manual for further information). Repeatedly running the cleaning card through the printer cleans the card feed rollers, the cleaning rollers, the print head and the magnetic encoder read-write head. If, in between two routine printer cleaning sessions, the read-write process fails with more than one card, it is advisable to run an advanced manual printer cleaning sequence (please see the "Maintenance" chapter of this manual for the procedure to follow).

### Magnetic encoding standard ISO 7811

Track number	Separator	Track density	Type of characters	Number of characters
TRACK 1	^	210 dpi <sup>1</sup>	Alphanumeric (ASCII 32-95) <sup>2</sup>	79 <sup>3</sup>
TRACK 2	=	75 dpi <sup>1</sup>	Numeric (ASCII 48-62) <sup>2</sup>	40 <sup>3</sup>
TRACK 3	=	210 dpi <sup>1</sup>	Numeric (ASCII 48-62) <sup>2</sup>	107 <sup>3</sup>

<sup>1</sup> Dot(s) per inch

<sup>2</sup> Except the character "?"

<sup>3</sup> Includes the characters Start, Stop, and LRC. These characters are generated automatically by the magnetic encoder



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### Contact Smartcard Encoding

A printer fitted with a smartcard contact station works in exactly the same way as a basic card printer. The Evolis smartcard contact station is used to program chips to ISO 7816-2 standards.

#### Contact station location

The contact station is a module that is either fitted in the factory or on site by your Evolis reseller. It is located over the path taken by the cards and behind the print head. To make contact with the smart card, the contact station descends mechanically and presses against the card. The programming sequence for a smartcard is always carried out before printing.



Use only smartcards compliant with the ISO 7816-2 standard.  
Never print over the chip.

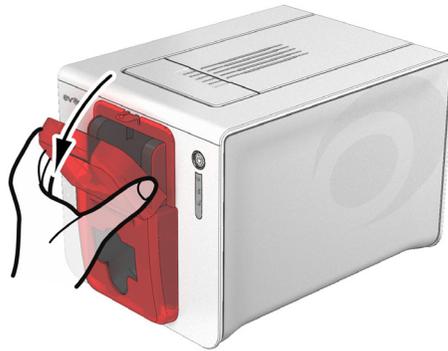
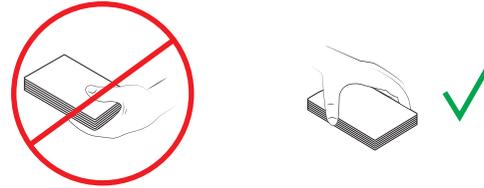


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### Card positioning

Smartcards must be placed in the card feeder so that the chip is facing upward as shown below:

- 1 Open the card feeder as shown.
- 2 Insert up to 50 smartcards maximum, of 0.76 mm (chip facing up). Hold and insert the cards as illustrated in the diagram.
- 3 Close the feeder.



1



2



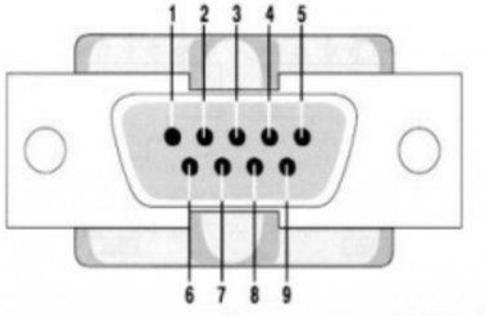
3



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### Contact station interface

Printers with only one smartcard contact station (without built-in encoder) are equipped with a DB-9 female connector on the back of the printer. This connector, directly connected to the contact station inside the printer, is also connected to an external coupler to program the chip.



PINS DB-9 CONNECTOR	SMARTCARD CONTACT POINTS
1	C1 (V c.c.)
2	C2 (reset to 0)
3	C3 (clock)
4	C4 (reserved)
5	C5 (mass)
6	C6 (Vpp)
7	C7 (E-S)
8	C8 (reserved)
9	Card present signal



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Please refer to the Evolis printer Programming Guide for further details on programming smartcards and the option installation manual for configuration of the card presence signal.



To encode a contact smartcard, you can use the cardPresso software or use the Evolis Premium SDK and the encoder SDK.



When printing you should not print on the chip, as it may be damaged.



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### Contact Smartcard Encoding

Evolis printers may be equipped with an encoding device for contactless smartcards (RFID). This consists of an encoding module and an integrated antenna.

Integration of such a module must be carried out by specialist. The Evolis product catalog has printers equipped with a built-in encoder for contactless chips.

This encoder is connected to your PC via a USB interface, which means encoding cannot be done with an Ethernet connection.

There is a very wide variety of contactless cards, and each card has specific technical properties associated with an equally specific type of encoder. See your Evolis reseller for further information.

#### **Location of the antenna (or the encoder including an antenna)**

Using a specific command, the card is positioned close to the antenna so that the card lies within its radio range.

From this time, reading data from or writing data to the card can begin.

The programming sequence for a smartcard is always carried out before printing.

#### **Card positioning**

There are no restrictions on card positioning when programming in contactless mode (apart from cards that include other encoding technology: magnetic and/or contact chip).

However, the ongoing reduction in size of components has resulted in cards that are fitted with mini-antennae.

In this situation, please see your card supplier for further information about where such mini-antennae are located within the card, in order to place the card as close as possible to the encoder's antenna. This operation will allow optimum card encoding.



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### Computer connection

If your encoder is supplied with a USB interface, it will either be connected to the printer's internal USB Hub, or equipped with a USB cable to connect to your computer directly.

In the first case, your printer's USB cable is used to drive firstly the printer and secondly the encoder from the computer.



Please refer to the Evolis Programming Guide for further details on programming contactless smartcards.



To encode a contactless smartcard, you can use the cardPresso software or use the Evolis Premium SDK and the encoder SDK.