

SLIDEBEL DUO

Automatic Slide Labelling

Slidebel Duo rev_01

Order No: SBD

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Read carefully before working with the instrument

About this manual

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Contact details of the manufacturer

In case of assistance, contact an authorised distributor.

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1. Important information

1. Important information

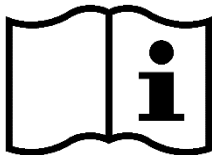
1.1 Meaning of symbols

**Warning**

Warnings appear in a highlighted box and are marked by the warning symbol.

**Important information**

Important information appears in a highlighted box and is marked by the information symbol.

**Instruction**

Instructions for use should be observed.

**Serial number**

Serial number of the instrument.

**Batch number**

Batch number of the consumables.

**Reference code**

Reference ordering code.

**Distribution code**

Distribution code for distributor's specific labels and ribbons assignment.

**CE mark**

The instrument fulfils the requirements of the CE directives.

1. Important information

RoHS

RoHS

The instrument fulfils the requirements of the RoHS directive.



WEEE

The instrument must be disposed of in accordance with the WEEE directive.



Fragile

The instrument's package contents should be treated as fragile items when shipped, handled or stored.



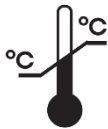
Keep dry

The instrument's package contents should be kept in a dry environment when shipped, handled or stored.



Keep upright

The instrument's package contents should be kept in an upright position when shipped, handled or stored.



Temperature range

The instrument must be stored or transported at a temperature between 5 °C and 40 °C.



Humidity range

The instrument must be stored or transported at relative humidity between 10% and 85%, non-condensing.



Manufacturer

Manufacturer of the instrument.



Manufacturing date

Manufacturing date of the instrument.

1. Important information



Crushing hazard

Risk for hand/fingers entanglement and crushing. Keep hands and fingers away from the areas marked with this label.

1.2. Instrument labels

All information provided in this user manual applies only to the instrument type indicated on the cover page.

An identification label is affixed to the back of the instrument.

The label shown in Figure 1 is provided as example.



Fig. 1. Instrument label

1.3. Intended use of the instrument

Slidebel Duo is a microscope slide label printer and applicator modules. Slidebel Duo is intended to be used for the labelling of microscope slides. Any other use of the instrument is prohibited.

1.4. Personnel qualified to use the instrument

- Slidebel Duo must be operated by trained laboratory staff only.
- All laboratory personnel who want to use Slidebel Duo must read this user manual carefully before attempting to operate the instrument.

2. Safety

2. Safety

2.1. Safety instructions



The safety and caution notes in this chapter must be observed at all times. You must read these notes even if you are already familiar with the operation and use of other GordiamKey products.

These instructions for use include important instructions and information related to the safe operation and maintenance of the instrument.

These instructions for use are an important part of the product. They must be read carefully prior to start-up and use and must always be kept near the instrument.

This instrument has been built and tested in accordance with the safety requirements for electrical equipment for measurement, control and laboratory use.

To maintain this condition and ensure safe operation, the user must observe all notes and warnings contained in these instructions for use.



GordiamKey encourages users to write down their own standard operating procedures (SOP) to ensure that safety instructions are followed at all times. SOP sheets concerning safety instructions for this instrument should always be kept within easy reach of the person operating the instrument.

2.2. Safety warnings



The protective devices on the instrument and its accessories must not be removed or modified under any circumstances. Only service personnel qualified by GordiamKey are authorised to repair the instrument and access its internal components.

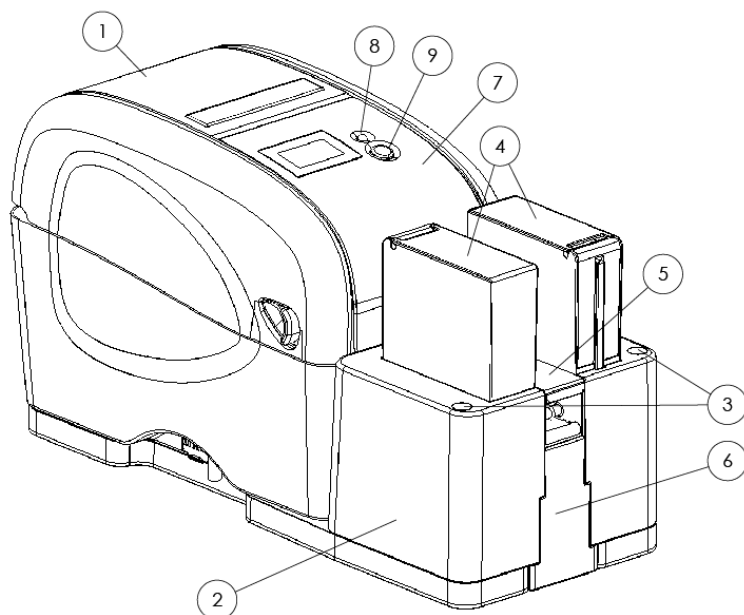


Always check the label on the power adapter before attempting to connect it to the instrument. The power connector on the back of the instrument is compatible with different sorts of power adapters; however, only the Slidebel Duo original power adapter must be used. The use of a wrong power adapter may result in serious damage to persons, things and to the instrument itself.

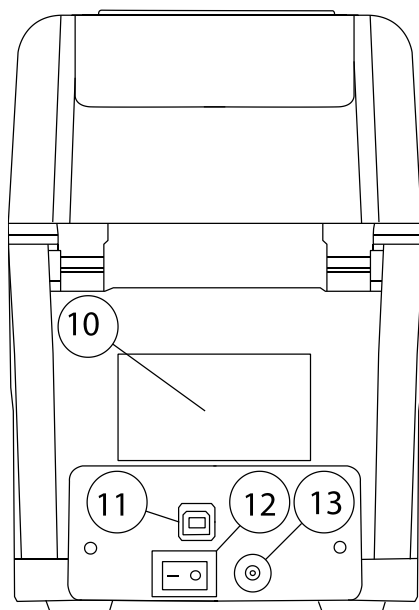
3. Instrument specifications

3. Instrument specifications

3.1. Instrument overview

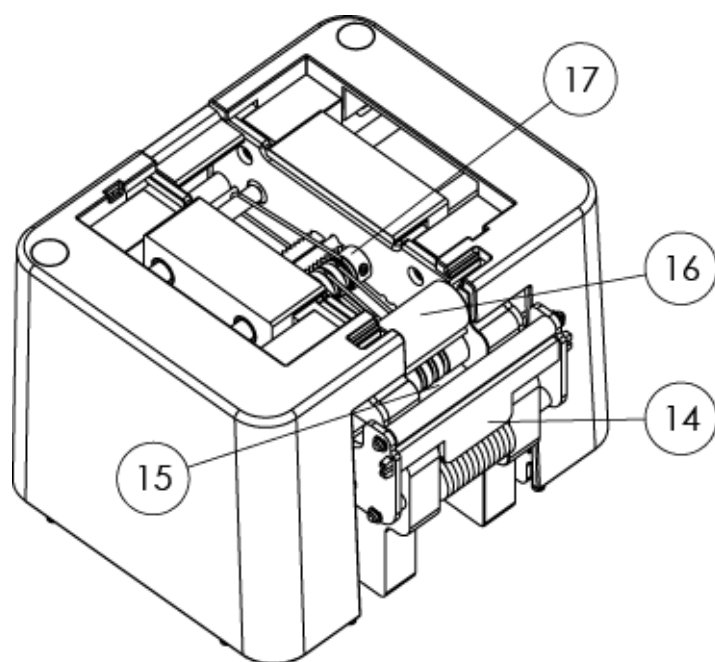


1. Label printer module
2. Applicator module
3. Multifunction buttons
4. Slide cartridges
5. Top cover
6. Front cover
7. Ribbon access cover
8. Printer status LED
9. Printer action button

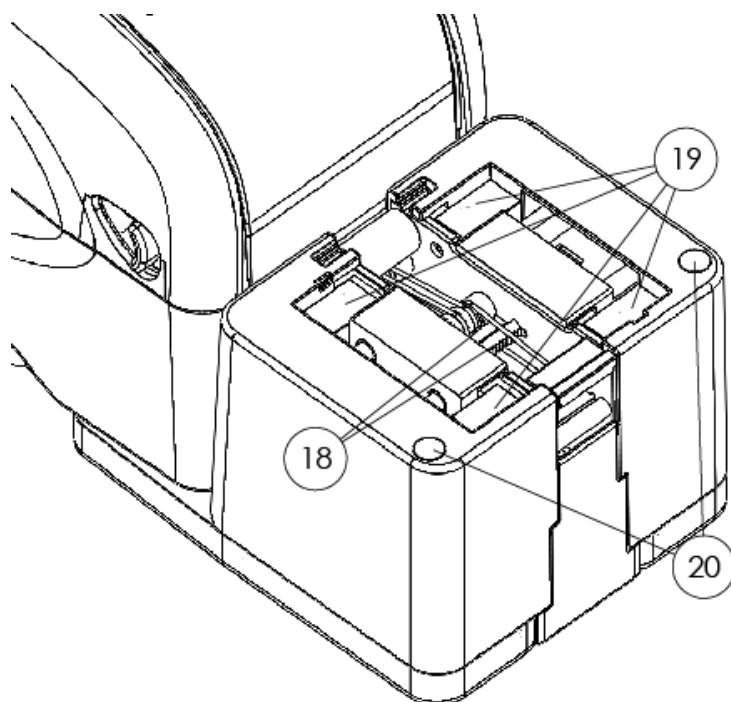


10. CE label
11. USB socket
12. Power switch
13. Power socket

3. Instrument specifications

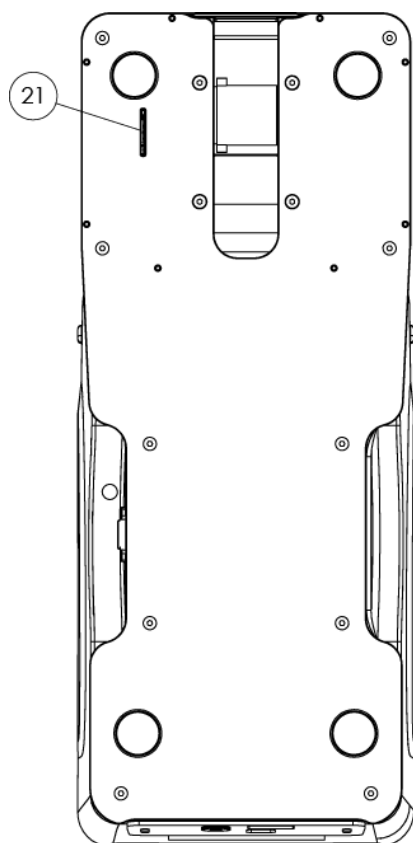


- 14. Peeling bracket
- 15. Slide positioning sensor
- 16. Labelling roller
- 17. Slide conveyor

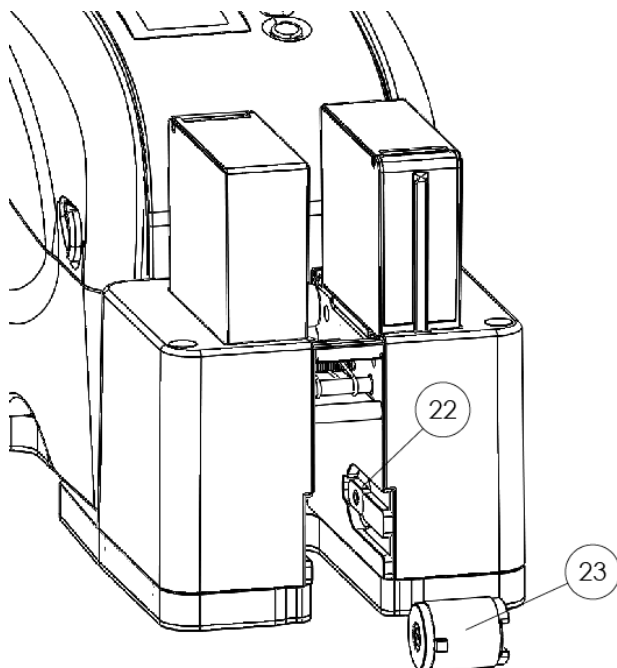


- 18. Slide cartridge gears
- 19. Cartridge receptacles
- 20. Multifunction buttons

3. Instrument specifications



21. SIM card slit



22. Recoiler wheel hub

23. Recoiler roller

3. Instrument specifications

3.2. Technical data

Equipment mobility	Fixed equipment
Size (H x W x D) [mm]	200 x 140 x 340
Mass [kg]	3.5
Electrical phase	Single
Current rating	Power adapter: 2–1 A Equipment: 2 A
Voltage rating	Power adapter: 100–240 V AC, Equipment: 24 V DC
Connection to mains supply	Via external power adapter
Operating conditions (IEC 61010)	Normal environmental conditions
Environmental operating temperature range	10 °C to 30 °C
Environmental relative humidity	20–80% non-condensing
Environmental operating altitude	Up to 2000 m
Permissible temperature range during storage	5 °C to 40 °C
Permissible temperature range during transport	5 °C to 40 °C
Permissible humidity range during storage and transport	10–85% non-condensing
Printing technology	Thermal transfer
Printing media	Chemlabels chemical-resistant labels
Ink type	Chemlabels chemical-resistant ribbon
Printing capacity	3400 slides / label roll
Printing resolution	200 DPI
Printing speed	20 slides/ minute
Electromagnetic environment	Basic electromagnetic environment
IP protection class (IEC 60529)	IP20

3. Instrument specifications

3.3. Main features

Slidebel Duo has several features providing relevant benefits for the laboratory:

- Compact and ergonomic, lightweight design
- Prints on any microscope slide according to ISO 8037/1 regulation
- Fast and intuitive slide cartridge loading
- Dual cartridge support
- Cartridge and single slide loading operation modes
- Fast printing, 20 slides/ minute
- Native LIS connectivity using Windows drivers
- Low maintenance requirements.

3.4. Consumables

To properly operate, Slidebel Duo needs to use genuine Chemlabels consumables, these are laboratory chemical-resistant labels and ribbons. The choice of the microscope slides is not restricted. Any ISO 8037/1 compliant slide may be used with Slidebel.

3.4.1. Consumable package

The Slidebel consumable package contains all the necessary media, apart from microscope slides, to run Slidebel.



Slidebel consumable package and its contents

3. Instrument specifications

The consumable package contains:

- The Chemlabels label roll, with 3.400 labels
- The Chemlabels ribbon, with print capacity for 3.400 labels
- The Chemlabels ribbon paper core
- The recoiler paper core
- The activation SIM card

3.4.2. Microscope slides

Slidebel Duo is compatible with all kinds of microscope slides available on the market that meet ISO 8037/1 regulation. This includes, but it is not restricted to:

- Plain transparent slides
- Slides with coloured frosted end
- Slides with 90° and 45° corners
- Slides with rough or polished edges
- Positively charged slides.

The texture of the slide print surface will never affect the print quality and durability. The only restrictions towards the use of different slides are purely mechanical. As a consequence, slide dimensions as described in ISO 8037/1 are inherently accepted. Slidebel Duo guarantees a perfect alignment of the label with the top margin of the slide, and tolerances of about 0.5 mm in vertical label positioning are achieved. Horizontal positioning depends on the slide's dimensions, and therefore tolerances of 1 mm can be achieved.



Different kinds of microscope slides labelled with Slidebel Duo

As with any pressure sensitive adhesive (PSA) application, the adhesive of the label will require a short set-up time to exert the maximum retaining force. However, the set-up time required is limited to a few minutes following the application of the label.

3. Instrument specifications

3.4.3. Chemical resistance



All laboratories must perform their own tests to ensure that the ink is resistant against the various reagents the slides will subsequently be exposed to. A wide range of factors beyond GordiamKey's control can have negative effects on the results.

The test conditions stated below can therefore only serve as an outline for individual laboratory test specifications.

The laboratory operating the unit shall bear full responsibility for the legibility of the imprint after processing with reagents.

Imprinted slides were tested with a variety of reagents in an environment simulating the conditions present during tissue processing. Chemlabels have been proven to withstand a large number of chemicals, including but not limited to xylene, acetone, alcohol, formalin and a large number of aggressive staining agents and protocols.

4. Installation

4. Installation

4.1. Choice of a good location

Slidebel Duo should be placed in an all-flat location, possibly on a desk. Avoid places with excessive mechanical vibrations and places subjected to direct sunlight.

4.2. Package contents

While unpacking Slidebel Duo, inspect the carton to ensure that no damage has occurred during shipping. Make sure that all accessories are included with your unit. Check all items against the following tables:

Items	Order no
Slidebel Duo unit	SBD
Slide collector	SBD-0015
Slide cartridge, 2 units	SBD-0016
Power adapter and power cords package	SB-0022
USB Cable	SB-0030
Label roll insertion guide	SBD-0033
Thermal head cleaning pen	AC-01
Consumable package	CLE-SB

Items in <i>Consumables package CLE-SB</i>	Order no
Chemlabels label roll	CLE2218X
Chemlabels ribbon	CLR2i
Chemlabels ribbon paper core	CLR2i-PC
Recoiler paper core	SBD-PC
SIM card	SBD-LC



Check the delivered components against the packing list and your order. If there is any discrepancy, contact the GordiamKey distributor handling your order.

4. Installation

4.3. Unpacking

1. Open the printer package, taking care not to damage the contents.
2. Lift the first support tray and put it on a table.
3. Locate and put aside the consumable package, the power adapter, the USB cable and the cleaning pen
4. Lift the Slidebel Duo unit and place it in the desired location.
5. Open the protection bag and extract the Slidebel Duo unit.
6. Locate and put aside the slide cartridges and the slide collector.

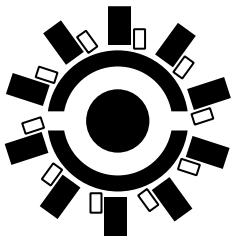


You must keep the packaging for the duration of the warranty period. If you need to return the instrument, pack it up by following the above instructions in reverse order.

4.4. Installation

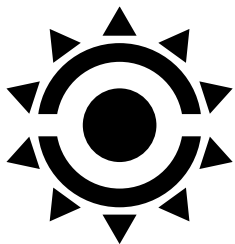
4.4.1 Applicator multifunction buttons

There are two action buttons in the applicator module, one on the left side and one on the right side. The action buttons are used during installation and operation. The button LEDs will light to indicate different status codes or require user attention.



BLINKING LED

This icon indicates that the action LED button is blinking. A blinking LED requires an action from the user.



STEADY LED

This icon indicates that the action LED button is steady. A steady LED indicates that the instrument is in a specific status.

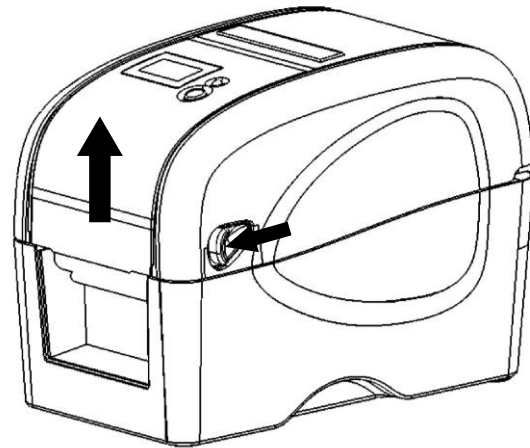
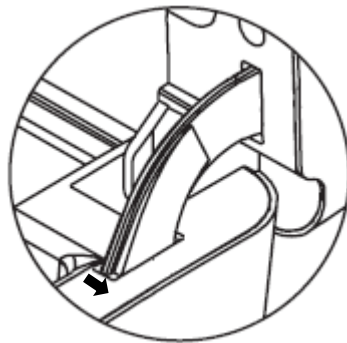
4. Installation

4.4.2. Install Chemlabels chemical-resistant ribbon

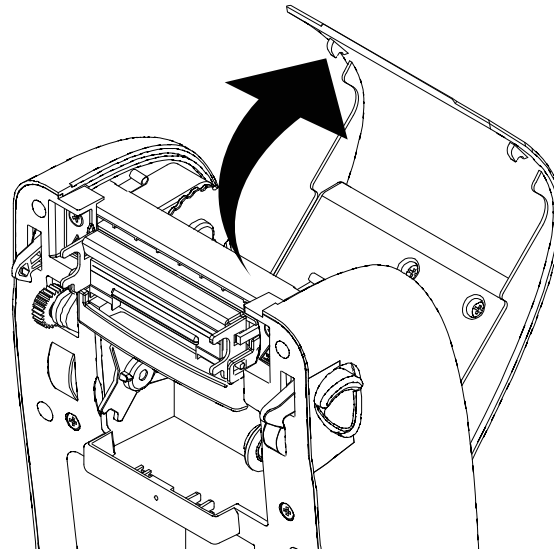


Always open the printer fully, until the top cover support engages and locks the printer's top cover in position. You should hear a distinct "click" sound. If the printer's top cover does not lock correctly it can fall down energetically, and cause hand injuries!

1. Open the cover of the printer by pulling the tabs located on each side towards the front of the printer.
Open the printer fully, until the top cover support engages and locks the printer's top cover in position.

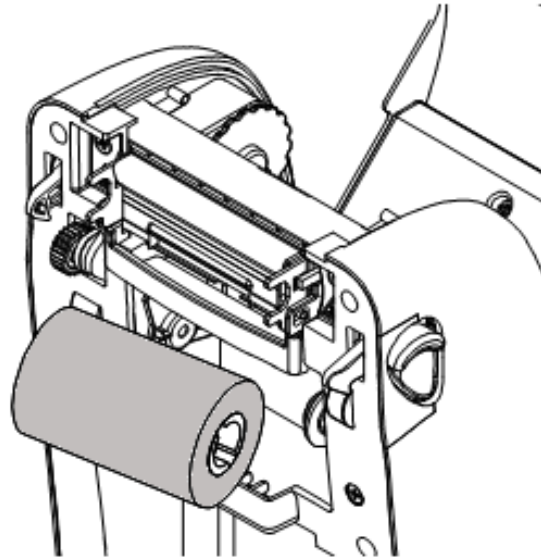


2. Open the ribbon access cover.

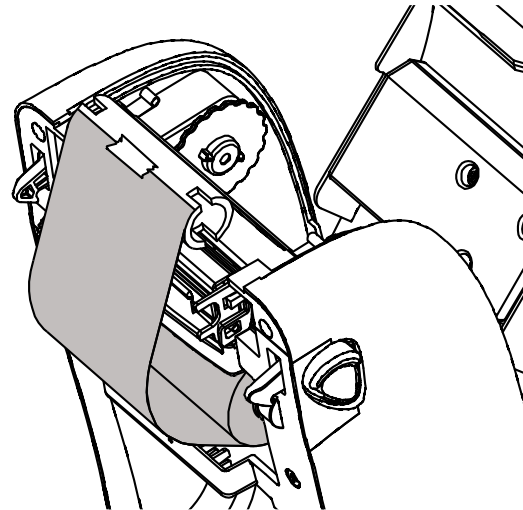


4. Installation

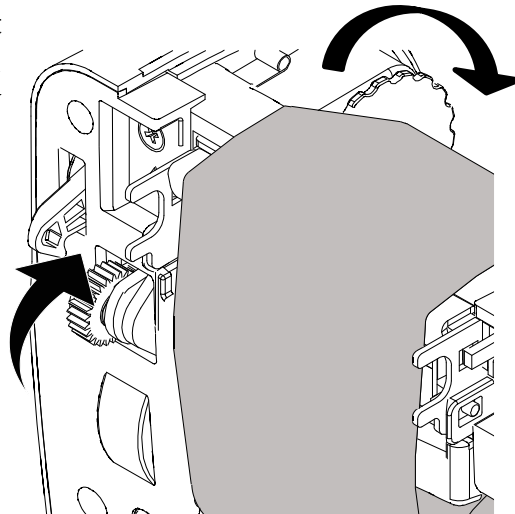
3. Insert the ribbon right side onto the supply hub. Align the notches on the left side and mount onto the spokes.



4. Stick the ribbon onto the ribbon rewind paper core. Insert the paper core right side onto the rewind hub. Align the notches on the left side and mount onto the spokes.

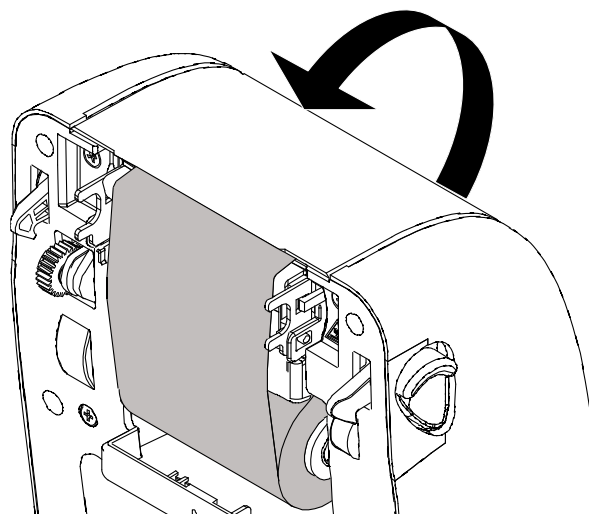


5. Pull the leading ribbon to pass the print head. Turn the ribbon rewind gear until the ribbon plastic leader is thoroughly wound and the black section of the ribbon covers the print head.



4. Installation

6. Close the ribbon access cover.



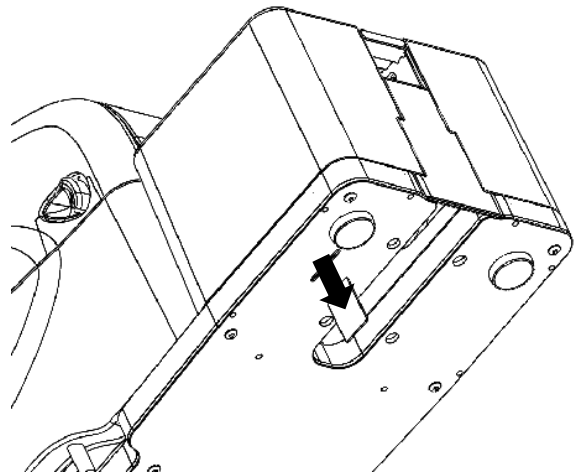
4. Installation

4.4.2. Install Chemlabels chemical-resistant labels



Always open the printer fully, until the top cover support engages and locks the printer's top cover in position. You should hear a distinct "click" sound. If the printer's top cover does not lock correctly it can fall down energetically, and cause hand injuries!

1. If it is not the first time you use Slidebel, remove the old SIM card. Gently push the card and extract it from the socket.

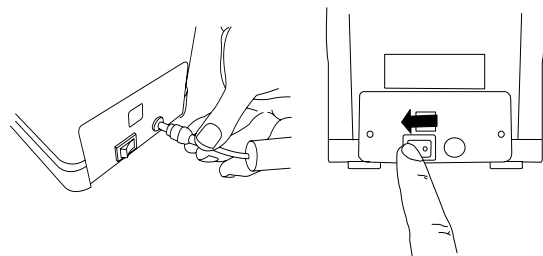


2. Then, insert the new SIM card. You will find the SIM card in the Slidebel consumable package.



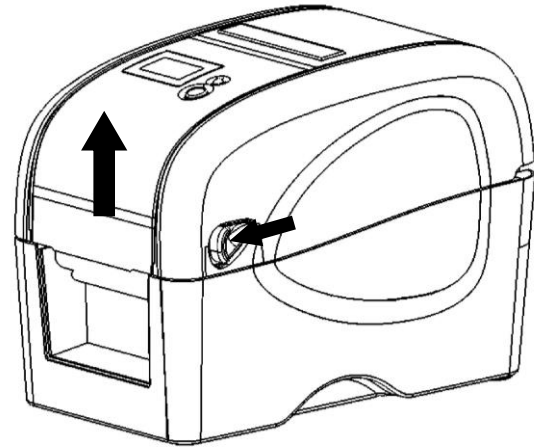
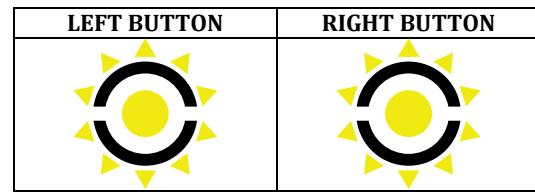
If no SIM card is inserted, the instrument will not be activated. Attempting to print with a non-activated instrument will result in an unauthorized printing error, with red/yellow LED flashing.

3. Plug the power cord to the power adapter and connect it to the printer. Power on the printer by pressing the main switch located on the rear panel.

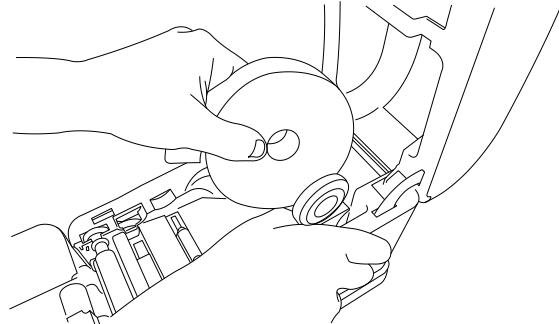


4. Installation

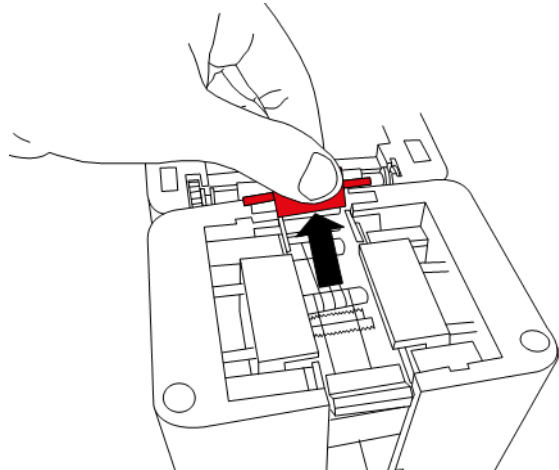
4. Open the top cover of the printer module by pulling the tabs located on each side towards the front of the printer. Open the printer fully, until the top cover support engages and locks the printer's top cover in position. Once the printer's top part is open, the printer will automatically enter calibration mode. The multifunction buttons will light solid yellow.



5. Separate the media roll holders and place the roll in between the holders

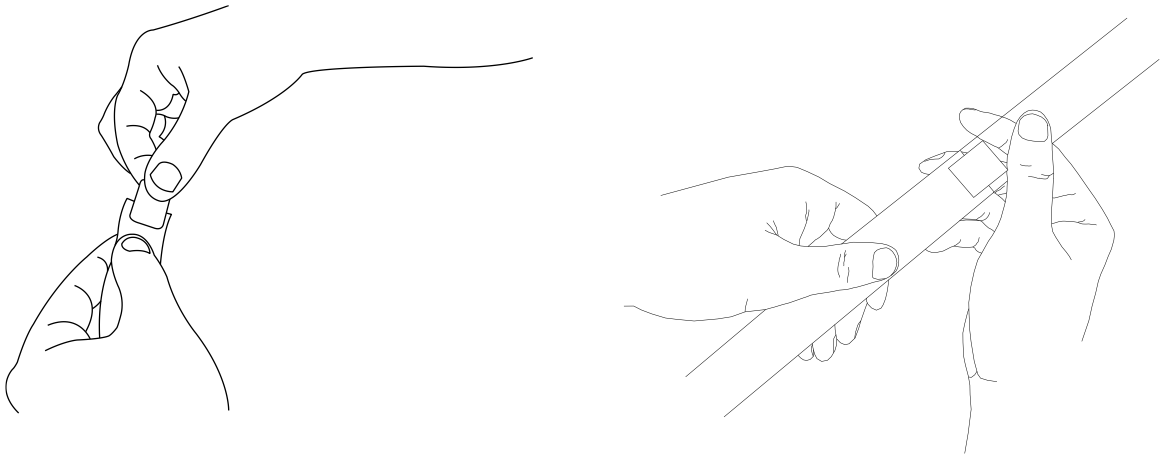


6. Remove the labelling roller with its shaft.

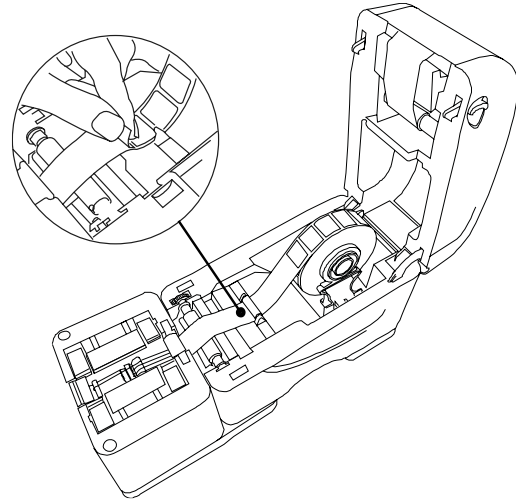


4. Installation

7. Attach the insertion guide to the free end of the roll. Use a label to fasten the insertion guide to the backside of the paper liner

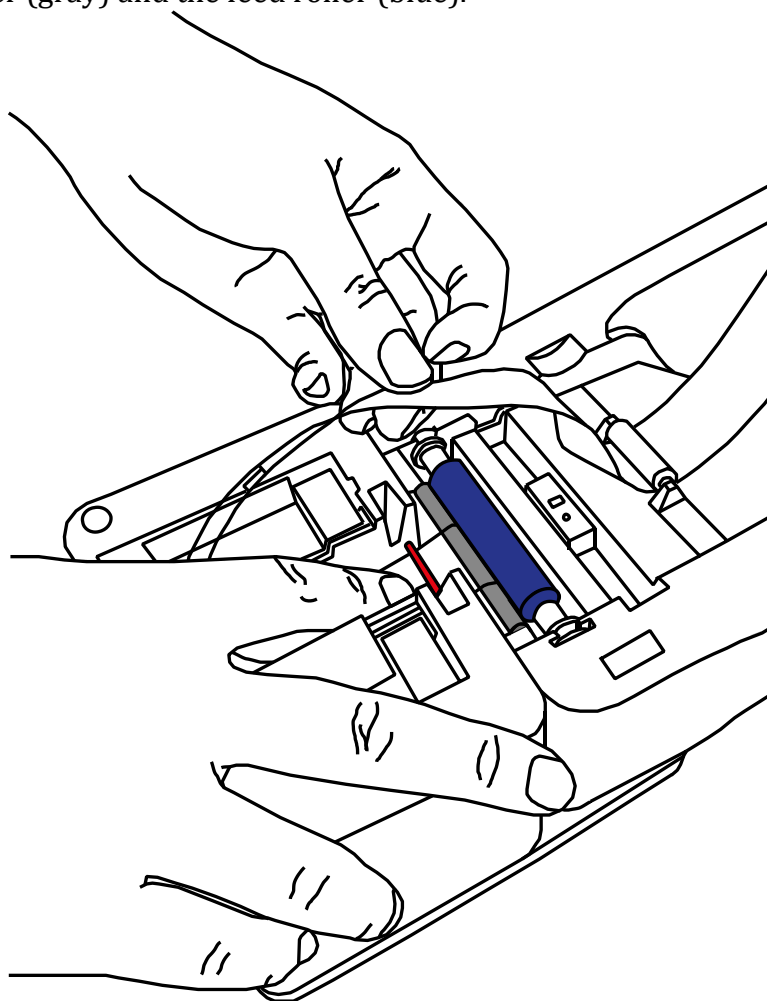


8. Make the first portion of the roll pass first under the white roller and then over the black roller of the printer. Please ensure that the first portion (30 cm) of the label roll is empty: if there are labels along the path, manually remove them.



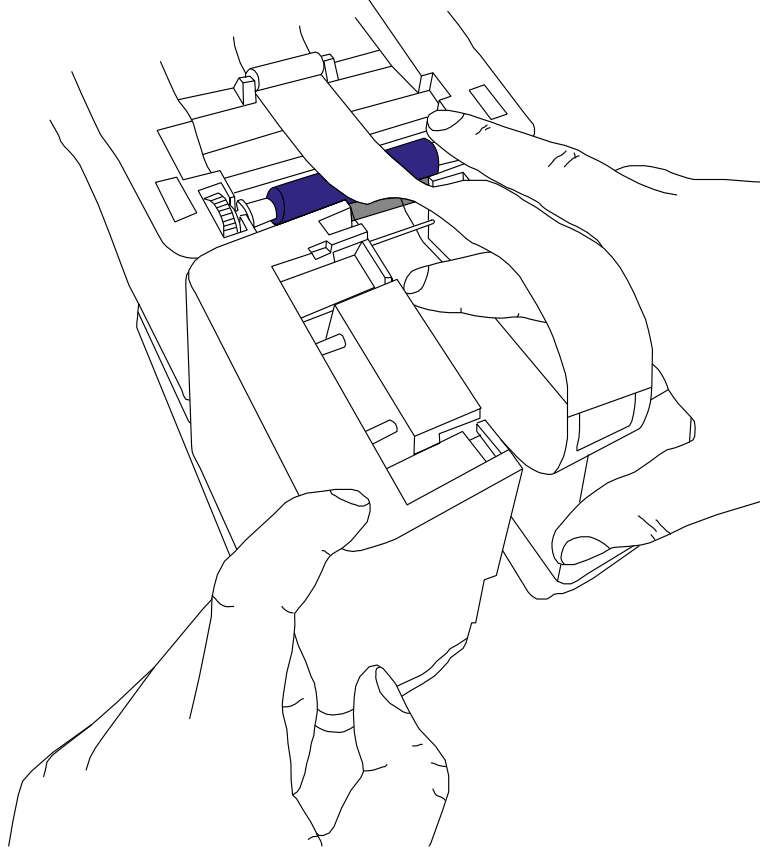
4. Installation

9. Insert the guide in the slot under the peeling edge (marked in red), then gently push the insertion guide with a finger, to position the edge of the guide between the peeling roller (gray) and the feed roller (blue).

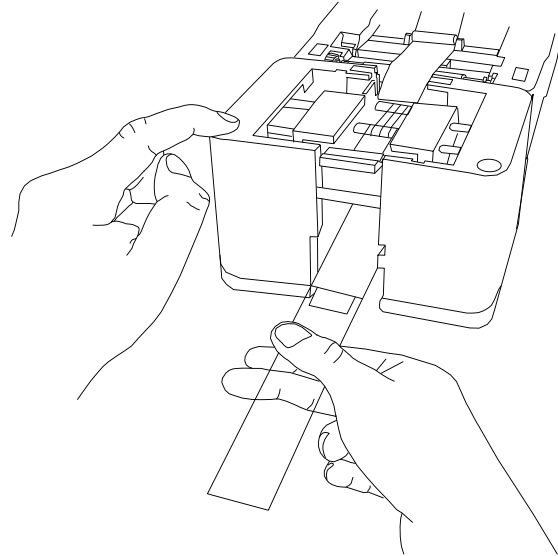


4. Installation

10. Use the two multifunction buttons to move the liner. The left action button will advance the liner, while the right action button will backward the liner. Keep the insertion guide in position by gently pushing it down and, at the same time, press the left action button to advance the liner. The insertion guide should fall in between the bracket roller (gray) and the feed roller (blue).

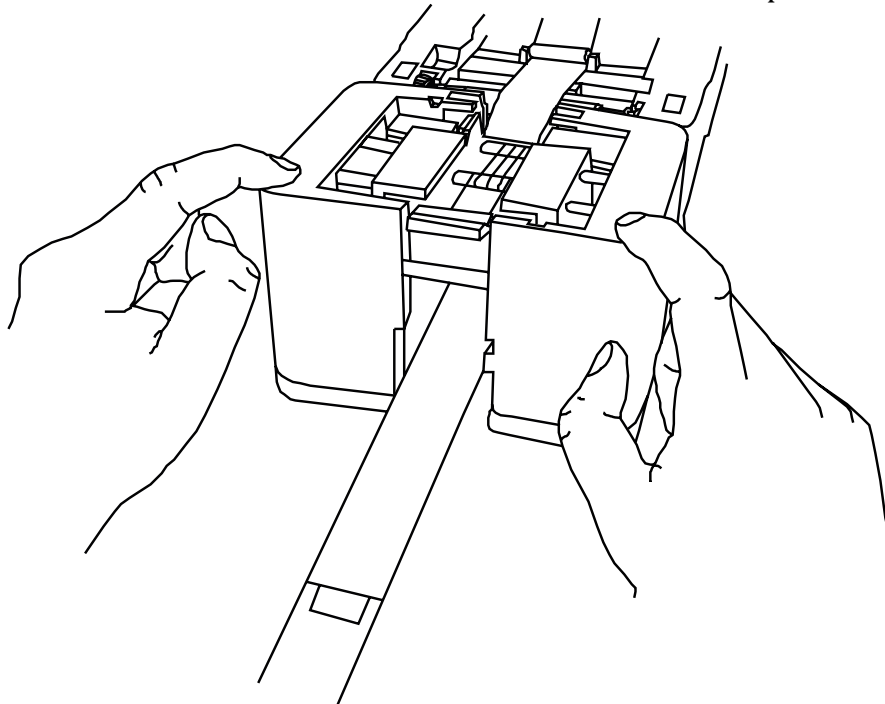


11. Check the insertion guide, it should advance in the bottom of the applicator's channel. Continue pressing the left action button to advance the liner while gently pulling the insertion guide out of the applicator.



4. Installation

12. Press both action buttons to move the recoiler wheel hub in flat position.

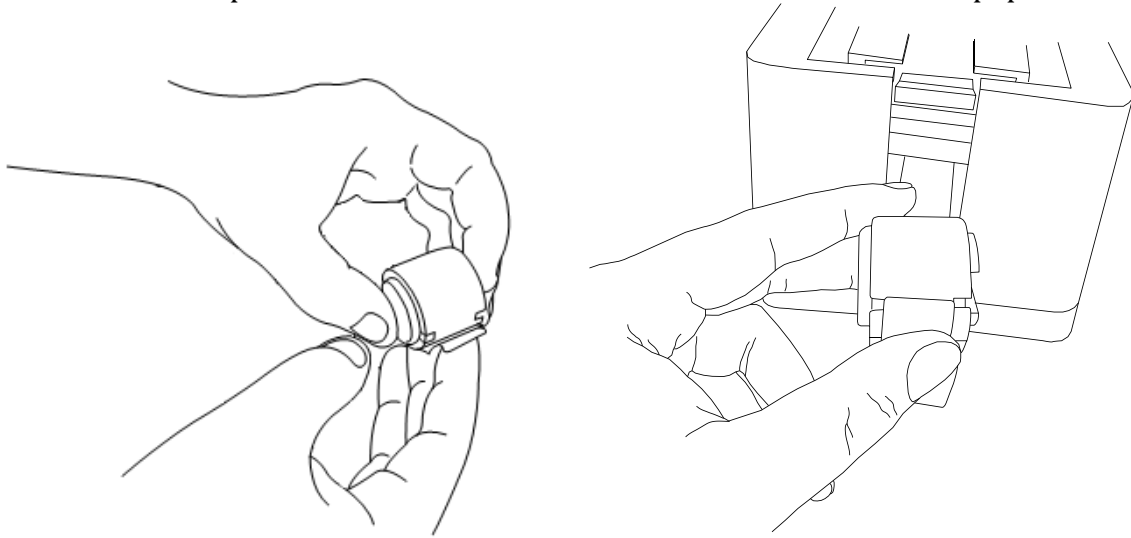


13. Insert an empty paper core on the recoiler roller. Keep the magnet on the left side, facing the printer.

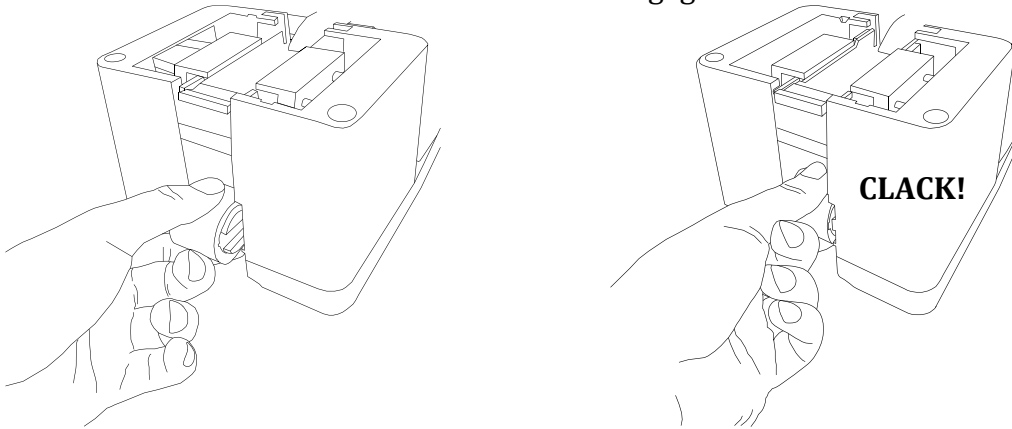


4. Installation

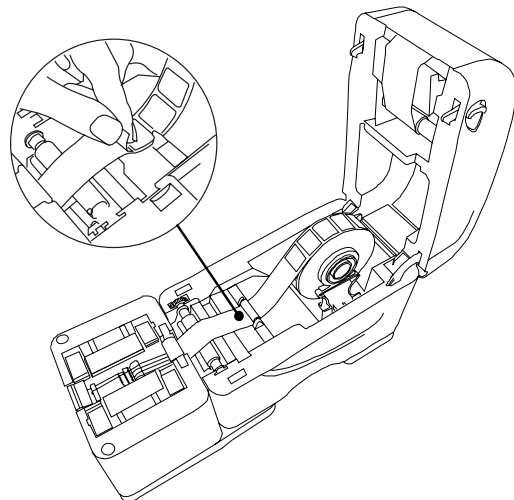
14. Use adhesive tape or a label to attach the liner to the lower side of the paper core.



15. Ensure that the recoiler wheel hub is in the correct position, as shown in the picture. Insert the recoiler roller into the applicator module. You will hear a distinctive “CLACK” sound when the recoiler roller is engaged.

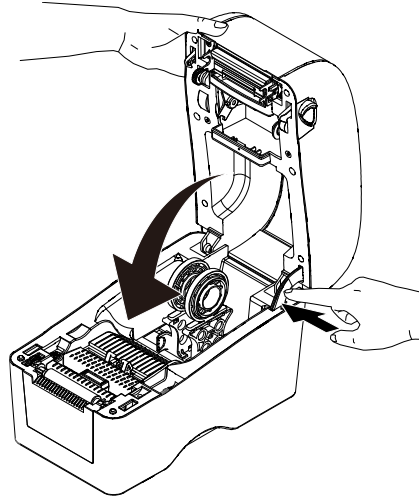
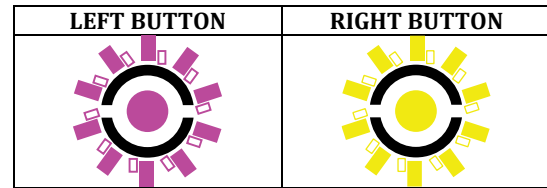


16. Ensure that the first portion (circa 30 cm) of the label roll is empty: if there are labels along the path, manually remove them. The first label of the series should be almost on top of the label roll. This will be needed for a successful calibration.



4. Installation

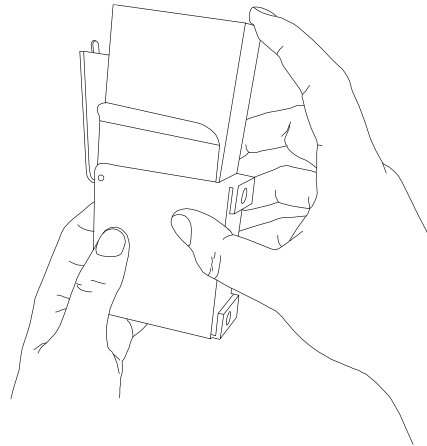
17. Hold the top cover and press the top cover support to disengage the top cover support with the lower inner cover. Gently close the top cover. Make sure the cover latches securely. Press both buttons simultaneously. The multifunction buttons should now alternate blinking purple and yellow. Once the printer's top cover is closed, press the left button if you wish to calibrate the printer. Press the right button if you wish to skip the calibration.



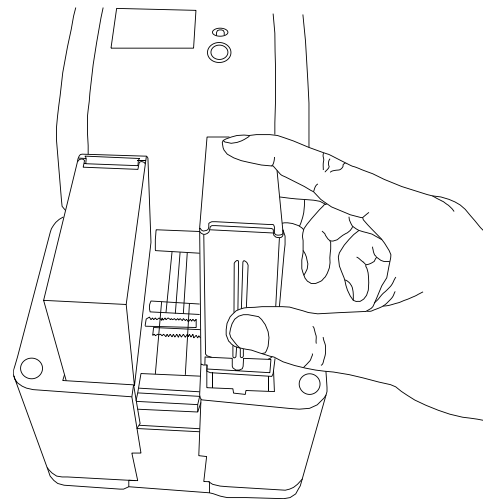
4. Installation

4.4.4. Loading the slide cartridge and installing the slide collector

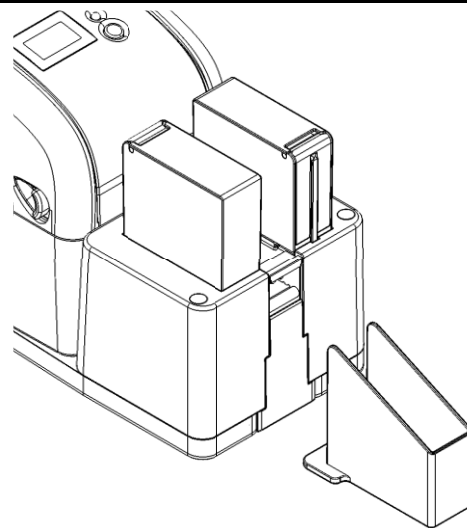
1. Hold the slide cartridge in your hand, as shown in the picture. Open a slide package from one side and insert it into the cartridge. Turn the package in order to make the slides reach the end of cartridge. Remove the empty slide package.



2. Place the cartridges in position on Slidebel Duo frontal part. Check the correct orientations. Only one orientation is possible per each side. Retention magnets will secure the cartridges to the structure.



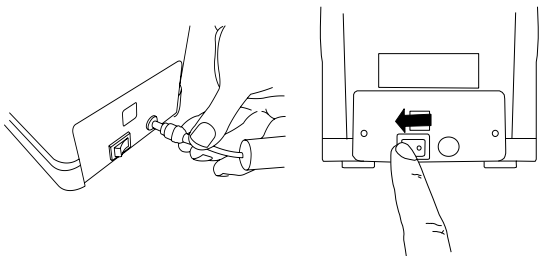
3. To install the slide collector, place it in front of the Applicator module. Magnets will secure the slide collector to the structure. The slide collector can be used to collect a batch of labelled slides.





4. Installation

4.4.5. Power on



- 1. To power on the Slidebel, ensure that the power adapter is connected to the printer. Simply press the main switch located on the rear panel.



- 2. Shortly after power on, the action button LEDs will light purple

LEFT BUTTON	RIGHT BUTTON
	

- 3. After short time, the right LED will turn blue while the left one will switch off. The printer is ready to print.

LEFT BUTTON	RIGHT BUTTON
	

5. Operation

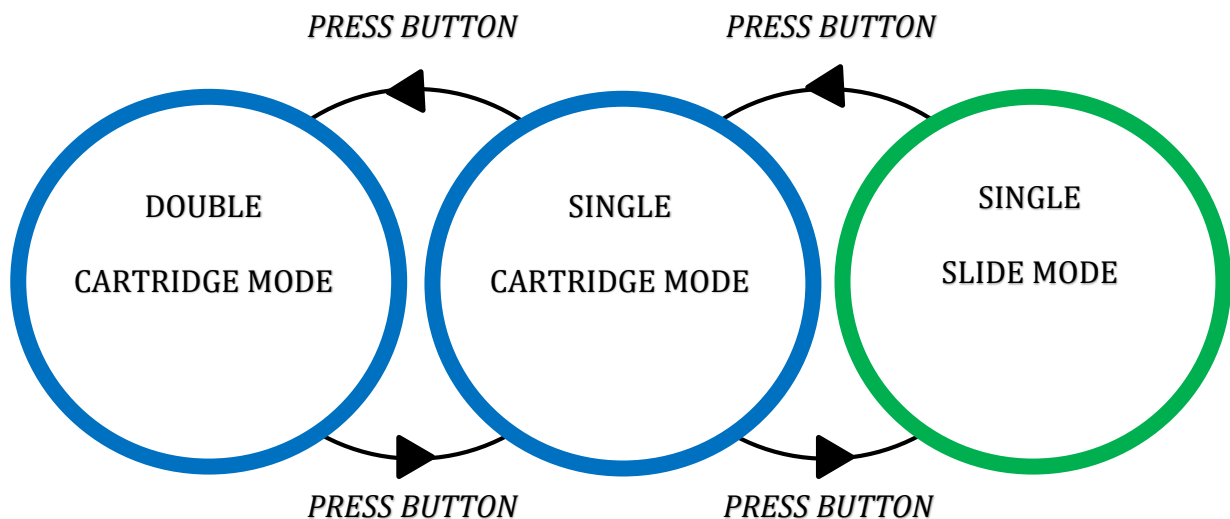
5. Operation

Slidebel Duo provides two different printing modes. Cartridge mode is used when automatic slide loading from the cartridge is desired. Single slide mode is used when manual loading of slides is preferred. Cartridge mode is the default operation mode.

The selection of the active cartridge can be manual, by using the corresponding multifunction button, or system driven. The IT system, software or application connected to Slidebel will always override the manual selection mode.

5.1. Switch operation mode

You can manually switch from one operation mode to the other by pressing the corresponding action button when Slidebel Duo is in idle mode. Press the buttons several times until the desired operation mode is activated.



Keep hands and the fingers away from the area marked with this symbol. The slide cartridge gears move very fast when loading a slide. A stall detection and protection system is in place, but the sharp teeth of the gears could still cause painful injuries!

5. Operation

5.2. Cartridge operation mode




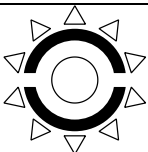
In cartridge mode Slidebel Duo will load microscope slides from the slide cartridges.

Right cartridge slide loading

To access right cartridge slide loading mode simply press the right button several times until the right LED is blue while the left LED is off.

To print a slide, just send a new print from the PC, tablet or LIS system. The right LED will light solid white printing.

This is the default operation mode for Slidebel.



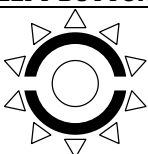

LEFT BUTTON	RIGHT BUTTON
	
LEFT BUTTON	RIGHT BUTTON
	

Left cartridge slide loading

To access left cartridge slide loading mode simply press the left button several times until the left LED is blue while the right LED is off.

To print a slide, just send a new print from the PC, tablet or LIS system.



The left LED will light solid white printing.

LEFT BUTTON	RIGHT BUTTON
	
LEFT BUTTON	RIGHT BUTTON
	

Double cartridge slide loading

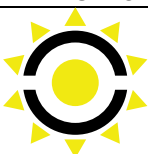
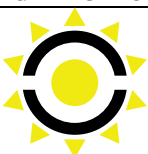
To access double cartridge slide loading mode simply press one button several times until both LEDs are blue.

To print a slide, just send a new print from the PC, tablet or LIS system. The LED of the corresponding loading side will light solid white printing.

LEFT BUTTON	RIGHT BUTTON
	

Cancel printing

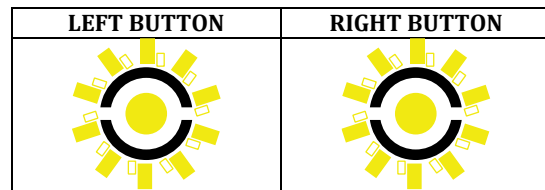
If you wish to cancel printing, keep any of the two buttons pressed until both LEDs are yellow. All the slides in the printer's memory will be deleted.

LEFT BUTTON	RIGHT BUTTON
	

5. Operation

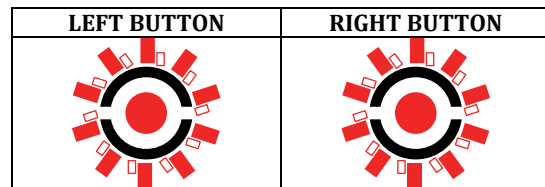
LED blinking yellow

If a slide failed to load correctly, the printer will return a warning. Place the slide correctly and press any button to recover from the error.



LED blinking red

If an error has occurred, both LEDs will blink red. Inspect the error cause and press any button to recover from the error.



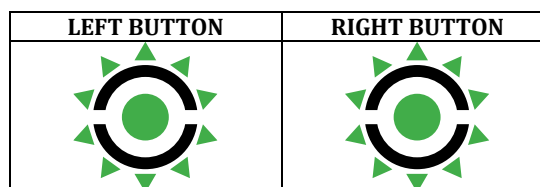
5. Operation

5.3. Single slide operation mode

In single slide mode Slidebel Duo will wait for slides to be manually fed by the user.

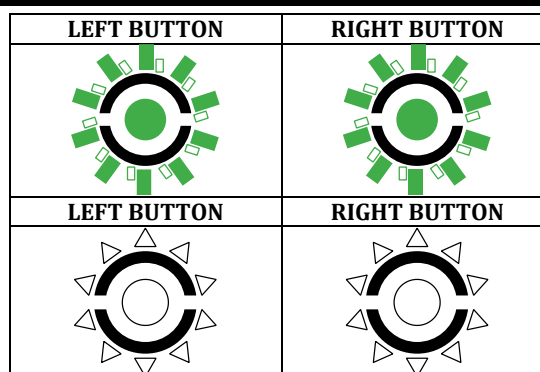
Single slide mode

To access single slide mode simply press one button several times until both LEDs are green.



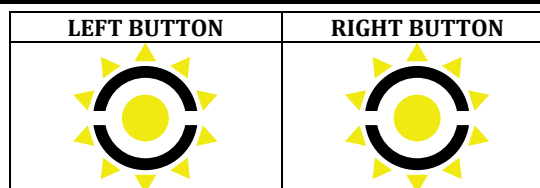
Slide printing

1. Send a new print from the PC, tablet or LIS system. Both LEDs will blink green
2. Position a slide on top of the slide conveyor
3. Load a slide onto the conveyor.
4. Just press any button. The LEDs of the will light solid white printing



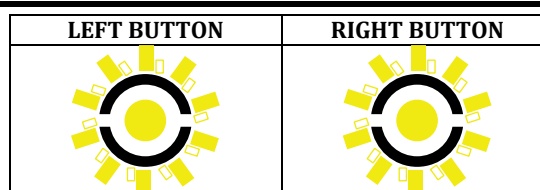
Cancel printing

To cancel printing, keep pressing any of the action buttons until both LEDs become yellow. All the slides in the printer's memory will be deleted.



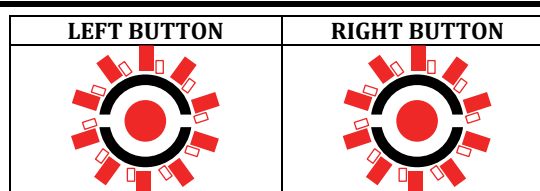
LED blinking yellow

If a slide failed to load correctly, the printer will return a warning. Place the slide correctly and press any button to recover from the error.



LED blinking red

If an error has occurred, both LEDs will blink red. Inspect the error cause and press any button to recover from the error.



5. Operation

5.4. Calibration mode

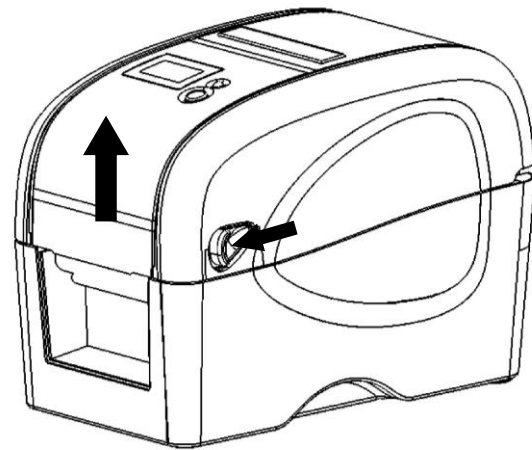
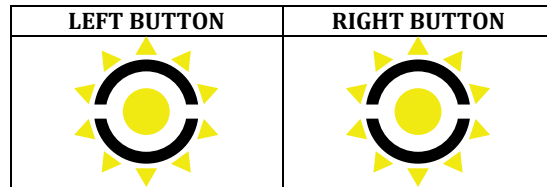
In calibration mode Slidebel Duo will wait for move the label roll liner forward or backward to calibrate the position of the labels in the printer.

Calibration mode

To access calibration mode, open the top cover of the printer module by pulling the tabs located on each side towards the front of the printer.

Open the printer fully, until the top cover support engages and locks the printer's top cover in position.

Once the printer's top part is open, the printer will automatically enter calibration mode. The multifunction buttons will light solid yellow.

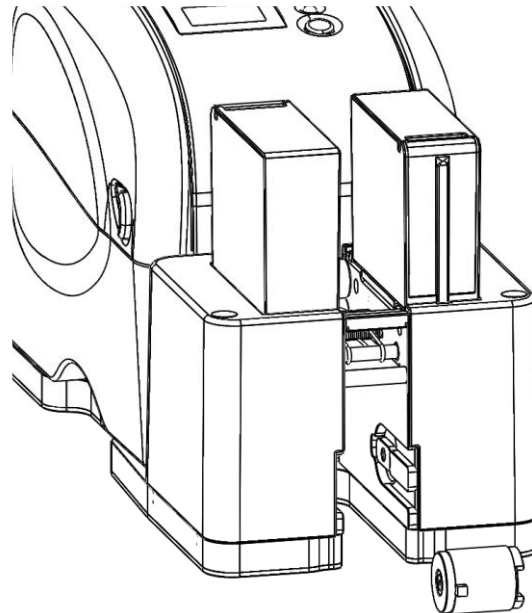


Recoiler wheel hub position

Upon entering calibration mode, the recoiler wheel hub will automatically position itself to allow removal or substitution of the recoiler roller.

The recoiler wheel hub flats will be parallel to the ground.

This allows to remove any waste paper liner and replace the paper core with a new one.





5. Operation

Calibration functions

Move the liner forward by pressing the left button

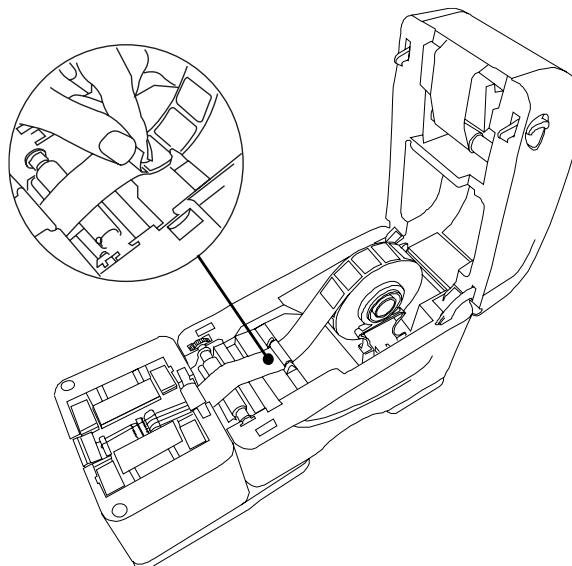
Move the liner backward by pressing the right button. Manually rewind the label roll when moving the liner backwards.

LEFT BUTTON	RIGHT BUTTON
	
Forward liner	Backward liner

First label position

Ensure that the first portion (circa 30 cm) of the label roll is empty: if there are labels along the path, manually remove them or move the liner backwards. The first label of the series should be on the peak of the label roll.

This will be needed for a successful calibration.




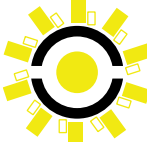
Exit calibration mode

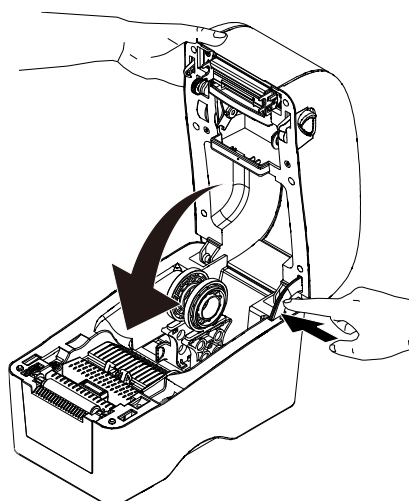
Hold the top cover and press the top cover support to disengage the top cover support with the lower inner cover. Gently close the top cover. Make sure the cover latches securely.

Press both buttons simultaneously.

The multifunction buttons should now alternate blinking purple and yellow.

Once the printer's top cover is closed, press the left button if you wish to calibrate the printer. Press the right button if you wish to skip the calibration.

LEFT BUTTON	RIGHT BUTTON
	



5. Operation



5.5. DUMP mode

In DUMP mode Slidebel Duo will wait for commands from the Slidebel Duo Service Tools application to read or modify the internal settings or execute diagnostic tests.

For more information, please refer to the Slidebel Duo Service Tools manual.

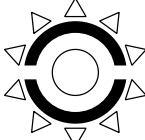
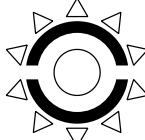
DUMP mode

To access DUMP mode, press the corresponding button from the Slidebel Duo Service Tools application. Both LEDs will light yellow.

LEFT BUTTON	RIGHT BUTTON
	



Read/Write Parameters

While reading or writing parameters from the printer, both LEDs will be white.

LEFT BUTTON	RIGHT BUTTON
	

Exit DUMP mode

To exit DUMP mode, press the corresponding button from the Slidebel Duo Service Tools application, or restart the printer. The printer will automatically enter in the last used mode (*e.g.*: default right slide loading)

LEFT BUTTON	RIGHT BUTTON
	

6. Interface and connectivity

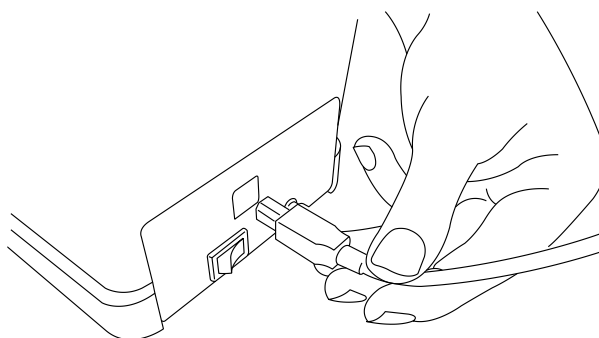
6. Interface and connectivity

Slidebel features an extended range of options for interfacing and connectivity with computer and IT systems. Please refer to the Slidebel Connectivity Manual for more information.

6.1. Interface ports

Slidebel Duo natively supports the USB interface. A standard USB cable might be used to connect the printer to a computer client, server or an external peripheral such as a barcode reader or another electronic device.

The USB interface is located on the back of the device.



The optional Slidebel print server might be used to connect the printer to the Ethernet network. Use the USB cable to connect the printer to the print server, then connect the print server to the Ethernet. For more information, please refer to the Slidebel print server installation instructions.

6.2. Communication protocols

Slidebel offers a broad range of connectivity options:

- Raw mode printing using one of the provided programming languages
- Standard Windows drivers
- Specific labelling software drivers, such as BarTender and NiceLabel

Slidebel Duo can support a great variety of printer layout languages, and the majority of external layout and printing software applications. The supported printer layout languages are:

- TSPL (TSC printer language)

Slidebel Duo supports standard Microsoft Windows certified drivers. Additionally, Slidebel has specific drivers, customised to fit with some of the major label layout and printing software applications:

- Nicelabel drivers, to be used together with the Nicelabel software suite
- Bartender drivers, to be used together with the Bartender software suite

6. Interface and connectivity

6.3. Layout and formatting

Slidebel Duo is capable of printing with a resolution of 203 DPI (8 dots per mm) in both vertical and horizontal directions. The printing area is 22 x 18 mm (width x length) or 176 x 144 dots.

Slidebel Duo natively supports a great number of 1D and 2D barcodes types:

- 1D bar code: Code 39, Code 93, Code 128UCC, Code 128 subset A, B, C, Codabar, Interleave 2 of 5, EAN-8, EAN-13, EAN-128, UPC-A, UPC-E, EAN and UPC 2 (5) digits add-on, MSI, PLESSEY, POSTNET, ChinaPost, GS1 Data Bar, Code 11
- 2D bar code: PDF-417, Maxicode, DataMatrix, QR Code, Aztec.



A free Microsoft® Windows® application, Slidebel Duo Tools, is available to create and print customized label layouts.

A screenshot of the Slidebel Duo Tools application interface. The window has a title bar with "Slidebel" and "GORDIAMKEY" with a logo. On the left, there are input fields for "Lab" (containing "TEST"), "Case" (containing "TT12345-01"), "Staining" (a dropdown menu with "HEX" selected), and "Notes" (containing "Notes"). Below these fields are "Print" and "Scan" buttons, and a numeric keypad with "-", "1", and "+" buttons. On the right, there is a preview of the label layout, showing a QR code, the text "TEST", and "TT12345-01-A", "HEX", and "A" below it.

7. Maintenance

7. Maintenance

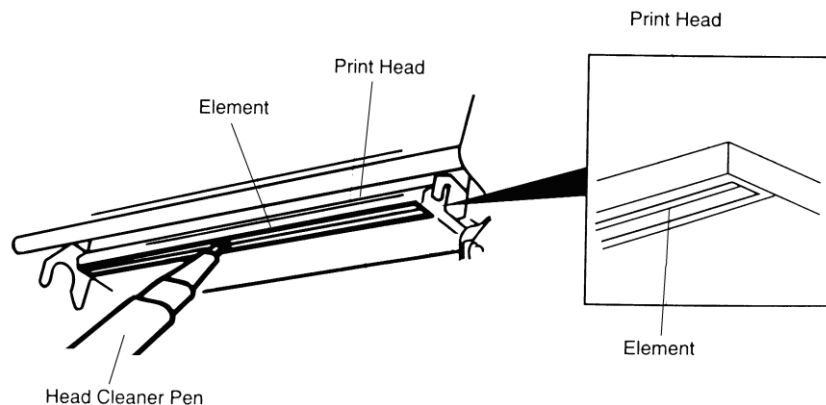
7.1. Cleaning



Before cleaning, always switch off the instrument and disconnect the mains plug. Do not allow any liquid inside the instrument. Never use metallic tools with sharp edges.

7.1.1. Cleaning the printer head

1. Always turn off the printer before cleaning the print head.
2. Allow the print head to cool down for at least one minute.
3. Use a thermal head cleaning pen and 100% ethanol to clean the print head surface.



Always follow these procedures when changing the label roll.

7.1.2. Cleaning the applicator module from glass dust

1. Remove the cartridges, the top and front applicator covers, the labelling roller
2. Turn-off the printer
3. Shake with care to remove any glass dust
4. Empty the slide cartridge and the slide collector and remove any glass dust.

7.2. Maintenance



Never open the casing of the instrument or its accessories. Only service personnel qualified by GordiamKey are authorised to repair the instrument or access its internal components.

To ensure the instrument's reliable function over extended periods:

- Clean the instrument with care after each use.
- Enter into a service contract at the end of the warranty period. For more information, contact your GordiamKey distributor.

8. Troubleshooting

8. Troubleshooting

8.1 Errors and warnings


Slidebel Duo can signal three different sorts of error grades: low level (or warnings), high level and unauthorised. The following table might help to identify the root cause of the error and the possible countermeasures to solve the issue.



Just press any of the action buttons in order to recover from a low/high level error and to return to the selected printing mode. If the error persists, restart the printer and run the instrument calibration procedure described in section 5.4

LED color	Grade	Root cause	Possible countermeasures
	Low level error	Slide cartridge empty	Load the slide cartridge and press any of the action buttons to continue printing.
		Slide not correctly loaded from the cartridge	Ensure that the cartridge is mounted in the correct position. Ensure that no slide is blocking the conveyor belts. Clean the cartridge and the cartridge holder from dust or debris. Ensure that the cartridge is not damaged.
		Slide not correctly loaded on the conveyor	Ensure that no slide is blocking the conveyor belts. Ensure that the conveyor is clean and free of glass dust. Ensure that no labels are stuck on the conveyor.
	High level error	Slide trapped on the conveyor	Remove any trapped slide.
		Improper recoiler behaviour	Run the instrument calibration procedure described in section 5.4

8. Troubleshooting

		Calibration error	Ensure you have followed all the required steps to calibrate the printer. Ensure that the first label of the sequence is correctly positioned.
		Printer top cover open	Ensure that the printer top cover is closed and securely latched
	Unauthorized	Instrument not activated	Contact your distributor to activate the instrument
		SIM card empty	Substitute the SIM card

8.2 General troubleshooting

Issue	Possible causes	Corrective actions
No printing occurs	Slidebel Duo in no-printing mode	Ensure that at least one of button LEDs is blue or green
	Printer not connected to the computer client	Ensure that the printer is correctly connected to the computer client
Label application failures	Label roll not properly calibrated	Run the instrument calibration procedure described in section 5.4
	Printer GAP sensor needs calibration	Contact your GordiamKey distributor
	Wrong printer settings	Reload factory default settings
Bad printing quality	The thermal head is dirty	Clean the thermal head with the supplied cleaning pen as shown in section 7.1.1

9. Warranty and service

9.1 Warranty

GordiamKey guarantees that this delivered product has been subjected to a full-scale quality control procedure based on GordiamKey in-house testing standards and that the product is faultless and complies with all technical specifications and/or characteristics. The warranty terms of your GordiamKey distributor shall apply exclusively.

9.2 Service information

If you require technical service or replacement parts, please contact your GordiamKey distributor.

When contacting your distributor, provide the following information:

- Model name and serial number of the instrument.
- Location of the instrument and name of the person to contact.
- Reason for the service call.
- Delivery date.



Any product that is meant to be returned to GordiamKey or serviced on site must be cleaned and decontaminated in the appropriate manner. Since it is not possible to decontaminate for prion diseases, such as CJD, BSE, CWD, etc., equipment exposed to specimens containing prion diseases cannot be returned to GordiamKey for repair. The on-site repair of prion-contaminated equipment will only be conducted after the field service engineer has been educated on the risks, instructed in the policies and procedures of the institution and provided with personal protective equipment. Please download and print the instrument decontamination form from the GordiamKey website (www.gordiamkey.com), fill it out carefully and enclose a copy with the instrument. Attach the confirmation to the outside of the flight case or hand it directly to the service technician.



www.gordiamkey.com