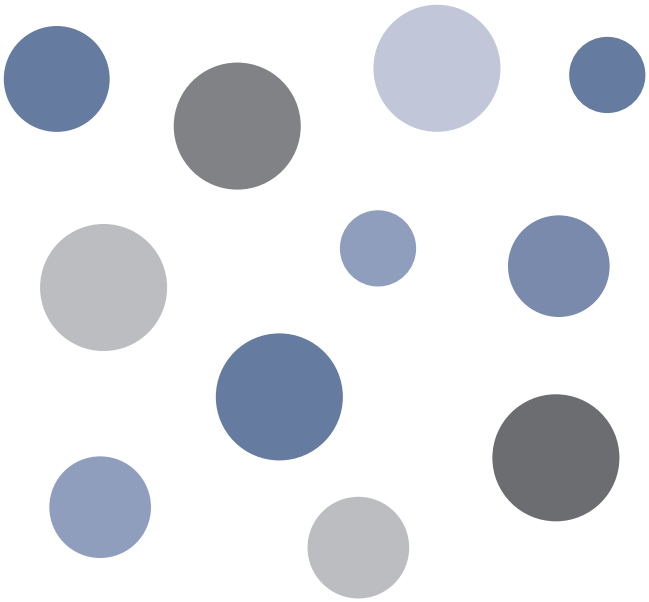
DLC1000

LABELROBO

USER'S MANUAL

MANUAL NO.DLC1000-UM-151



GRAPHTEC

TO ENSURE SAFE AND CORRECT USE

- To ensure the safe and correct use of your machine, read this manual thoroughly prior to use.
- After reading this manual, keep it in a handy location for quick reference as necessary.
- Do not allow small children to touch the machine.
- The following describes important points for safe operation. Be sure to observe them strictly.

Conventions Used in This Manual

To ensure the safe and accurate use of the machine as well as to prevent human injury and property damage, the safety precautions provided in this manual are ranked in the three categories described below. Their display and meaning is as following. Be sure to gain a full understanding of the meaning of them before reading the Manual.

⚠ **DANGER**	This category provides information that, if ignored, is highly likely to cause fatal or serious injury to the operator.
⚠ **WARNING**	This category provides information that, if ignored, is likely to cause fatal or serious injury to the operator.
⚠ **CAUTION**	This category provides information that, if ignored, could cause injury to the operator or damage to the machine.

Description of Safety Symbols

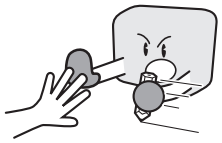
⚠	The ⚠ symbol indicates information that requires careful attention (including warnings). The specific point requiring attention is described by an illustration or text within or next to the ⚠ symbol.
⃠	The ⃠ symbol indicates an action that is prohibited. Such prohibited action is described by an illustration or text within or next to the ⃠ symbol.
❗	The ❗ symbol indicates an action that must be performed. Such imperative action is described by an illustration or text within or next to the ❗ symbol.

Safety Precautions

⚠ WARNING

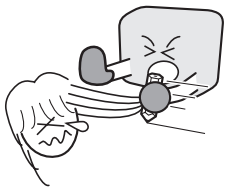
During a cutting/operation, do not touch the roller, tool carriage, and other moving parts.

- Such action may cause human injury.



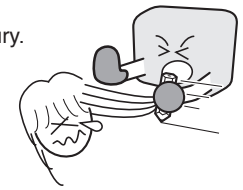
During a cutting/operation, be sure to keep your hands, hair, and so forth away from the roller, tool carriage, and other moving parts.

- Such action may cause human injury.



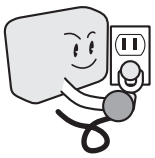
Even when the machine is stopped, it may suddenly start operating if it receives data, so be sure to keep your hands, hair, and so forth away from the vicinity of the roller, tool carriage, and other moving parts.

- Such action may cause human injury.



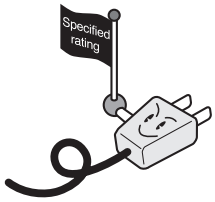
Make sure that the machine is grounded.

- If the printer is not grounded, the operator could suffer an electrical shock in case of current leakage.



Do not connect the machine to a non-rated power supply.

- Use of a different supply voltage may result in electrical shock or a fire hazard due to current leakage.

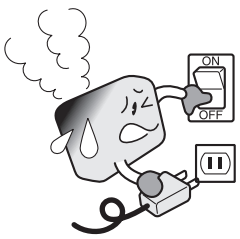


Do not disassemble or remodel the machine.

- Such action may result in electrical shock or a fire hazard due to current leakage.
- Contact with the high-voltage parts within the machine may cause electrical shock.
- Contact your sales representative or nearest Graphtec vendor to request repair.

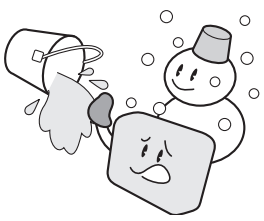
If the machine generates smoke, is too hot, emits strange odor, or otherwise functions abnormally, do not continue using it. Turn off its power and unplug its power cord from the electrical socket.

- Use of the machine in such status may result in a fire hazard or electrical shock.
- After confirming that smoke is no longer being generated, contact your sales representative or nearest Graphtec vendor to request repair.
- Never try to perform repair yourself. Repair work by inexperienced personnel is extremely dangerous.



Do not use the machine in a location where it will be exposed to water, rain or snow.

- Such action may result in electrical shock or a fire hazard due to current leakage.

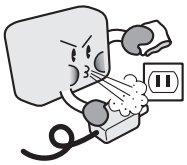


Safety Precautions

⚠ WARNING

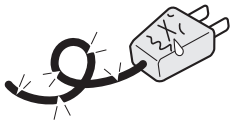
Do not allow dust or metallic matter to adhere to the power plug.

- Such action may result in electrical shock or a fire hazard due to current leakage.



Do not use the power cord if it is damaged.

- Use of a damaged cord may result in electrical shock or a fire hazard due to current leakage.
- Replace the power cord with a new one.



Handle cutter blades with care.

- Avoid direct contact with the cutter blade. Touching the blade with your bare hand may cause injury.
- During a cutting operation, keep away from the cutter blade.

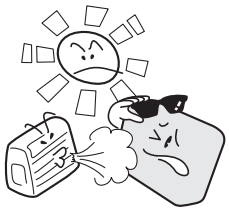
Safety Precautions

⚠ CAUTION

Do not use or store the machine in a location exposed to direct sunlight or the direct draft of an air conditioner or heater.

- Such locations may impair the performance of the machine.

Prohibited



Do not use or store the machine in an excessively dusty or humid location.

- Such locations may impair the performance of the machine.

Prohibited

Do not place a coffee cup or any other receptacle containing water or other fluid on top of the machine.

- Fluid falling inside the machine may cause electrical shock or a fire hazard due to current leakage.

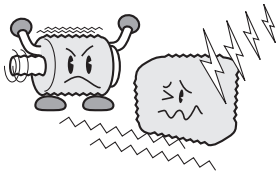
Avoid water

Beware of electrical shock

Do not install, use, or store the machine in a location subject to excessive mechanical vibration or electrical noise.

- Such locations may impair the performance of the machine.

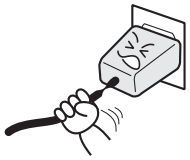
Prohibited



When disconnecting the power cord or an interface cable, do not pull on the cord/cable.

- Such action will damage the cord/cable, resulting in a fire hazard or electrical shock.

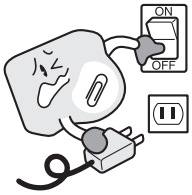
Prohibited



If water or foreign matter enters inside the machine, do not continue using it. Turn off its power and unplug its power cord from the electrical socket.

- Use of the machine in such a status may result in electrical shock or a fire hazard due to current leakage.
- If the machine requires repair, contact your sales representative or nearest GRAHTEC vendor.

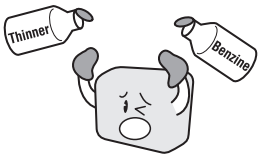
Unplug the power cord from the socket



Do not clean the machine using a volatile solvent (such as thinner or benzene).

- Such action may impair its performance.

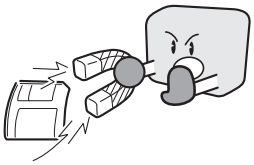
Prohibited



Do not place magnetic cards, diskettes or similar items in the vicinity of the tool carriage.

- The magnetic force may destroy the data on the magnetic cards or diskettes.

Prohibited



Safety Precautions

⚠ CAUTION

Do not attempt to lubricate the machine's mechanisms.

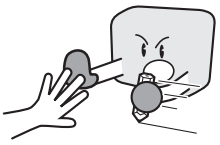
- Such action may cause it to break down.

Prohibited

Provide sufficient space around the machine so that the media does not strike any objects in the machine's vicinity during cutting or plotting.

- Such contact may cause cutting to go out of alignment.

No touching



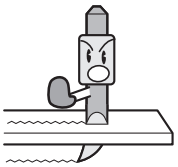
Do not place the machine on an incline, areas subject to many vibrations, or other unstable locations.

- If the machine falls, it may cause human injury.

Prohibited

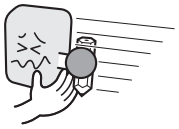
When using the cutter pen, take care not to extend the cutter blade excessively.

- An excessive blade length will damage the cutting mat and impair the machine's cutting quality.



Move the pen carriage slowly when moving it manually in order to load the medium or for other reasons.

- Moving it quickly may damage the machine.



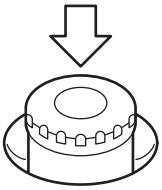
When using indoor lighting such as fluorescent lamps and desk lamps, make sure the machine is separated by at least 1 m.

- Placing the machine too close to such lighting may cause sensor malfunctions and the paper detection to not function efficiently.

Run a test cut when cutting materials with unknown condition settings.

- Running a cut operation with incorrect setting values may cause a large overload to the blades and device or a system breakdown.

Before use, check that the power can be turned off by pressing the Emergency Stop Switch.



PREFACE

Thank you for purchasing a LABELROBO DLC1000.

This is a combined machine that is equipped with a cutting machine for label cut.

To ensure optimum use of the machine's various functions, be sure to read this manual thoroughly before use.

This product is manufactured and sold pursuant to a license under Gerber Scientific International, Inc.'s U.S. Patent No. 5,537,135 and its foreign counterparts.

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(2) The specifications and other information this manual are subject to change without notice.

(3) While every effort has been made to supply complete and accurate i nformation about this product, please address any inquiries about unclear information, possible errors, or other comments to your sales representative or nearest Graphtec vendor.

(4) Notwithstanding the preceding paragraph, Graphtec Corporation assumes no liability for damages resulting from the use of the information contained herein or of the product.

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Copyright

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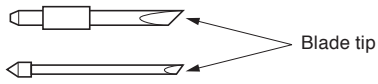
Precautions on the Handling of Cutter Pens

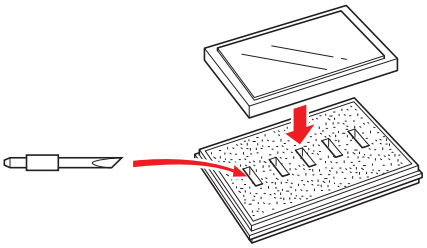
This product uses a cutting blade. To prevent injuries (when replacing the cutter blade, installing the cutter pen, etc.), take the following precautions when handling the cutter blade.

Cutter Blade

The cutter blade is sharp. Be careful not to cut your fingers or prick yourself when handling the cutter pen.

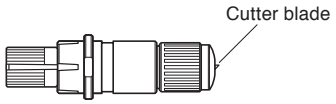


Return used blades to the accessory cutter blade case and throw them all out together when the whole case has been filled.



Cutter Pen

The tip consists of a sharp blade. Do not extend it too far. Moreover, the tip of cutter blade is sharp. When you are not using the cutter pen, make sure that the blade is fully retracted.



After Mounting the Cutter Pen

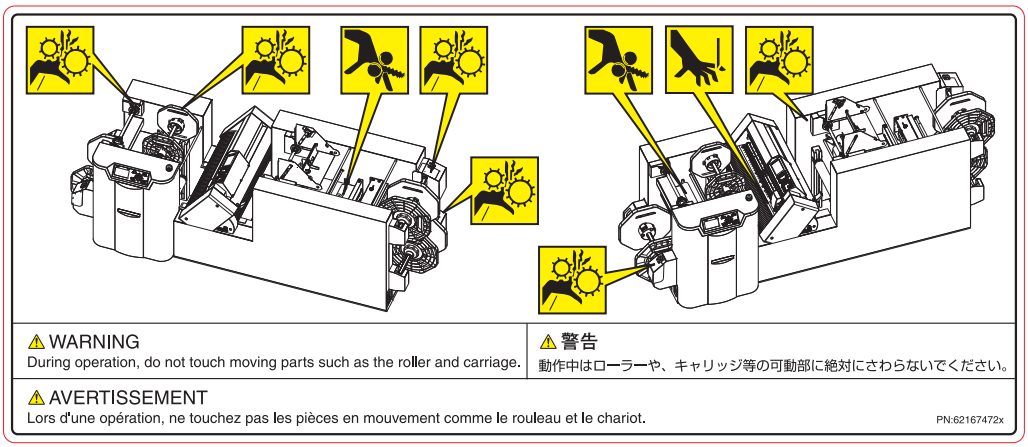
After the power has been turned on, and during operation, do not touch the pen tip. It is dangerous.

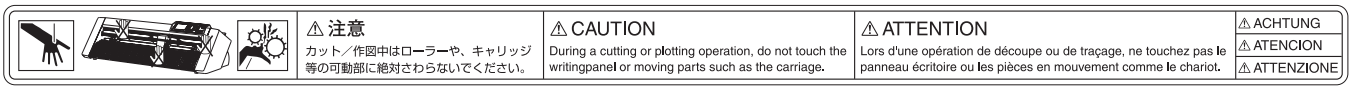
Precautions After Turning on the Machine

During operations, immediately after completion of operations, and when setting the cutting label printer functions, the pen carriage, Y bar, and other parts which are not fixed, may move suddenly. Do not let your hands, hair, or clothing get too close to the moving parts or within their range of movement. Do not place any foreign objects in or near these areas either. If your hands, hair, clothing, or the like get caught in, or wrapped around moving parts, you may be injured and the machine may be damaged.

Machine Caution Label

The machine's Caution Label is located on the cover. Be sure to observe all the cautions on the label.





Notes on the Stand

Be sure to use only the stand designed for the DLC1000 with your DLC1000 machine. The use of a different stand may cause a machine malfunction or bodily injury.

Usage

This document contains precautions to be adhered to upon using this product. Please read it carefully prior to use.

Safety Precautions for Attaching Labels

Various functions and attributes of the label may differ depending on the conditions of the environment in which it is used.

Before use, please be sure to confirm whether the product is appropriate for its intended use.

Precautions when affixing labels to moldings (shaped products)

In situations where labels are affixed to resin moldings, it is possible that the air bubbles from the outgas emerging out of the resin could enter the label and cause it to soften.

As this occurs especially easily with polycarbonate, polystyrene, ABS, and acrylic, please carry out thorough testing when using.

Usage Environment

When printing is carried out in a hot and humid environment, this may cause the label materials to change and become defective, and the separator winder to become faulty.

Furthermore, the surface of completed labels may change from flat to rounded.

Please refrain from using in a hot and humid environment.

Media

When using label materials that have been stored for a long period of time in the low-temperature environment of a warehouse, leave them in a normal-temperature setting at least half a day before usage as the print quality is reduced when the central interior portion of the material is chilled.

Consumable Parts

The cross cutter unit and slitter unit are consumable parts. They are consumed as they are used, and must eventually be replaced.

After Use

After use, cover the main unit with the soft cover supplied or a cloth to keep dust off.

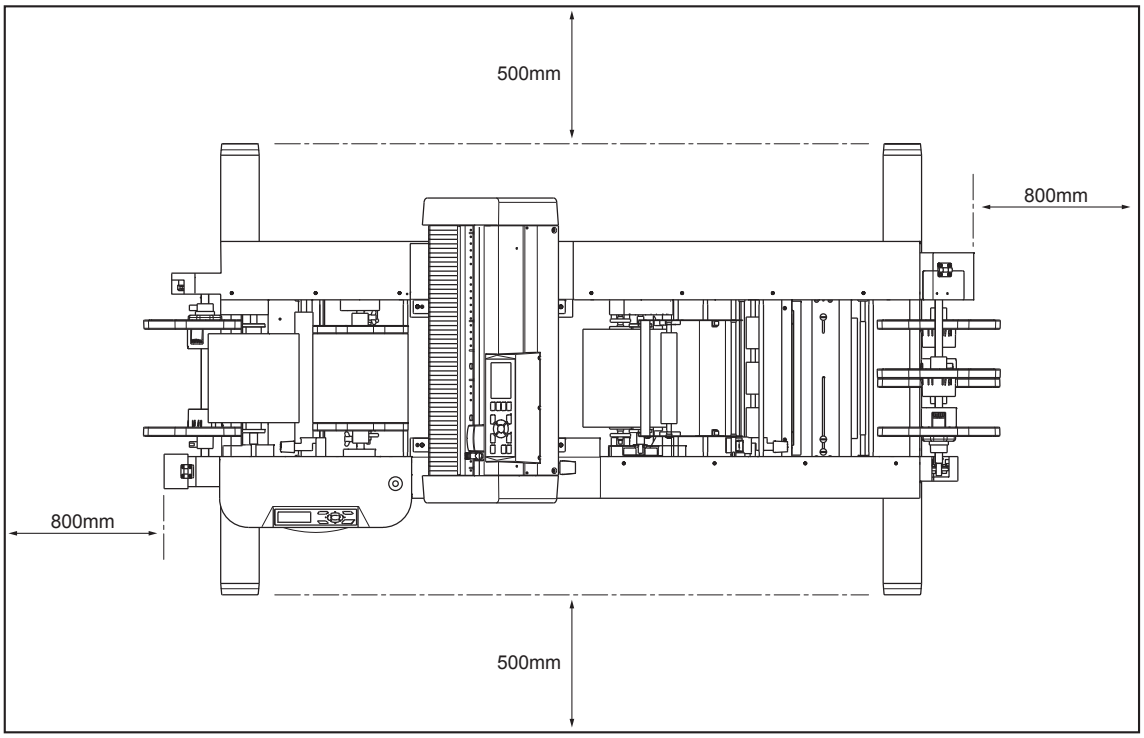
Prior to use

Be sure to read the attached “TO ENSURE SAFE AND CORRECT USE” prior to use. Otherwise, it may cause an unexpected accident or fire.

Installation Space

Please secure a space for installation as according to the below illustration.

> ⚠ **CAUTION**
>
> Leave sufficient space for operations in front of and behind the printer.



WARNING

The United States Federal Communications Commission has specified that the following notice must be brought to the attention of users of this product.

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

USE SHIELDED CABLES

To comply with FCC Class A requirements, all external data interface cables and connectors must be properly shielded and grounded. Proper cables and connectors are available from GRAPHTEC's authorized dealers or manufacturers of computers or peripherals. GRAPHTEC is not responsible for any interference caused by using cables and connectors other than those recommended or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Selecting a Power Cable

Be sure to refer to the following tables if you wish to use a cable other than the one supplied as an accessory.

Table 1. 100 V to 120 V Power Supply Voltage Range

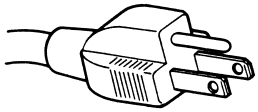
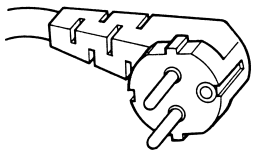
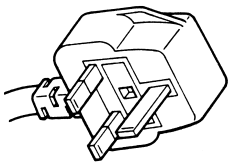
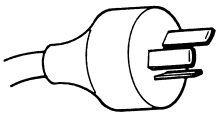
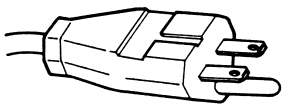
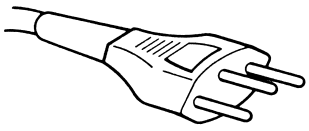
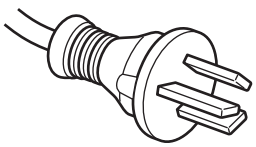
Plug Configuration	Plug Type	Supply Voltage Selector Settings	Reference Standards	Power Cable
	North America 125 V 10 A	100/120 V	ANSI C73.11 NEMA 5-15 UL498/817/62 CSA22.2 NO.42/21/49	UL Listed Type SJT No.18AWG × 3 300 V, 10 A

Table 2. 200 V to 240 V Power Supply Voltage Range

Plug Configuration	Plug Type	Supply Voltage Selector Settings	Reference Standards	Power Cable
	Europe 250 V 10 A	200 V	CEE(7)VII IEC320 CEE13	TYPE: H05VV-F 3 × 1.0 mm^2
	UK 250 V 5 A	200 V	BS1363 BS4491 BS6500	TYPE: H05VV-F 3 × 1.0 mm^2
	Australia 250 V 10 A	200 V	AS3112 AS3109 AS3191	TYPE: OD3CFC 3 × 1.0 mm^2
	North America 250 V 15 A	200 V	ANSI C73.20 NEMA 6-15 UL 198.6	UL Listed Type SJT No.18AWG × 3 300 V, 10 A
	Switzerland 250 V 6 A	200 V	SEV1011 SEV1004 SEV1012	TYPE: H05VV-F 3 × 0.75 mm^2
	China 250 V 6 A	200 V	GB15934 GB2099.1 GB1002 GB/T 5023.5	TYPE: H05VV-F 3 × 1.0 mm2

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Chapter 1 Product Summary

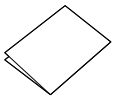
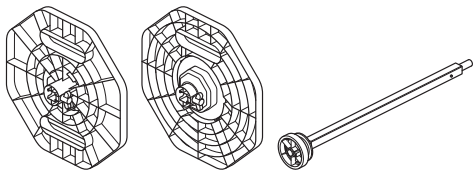
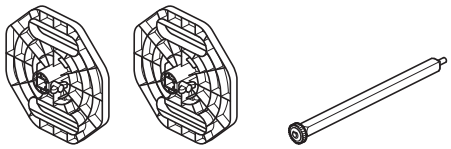
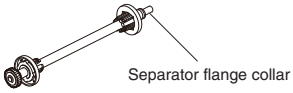
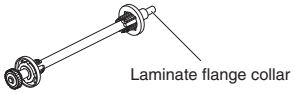
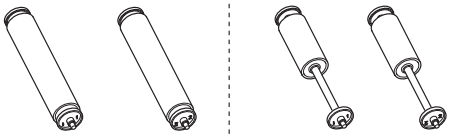
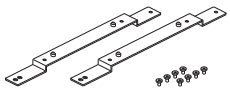
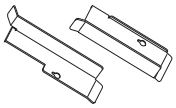
This chapter explains how to connect this device your computer.

PRODUCT SUMMARY

1.1 Checking the Accessories
1.2 Nomenclature
1.3 Connecting to the Computer

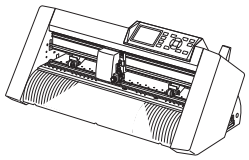
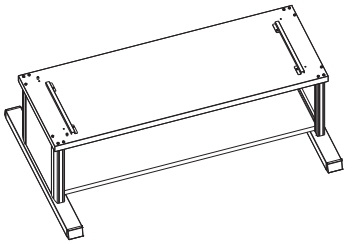
1.1 Checking the Accessories

Accessories

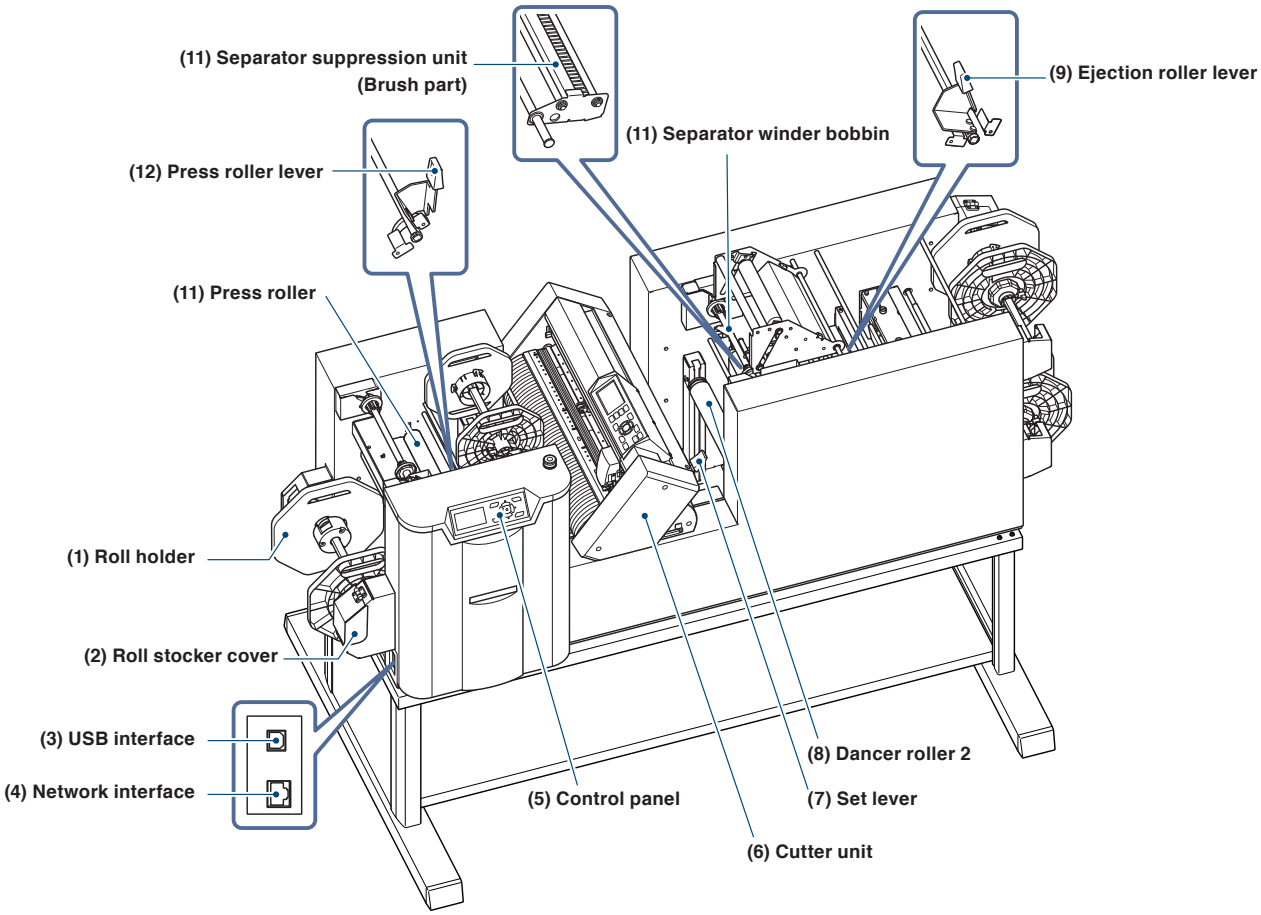
Item	Q'ty	Item	Q'ty
Power cable	1 pc.	DVD • Various software • User's Manual (pdf)	1 pc.
TO ENSURE SAFE AND CORRECT USE 	1 pc.	Setup Manual, Start Guide	1 pc.
Roll holder Flange A, Flange B, Shaft (Use the shaft with a scale for the roll holder.) (A flange sheet (white) is attached to one of the flange sets.) * Please use the shaft with a scale and the two flanges with the flange sheet as one set. 	3 set	Laminate holder Flange (2 pcs.), Shaft 	1 set
Separator winder bobbin, Separator flange collar (Separator flange collar: Marked (groove)) 	1 set	Laminate winder bobbin, Laminate flange collar (Laminate flange collar: Not marked) 	1 set
Dancer roller (1, 2) <Width: 228 mm> <Width: 109 mm> 	1 set	Attachments (Brackets: 2 pcs., Screws: 8 pcs.) (Used to mount the cutter unit.) 	1 set
Guide (F, R) (Attach them when using the slitter.) 	1 set		

* Other manuals may be added later separately.

Dedicated Accessories

Item	Q'ty	Item	Q'ty
Cutter unit (CE6000-40DLC)  **<The following components are not supplied with the CE6000-40DLC>** Water-based fiber pen (KF700-BK [1P]) Water-based fiber pen adapter Carrier Sheet (CR09300-A3) Roll-medium tray Power cable	1 set	Stand (ST0106) 	1 set

1.2 Nomenclature



(1) Roll holder .....Use the Flange A and Flange B to align the roll paper in the proper position.

(2) Roll stocker cover .....This is used to protect the location to set the roll holder.

(3) USB interface .....Connector used when connecting this device via USB I/F.

(4) Network interface .....Connector used when connecting this machine via network I/F.

(5) Control panel .....Carry out operations and various settings.

(6) Cutter unit .....Cuts (stenciling, frame-cutting) media.

(7) Set lever .....When loading the media to the cutting part, raise and lower the push roller to release and fix the media.

(8) Dancer roller 2 .....Used when setting/feeding media.

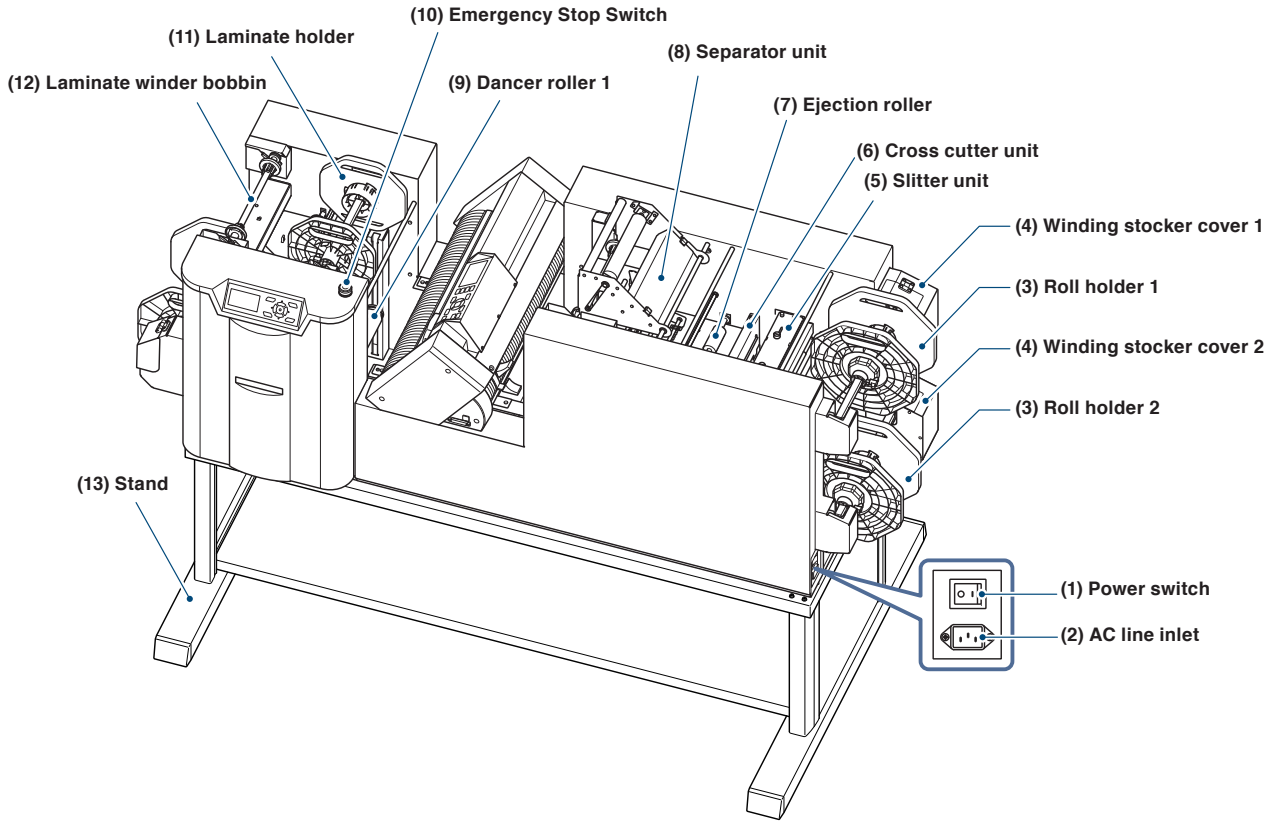
(9) Ejection roller lever .....When loading the media, use this lever to open and close the ejection roller.

(10) Separator winder bobbin ...Rolls up detached unnecessary media.
When the separator is not used, it must not be removed.

(11) Separator suppression unit (Brush part)
.....This is used as a media holding and a route when unnecessary media is peeled off.

(12) Press roller lever .....Opens and closes the press roller when the media is set.

(13) Press roller .....Thrusts the media into the feed roller.



(1) Power switch .....Switch for turning the power on/off.

(2) AC line inlet .....Connector that connects the power cord.

(3) Roll holder (1 and 2) .....Use the Flange A and Flange B to align the roll paper in the proper position. (Winding part)

(4) Winding stocker cover (1 and 2)

.....This is used to protect the location to set the roll holder.

(5) Slitter unit .....This is used to width-cut (longitudinal cut) the roll paper.

(6) Cross cutter unit .....Cutter used for cross-cutting (horizontal cutting) media.

(7) Ejection roller .....The media is pressed against the lower roller and is fed.

(8) Separator unit .....Set when unnecessary media is detached.

(9) Dancer roller 1 .....Used when setting/feeding media.

(10) Emergency Stop Switch

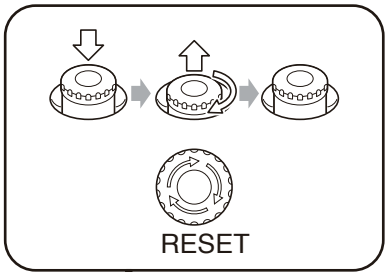
.....Press to stop the machine. Please use this in case of emergency.

(11) Laminate folder .....Sets the laminate.

(12) Laminate winder bobbin ....Rolls up the laminate backing sheet.

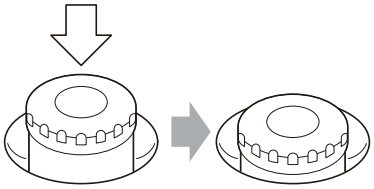
(13) Stand .....A stand to put the machine on.

Emergency Stop Switch



Only use this in case of emergency or check before use.

Pressing the switch will cause the switch to become depressed.

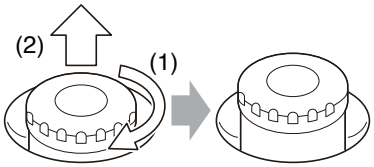


In this state, turning the power switch to the On position (I) will not turn the power on.

Cautionary notes for turning power on again

Be sure to confirm that the power switch is in the Off (◯) position.

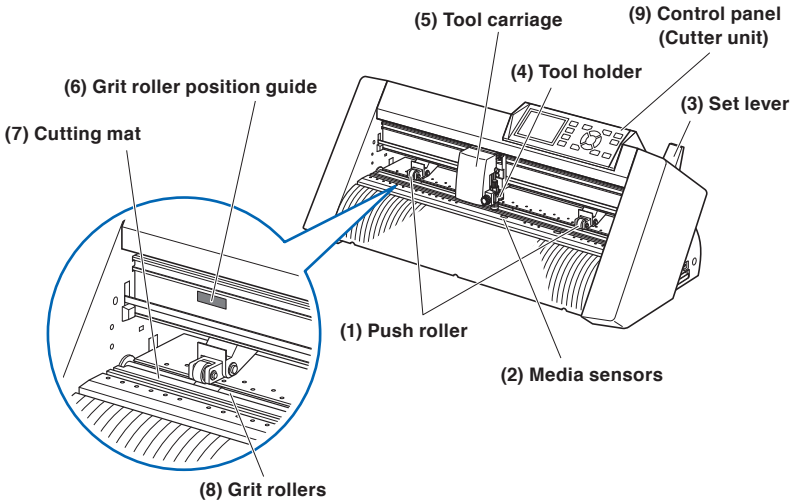
When the power switch is in the Off position, you can turn it On by turning the emergency stop switch clockwise until you hear the click and the switch pops up.



After confirming safety, turn the power switch to the On (I) position.

> ⚠ **CAUTION**
>
> - When turning the power on for the first time after implementing the emergency stop switch, push the switch to the On position strongly.

Cutter unit



(1) Push roller .....This is used to press the media against the grit roller.

(2) Media sensors .....The front sensor is used to sense the leading edge of the media. The rear sensor is used to sense the trailing edge of the media.

(3) Set lever .....When loading the media to the cutting part, raise and lower the push roller to release and fix the media.

(4) Tool holder .....Holds the cutter-pen or plotting pen and moves it up or down.

(5) Tool carriage .....Moves the cutter-pen or plotting pen across the media during cutting.

(6) Grit roller position guide .....Stickers on the front of the Y rail and the rear side of the top cover that show the position of each grit roller. To move the push roller, set it within the area of this guide in accordance with the width of media.
* Leftmost position of the roller is not used.

(7) Cutting mat .....Cutter blade moved on this mat, preventing wears of the blade.

(8) Grit rollers .....This is used to feed the media back and forth.

(9) Control panel (Cutter unit) ...This is not used in this Cutter.

1.3 Connecting to the Computer

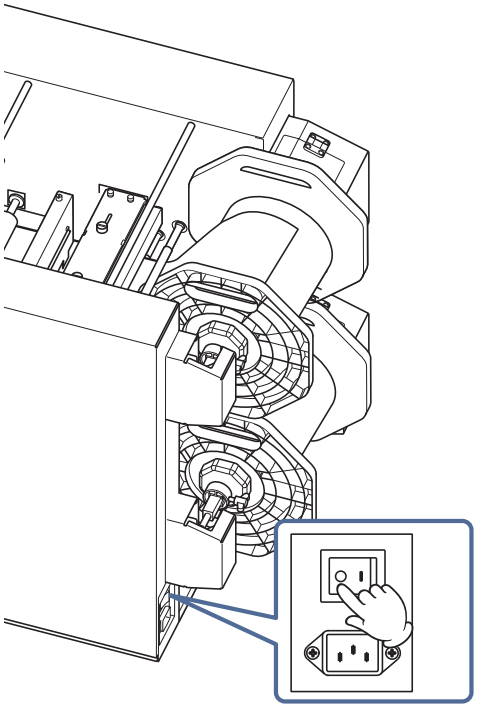
This machine connects to your computer with a communication cable. When connecting this machine to your computer, use either the USB port or network (LAN) port. Select which port to use according to the requirements of your application software and/or which of your computer's interface ports are available for use.

Please install driver software before connecting.

Use a USB cable or a network cable in accordance with the port chosen. Obtain a cable that is compatible with your computer.

Connecting

1 Confirm that the power switch is in the Off (○) position.

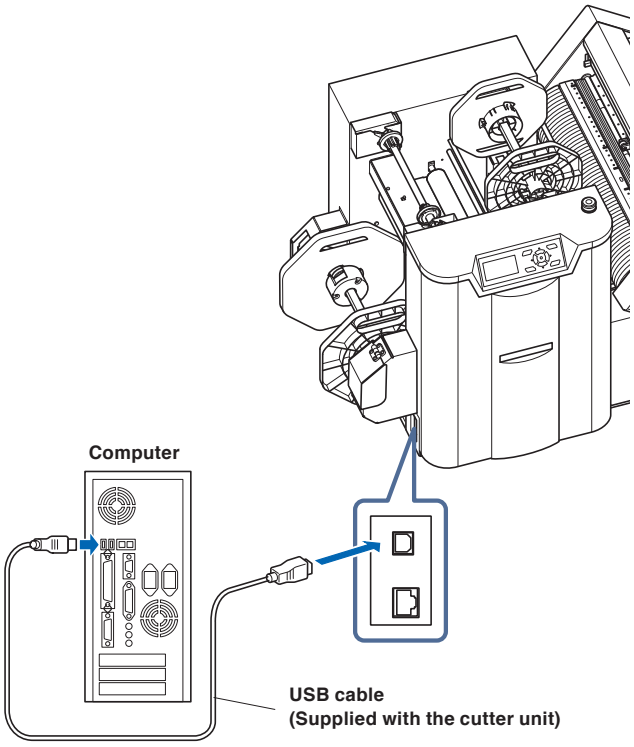


2 Connect using the connection cable between the PC and this machine.

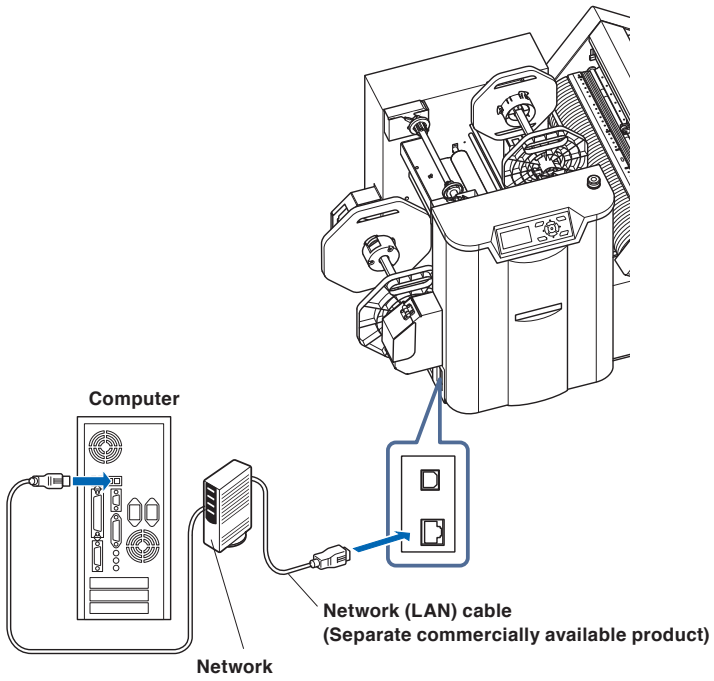
CHECKPOINT

Refer to "5.1 Setting Interface" for setting the interface.

Connecting With USB Interface



Connecting With Network Interface



Chapter 2 Preparing

This chapter provides how to prepare before the operation.

PRODUCT SUMMARY

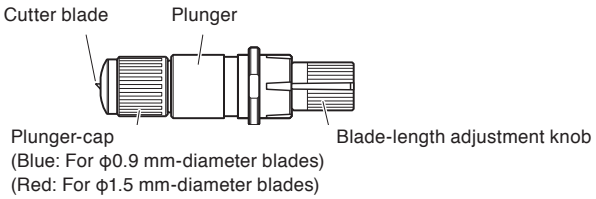
2.1 Preparation of Cutter Plunger
2.2 Attaching a Tool
2.3 Using the Control Panel
2.4 Turning on the Power
2.5 Setting the Label Material (Media)
<When using the separator (weeding)>
<When the winding roll holder is used>
<When the winding roll holder is not used>
2.6 Aligning the Push Rollers
2.7 Using the Laminate
2.8 Using the Cross Cutter
2.9 Using the Slitter
2.10 COND/TEST Key
2.11 Select the Tool Conditions
2.12 Adjusting the Blade Length
2.13 Running Cutting Tests
2.14 Stop during operation
2.15 Display Cutting Area

2.1 Preparation of Cutter Plunger

This chapter describes the structures and types of the cutter plungers (cutter pens).

Cutter Plunger Nomenclature

The machine cuts using a cutter blade mounted in a plunger. There are two different plungers to suit the diameter of the cutter blade to be mounted (the ϕ0.9 mm cutter plunger is provided as a standard accessory). Be sure to mount the cutter blade in the corresponding cutter plunger.

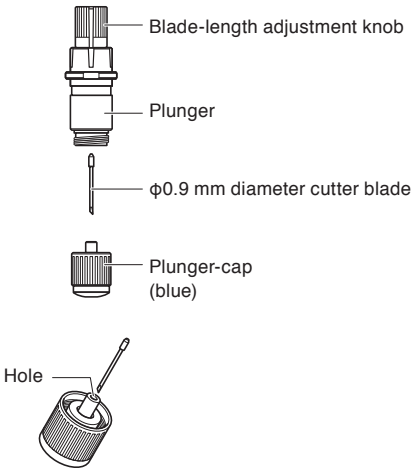


⚠ CAUTION

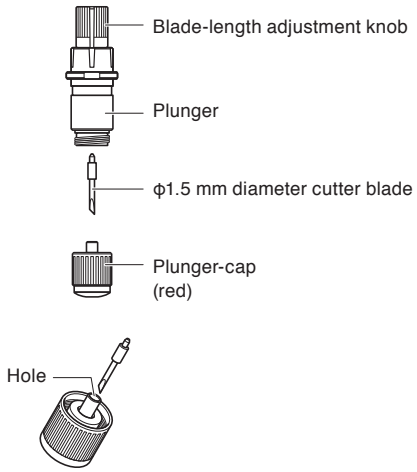
To avoid bodily injury, handle cutter blades with care.

Structure of Cutter Plunger

ϕ0.9 mm diameter cutter plunger



ϕ1.5 mm diameter cutter plunger



Adjusting the Blade Length

Blade length needs to be adjusted to perform optimal cut. Perform few test cuts and set the optimal blade length.

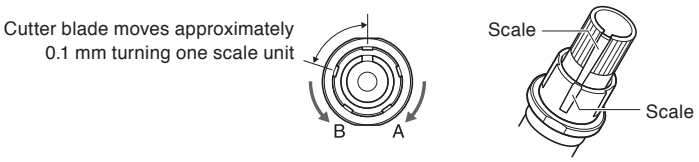
⚠ CAUTION

- To avoid bodily injury, handle cutter blades with care.
- It may result in damaging the cutter blade or the cutting mat if the blade is extended too much. Make sure the blade length is set less than the thickness of the media.
- If the blade is extended too much, the cutting mat would be cut out along with the media. As a result, the media may not be fed and weeded. Be sure to perform the cutting test and adjust the blade length not to cut out the cutting mat.

Supplement

- Refer to "Running Cutting Tests" for cutting tests.
- For method to adjust the blade length, refer to " Adjust the Blade Length ".

Adjust the blade length by turning the blade-length adjustment knob. Turn the knob in direction "A" to extend the blade, or in direction "B" to retract the blade. When the knob is turned by one scale unit, the blade moves approximately 0.1 mm. One full turn of the knob moves the blade approximately 0.5 mm.



Blade Application and Features

Select the optimal cutter blade and media to be cut.

Refer to the Cutter Blade Manual.

> ⚠ **CAUTION**
>
> To avoid bodily injury, handle cutter blades with care.

2.2 Attaching a Tool

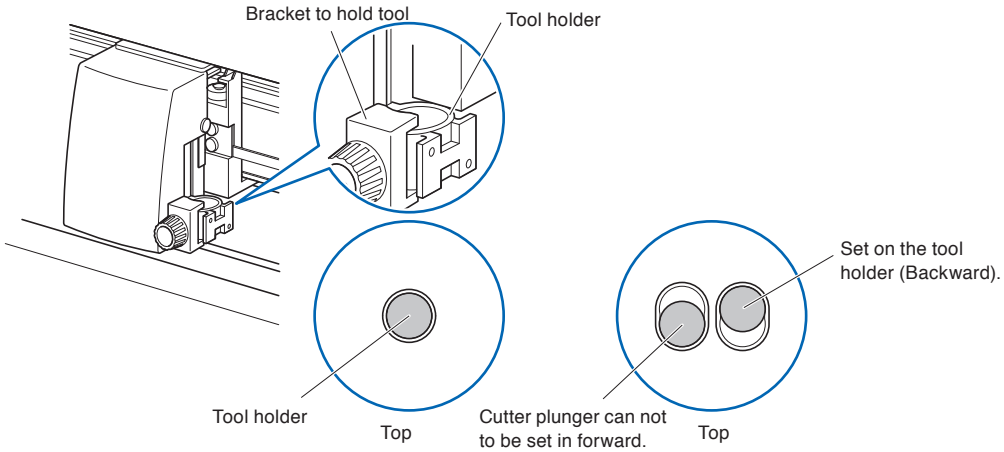
Attach a tool (cutter plunger) to the machine.

Attaching a Tool

When mounting the tool in the tool holder, please note the following.

- Push the tool all the way into the holder until its flange contacts the upper part of the holder and then tighten the screw firmly.
- To prevent injury, avoid absolutely touching the tool immediately after the cutting machine is turned on or whenever the tool is moving.
- There are two types of tool holders. When setting the cutter plunger in the tool holder, please be careful to the set position.

It is explained here using cutter plunger as an example.

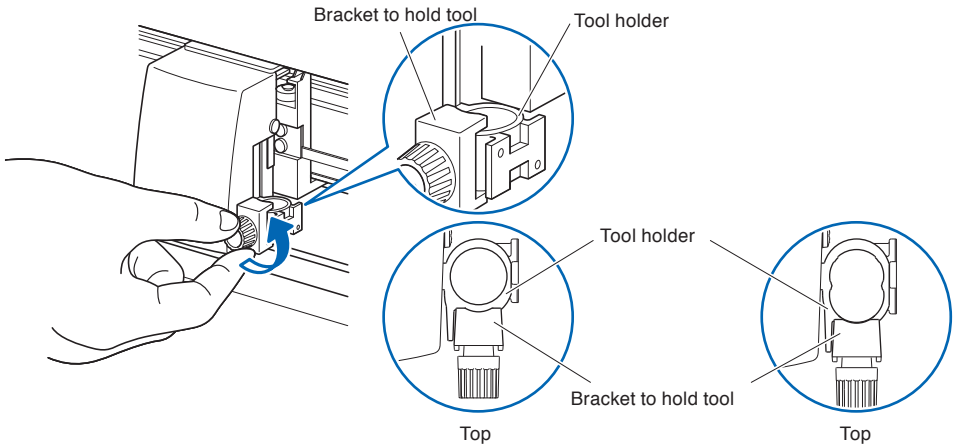


⚠ CAUTION

When pushing the tool holder with your fingers, the blade tip may be protruding. Take care not to cut your fingers.

Mounting

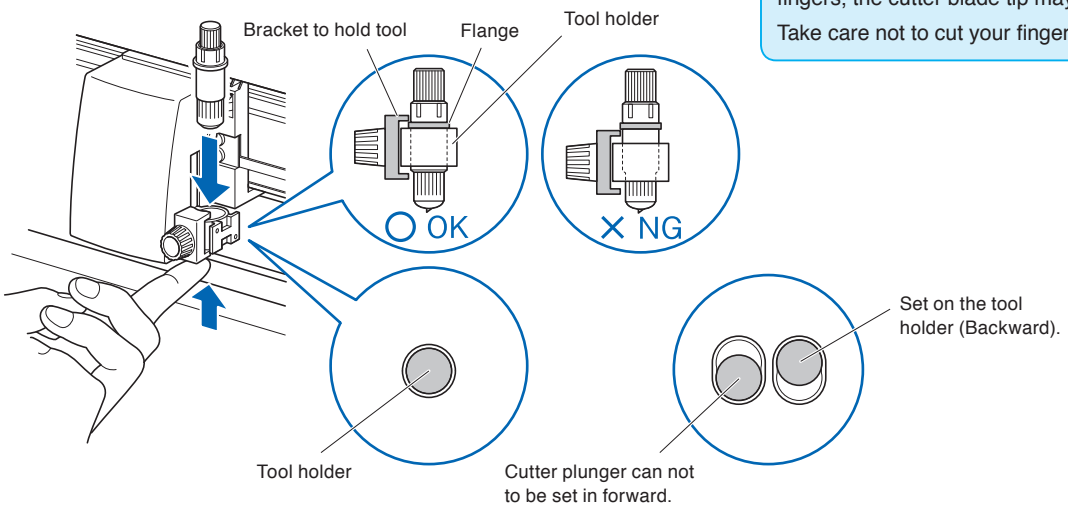
1 Loosen the tool holder screw.



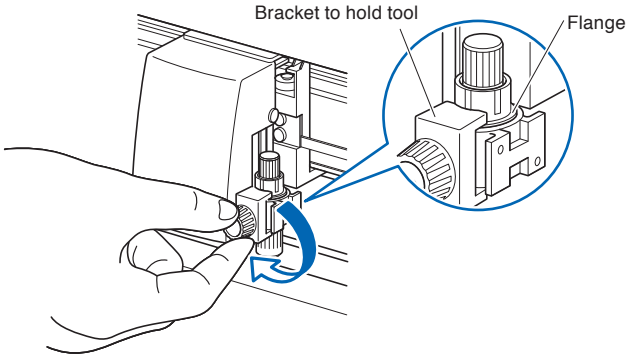
2 While pushing up the tool holder, push until its flange completely touches the upper part of the holder.

CAUTIO

When pushing up the tool holder with your fingers, the cutter blade tip may be protruding. Take care not to cut your fingers.



3 Make sure that the tool bracket is engaged on the tool's flange and then tighten the screw.

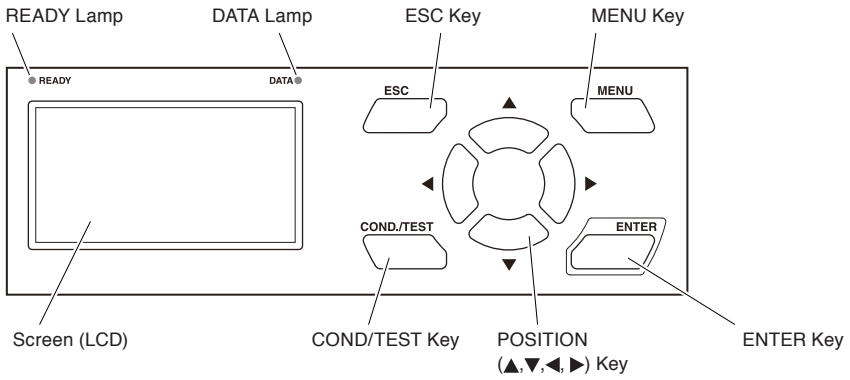


Removing the tool

When removing the tool, turn it counterclockwise to remove the tool.

2.3 Using the Control Panel

The functions of the control panel lamps and keys are explained.



Indicator Lamps

READY Lamp ..... The READY lamp (Green) lights while the label printer is on.

If the MENU key is pressed, the green lamp goes off when the menu screen appears.

DATA Lamp ..... The DATA lamp (Orange) flashes when the label printer receives data.

The DATA lamp (Orange) lights while the data is stored in the internal memory.

The DATA lamp (Orange) goes out when the data is cleared (there is no data).

Panel Keys

MENU ..... Switch from/to the REDY screen to/from the MENU screen.

COND/TEST ..... Switch the READY screen to the CUT CONDITION & TEST screen with the cutting conditions and test menus.

◀ (Cross Cut) ..... Cross-cut the media in the READY screen. The confirmation screen is displayed. The media is cross-cut by pressing [ENTER] key.

▶ (Media Feed) ..... The label material (media) is fed as long as you hold down this key in the READY screen. When [ENTER] key is pressed at the same time in this status, the media continues to even if you release the key. Pressing [▶] key again stops the media feed.

POSITION (▲, ▼, ◀, ▶) Key

..... Adjust various settings, select numerical value changes, move the cursor, and change positions.

ENTER ..... After setting a function or condition at the control panel, press the [ENTER] key to register your setting.

ESC ..... Cancel setting change and return to the previous screen in the menu. Return to the previous screen in the menu.

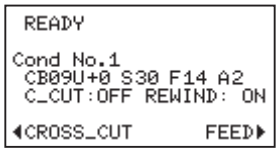
When this key is pressed during operation, 1 page of the cutting side at the time that the key is pressed is cut and then the operation is stopped.

Reading the Screen (LCD)

Information reflecting the status will be displayed in the screen of the control panel.

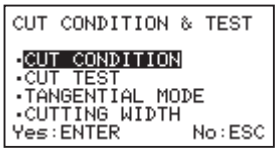
Name of the button or corresponding function is displayed on the screen when a function is allocated to the button on the control panel. Button name will be displayed in reverse when the item is selected.

READY screen (READY)



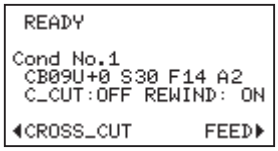
MENU screen (MENU)

CUT CONDITION & TEST screen (COND/TEST)



READY screen (READY)

The following items are displayed in the basic screen (READY).



Display the current cutting conditions.

CROSS CUT
Media feed (FEED)

The Condition No. (Cutting conditions) that has been set is displayed.

Supplement

- In this manual, this basic screen is referred as READY status.
- In this READY status, you can set the cutting and communication conditions by pressing [MENU] or [COND/TEST] key.

MENU screen (MENU)

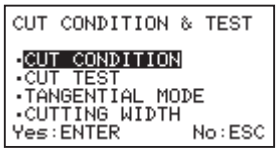
To display the MENU screen used to set the various conditions, press [MENU] key.

Set the various conditions.

The selected item is highlighted. Press [ENTER] key to display the setting screen related to the highlighted item.

CUT CONDITION & TEST screen (COND/TEST)

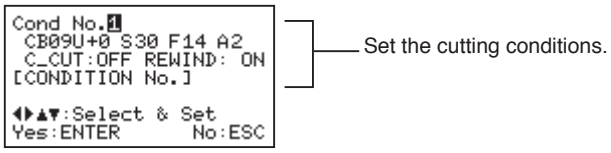
To display the setting screen used to set the corresponding conditions, press [COND/TEST] key.



Set the cutting condition and cutting test, etc.

Setting screen for cutting conditions

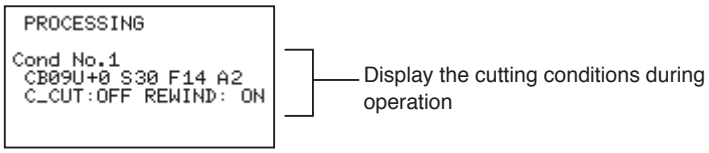
To display the setting screen used to set the cutting conditions, press [CUT CONDITION] key.



The selected item is highlighted.

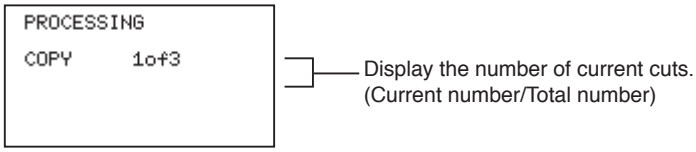
Screens during operation

The screen during operation is displayed upon transferring the data.



The number of current cuts is displayed during copy.

(Current number/Total number)



Notes on the media feed

- When the label material (media) is fed by pressing [▶] (Media Feed) key, the label during cutting (pending) is not cut properly.
- After the label material (media) is fed by pressing [▶] (Media Feed) key, the initial operation of the feeding system is started prior to the next cut and then the label material (media) is fed. Please note that wasted space is generated on the label material.

2.4 Turning on the Power

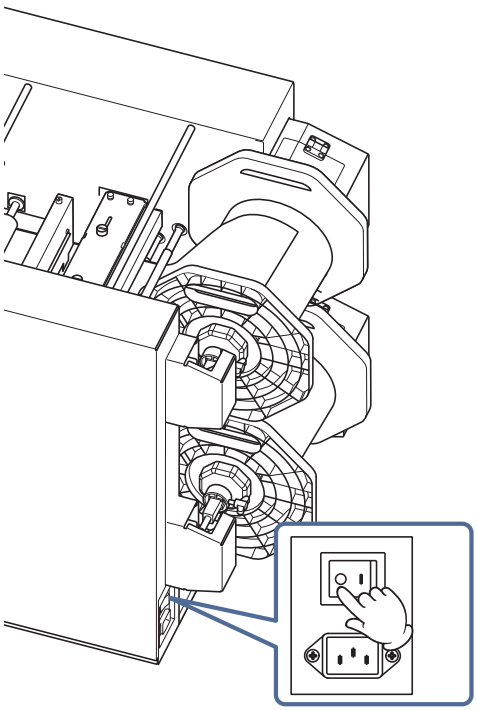
This section describes how to turn on the power of the machine.

Supplement

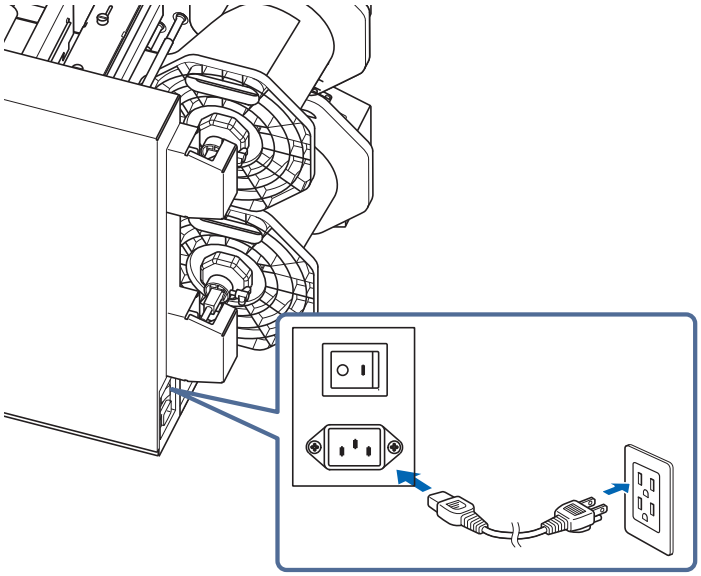
When performing the power cycle, please turn on after more than 10 seconds has elapsed. If sufficient time has not elapsed, the Cutter may not be reset properly.

Operation

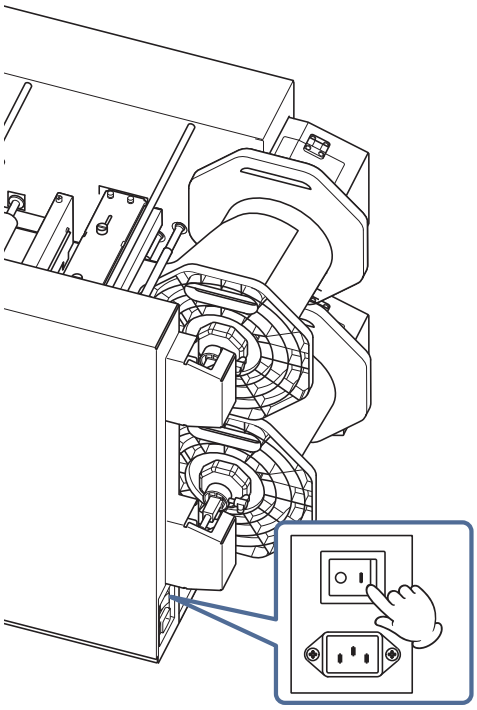
1 Make sure that the power switch is turned off (“◯” side).



2 Connect one end of the provided power cable to the DLC1000 AC line inlet and the other end to an electrical socket of the rated supply voltage.



3 Turn on ("I" side) the power of the machine. The READY lamp on the control panel lights after initial operation.



When the label material (media) is loaded properly, the machine feeds the label material (media) properly.

Supplement

When the label material (media) is not loaded, or when the set lever on the cutter unit is lowered, the following message is displayed after the version is displayed.

2.5 Setting the Label Material (Media)

Supplement

Please wipe out the dust and dirt lightly from a label or laminate material by using a dry cleaning paper or clean paper.

Settable size of the label material is as follows.

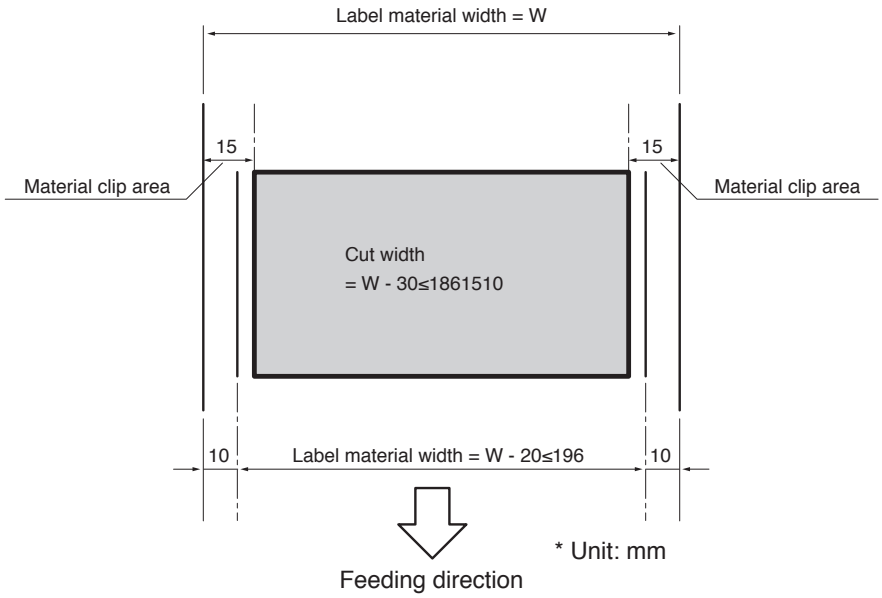
- Width: max. 216 mm, min. 100 mm
- Outer diameter: 254 mm, 200 m roll

Settable size of the laminate material is as follows.
For the laminate material, use the narrow width of 20 mm than the label material.

- Width: max. 196 mm, min. 80 mm
- Outer diameter: 210 mm or 200 m roll

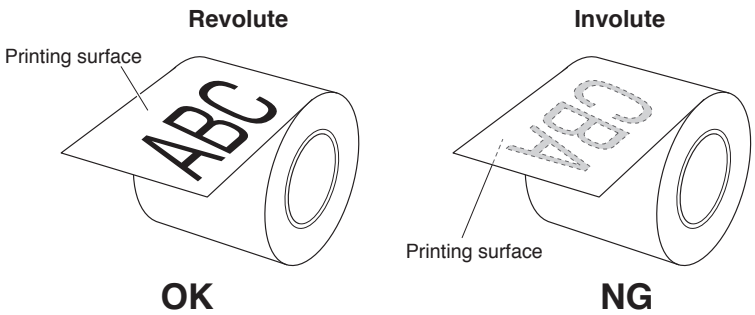
For the relationship of the label material and the laminate material, and cutting area, refer to the figure below.
<Cutting area>

- Label material (media) width: 70 to 186 mm (It depends on the media width to be used.)
- Label material (media) feeding direction: 76.2 to 300 mm



Label Material (Media) Type

There are two types of involute and revolute on the label material. Please use the revolute on the label material in this machine.

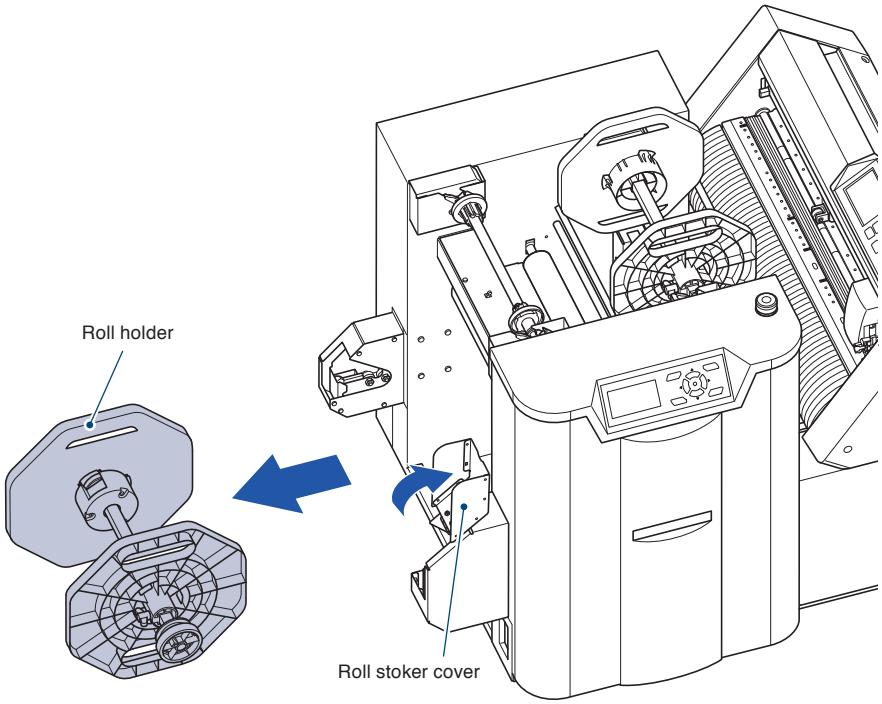


Set the Label Material (Media)

Supplement

- Since the roll holder is heavy, please be careful not to fall.
- When you remove the flange, please be sure to use both hands.
- The flange cannot be removed in a state in which the role holder is installed to the machine.
- The shape of roll holder flange is similar to those of laminate holder flange. The flange with longer shaft is the roll holder flange.
- The shape of roll holder shaft is similar to those of laminate holder shaft. Longer shaft is the roll holder shaft.
- When the flange fixing screw is not tightened firmly, the roll holder shaft may be fallen.
- When using the roll holder that media has been loaded after printing in the DLP1000, refer to “Use the Media After Printing in DLP1000” described below.

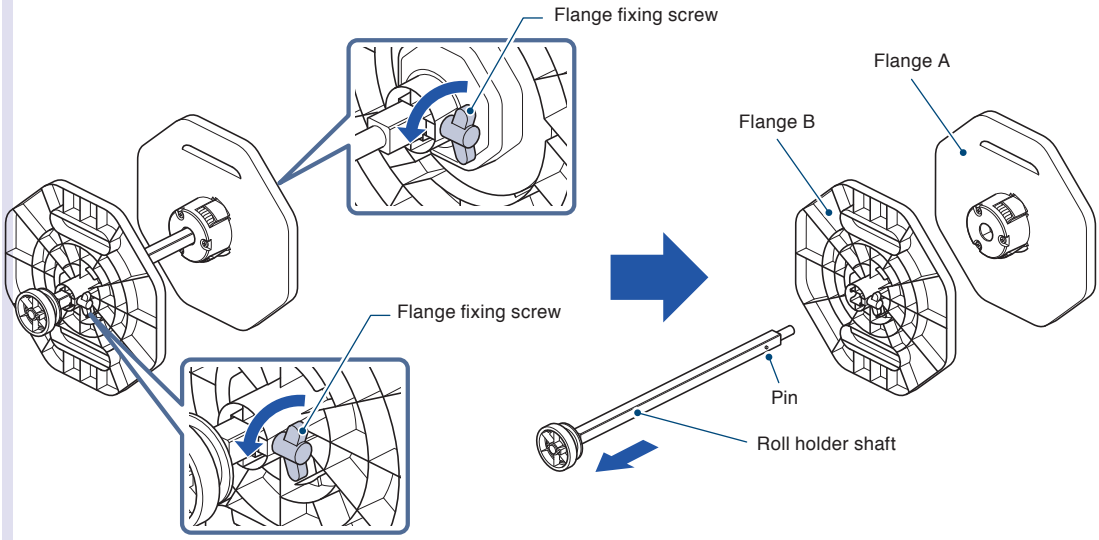
1 Open the roll stocker cover of this machine and remove the roll holder from the roll stocker.



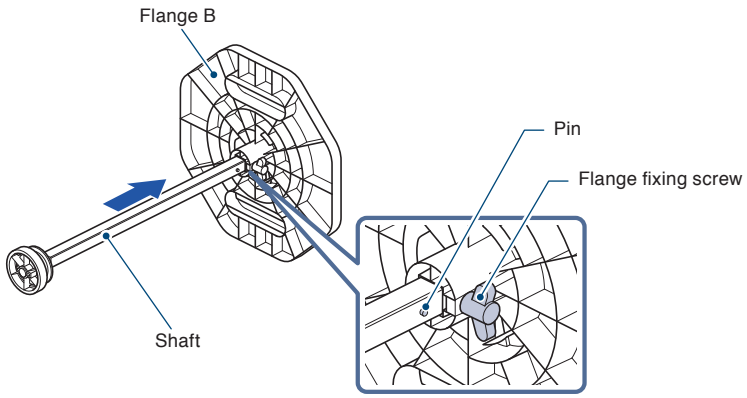
2 Loosen the flange fixing screw of the roll holder by turning it counterclockwise.

Remove the flange.

* If the flange fixing screws touches the pin of shaft, please loosen the flange fixing screws until it cannot be touched.

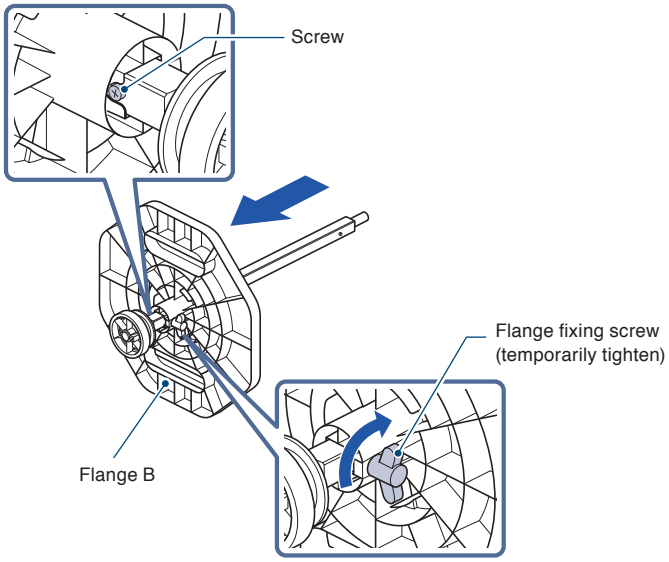


3 Attach the Flange B to the roll holder shaft. Set in the direction (flange fixing screws side) in which there is a pin of the shaft.



Insert the Flange B until it stops with a screw.

Tighten the flange fixing screws (temporarily tighten).



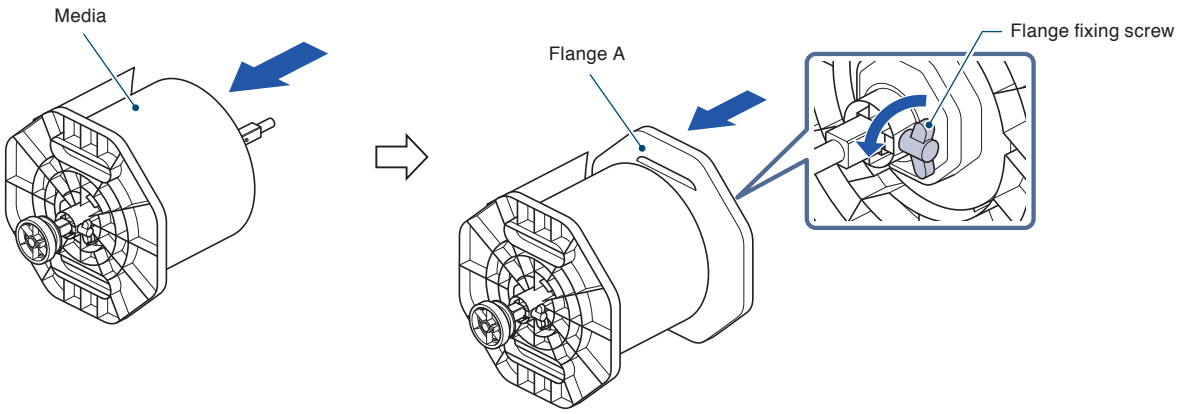
4 Set the label material (media) with revolute.

Loosen the flange fixing screw of Flange A by turning it counterclockwise.

Attach the Flange A to the roll holder shaft.

Supplement

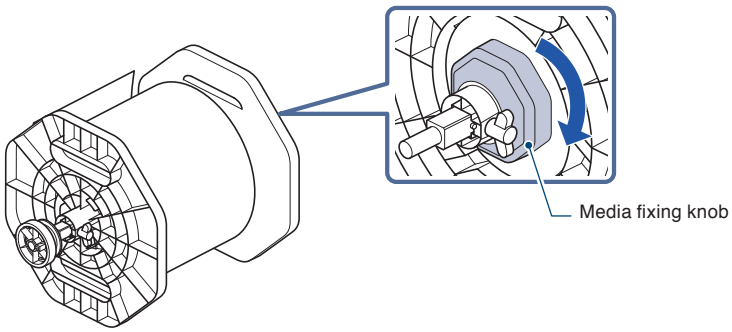
Please note the direction of the media.



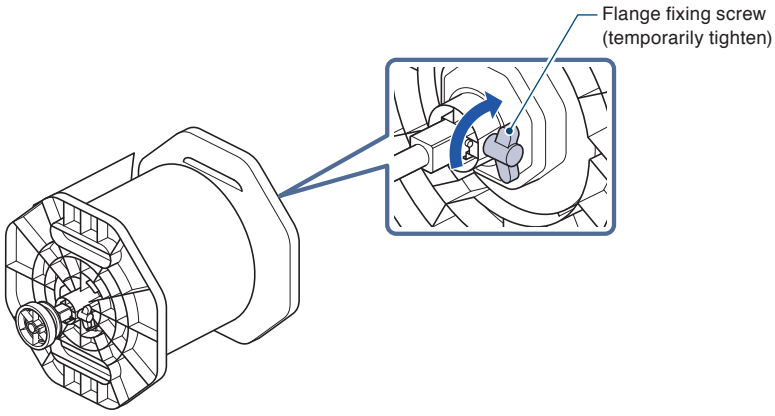
5 Turn the media fixing knob of Flange A clockwise to fix the paper core.

⚠ CAUTION

When removing the media from the flange, please remove it after always loosening the media fixing knob.

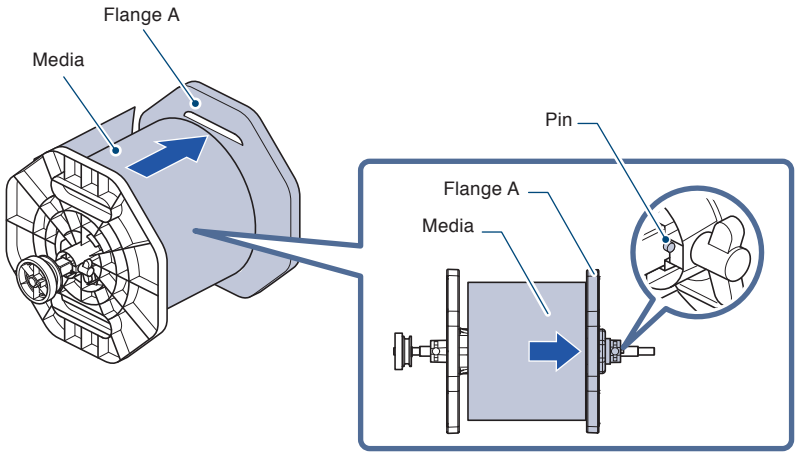


6 Tighten the flange fixing screw (temporarily tighten).

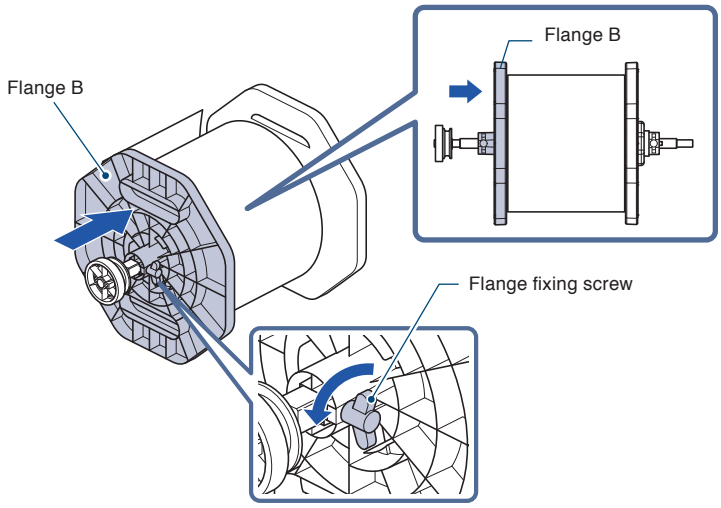


7 Move the label material (media) to the direction of the pin in a state in which the Flange A and the media have been fixed.

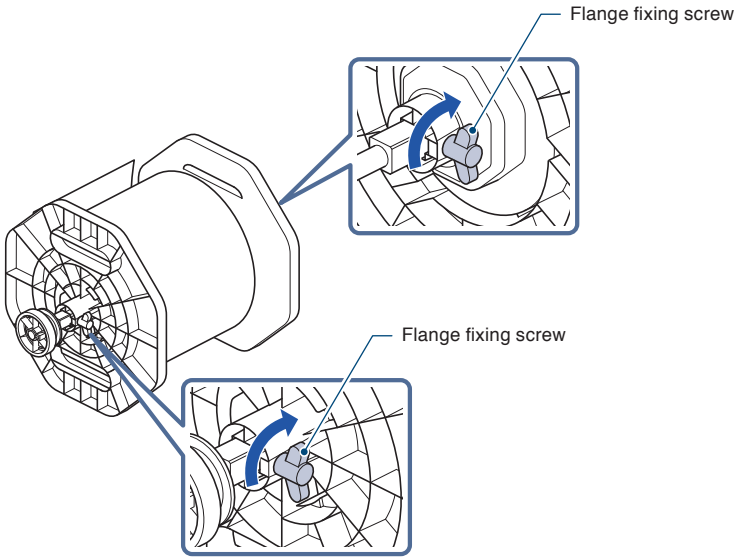
Move the label material (media) until it contacts the pin.



8 Push the Flange B so that there is no gap between the paper core and Flange B.



9 Tighten the flange fixing screw.



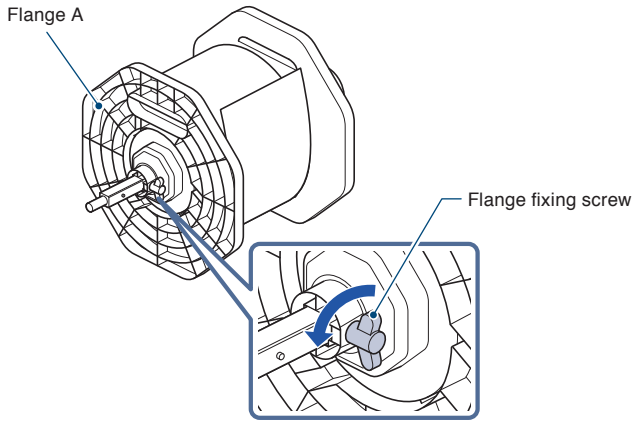
When Using the Media After Printing in DLP1000

Prepare to set the media and roll holder after printing in DLP1000.

1 Align the position of the roll holder.

Loosen by turning the flange fixing screws 2-3 times.

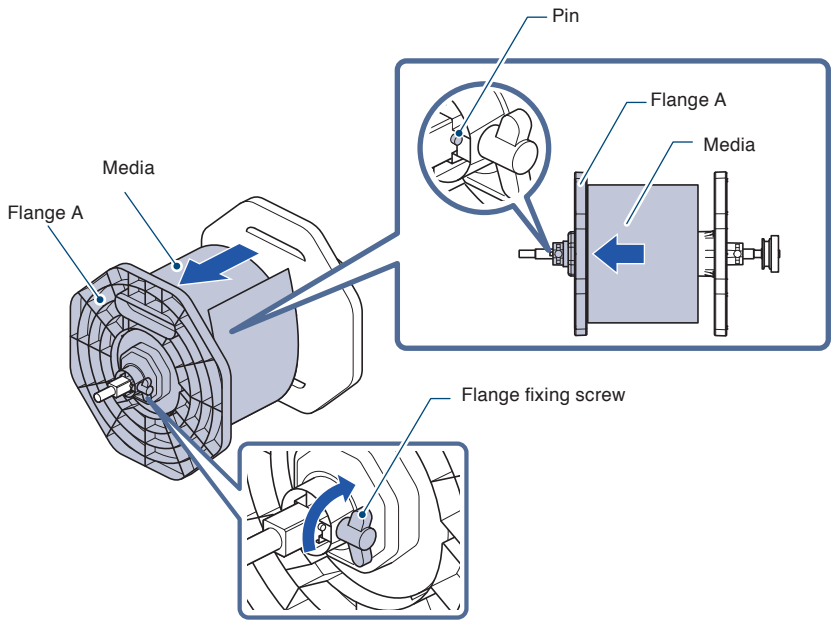
* Please do not loosen the flange fixing screws too much. The pin will no longer hit in Step 2.



2 Move the label material (media) to the direction of the pin in a state which the Flange A and the media have been fixed.

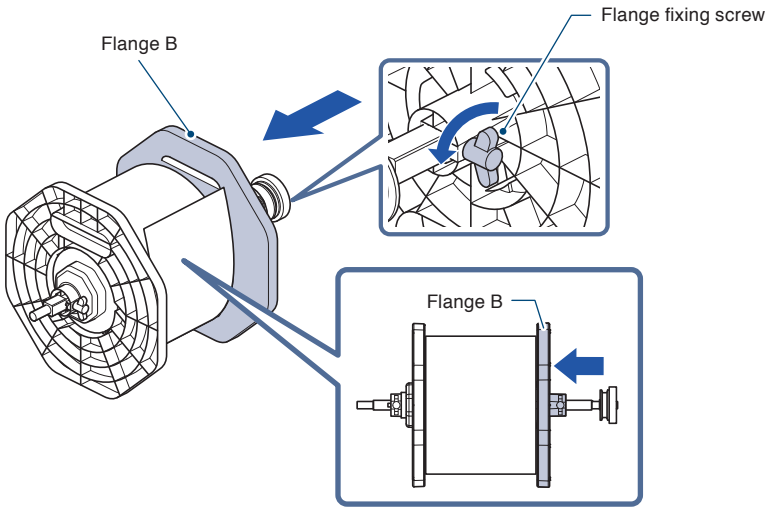
Move the label material (media) until it contacts the pin.

Tighten the flange fixing screw.

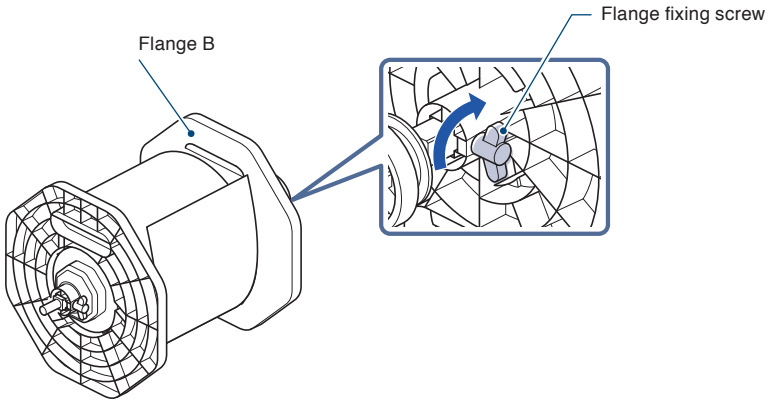


3 Loosen the flange fixing screws.

Push the Flange B so that there is no gap between the paper core and Flange B.



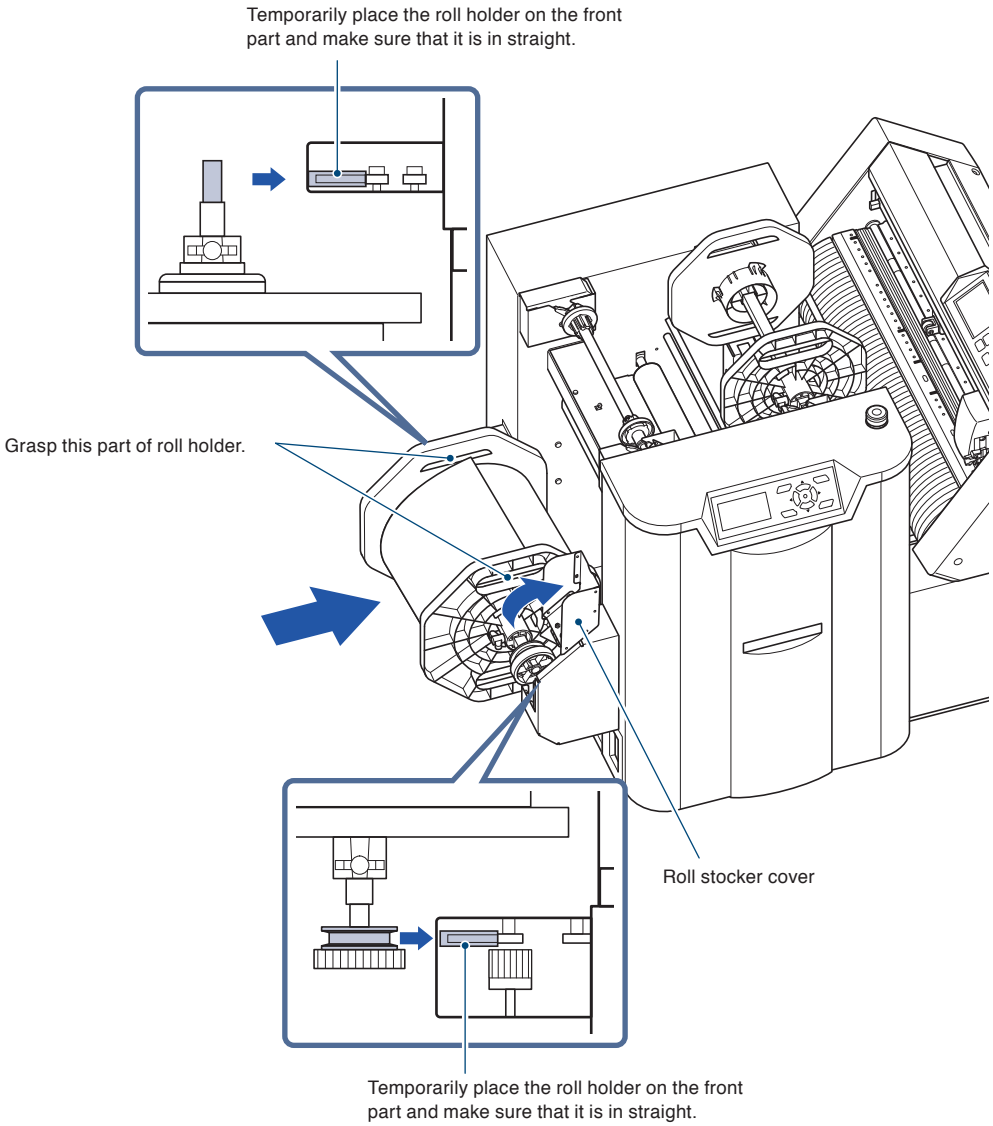
4 Tighten the flange fixing screw.



Set the Label Material (Media) in the Machine

1 Open the roll stocker cover of this machine and set the roll holder in the roll stocker.

Temporarily place the roll holder on the front part of the roll stocker and make sure that it is in straight.

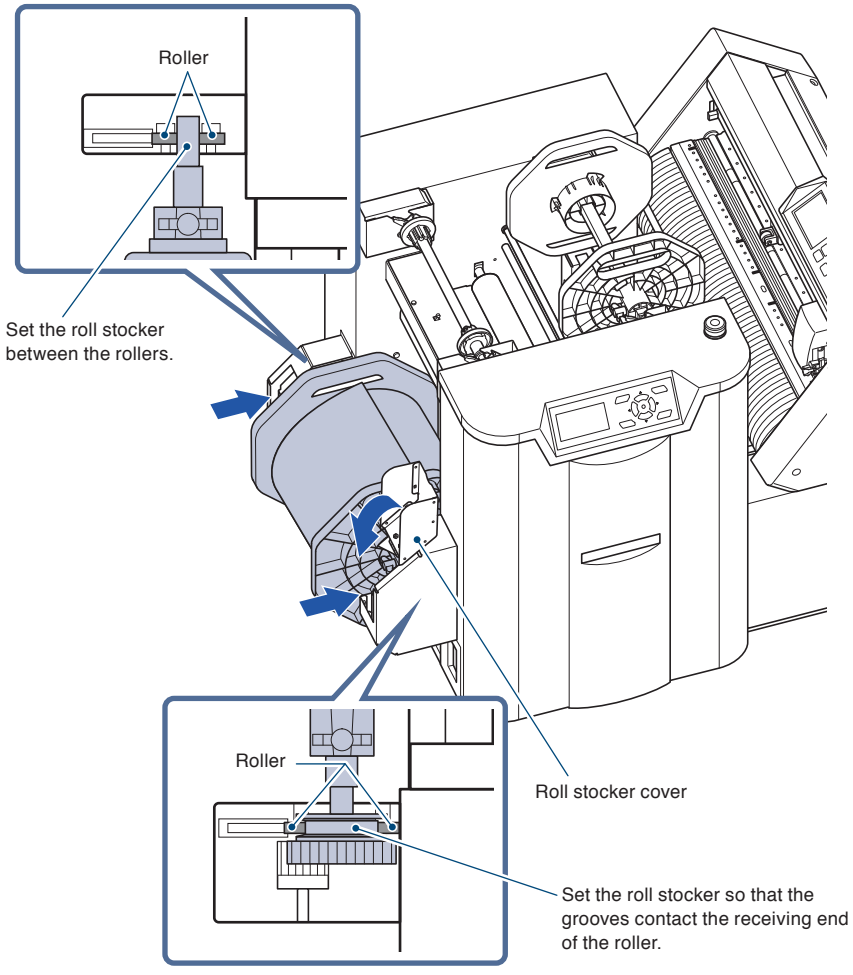


⚠ CAUTION

- During a cutting operation, be sure to keep your hands, hair, and so forth away from the shaft receiving part, gear and roller.
- Please be sure to close the roll stocker cover.
- Please be careful not to get your fingers pinched or stuck on the gears, rollers, or other moving parts when loading the media.
- Deviations and errors may result if the roll holder shaft is misaligned when the cutting operation starts.

2 Set on the roll stocker.

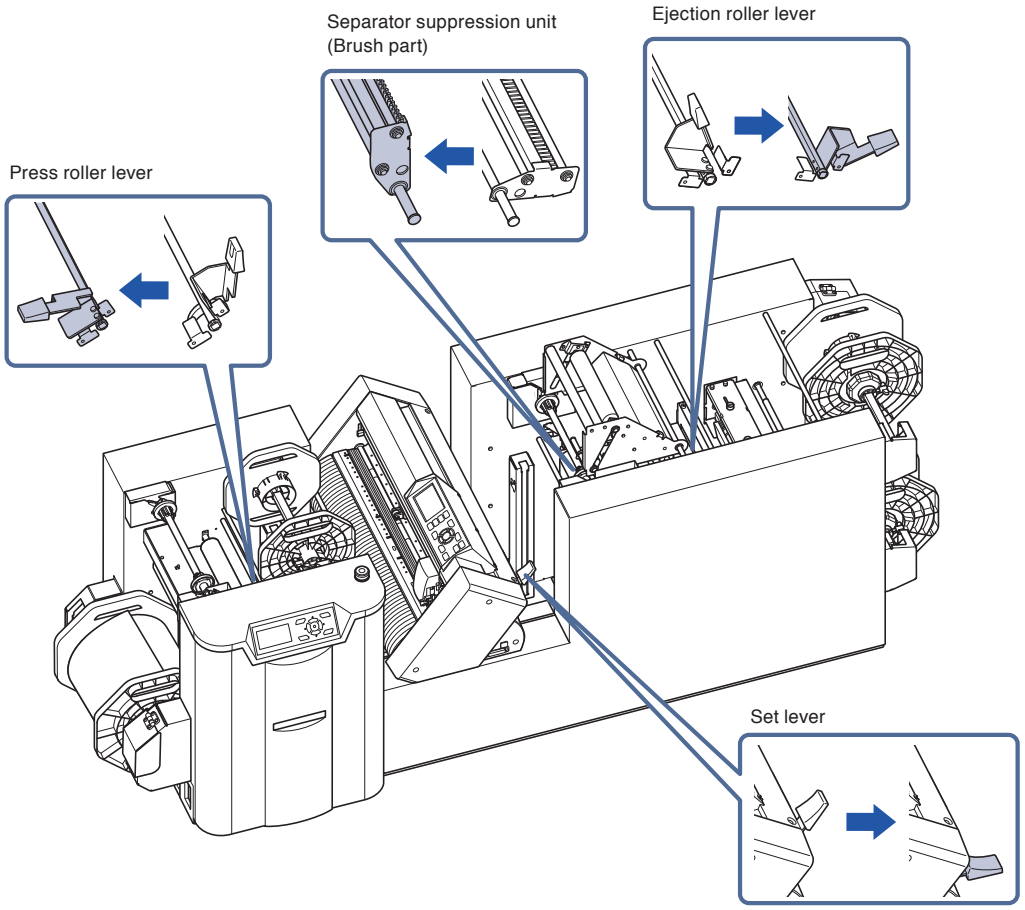
Close the roll stocker cover.



Feed the Label Material (Media)

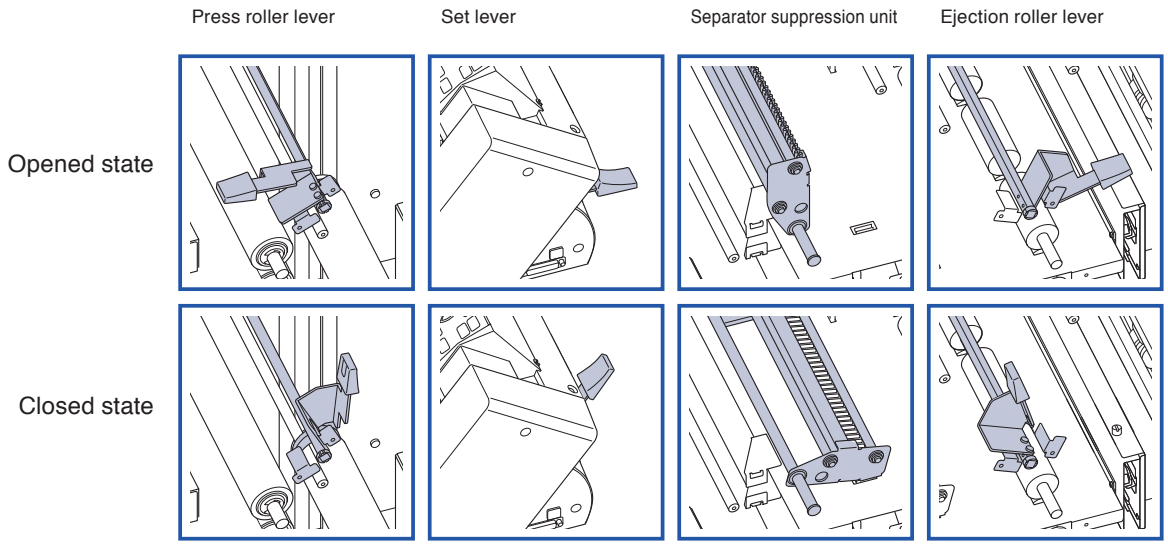
(Without laminate, without/with separator, without cross cutter, without slitter, and rewind)

1 Leave the press roller lever, set lever, separator suppression unit, and ejection roller lever open.

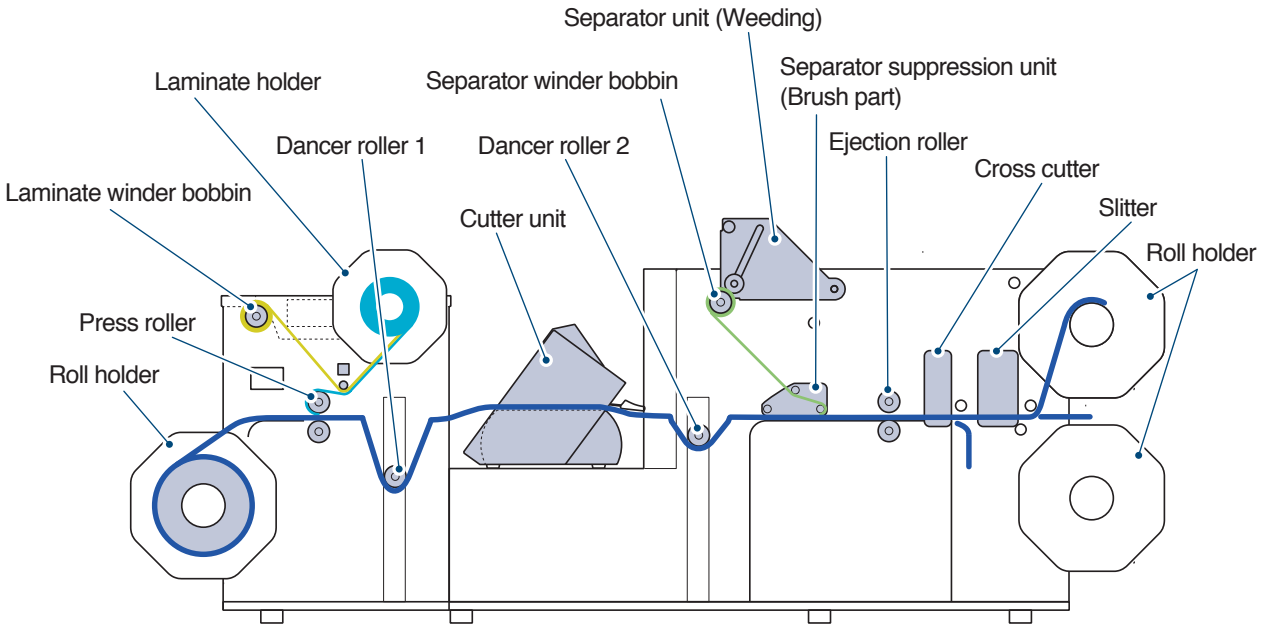


Supplement

The following figure shows that the press roller lever, set lever, separator suppression unit, ejection roller lever are set (closed) or opened.



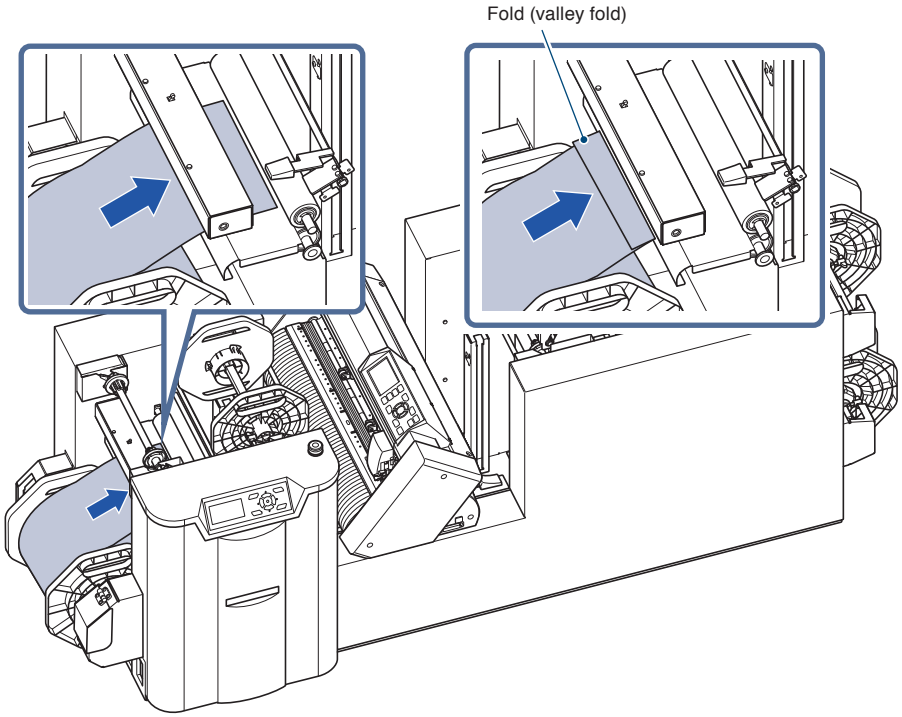
< Media Path >



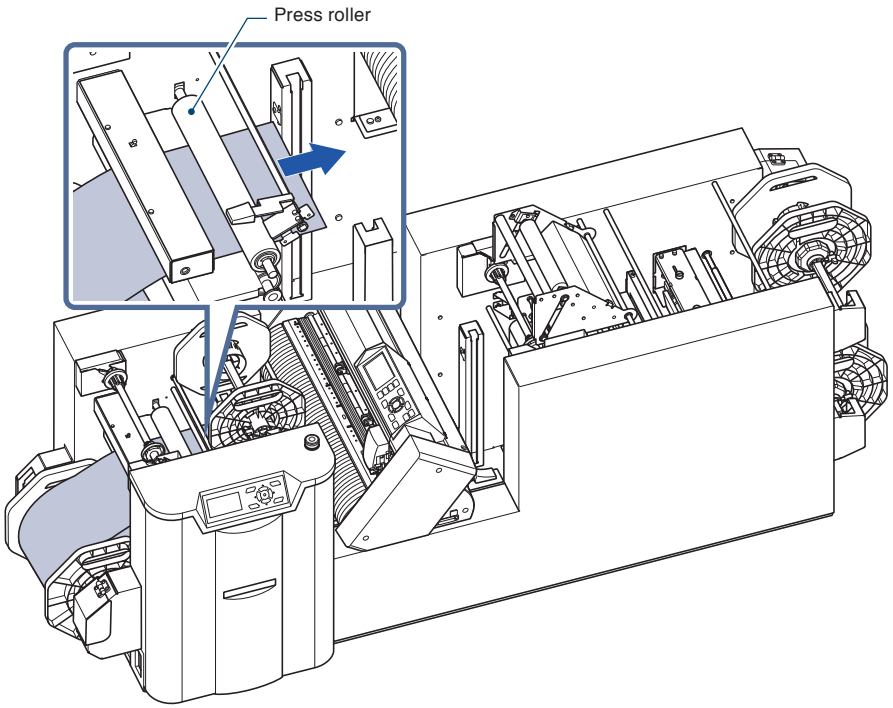
2 Pull out the media in a state which the media is set in the roll stocker.

Insert the media into the machine.

* If the media is strongly curled, fold (valley fold) at about 5 to 10 cm from the tip of media and then insert it.

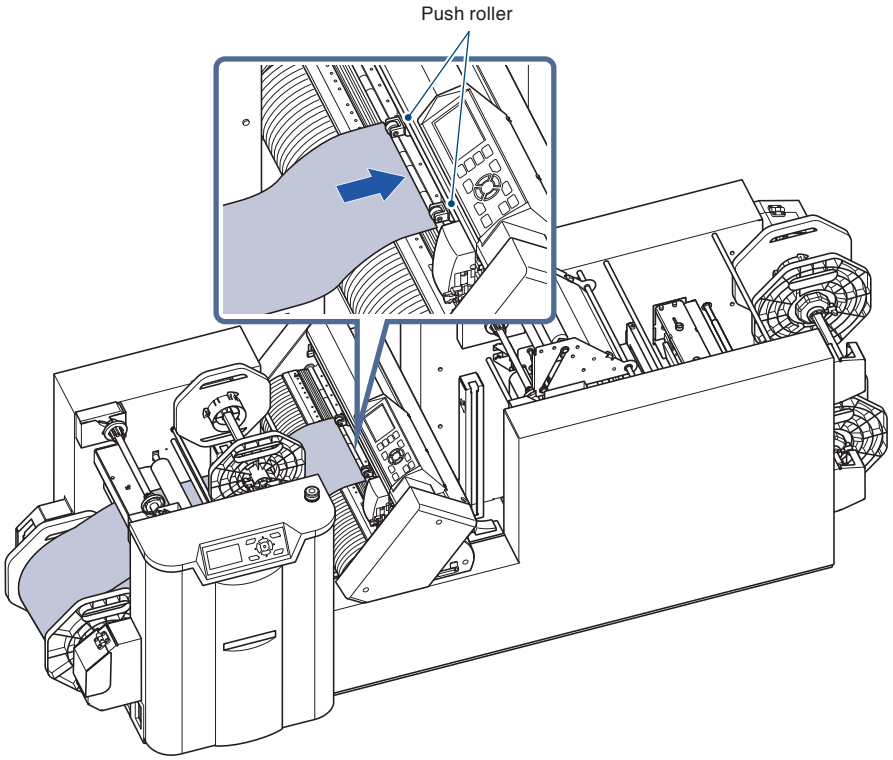


3 Pass through the lower side of the press roller.

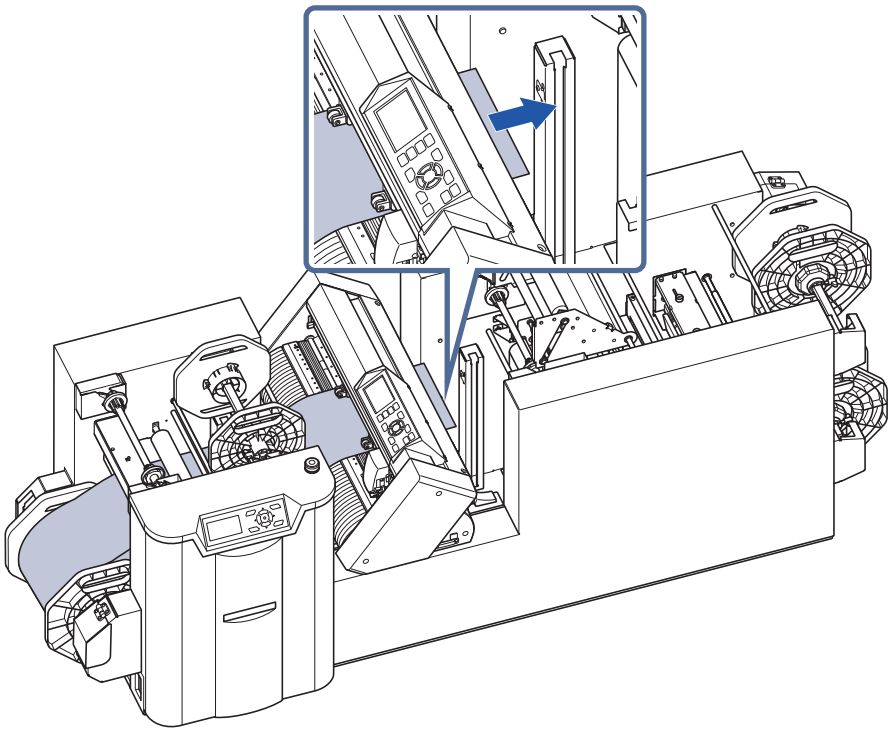


4 Pass through the cutter unit.

Align the position of the push roller. (Refer to “2.6 Setting the Push Roller”.)

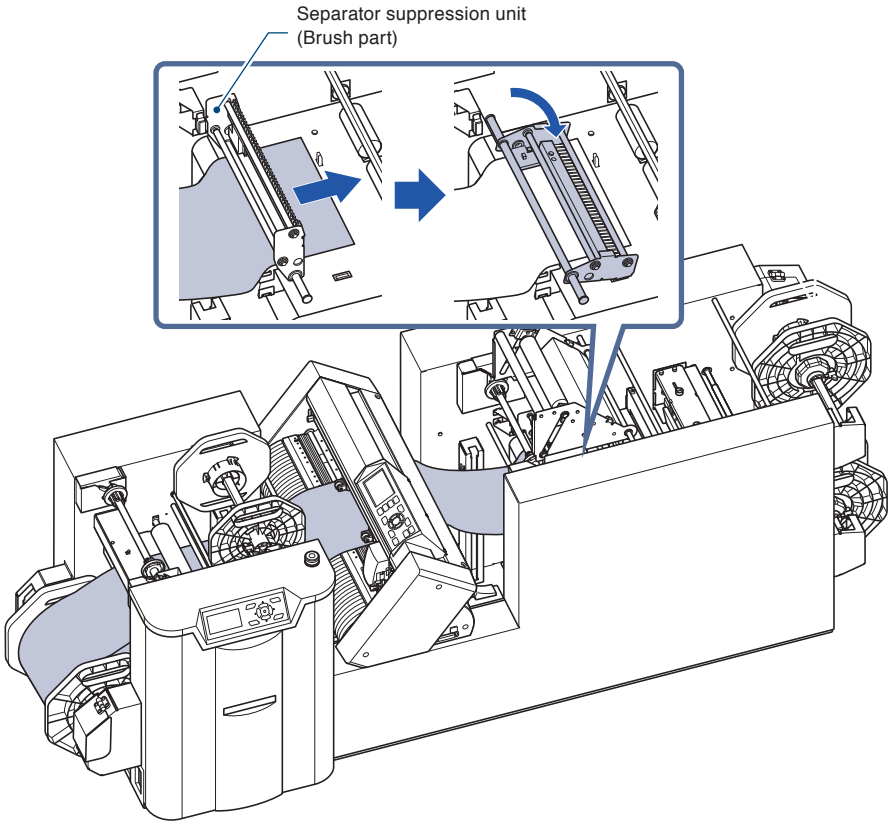


5 Pull out it from the cutter unit.

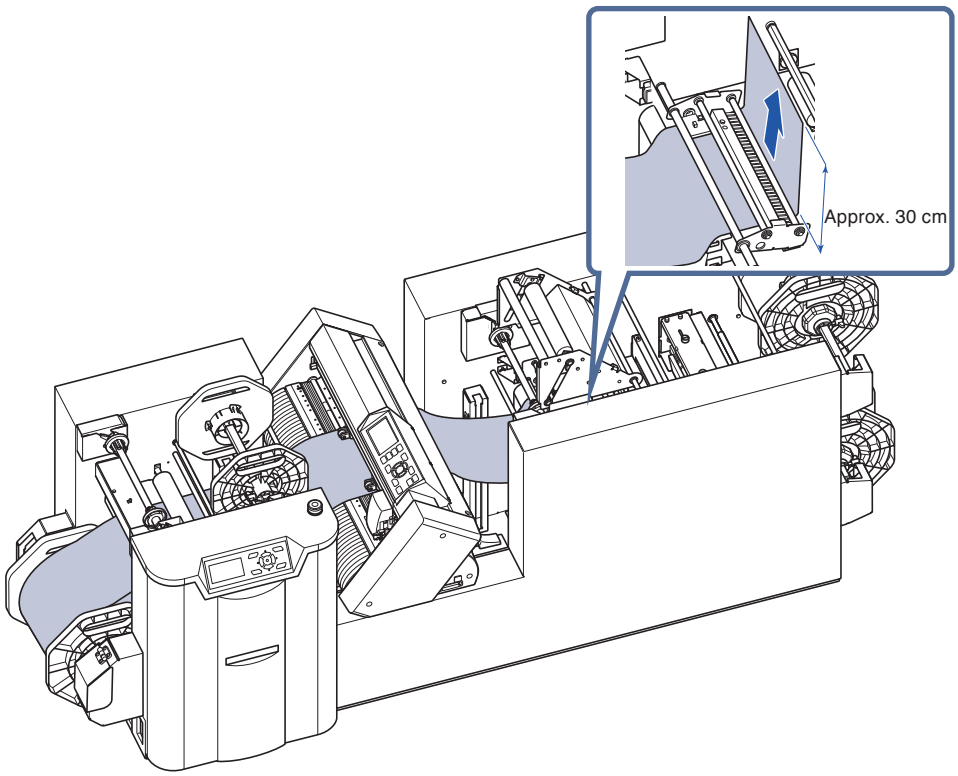


6 Pass through the lower side of the separator suppression unit (Brush part).

Lower the separator suppression unit (Brush part).



7 After lowering the separator suppression unit (Brush part), pull out the media about 30 cm.



- When the separator (weeding) is used, refer to “<When using the separator (weeding)>” described below.
- When the separator (weeding) is not used, go to Step 8 below.

<When using the separator (weeding)>

Supplement

- For using the separator (weeding), when the winding bobbin is set in the separator part before loading label material, you can work smoothly.
- If the loaded label material has not yet been little used (A lot of roll paper remains still.), the separator winding bobbin will be full before all the label material is used up. The conditions that the winding bobbin becomes full depend on the cut pattern, surrounding environment, and label material type. When operating the machine for a long time, we recommend that the new paper core is set in the separator winding bobbin.
- Rollable outer diameter depends on the cut pattern.
- The shape of separator winder bobbin is similar to those of laminate winding bobbin. Direction to tighten the separator flange collar attached to the shaft is different. Bobbin that is marked on the separator flange collar is used as a separator winder bobbin.
- Paper core for winding is sold separately.
- The operation of separator (weeding)

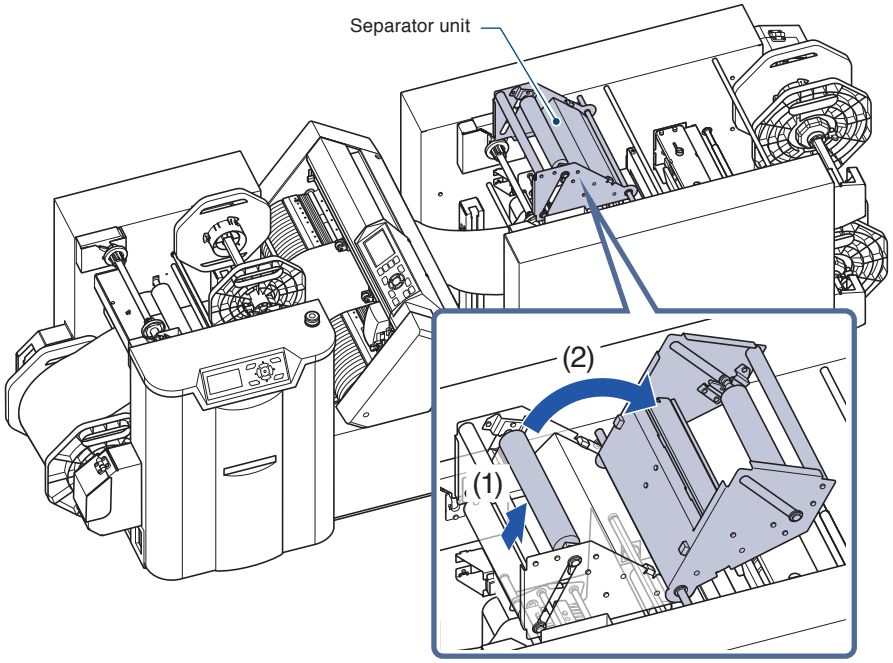
  To slowly weed without pulling strongly the printed label material, the wind-up to weed operates with uneven rotation speed.

⚠ CAUTION

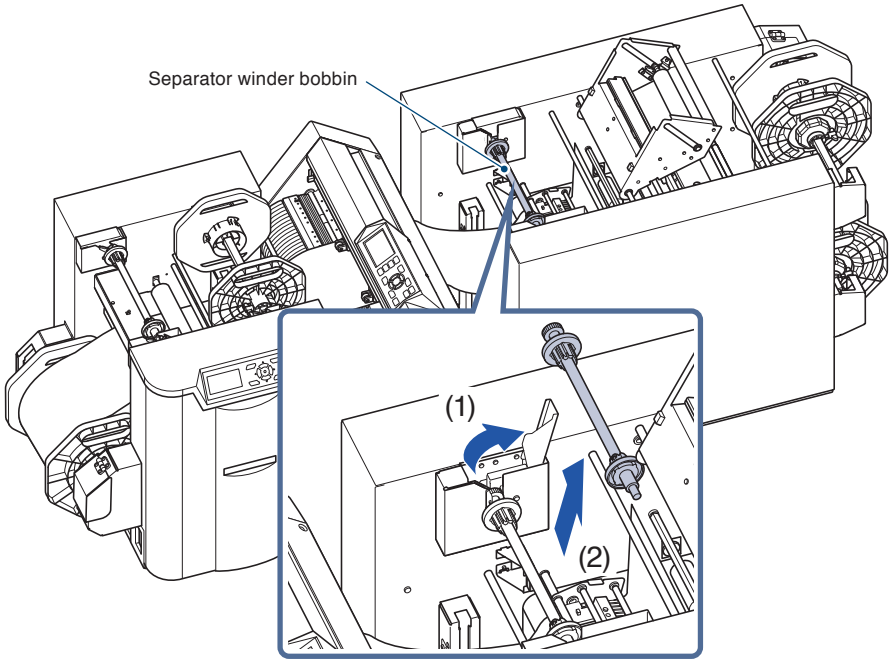
- For the separator flange collar of the separator winder bobbin, the tightening direction when installing is counterclockwise direction and the loosening direction when removing is clockwise direction. Please be careful when you use it.
- It may be difficult to weed by the separator unit due to the label layout and the label shape to be created. In this case, please try to rearrange the label layout or turn ON the Frame cut function..

1 Raise the presser bar of the separator unit and then fix it.

Raise the separator unit.

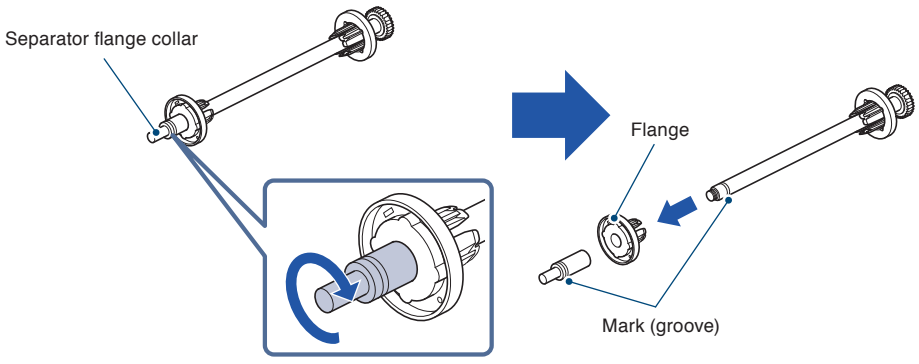


2 Open the cover and remove the separator winder bobbin.



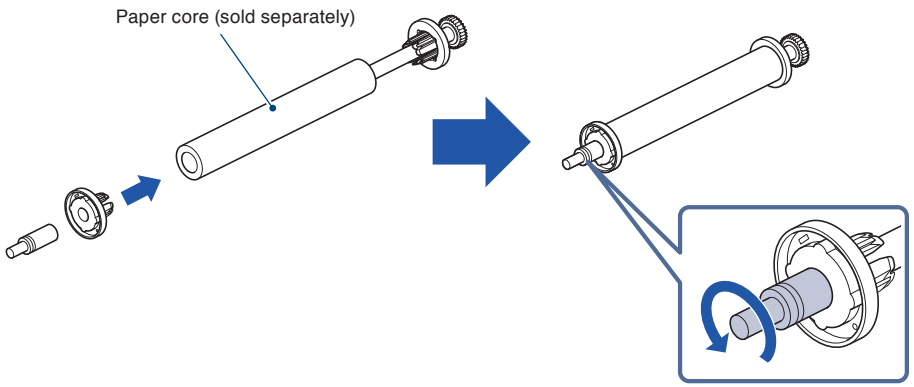
3 Remove the separator flange collar by turning it clockwise and then remove the flange.

> **⚠ CAUTION**
>
> For the separator flange collar of the separator winder bobbin, the tightening direction when installing is counterclockwise direction and the loosening direction when removing is clockwise direction. Please be careful when you use it.

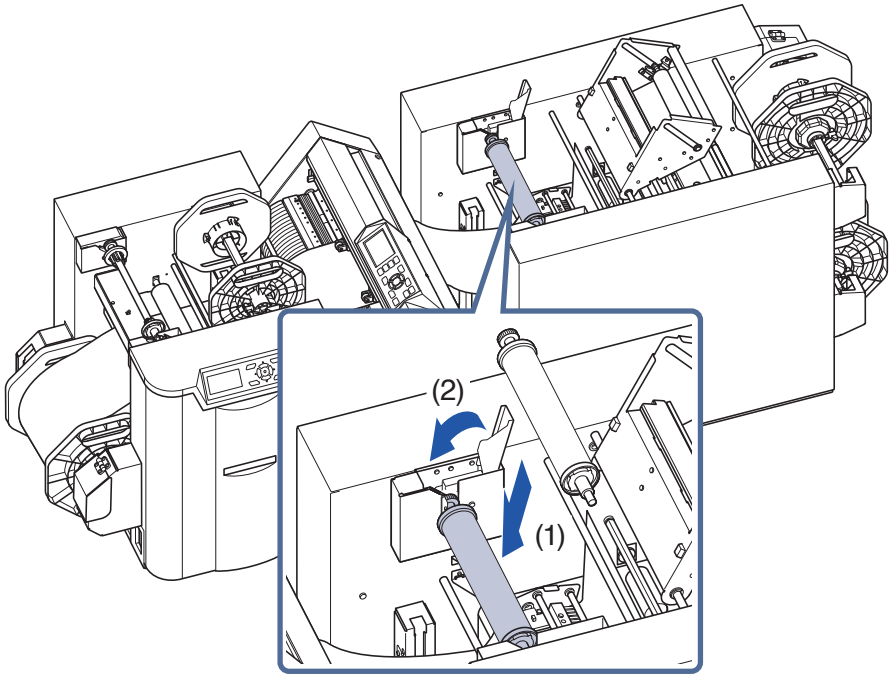


4 Set the paper core (sold separately) and then attach the flange.

Turn the separator flange collar counterclockwise to attach it.



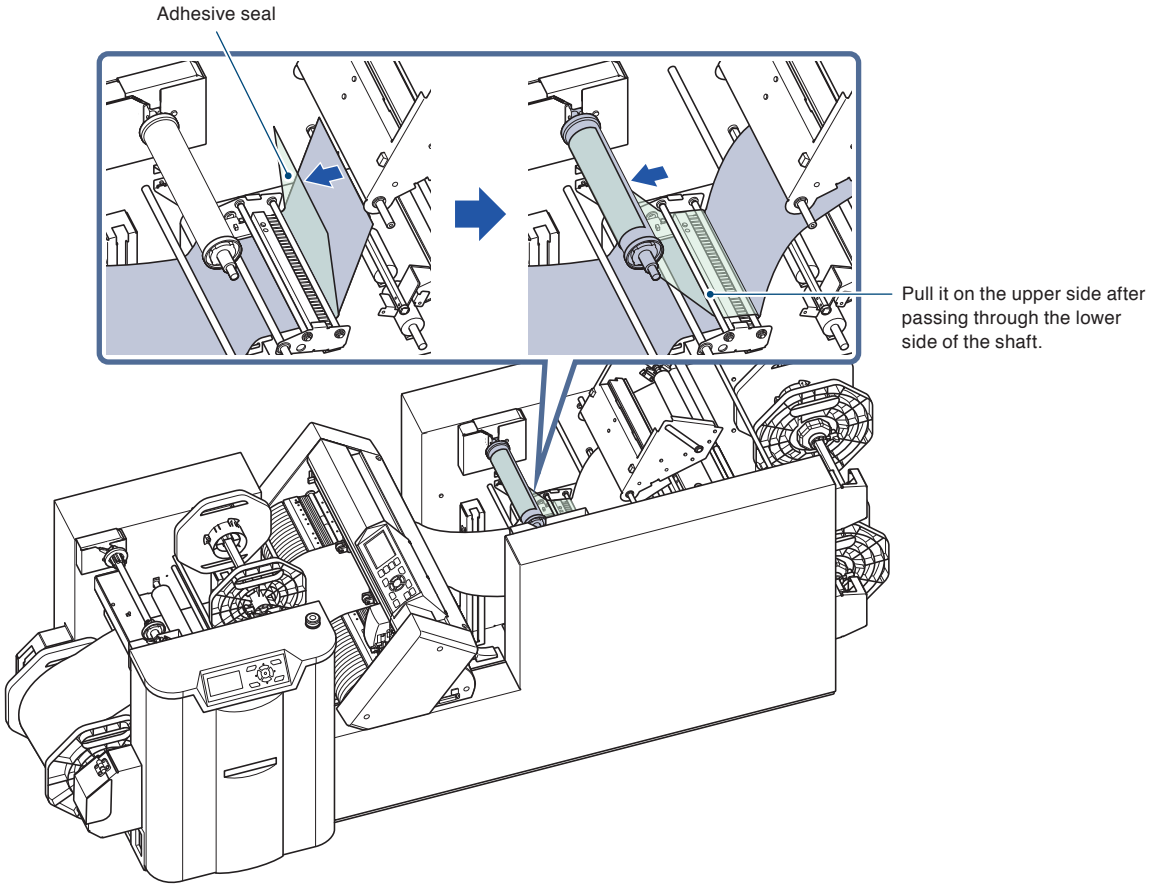
5 Set the separator winder bobbin and then close the cover.



6 Peel off the adhesive seal of the media.

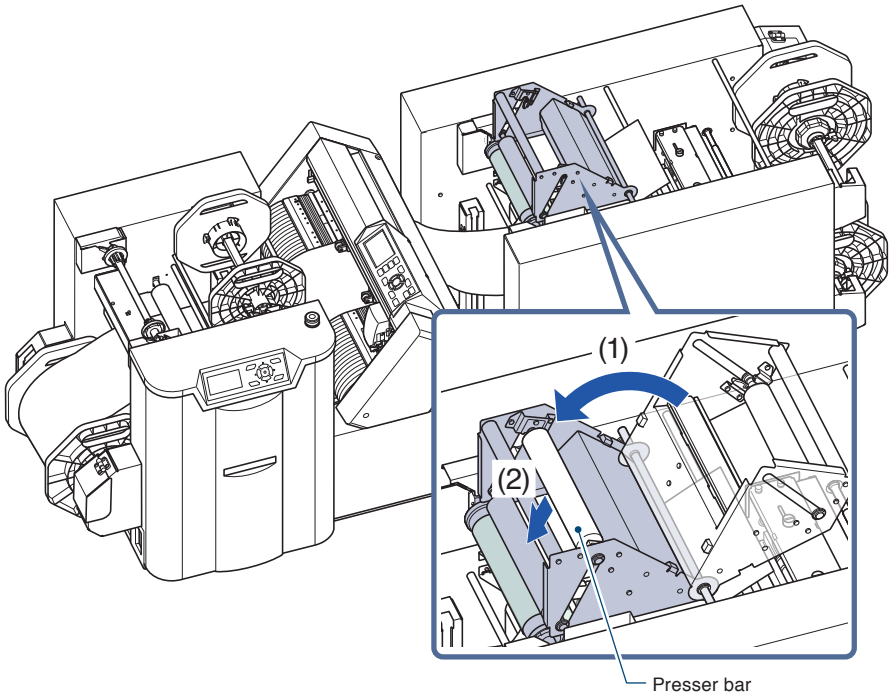
Pass the peeled seal through the lower side of the center shaft of the separator suppression unit (Brush part) and pull it on the upper side.

Then, paste it on the separator winding bobbin.



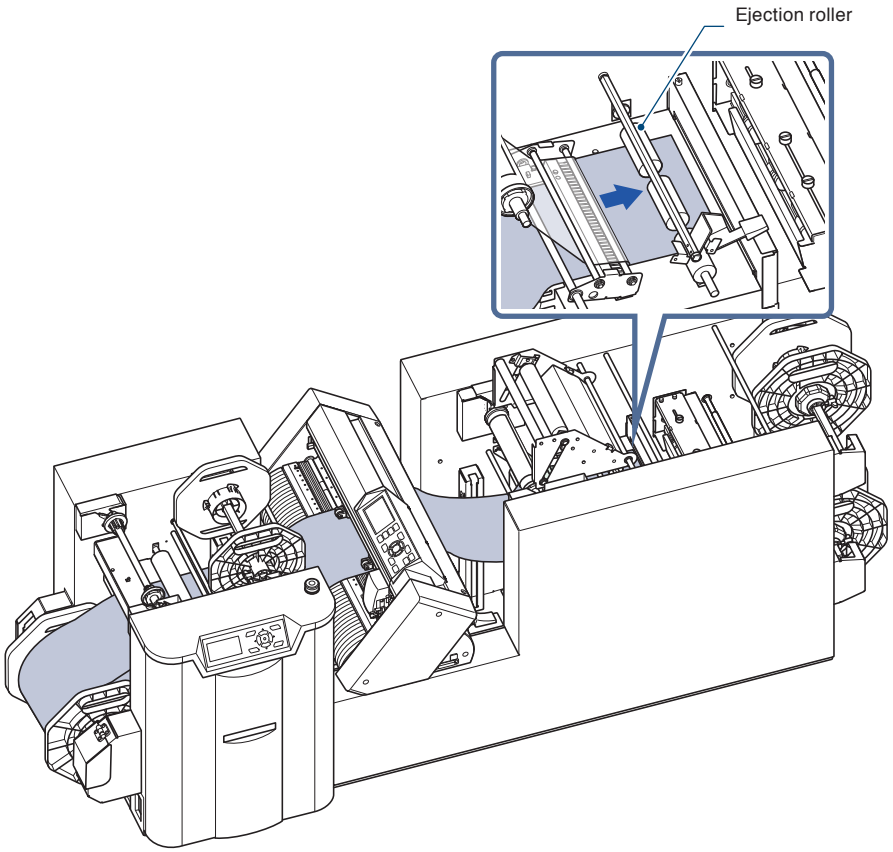
7 Lower the separator unit.

Set the presser bar of the separator unit to separator winding bobbin so as to extend along the separator winding bobbin.



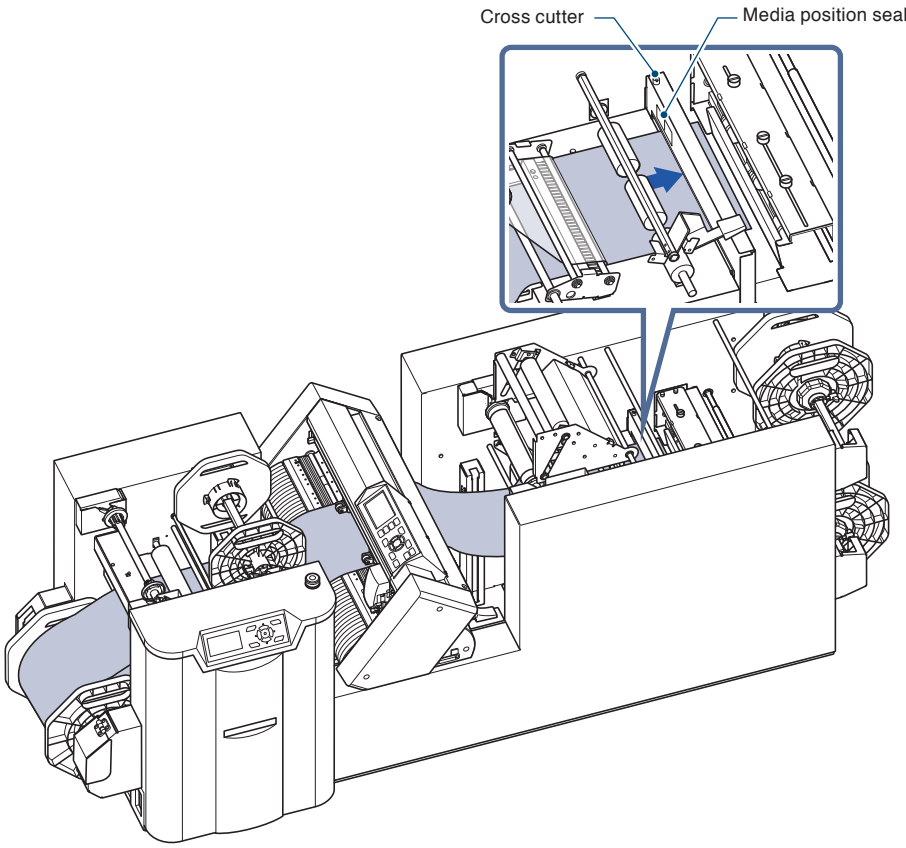
The installation of separator unit is complete.

8 Pass the media through the lower side of the ejection roller.

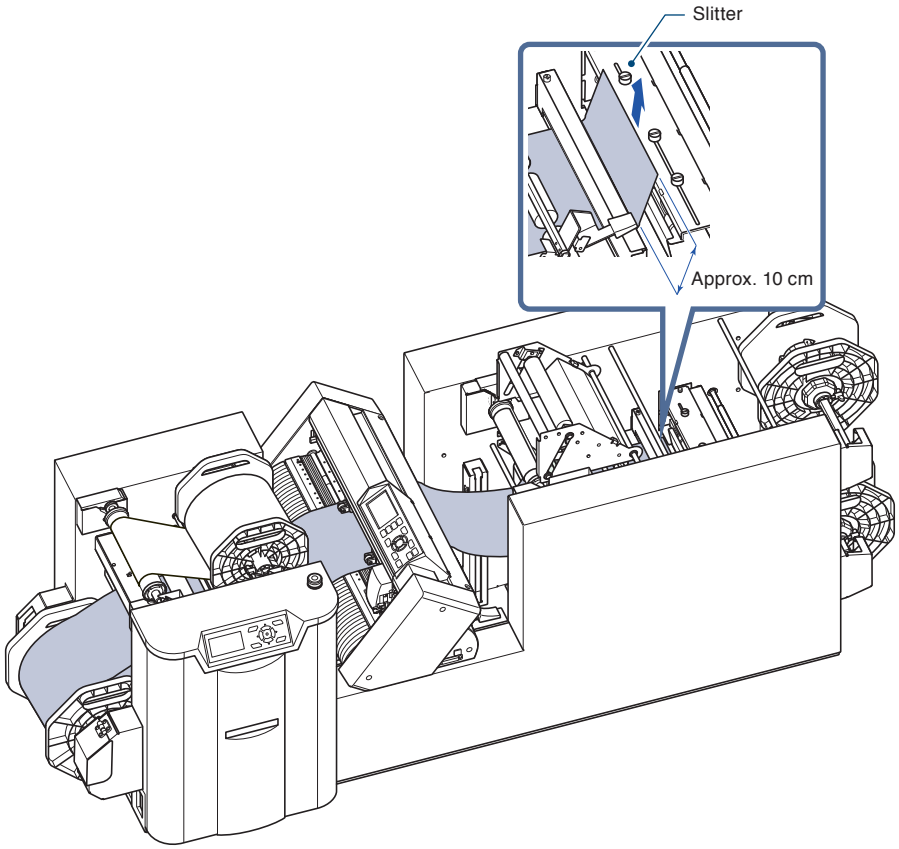


9 Pass through the cross cutter part.

Please set the media straight in accordance with the media position seal.
When the cross cut is used, drop the media down without passing through the slitter part.
(Refer to “2.8 Using the Cross Cut”)

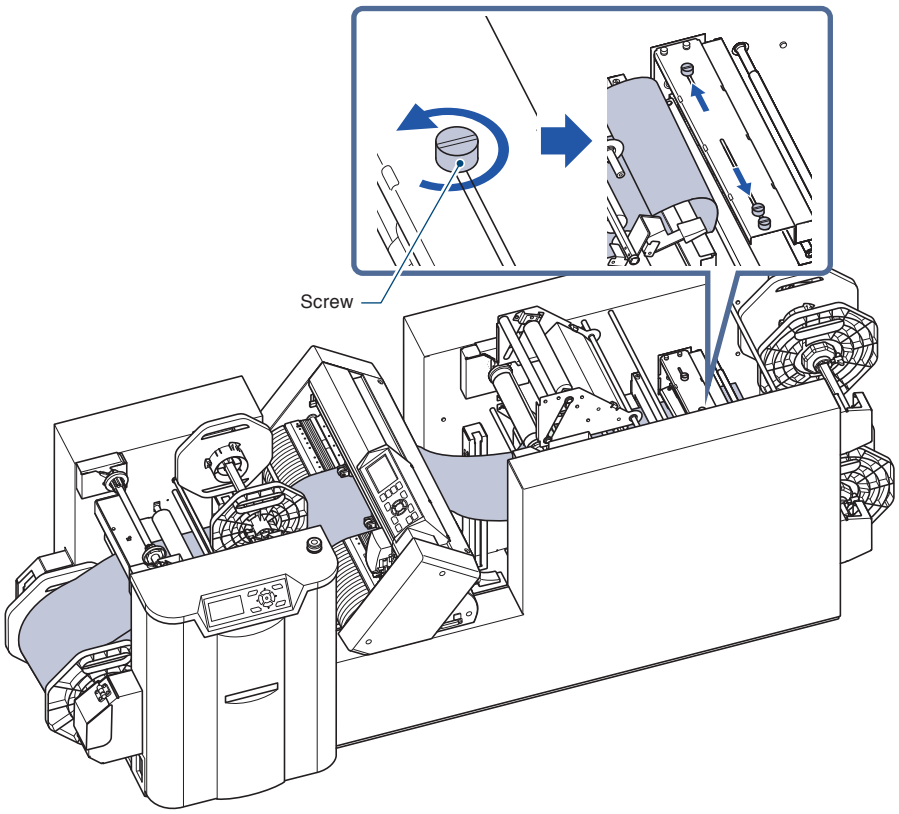


10 Pull out the media about 10 cm in front of the slitter.



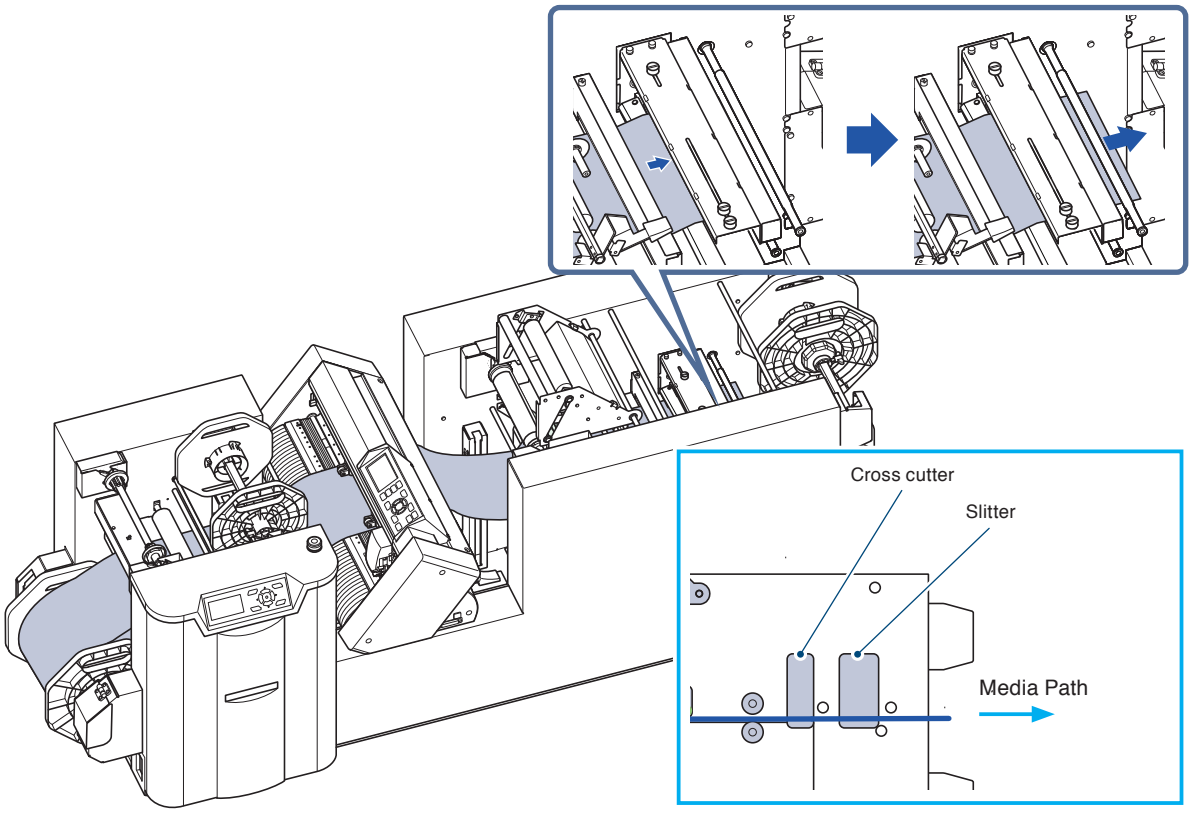
11 When the slitter is not used, loosen the two screws and then move both screws to outside edges.

When the slitter is used, refer to “2.9 When Using the Slitter”.



12 Set the media on the inlet of the slitter.

Pull out the media backward.



13

Turn on ("I" side) the power of the machine.

▷ The following screen is displayed.

Supplement

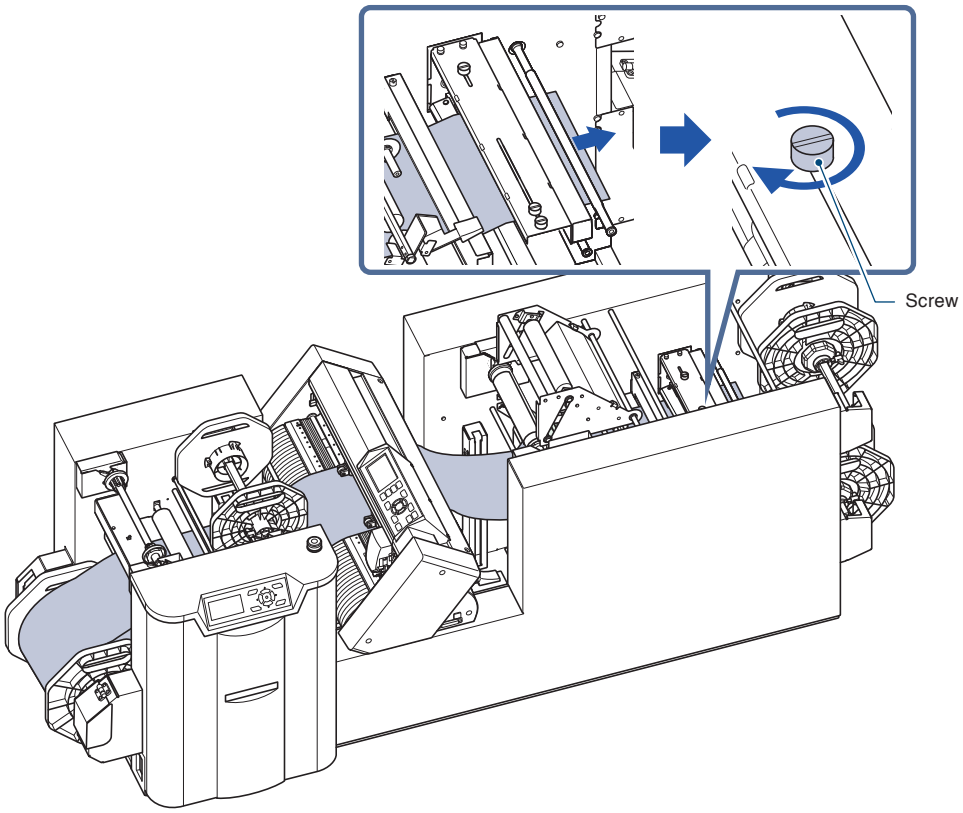
When the set lever of cutter unit is lowered, or when the material is not fed to the cutter unit, the same message is displayed.

14

Feed the media by pressing [▶] key (Media Feed).

Pull out the media about 30 cm backward from the slitter.

Then tighten the screw of slitter.



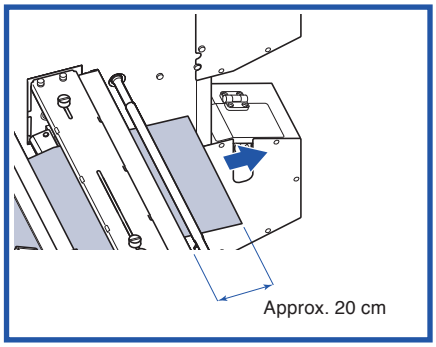
15

Pull out the media from the slitter backward.

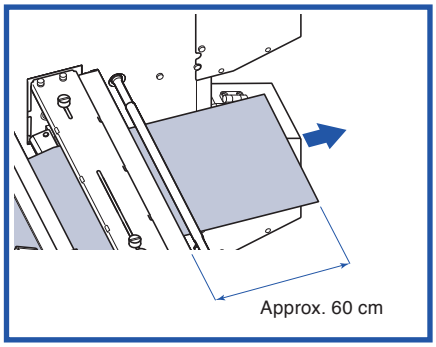
When the winding roll holder is used, pull out about 60 cm.

When the winding roll holder is not used, pull out about 20 cm.

When the winding roll holder is not used



When the winding roll holder is used



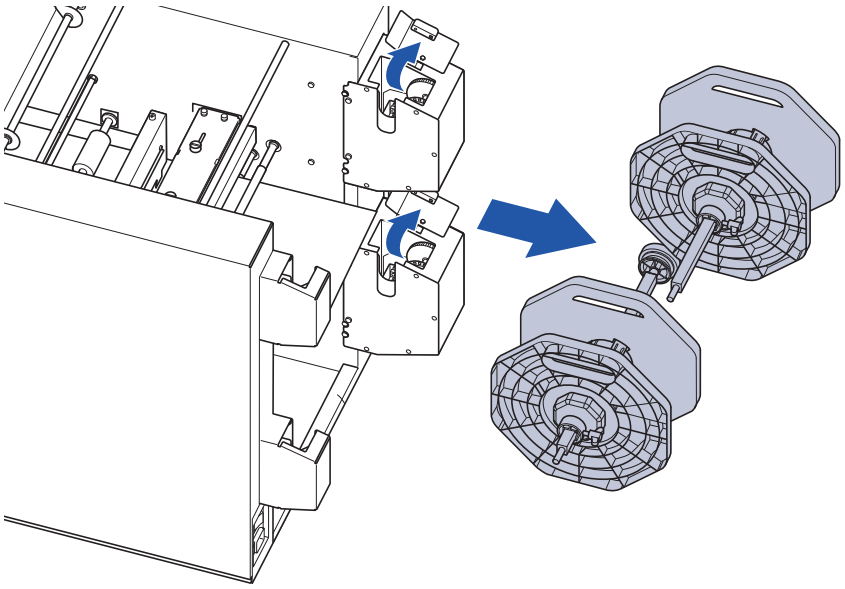
16 Remove the roll holder to be used.

When the slitter is not used, or when winding the media which the edges are cut by the slitter, is one set, set the roll holder corresponding to one set.

When the media to be wound with the slitter is two sets, set the roll holder corresponding to two sets.

Open the winding stocker cover.

Remove the roll holder to be used.



After setting the winding roll holder, go to Step 17.

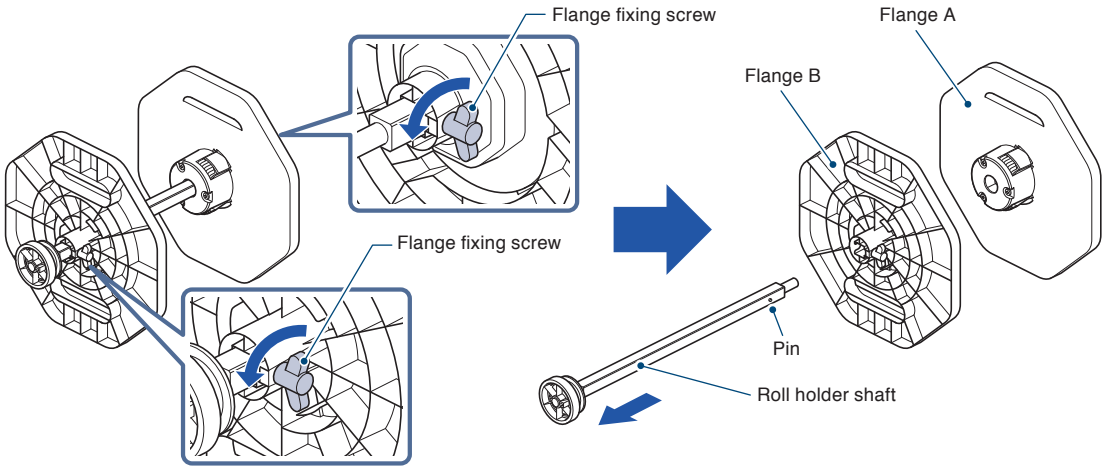
<When the winding roll holder is used>

> **⚠ CAUTION**
>
> When the winding roll holder is used, set the “REWIND” to ON after the setting of media is complete. (Refer to “Setting the Rewind (REWIND)”.).

1 Loosen the flange fixing screw of roll holder by turning it counterclockwise.

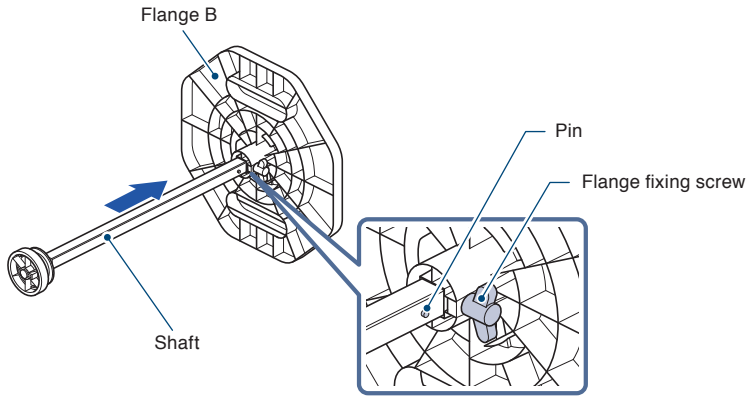
Remove the flange.

* If the flange fixing screws touches the pin of shaft, please loosen the flange fixing screws until it cannot be touched.



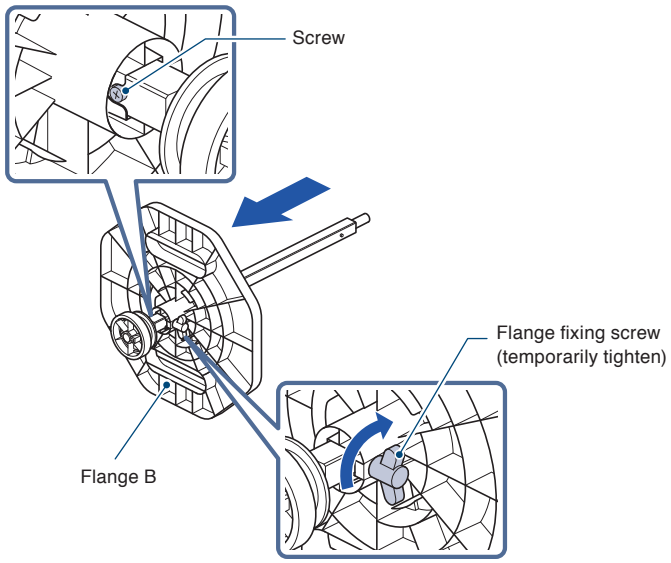
2 Attach the Flange B to the roll holder shaft.

Set in the direction (flange fixing screws side) in which there is a pin of the shaft.

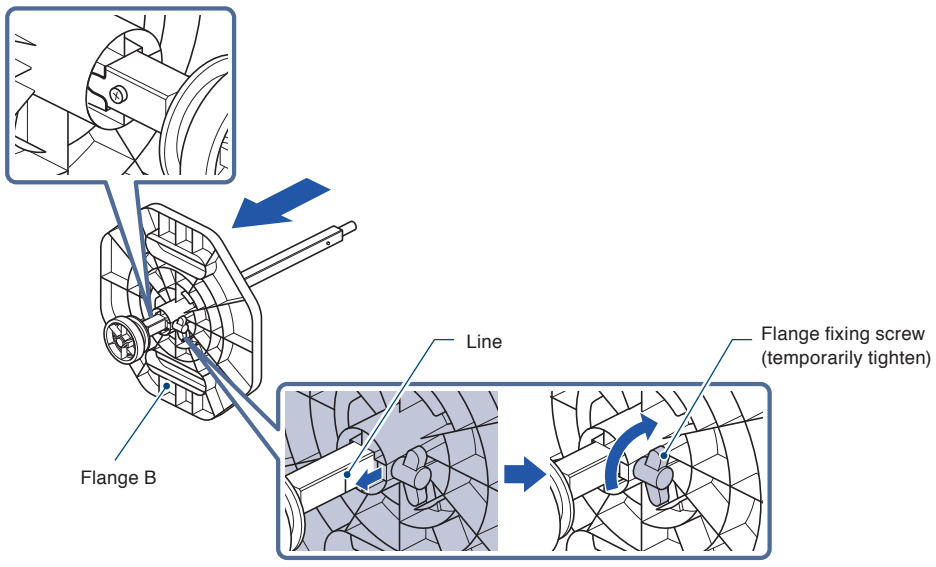


Set the Flange B at the position where it stops with the screw.

Tighten the flange fixing screws (temporarily tighten).



* When winding the media which the edge is cut by the slitter, set the media after aligning the Flange B to the position of line.



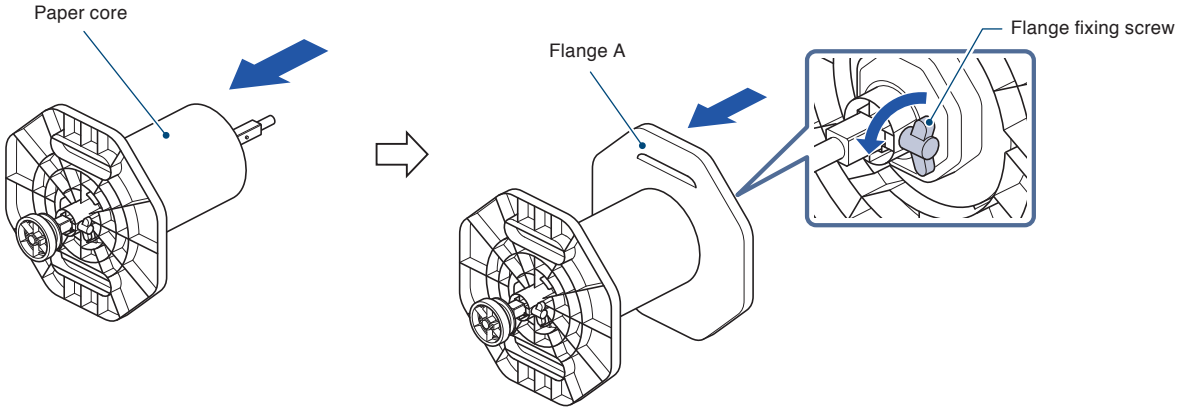
Supplement

For the paper core (sold separately), please prepare the paper core that have the same width as the width of the media to be wound.

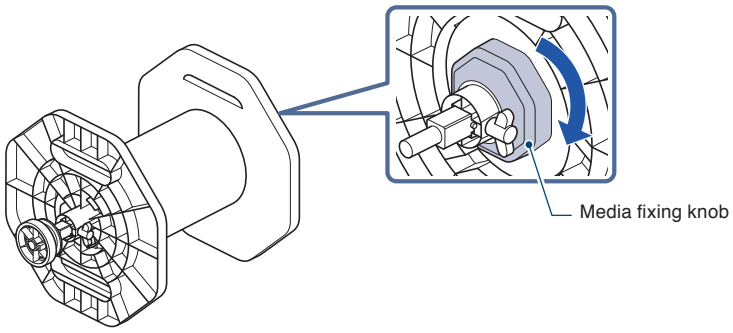
3 Set the paper core (sold separately).

Loosen the flange fixing screw of Flange A by turning it counterclockwise.

Attach the Flange A to the roll holder shaft.

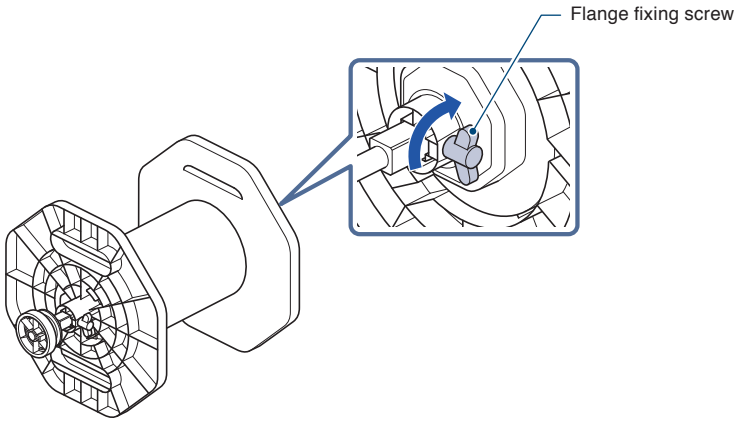


4 Fix the paper core by turning the media fixing knob of Flange A clockwise.



5 Tighten the flange fixing screw. (temporarily tighten)

* Align the media to the position where you attach the roll paper to the paper core by the tape as shown later, and then tighten the flange fixing screw again.



<When the winding roll holder is not used>

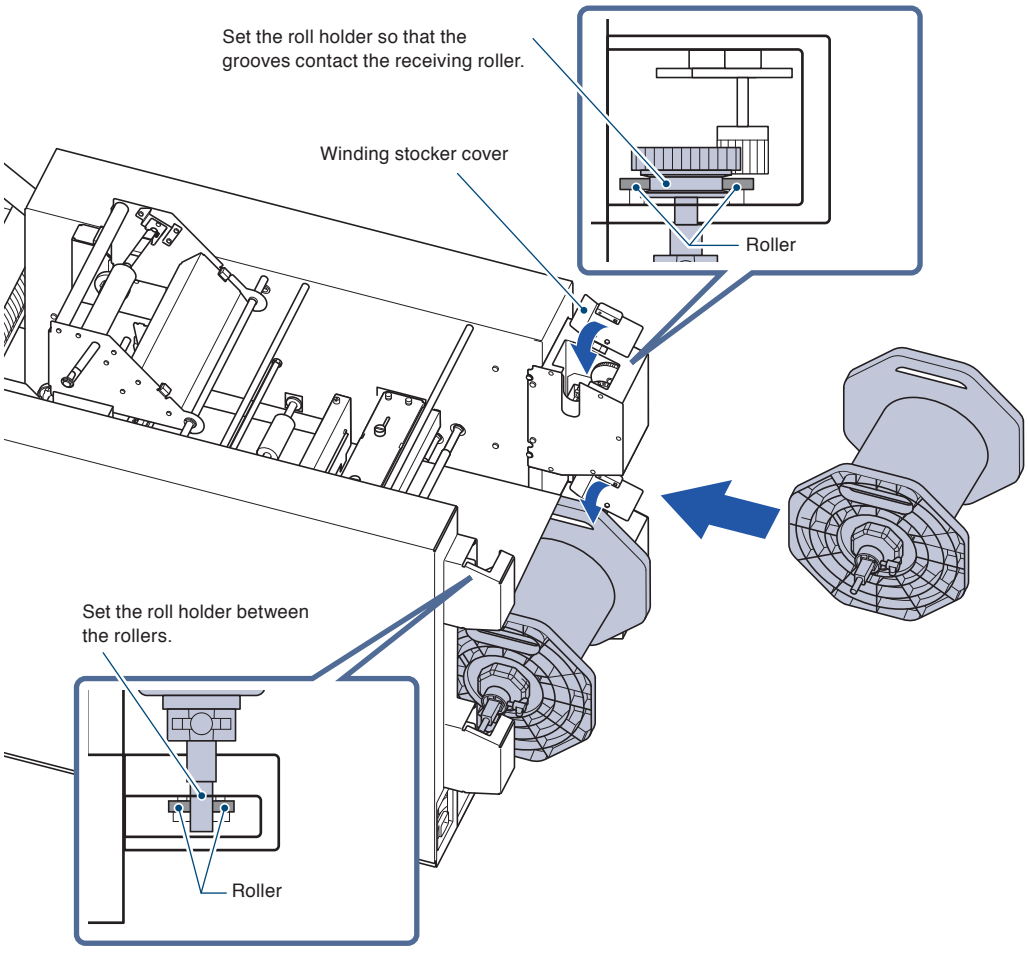
1 Feed the media after pulling out about 20 cm.

> **⚠ CAUTION**
>
> When the winding roll holder is not used, since the media stays there, the cut media might be folded or creased.
> Typically the media must be wound using the winding roll holder.

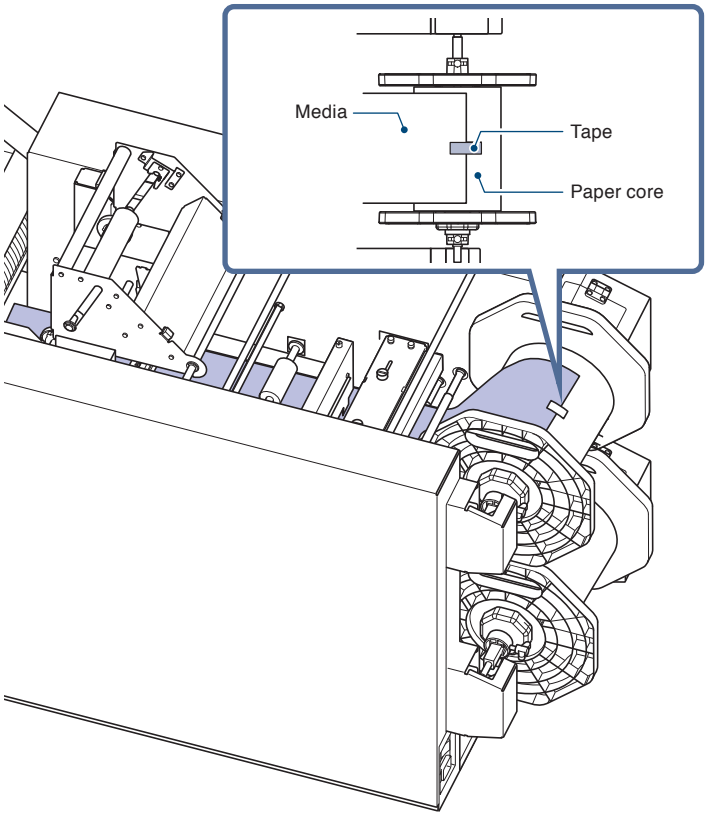
17 Set the roll holder in the winding stocker.

Close the winding stocker cover.

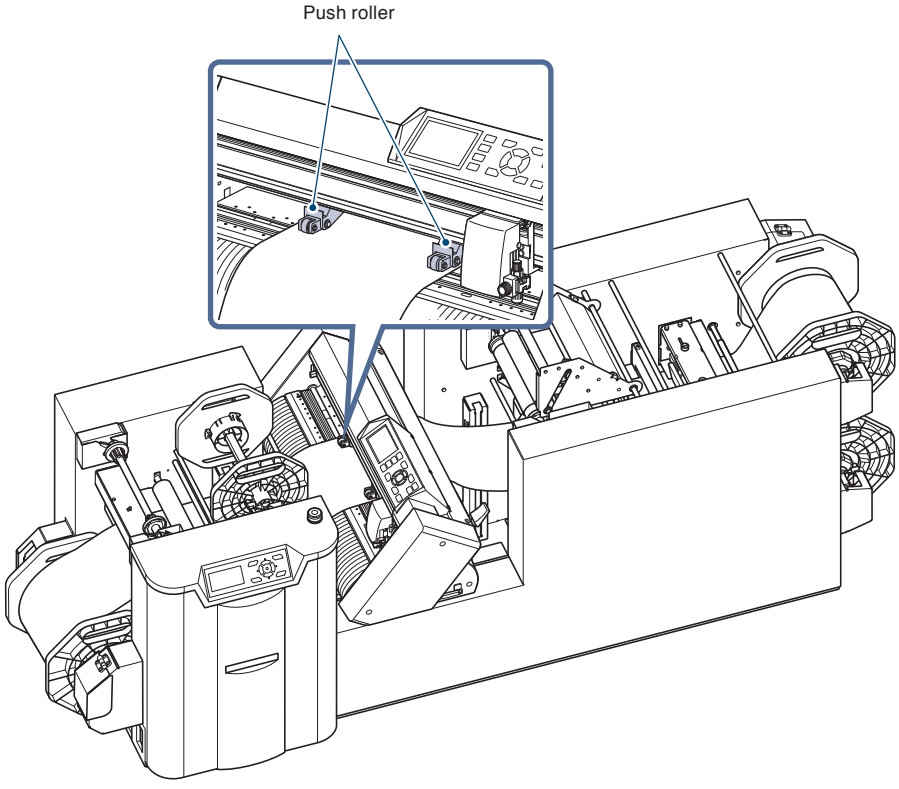
* When the media to be wound is one set, use the lower roll holder.



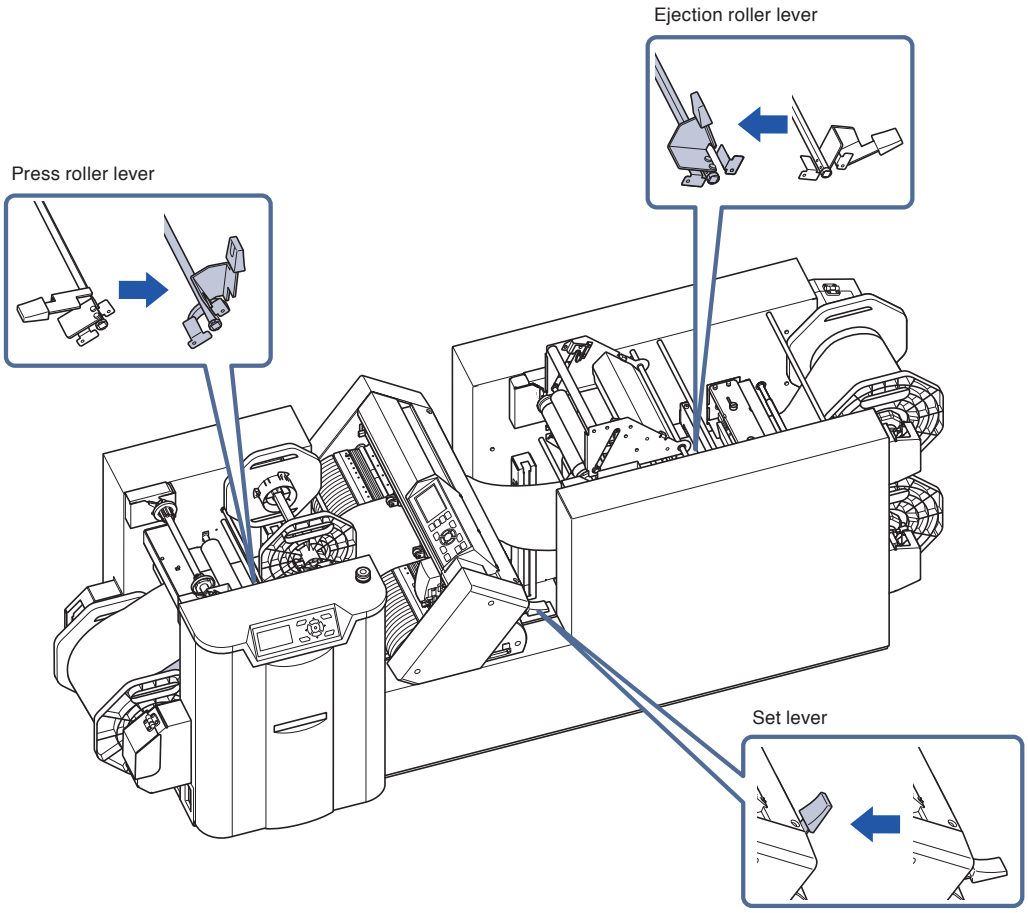
18 Paste the media to the roll holder.
Adjust the flange position to align to the ejected media, and then tighten the flange fixing screw.



19 Adjust the position of the push roller in cutter unit.
(Refer to “2.6 Aligning the Push Rollers”.)

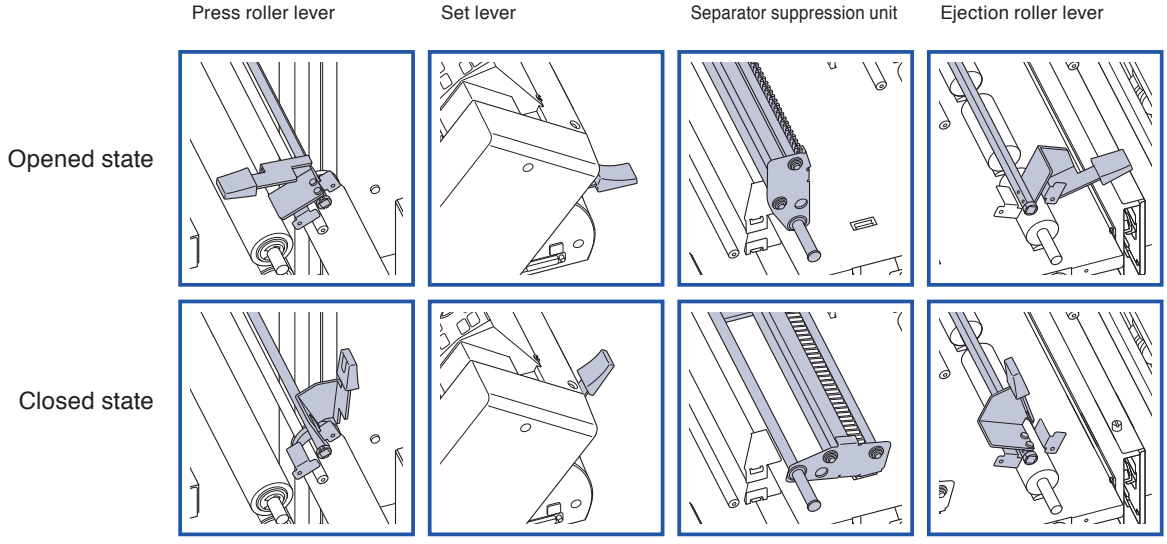


20 Leave the press roller lever, set lever, and ejection roller lever closed.



Supplement

The following figure shows that the press roller lever, set lever, separator suppression unit, ejection roller lever are set (closed) or opened.

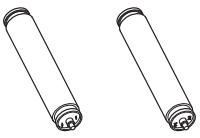
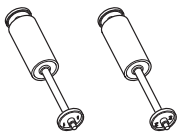


21

Attach the dancer roller 1 and 2.

The two types of dedicated Dancer rollers which have different lengths of rubber roller are included.

Install the Dancer rollers which fitted to the width of the media to be used (See table below.).

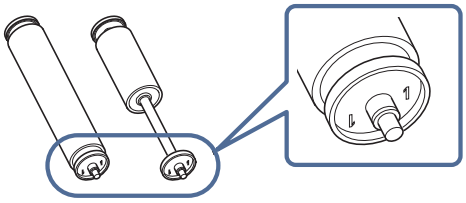
Graphtec genuine product Media size (width)	Dancer rollers (Width: 228mm)	Dancer rollers (Width: 109mm)
131.5 mm	NG	OK
135 mm	NG	OK
153 mm	OK	NG
157.5 mm	OK	NG
178 mm	OK	NG
182.5 mm	OK	NG
		

OK: Available, NG: Not available

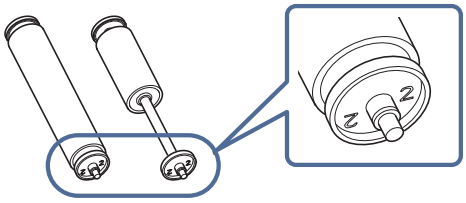
Supplement

There are two types of dancer rollers. Please be careful not to mistake the dancer roller 1 and 2 when setting them.

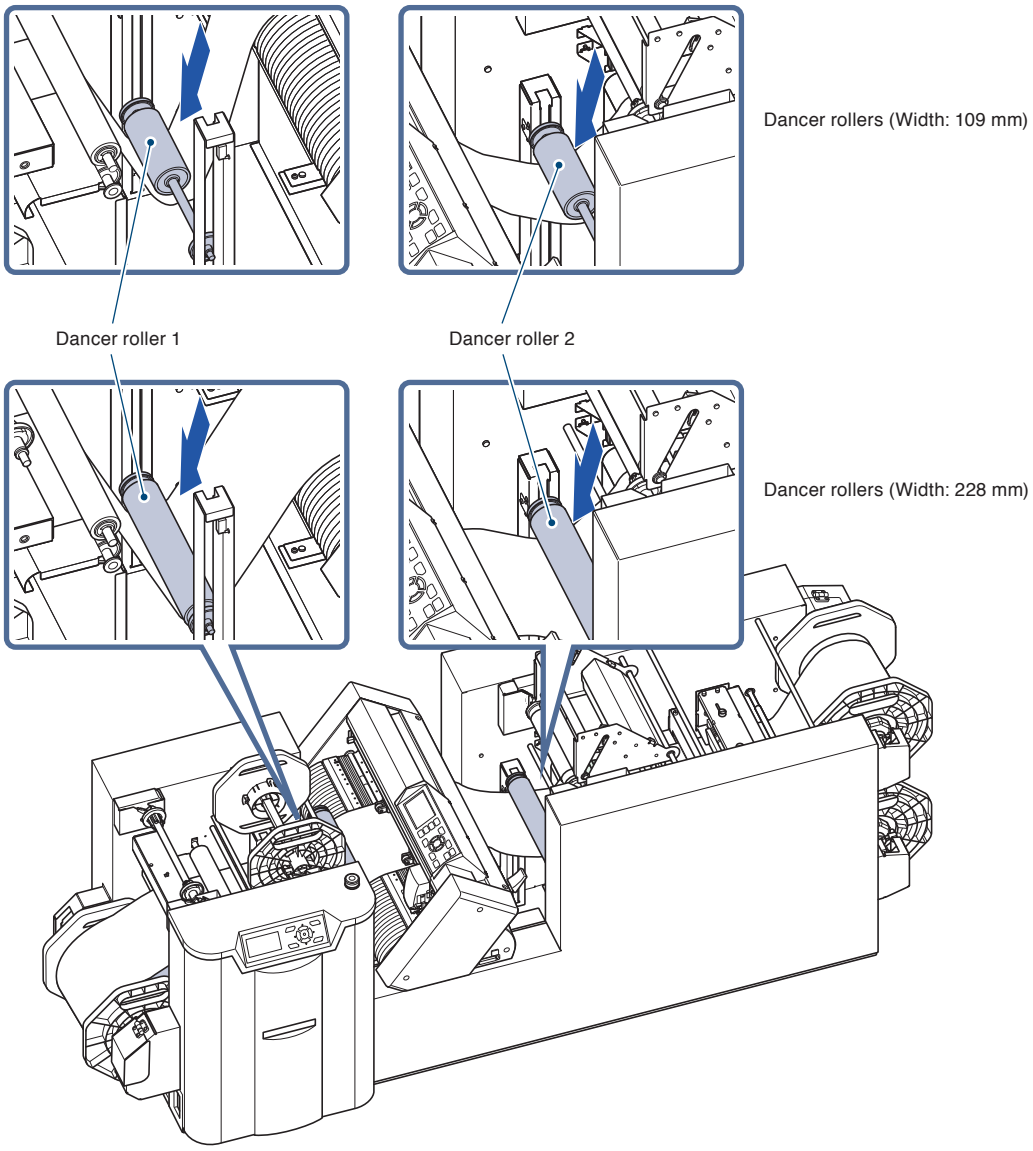
Dancer roller 1 (Heavy)



Dancer roller 2 (Light)



Install the Dancer rollers in the direction where the rubber rollers are on the media.



22 When the following screen is displayed, set the dancer rollers in accordance with the message and then press [ENTER] key.

```
MEDIA LOADING.
SET DANCER ROLLER1,2
PRESS ENTER KEY!
```

23 Perform the initialization operation.

When the initialization operation is completed successfully, the READY screen is displayed.

```
 READY

Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON

◀CROSS_CUT      FEED▶
```

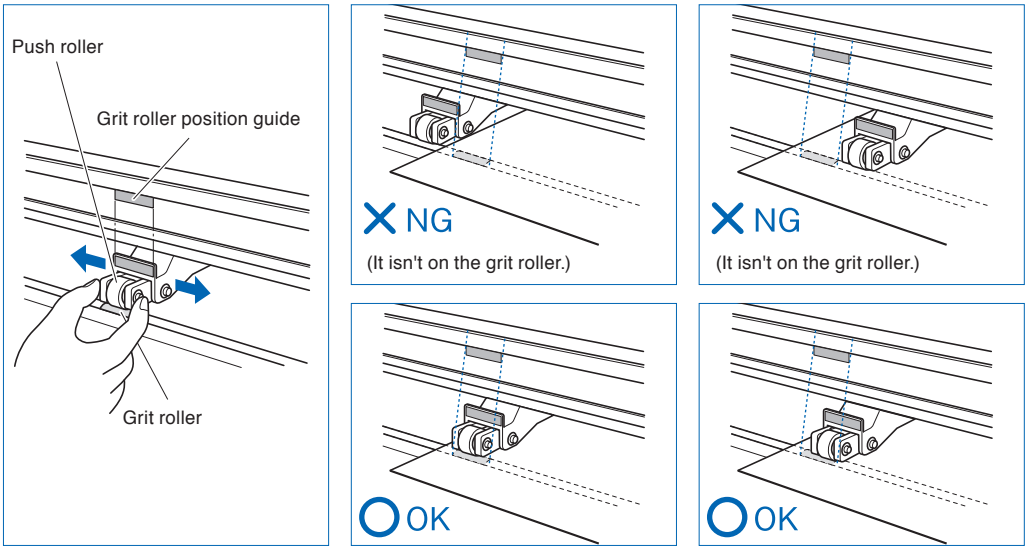
2.6 Aligning the Push Rollers

This section describes how to align the push rollers.

Aligning the Push Rollers

Position the left and right push rollers to correspond with the width of the media. Adjust the push rollers so that they are positioned above both the media and the grit rollers.

Position the push rollers within the grit roller position guides ensures that they are above the grit rollers.



⚠ CAUTION

To move the push rollers, the media set lever must be in the lowered position.

Supplement

If the “W06: Push roller Confirm the Push roller Position” message is displayed after setting the media and raising the set lever, make sure everything is set correctly.

2.7 Using the Laminate

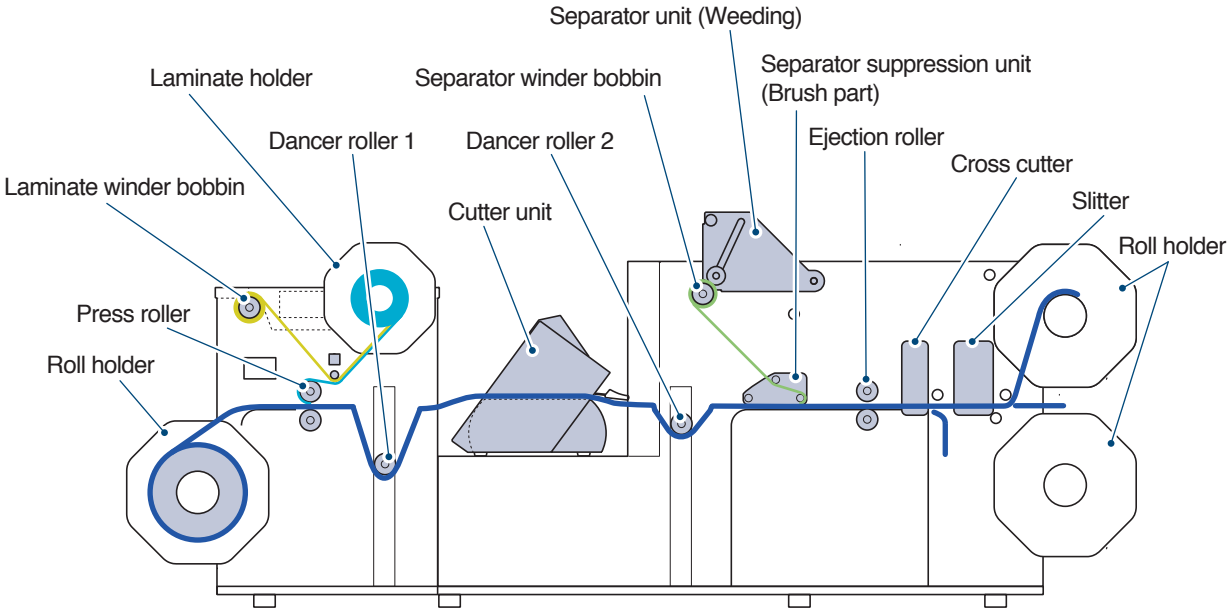
This chapter provides how to use a laminate.

Set the laminate after setting the label material.

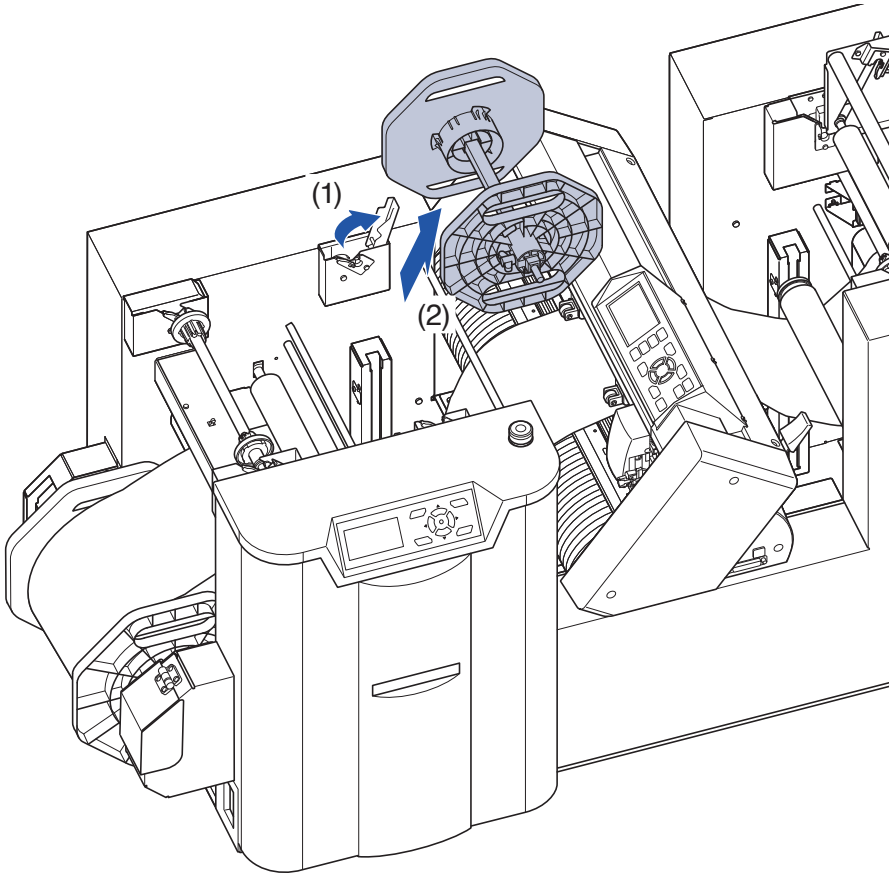
Supplement

- Please set the laminate after setting the label material.
- For the setting of label material, please refer to "2.5 Setting the Label Material (Media)".
- When the glue of laminate material is adhered to the push roller, it may affect the cutting accuracy. Please clean periodically the push roller.
- The laminate holder flange is similar to the roll holder flange. Smaller flange is a laminate holder flange.
- The shape of laminate winder bobbin is similar to those of separator winding bobbin. The bobbin that is not marked (groove) on the laminate flange collar is a laminate winder bobbin.
- When the laminate is not used, please remove the laminate winding bobbin.
- Paper core for winding is sold separately.

<Media Path>



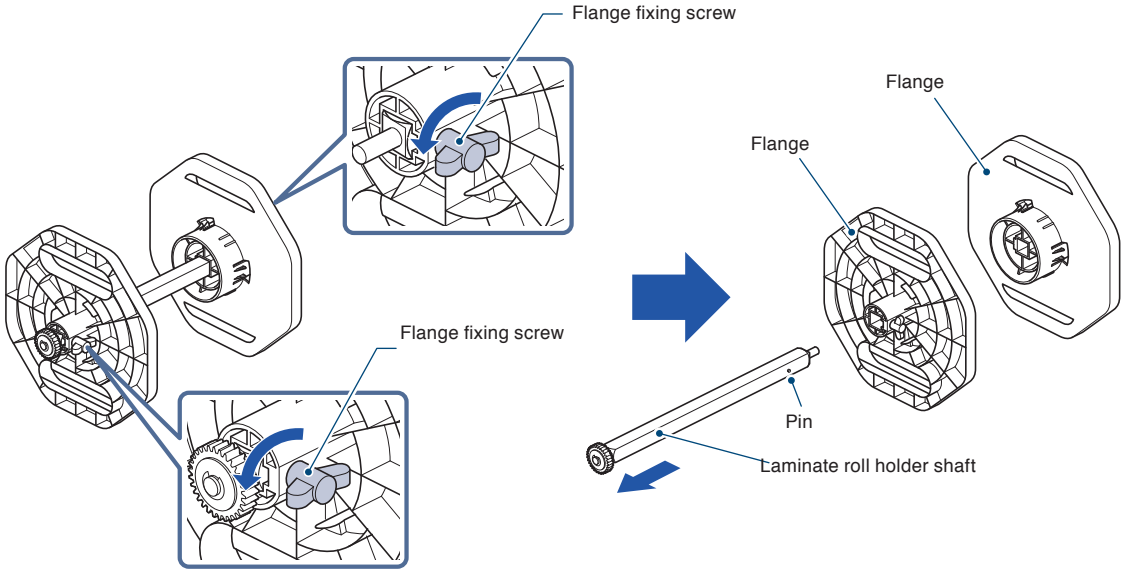
1 Open the cover and remove the laminate holder from the laminate stocker.



2 Loosen the flange fixing screw of the laminate holder by turning it counterclockwise.

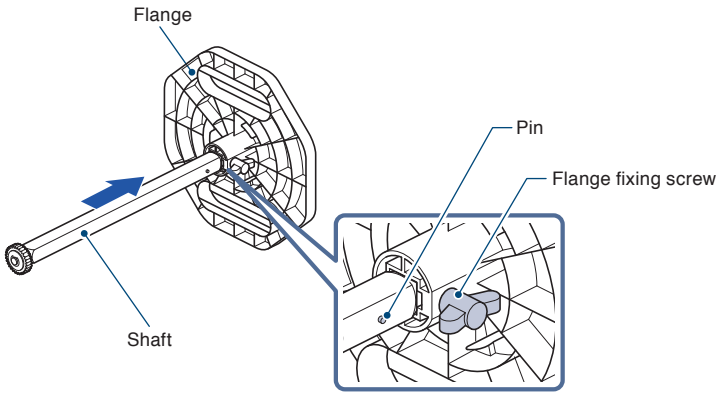
Remove the flange.

* If the flange fixing screws touches the pin of shaft, loosen the flange fixing screws until it cannot be touched.



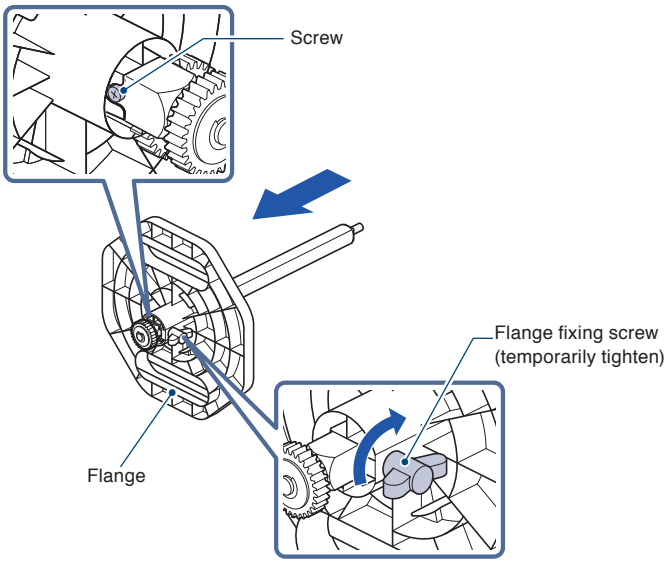
3 Attach the flange to the shaft.

Set in the direction (flange fixing screws side) in which there is a pin of the shaft.



Set the flange at the position where it stops with the screw.

Tighten the flange fixing screws (temporarily tighten).



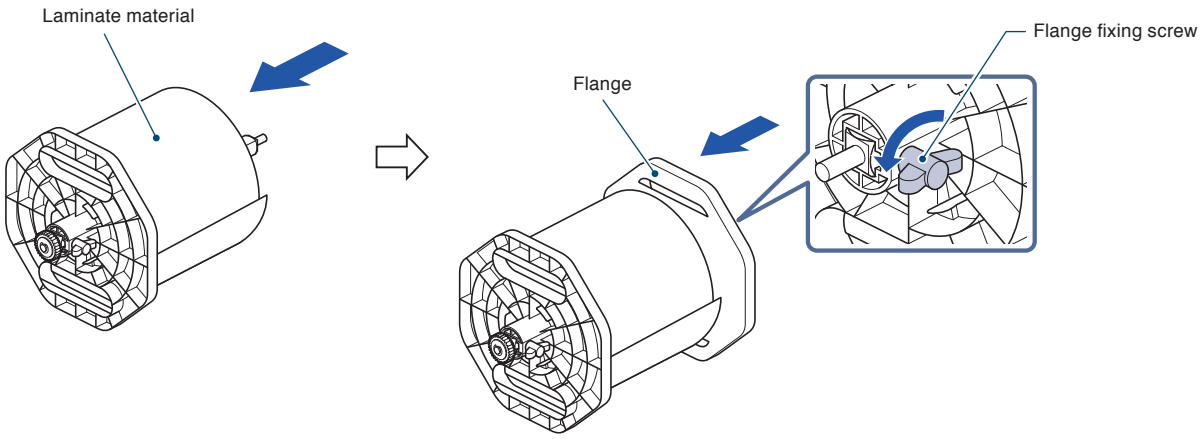
4 Set the laminate material (media) with revolute.

Loosen the flange fixing screw of flange by turning it counterclockwise.

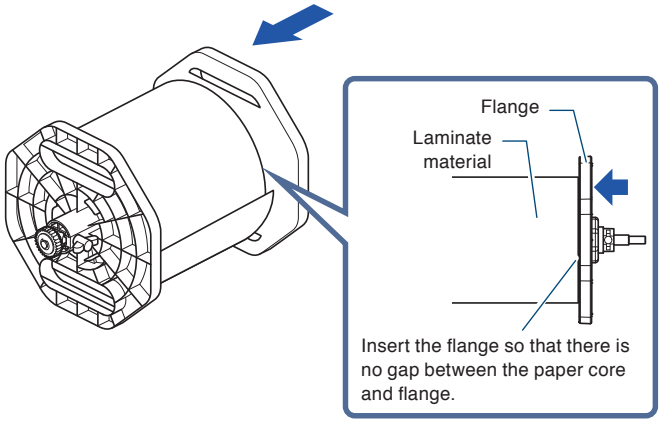
Attach the flange to the shaft.

Supplement

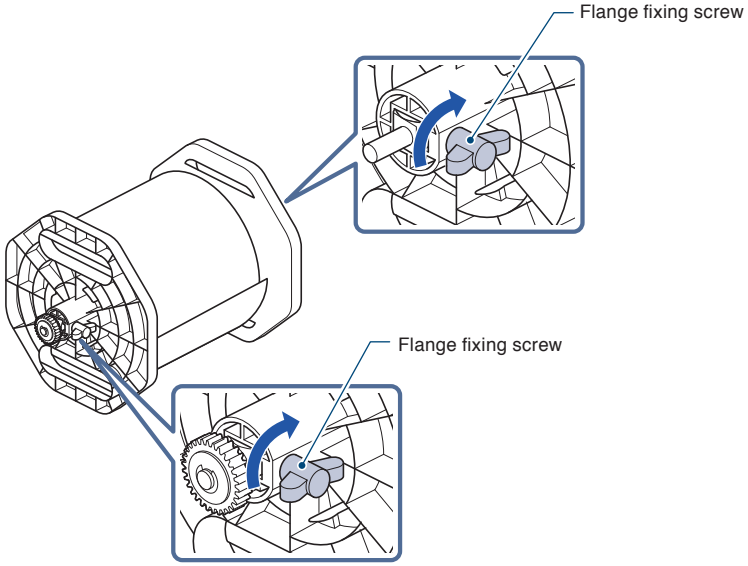
Please be careful not to mistake the direction of the laminate material.



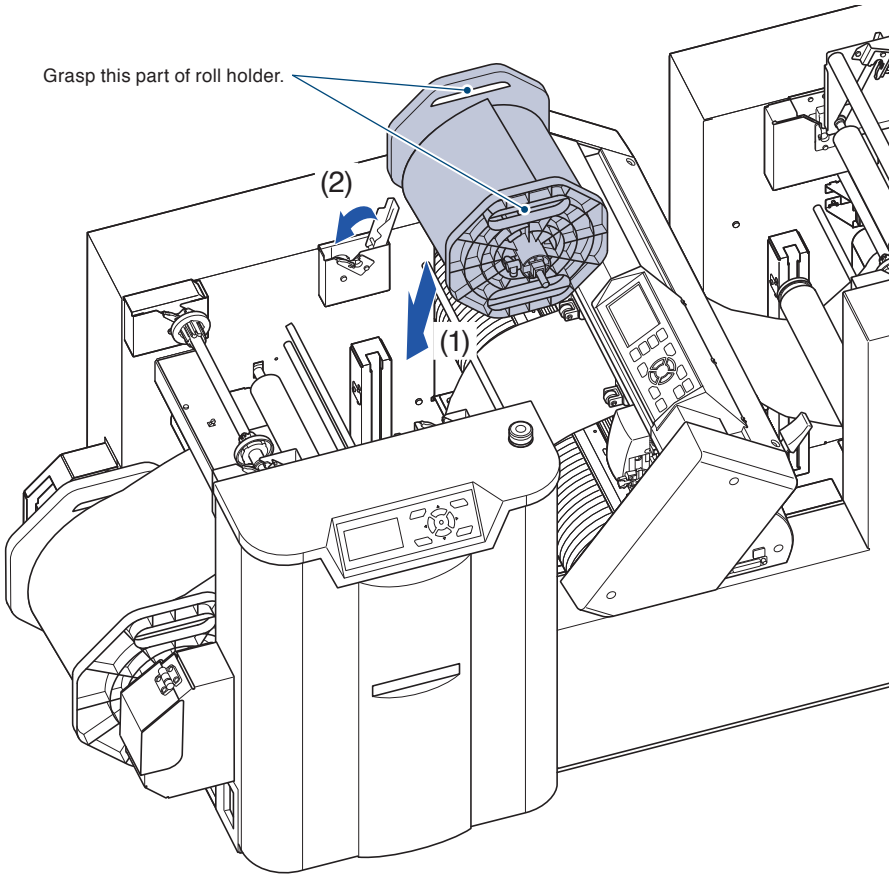
Push the flange so that there is no gap between the paper core and flange.



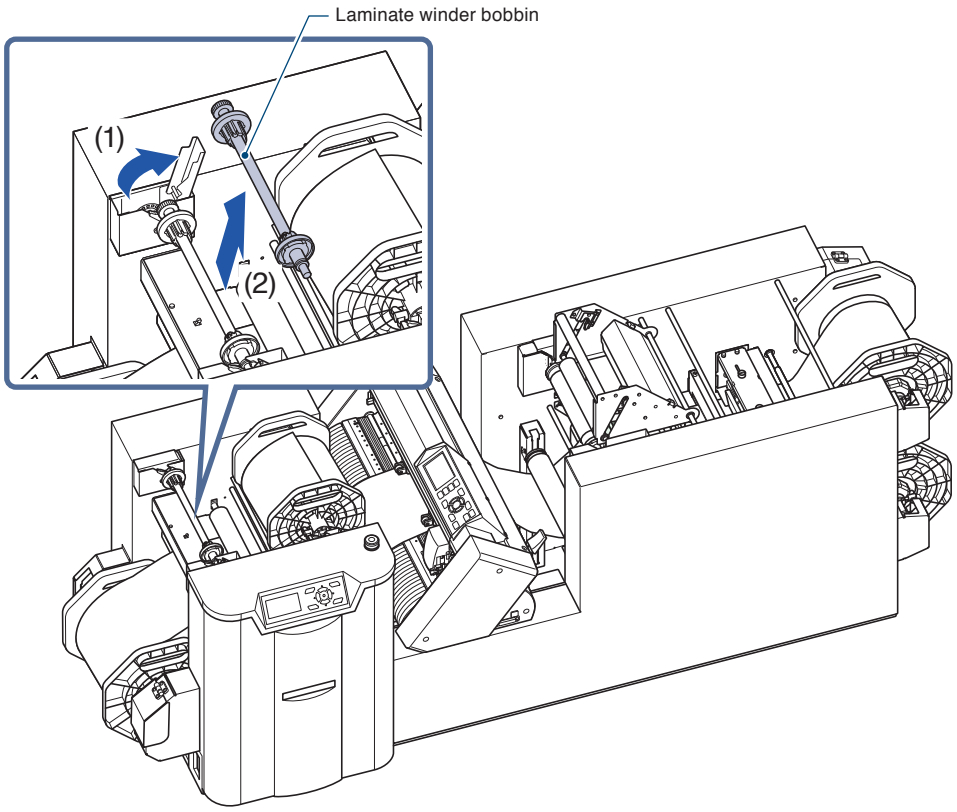
5 Tighten the flange fixing screw.



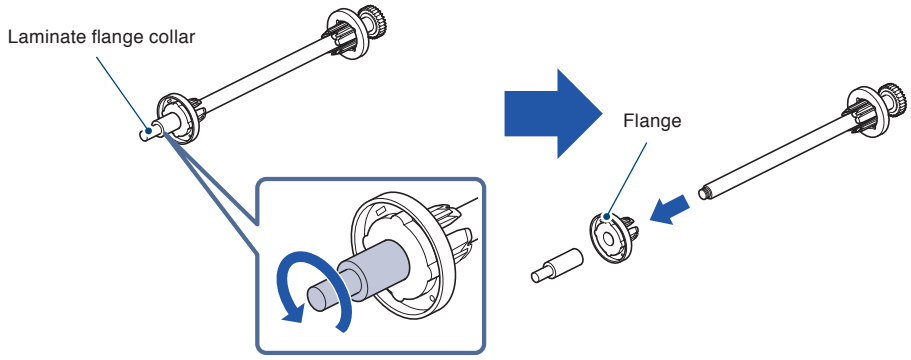
6 Set the laminate holder and then close the cover.



7 Open the cover and remove the laminate winder bobbin.

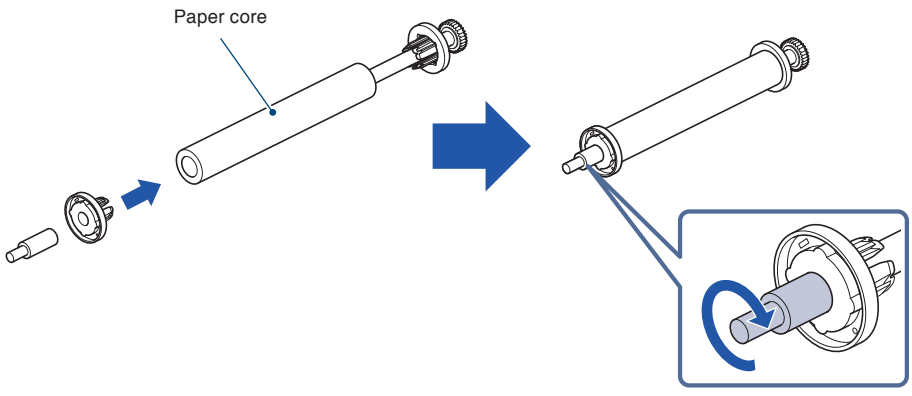


8 Remove the laminate flange collar by turning it counterclockwise and then remove the flange.

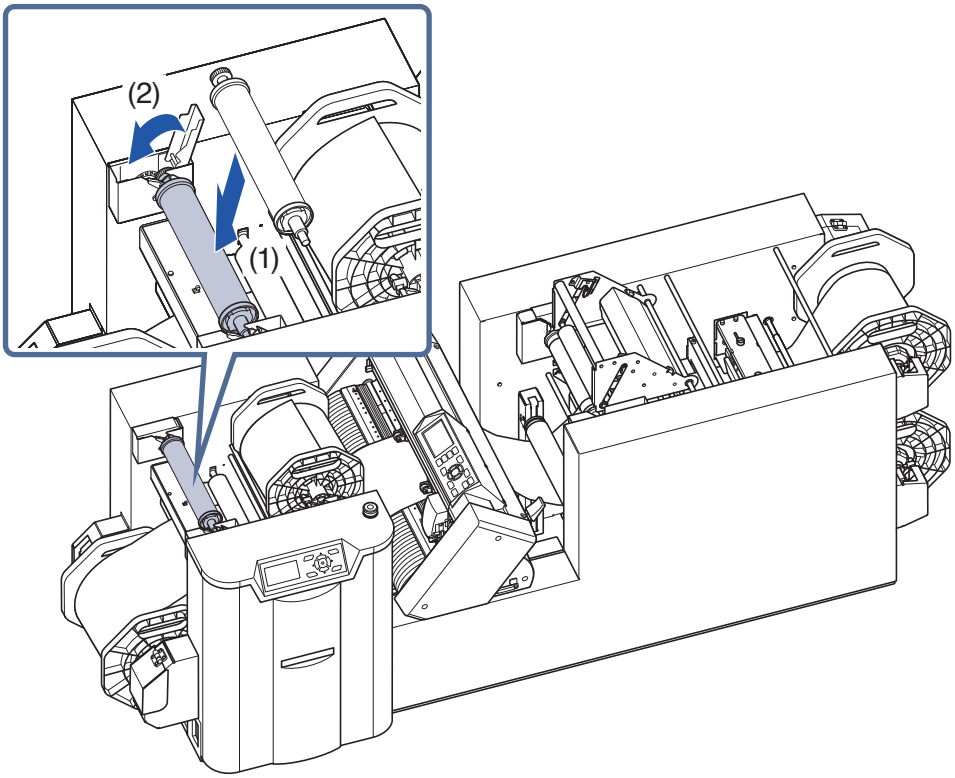


9 Set the paper core (sold separately) and then attach the flange.

To attach the flange, turn the laminate flange collar clockwise.

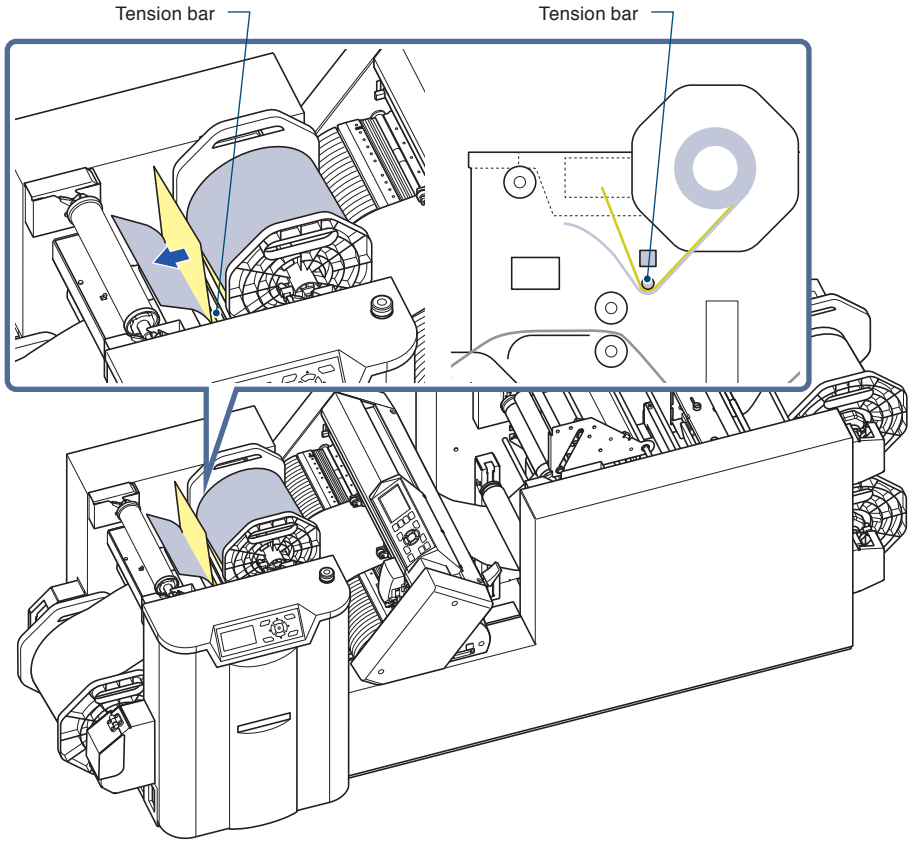


10 Set the laminate winder bobbin and then close the cover.

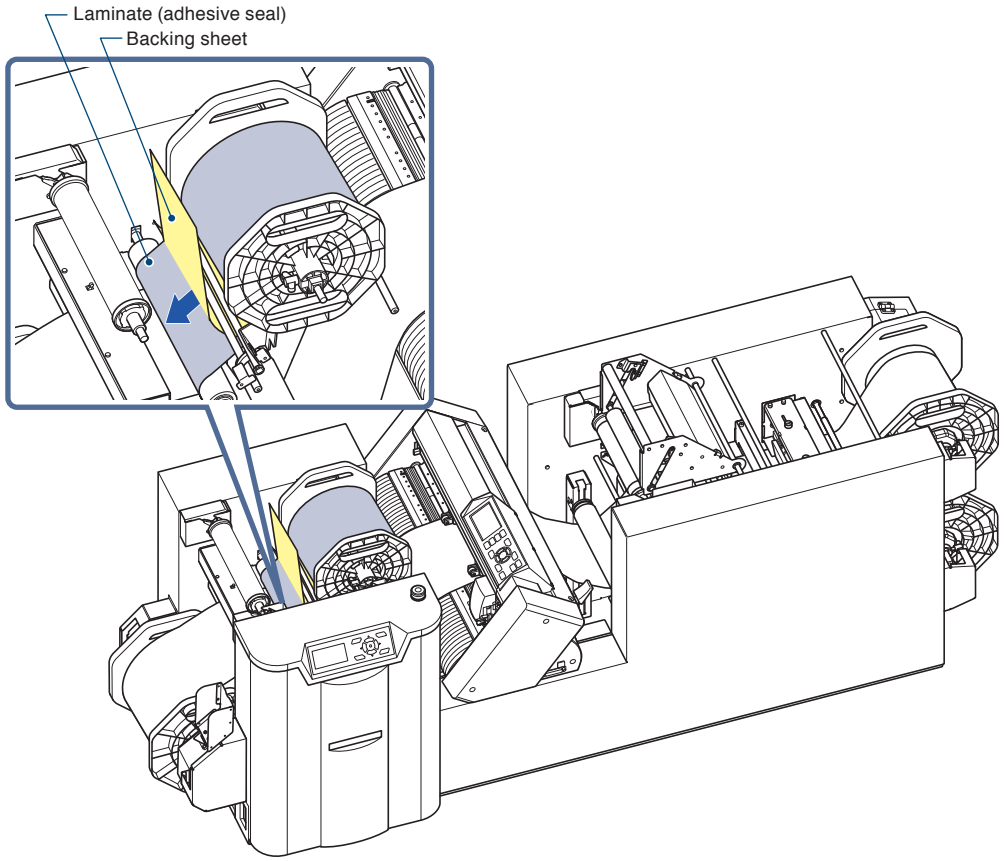


11 Pass through the laminate material under the tension bar and pull out it about 15 cm.

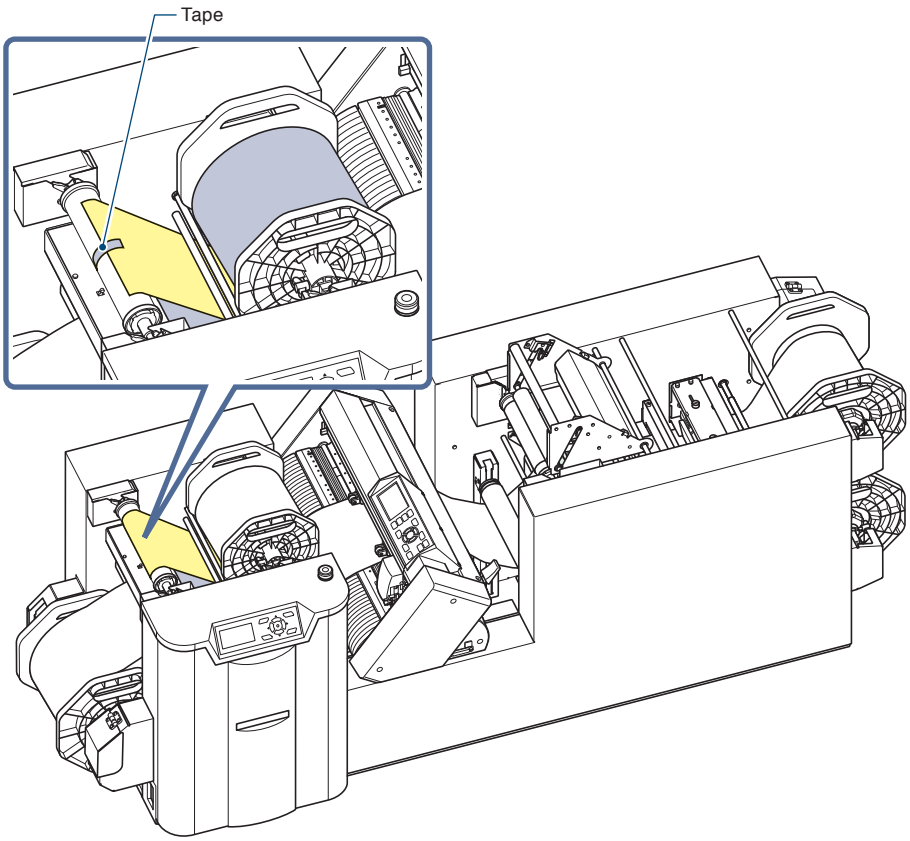
Peel off the tip portion of the adhesive seal of laminate.



12 Paste the laminate (adhesive seal) on the label material so that it does not deviate while aligning the laminate to the press roller.



13 Attach the backing sheet to the laminate winder bobbin by using tape.
If the backing sheet of laminate material is loosed, rewind it by turning the laminate winding bobbin.
Feed the media while holding down [▶] key (FEED) until the paste of laminate is stabilized.



2.8 Using the Cross Cutter

This chapter provides how to use the Cross Cutter.

The media is cross-cut at the Cross Cutter.

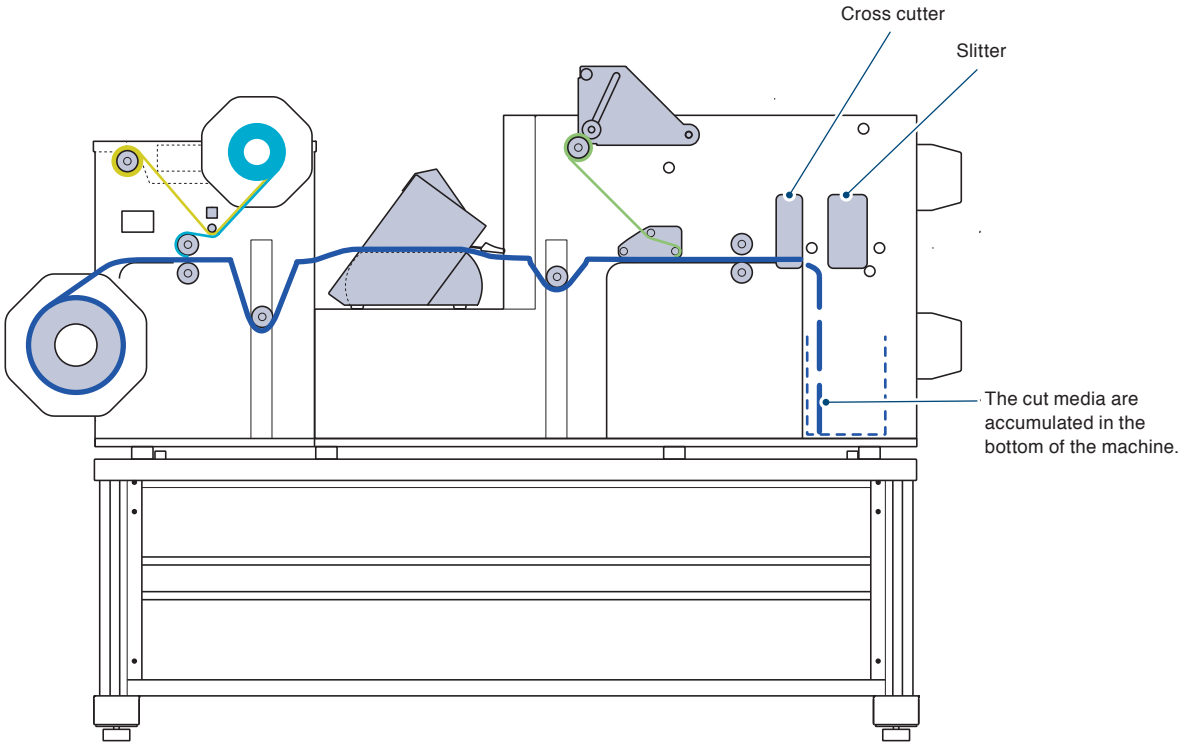
When using the Cross Cutter, set to “Using the Cross Cut (ON)” in cutting conditions setting.

Refer to “Setting the Cross Cut (CROSS CUT)” described below.

> **⚠ CAUTION**
>
> - The separator (weeding) is required to use the Cross Cutter.
> - The cross cut is used to cut the backing sheet of label material that has weeded by the separator. The label material with the backing sheet or the label that stuck a laminate material may not be cut off completely. At this time, the glue of the label material is attached to the cutter blade, or some failure may be caused in the cross-cutter part. Please do not cut other than the backing sheet.
> - When setting to “ON” (used), the winding function is disabled automatically.
> - When cross-cutting the media continuously printed by the DLP1000, the last label is not able to be cut.

The cross-cut media are accumulated in the bottom of the machine.

Please use the “Media receiving box” of ”OPH-A31: Box set (optional)”.



2.9 Using the Slitter

This chapter provides how to use the slitter.

To set the label material, align the slitter to the position where the label material is passed through the slitter.

When the slitter is used, install the dedicated guides (Exclusive parts: Guide F, Guide R) for pathway to drop off the unnecessary media edges.

⚠ CAUTION

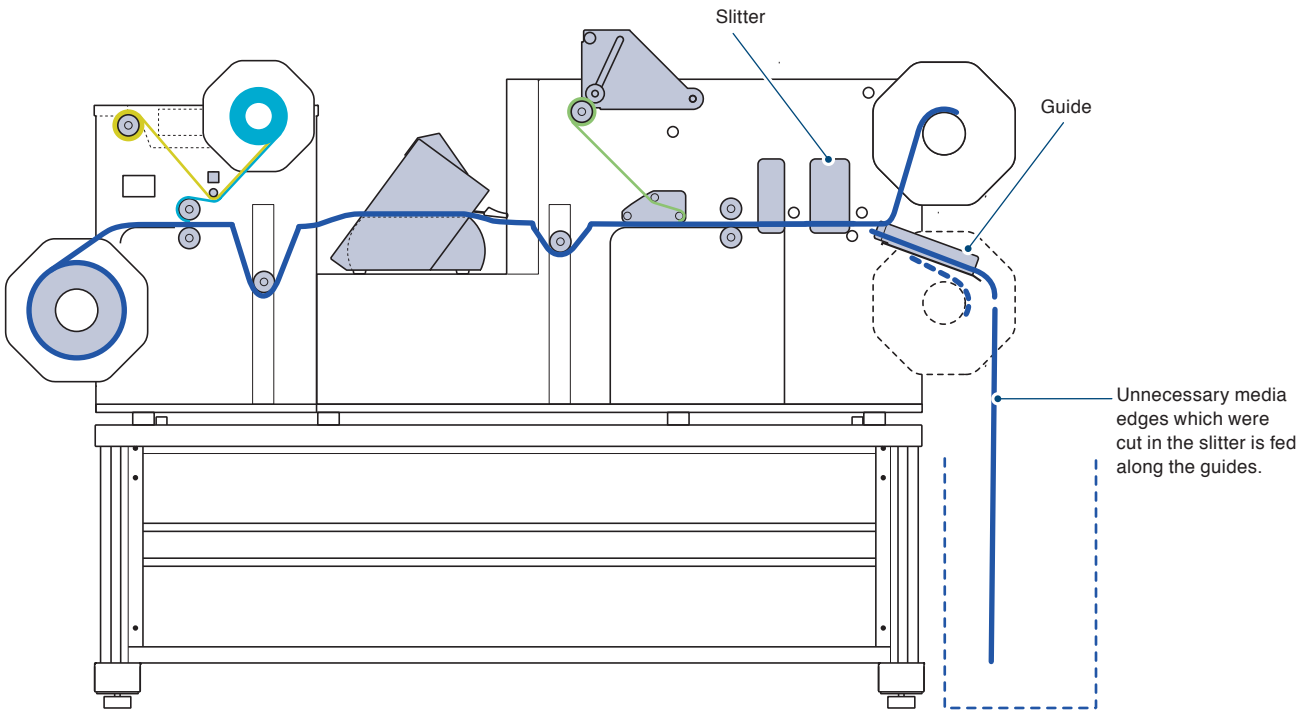
- When using the slitter, the separator (weeding) must be used. The slitter cannot cut the adhesive seal of label material.
- When using the slitter, the media winder must be used. If it is not used, problems such as the cut paper is folded or creased may occur.
- Make sure to use the gloves to prevent injury when touching the backing sheet.

Supplement

- It is not possible to adjust the position of slitter in a state in which the label material has been set.
- Please set the slitter again after cutting the label material in front of the slitter.
- Media might not be cut in high humidity environment. The slitter must be used in 70% or less humidity environment.

Unnecessary media edges which were cut in the slitter is fed along the guides.

Please use the “Paper ejection box” of ”OPH-A31:Box set (optional)”.

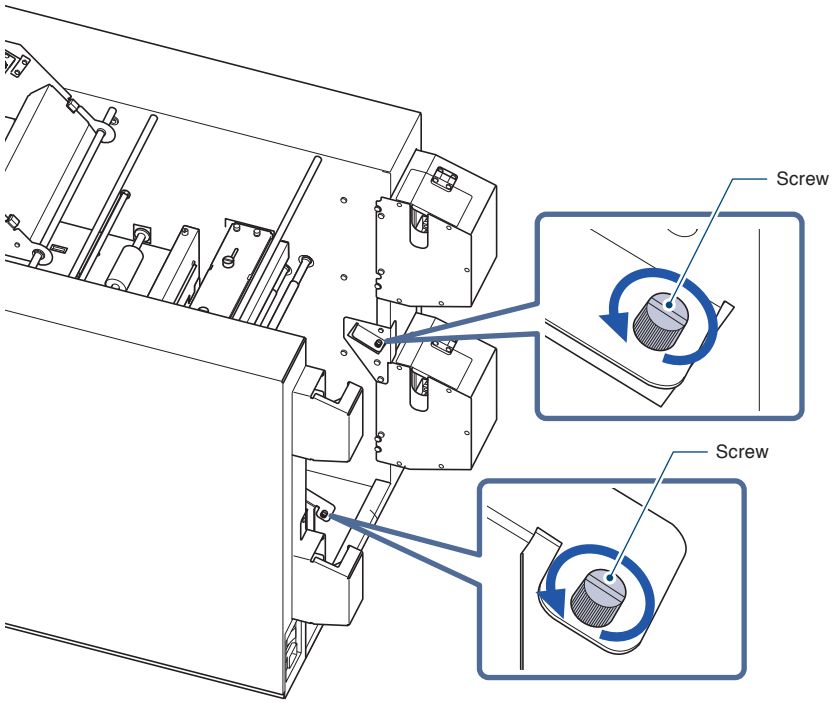


Installing the Guide F and Guide R

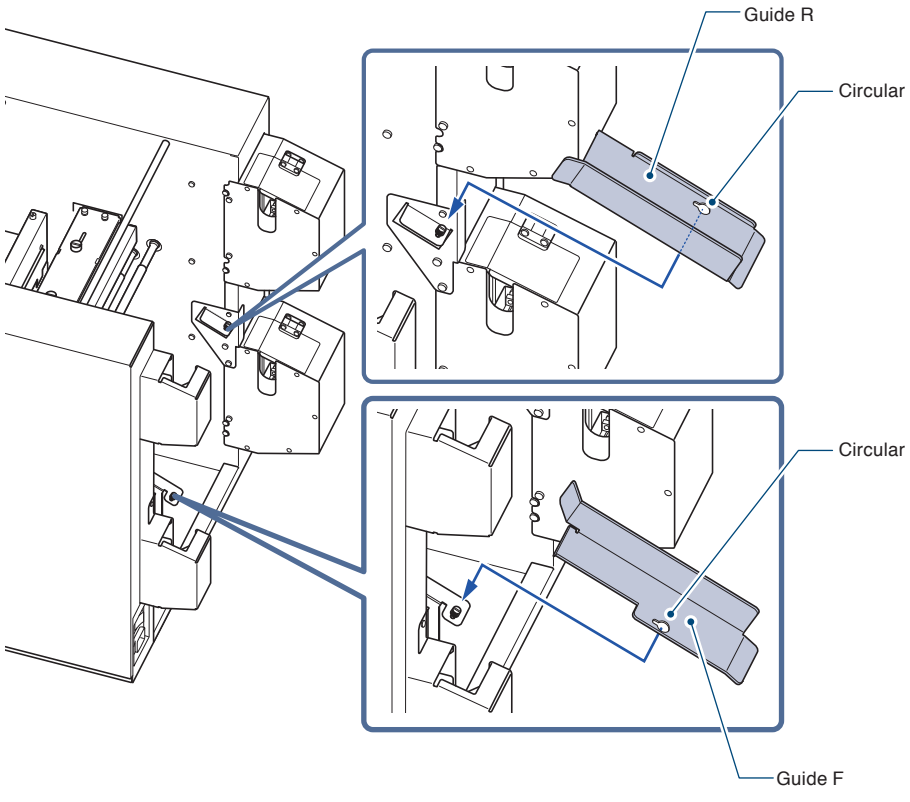
Supplement

In the case when using the Winding stocker 2 (lower), install the Roll holder first.

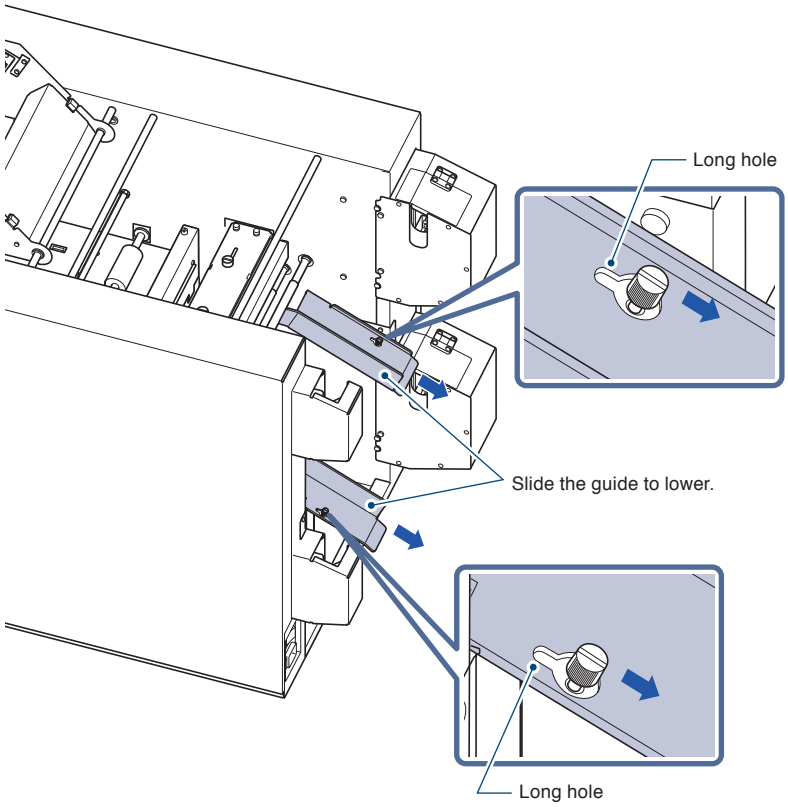
1 Loosen the screw approximately two turns.



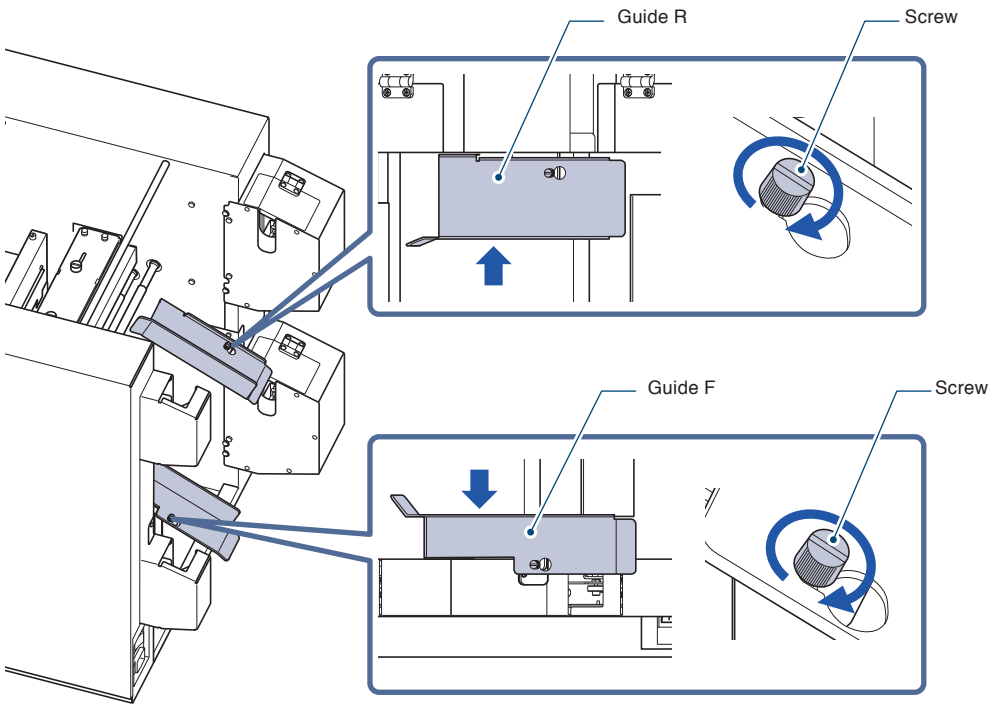
2 Insert the screw head into the circular hole.



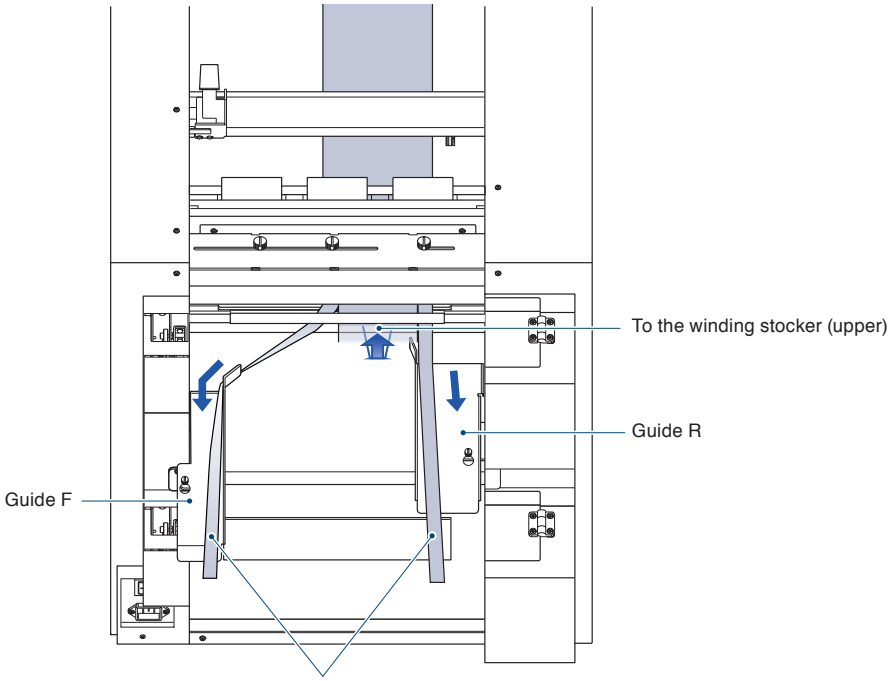
3 Slide the Guide towards the long holes.



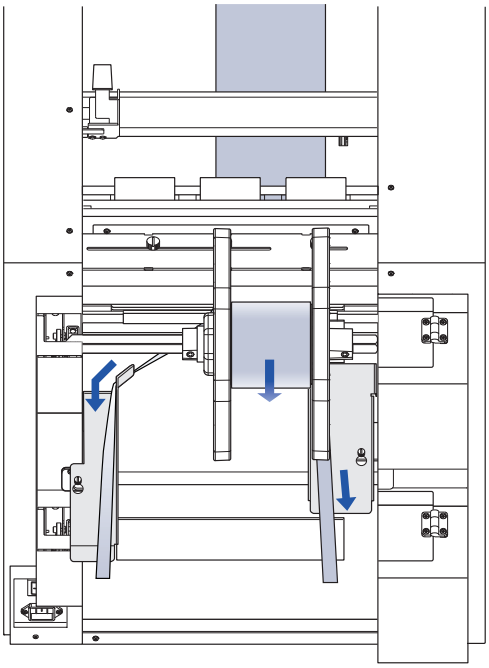
4 Tighten the screw while pushing the Guide to the plate (Pointed direction).



5 Pass the unnecessary media edges, which are fed out after cut by a slitter, into the guides.



6 Make sure that the unnecessary media edges are fed along the guides in the pointed direction.



After the winding is completed, detach the Guide (F and R) before detaching the Roll holder.

It is necessary to prepare the receiving box to receive the unnecessary media edges.

Use the box set (OPH-A31: optional).

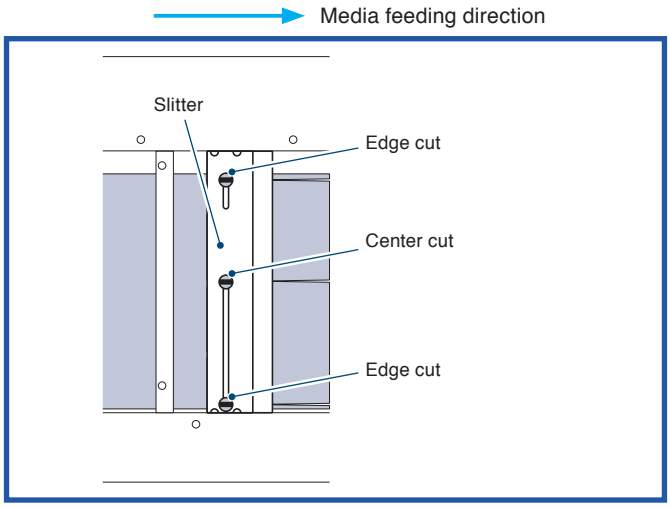
Detach the guides and keep them when not using the Slitter.

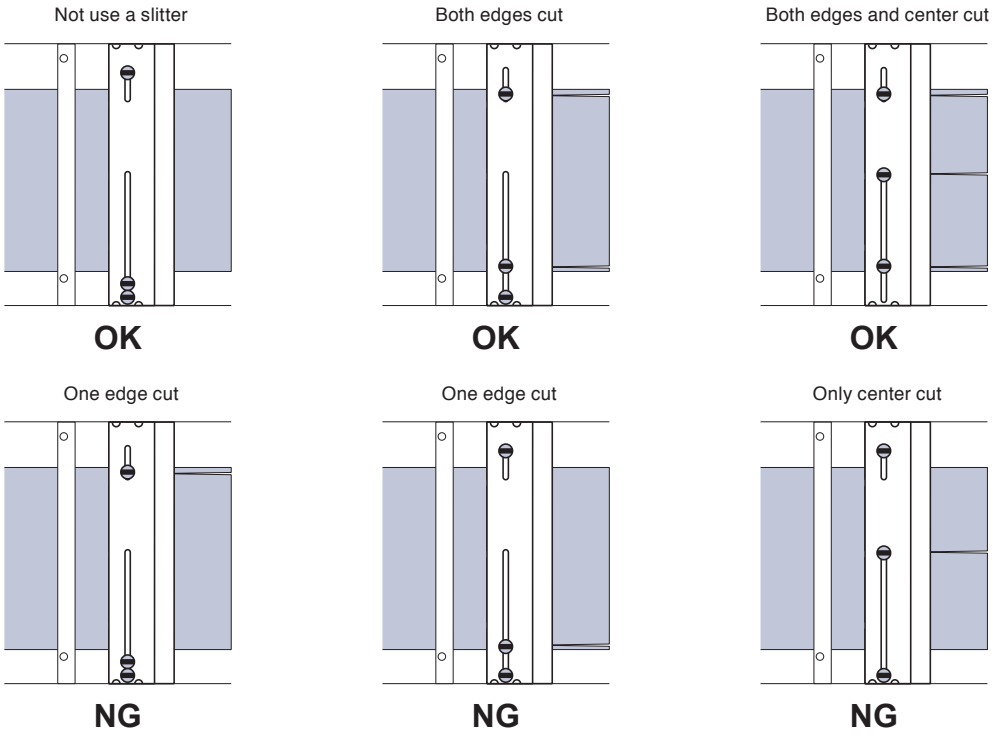
Combinations of Slitter Position

Combinations that can be used for slitter are as follows.

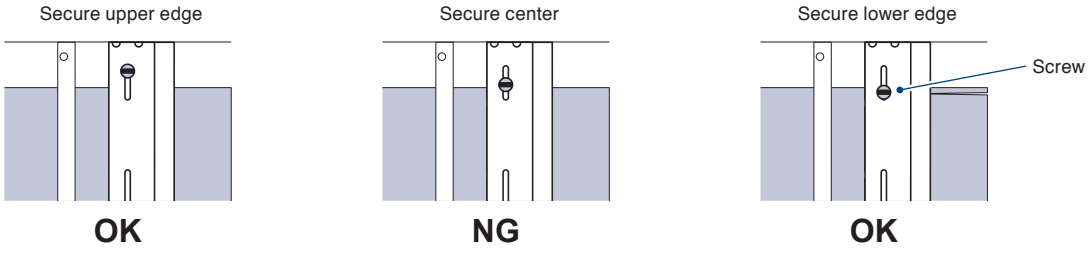
Width of edge cut is fixed to about 12.5 mm.

Align the slitter position to the scale in accordance with the media to be used.





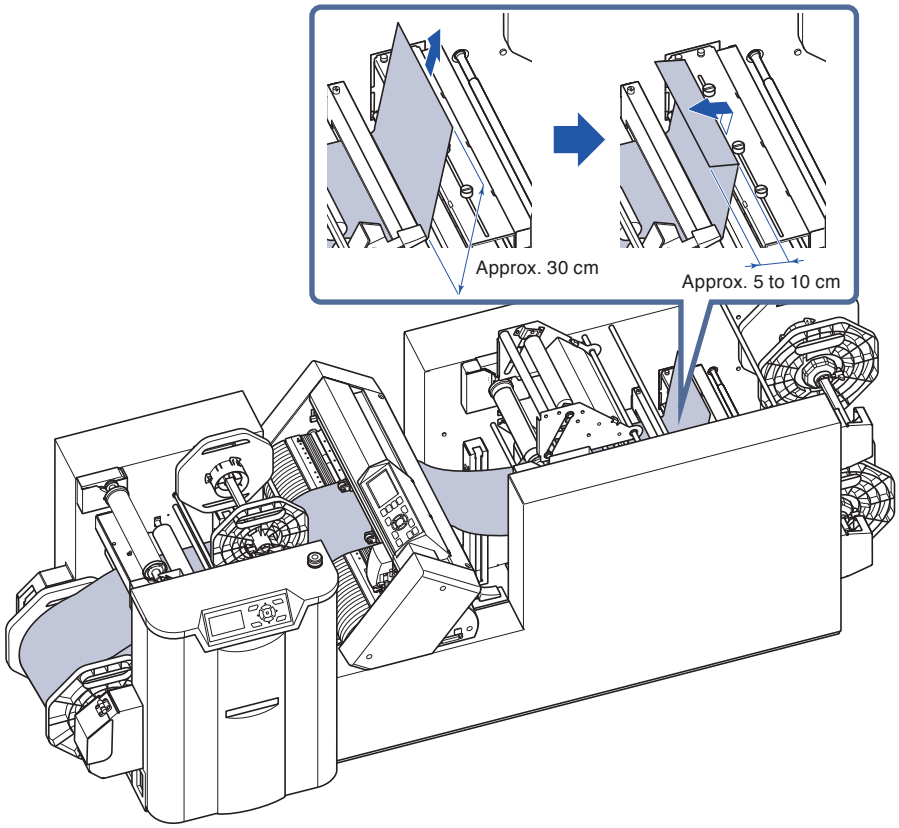
As shown in the figure below, secure the screw at the upper or lower when aligning the cutting position to the upper edge. Please do not align in position other than the upper and lower.



When using the slitter

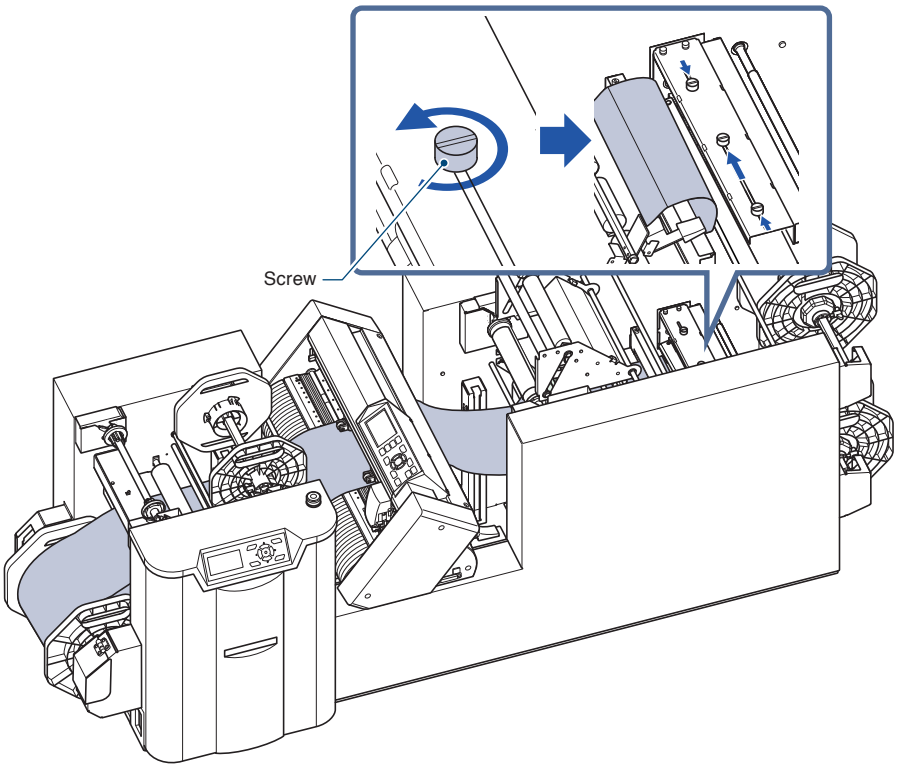
1 Pull out the media about 30 cm in front of the slitter.

Fold around of about 5 to 10 cm from the tip of the media.

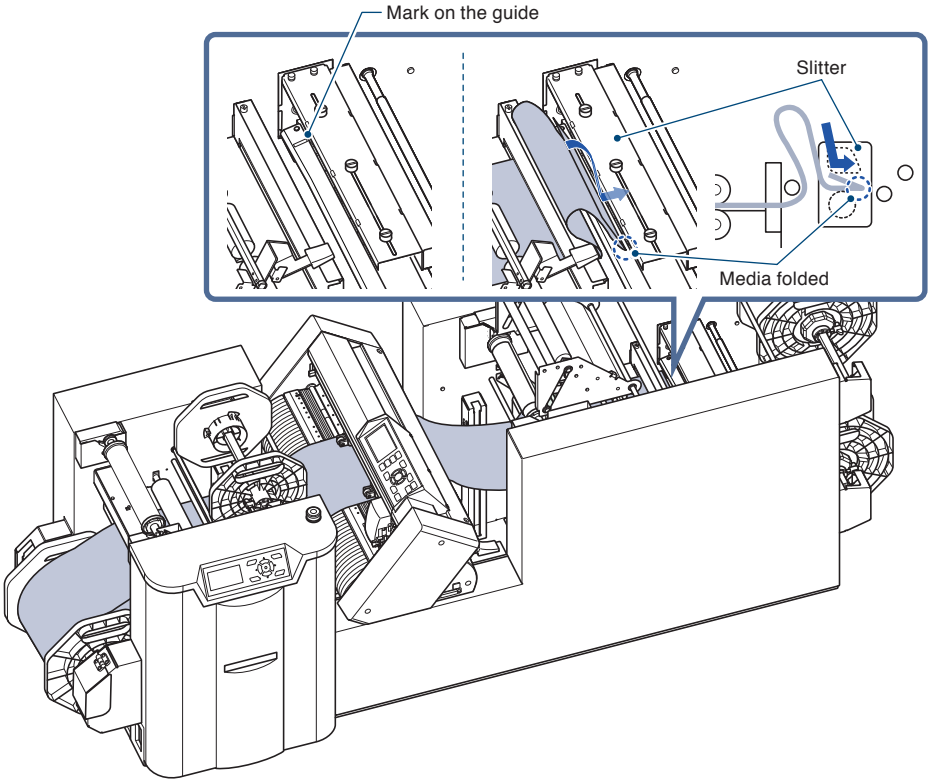


2 Loosen the screw and move the slitter blade to the position that you want to cut.

* Please refer to “Combinations of Slitter Position” described above.
* Please note that if tightening the screw before passing through the media, the media may not be able to set correctly.



3 Set the media on the inlet of the slitter in a state which the screw is loosened and the tip of media is folded (folded on the upper side).
Set it to the slitter along the mark on the guide.

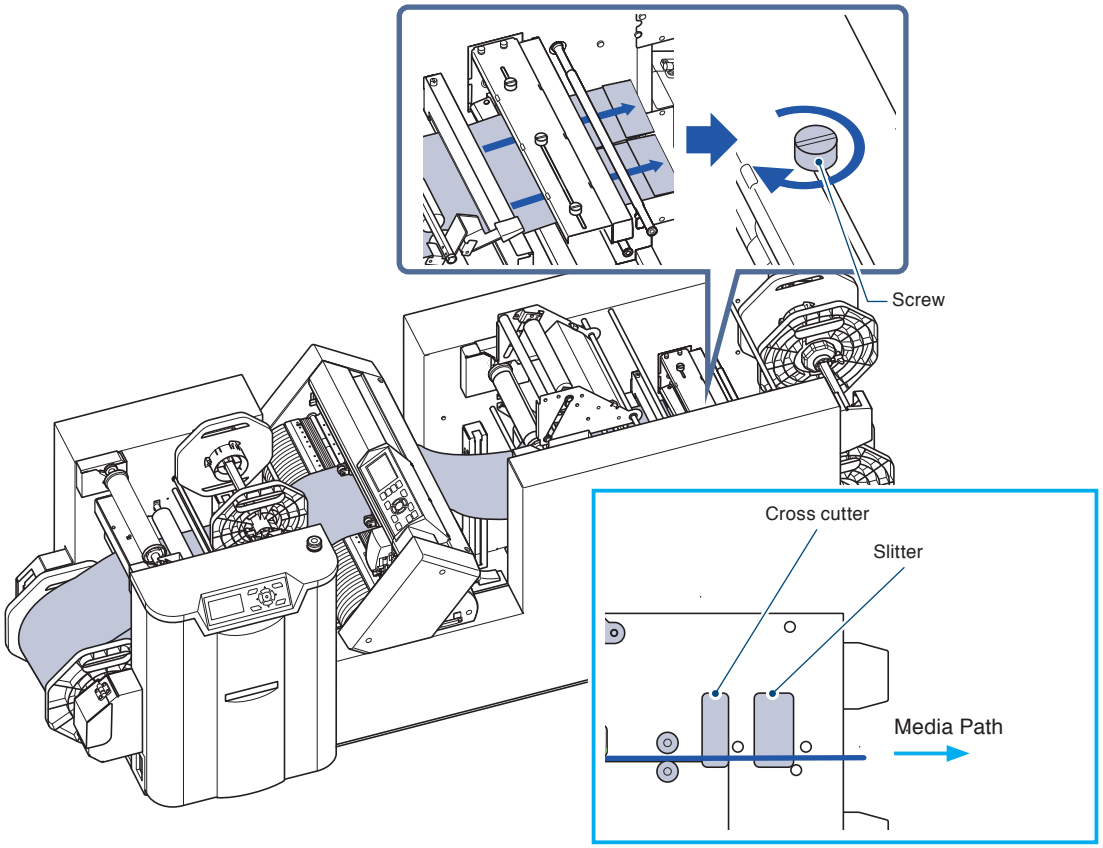


Tighten the screws after passing through the media as shown later.

4 Feed the media carefully while pressing [▶] key (Media Feed).

Pull out the media about 30 cm backward from the slitter.

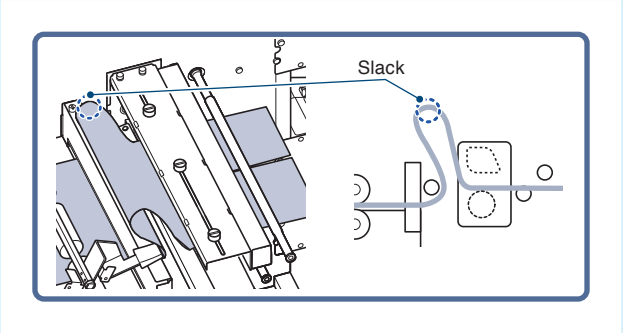
Tighten the screw of the slitter.



⚠ CAUTION

Please be careful there is no slack in the media between the cross cutter and slitter.

The media might not be able to successfully feed when there is slack.



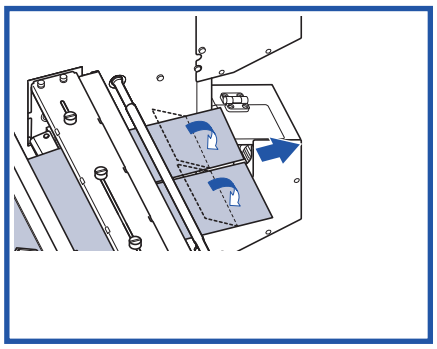
- When there is slack in the media

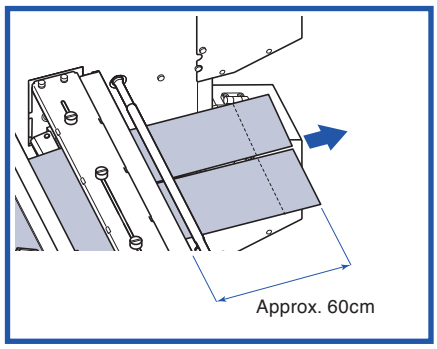
  Open the set lever of cutter unit and ejection roller lever and then feed the media by pressing [▶] key (FEED).

  It is possible to eliminate the slack by feeding the media in the slitter.

5 Extend the tip of media folded.

Pull out the media about 60 cm backward from the slitter to use the winding holder.





Set the winding roll holder referring to Step 16 in “Feed the label material (media)” described above.

* It is not possible to wind the only one side. Be sure to wind the both sides.

Complete the setting of media.

2.10 COND/TEST Key

To set the cutting conditions and confirm the cut test and the cutting area (width), press the COND/TEST key in the READY screen.

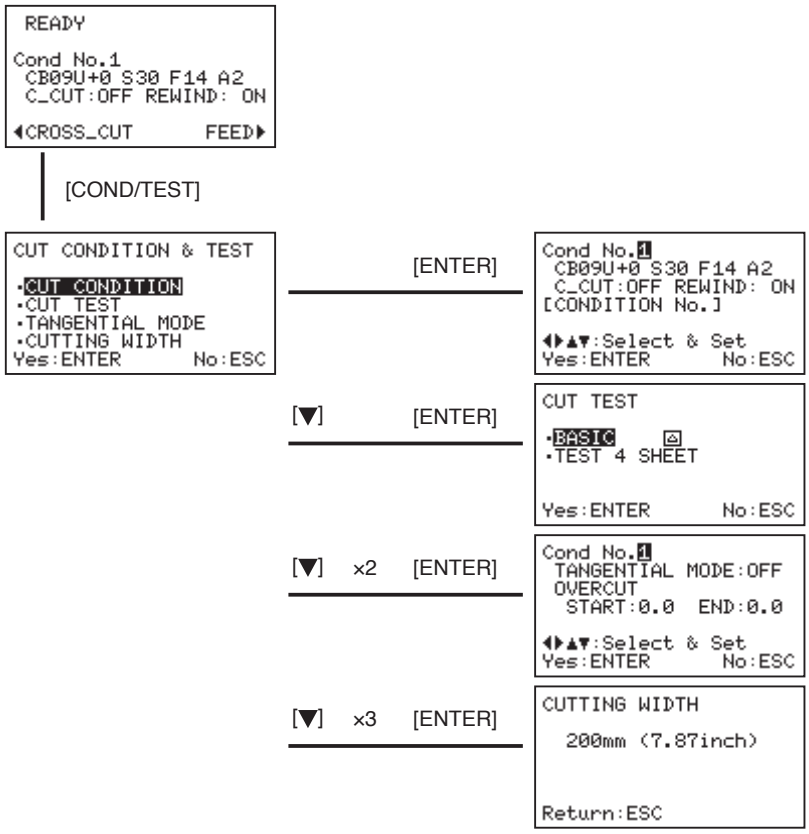
CUT CONDITION: Set the tool conditions, cross cut, rewind to cut the media.

CUT TEST: Perform the cut test.

TANGENTIAL MODE: Set Tangential Mode (thick media).

CUTTING WIDTH: Display the cutting area (width).

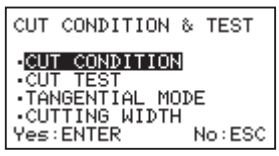
Screen Flow Through COND/TEST Key



Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

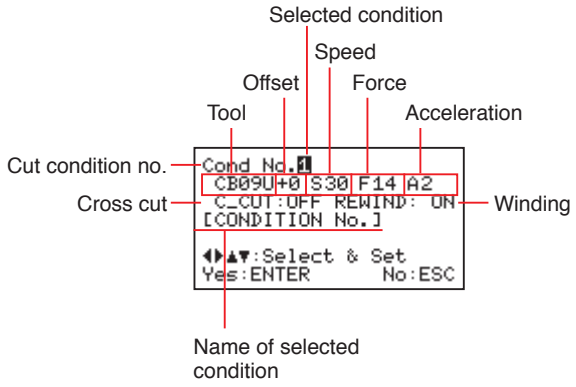


2 Press the POSITION (▼) keys to select the item in the screen above as necessary (The selected item is highlighted.). Then, press [ENTER] key.

2.11 Select the Tool Conditions

Set the “CUT CONDITION (Tool Condition) No.”, “TOOL”, “OFFSET”, “FORCE”, “SPEED”, and “ACCEL (ACCELERATION)”.

LCD Display



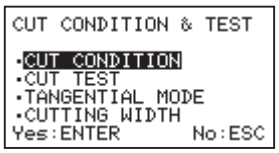
Selecting the Tool Condition No.

Eight settings (1 to 8) as the cutting condition can be stored. Settings can be changed in accordance with the label material (8 types) to be used.

Operation

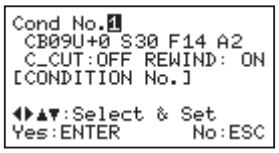
1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

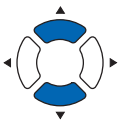


2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.



3 Press the POSITION (▲▼) key and select the setting(CONDITION No.).



4 Confirm the setting and press the [ENTER] key

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

5 Press the [ESC] key.

▷ It will return to READY screen.

Supplement

Pressing [MENU] key before pressing [ENTER] key returns to the READY screen without changing the settings.

Setting Tool Condition

This section will explain the settings for Tool, Offset, Speed, Force and Acceleration.

The tool conditions for cutting label materials are decided in the following 4 items:

- OFFSET
- FORCE
- SPEED
- ACCEL (ACCELERATION)

> ⚠ **CAUTION**
>
> - It may result in damaging the cutter blade or the cutting mat if the blade is extended too much. Make sure the blade length is set less than the thickness of the media.

Tool Conditions (Cutter Blade) for Each Media Type

Refer to the Cutter Blade Manual (supplied with the cutter unit).

Blade Part Nos., Displayed Blade Types, and CUTTER OFFSET Values

Refer to the Cutter Blade Manual (supplied with the cutter unit).

⚠ **CAUTION**

How to Improve Weedability

To improve the weed performance, please note the following.

- Select the correct blade for the application.

  Refer to the Cutter Blade Manual (supplied with the cutter unit).

- Use blades that are not worn.

  If the blade is worn, it will not be cleanly and the cut results will be difficult to weed.

- Adjust the blade-length and FORCE settings until only traces of the blade are left on the backing sheet.

  Specify a FORCE value that is as low as possible, but that still leaves faint traces on the backing sheet.

- Set the SPEED and ACCELERATION values as low as possible.

<Supplement>

Weeding refers to the removal of unwanted areas from the background after the media has been cut.

Supplement

- Completion will become coarser, but the cut time is decreased when the settings for the speed and acceleration is set higher.
  Especially with the large media, good cut quality might not be achieved by rumbling media. Decrease the values for the speed and acceleration settings in that case.
- Completion will become good, but the cut time will increase when the settings for the speed and acceleration is set smaller.

Setting the Tool

Set the tool to be used. Set it in accordance with the guidelines on the tool conditions of label material and tool type. (Refer to “Setting Tool Condition” described above.)

Tool type: “CB09U” and “CB15U”

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

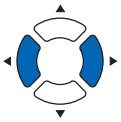
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

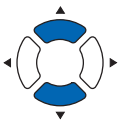
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the tool.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[TOOL TYPE]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to set the tool.



Settable tools are “CB09U” and “CB15U”.

Supplement

Pressing the [ESC] key (NO) returns to the CUT CONDITION & TEST screen without changing the settings.

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Offset

The OFFSET (TOOL OFFSET) setting is to adjust a tip of the blade length when cutting. Set it in accordance with the guidelines on the tool conditions of tool type. (Refer to “Blade model, displayed blade type and Offset value” described above.)

Refer to “2.13 Running Cutting Tests” to adjust the blade length.

Settable range: -5 to +5

Operation

1 Press the [COND/TEST] key in READY status.

▶ CUT CONDITION & TEST screen is displayed.

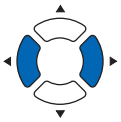
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▶ Cond No. selection screen is displayed.

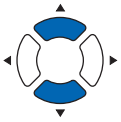
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◀▶▲▼:Select & Set
Yes:ENTER        No:ESC
```

3 Press the POSITION (◀▶) keys to select the TOOL OFFSET.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[TOOL OFFSET]

◀▶▲▼:Select & Set
Yes:ENTER        No:ESC
```

4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

- What is the Offset
  It will adjust the difference between the tip of the blade in the plunger and the center of the plunger. There are standard adjustment values for each cutter blades. Fine adjustment will be made to that standard values here. (Adjustment will be made with standard value as 0.)
- Settable range is -5 to +5.

5 Confirm the setting and press the [ENTER] key.

▶ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▶ It will return to READY screen.

Setting the Speed

Set the speed of the tool that is used in each of the condition numbers.

Setting range: 1 to 10 (1 cm/s step), 10 to 60 (5 cm/s step)

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

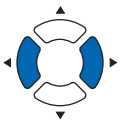
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

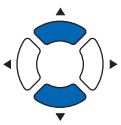
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the SPEED.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[SPEED cm/sec]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

Settable range is 1 to 10 (1 step)

15 ·· (5 steps) ··60 (cm/s)

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Force

Set the cutting force that is used in each of the condition numbers.

Setting range: 1 to 31

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

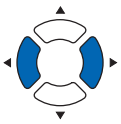
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

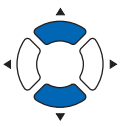
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the FORCE.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[FORCE]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

Settable range is 1 to 31.

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Acceleration

Set the acceleration of the tool that is used in each of the tool condition numbers.

Setting range: 1 to 3

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

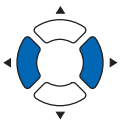
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

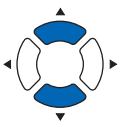
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the ACCEL.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[ACCEL]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

Settable range is 1 to 3.

When the value is reduced, the acceleration is lower and the quality is better.

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Cross Cut

Set whether or not to use the cross cut.
When set to the ON (used), the label that cut the contour and weeded is cross-cut near the cross cut mark when ejecting it.
The plurality of page data or label cut by selecting the COPY can be separated for each sheet.

> **⚠ CAUTION**
>
> - The separator (weeding) is required to use the cross cutter.
> - The cross cutter is used to cut the backing sheet of label material that has weeded by the separator. The label material with the backing sheet or label that stuck a laminate material may not be cut completely. At this time, the glue of the label material is attached to the blade, or the failure of the cross-cut section may be caused. Please do not cut other than the backing sheet.
> - When set to “ON” (used), the winding function is disabled automatically.

Operation

1 Press the [COND/TEST] key in READY status.

▶ CUT CONDITION & TEST screen is displayed.

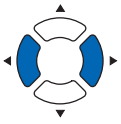
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▶ Cond No. selection screen is displayed.

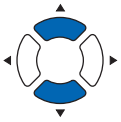
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the C_CUT.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CROSS CUT]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to set to “ON” (used) or “OFF” (not used) for the cross cutter.



5 Confirm the setting and press the [ENTER] key.

▶ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▶ It will return to READY screen.

Setting the Rewind (REWIND)

Set whether or not to use the rewind function.
When set to “ON” (used), the motor rotates when setting the winder bobbin in the winding part and the label is rewound.

> **⚠ CAUTION**
>
> - When the slitter is used, the media must be weeded.
> - The slitter is used to cut the backing sheet of label material that has been weeded. The label material with the backing sheet or label that stuck a laminate material may not be cut completely. At this time, the glue of the label material is attached to the blade, or the failure of the cross-cut section may be caused. Please do not cut other than the backing sheet.
> - When set to “ON” (used), the rewind function is disabled automatically.

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

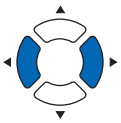
```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

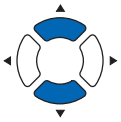
```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[CONDITION No.]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the REWIND LABEL.



```
Cond No.1
 CB09U+0 S30 F14 A2
 C_CUT:OFF REWIND: ON
[REWIND LABEL]

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

4 Press the POSITION (▲▼) keys to set to “ON” (used) or “OFF” (not used) for the REWIND.



5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Tangential Emulation (TANGENTIAL MODE)

The Tangential Emulation (TANGENTIAL MODE) is to adjust the blade when cutting.
Set the TANGENTIAL MODE to ON or OFF individually for each tool condition no. 1 to 8.
(Refer to “Outline of Tangential Emulation (TANGENTIAL MODE)” described below.)
Setting range: OFF, MODE1, and MODE2.

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

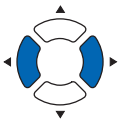
2 Press the POSITION (▲▼) keys to select the CUT CONDITION (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

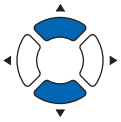
```
Cond No.1
 TANGENTIAL MODE:OFF
 OVERCUT
  START:0.0  END:0.0

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the TANGENTIAL MODE.

```
Cond No.1
 TANGENTIAL MODE:OFF
 OVERCUT
  START:0.0  END:0.0

◆▶▲▼:Select & Set
Yes:ENTER       No:ESC
```



4 Press the POSITION (▲▼) keys to set the TANGENTIAL MODE to “OFF”, “MODE1”, or “MODE2”.



5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

6 Press the [ESC] key.

▷ It will return to READY screen.

Setting the Length of Overcuts (OVERCUT)

Set the TANGENTIAL MODE to ON or OFF individually for each tool condition no. of 1 to 8.
When setting the length of overcut, the start and end of the overcut length should be set.
(Refer to “Outline of Tangential Emulation (TANGENTIAL MODE)” described below.)
Setting range: 0.0 to 0.9 mm

Operation

1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

```
CUT CONDITION & TEST

·CUT CONDITION
·CUT TEST
·TANGENTIAL MODE
·CUTTING WIDTH
Yes:ENTER       No:ESC
```

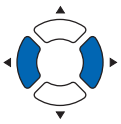
2 Press the POSITION (▲▼) keys to select the TANGENTIAL MODE (The selected item is highlighted.). Then, press [ENTER] key.

▷ Cond No. selection screen is displayed.

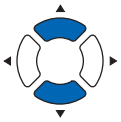
```
Cond No.1
 TANGENTIAL MODE:OFF
 OVERCUT
  START:0.0  END:0.0

◀▶▲▼:Select & Set
Yes:ENTER       No:ESC
```

3 Press the POSITION (◀▶) keys to select the OVERCUT START.

```
Cond No.1
 TANGENTIAL MODE:MDE1
 OVERCUT
  START:0.0  END:0.0

◀▶▲▼:Select & Set
Yes:ENTER       No:ESC
```



4 Press the POSITION (▲▼) keys to increase or decrease the setting value.

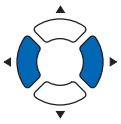


Supplement

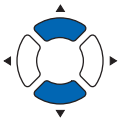
Settable range is 0.0 to 0.9 mm.

5 Press the POSITION (◀▶) keys to select the OVERCUT END.

```
Cond No.1
 TANGENTIAL MODE:MDE1
 OVERCUT
  START:0.0  END:0.0

◀▶▲▼:Select & Set
Yes:ENTER       No:ESC
```



6 Press the POSITION (▲▼) keys to increase or decrease the setting value.



7 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CUT CONDITION & TEST screen.

8 Press the [ESC] key.

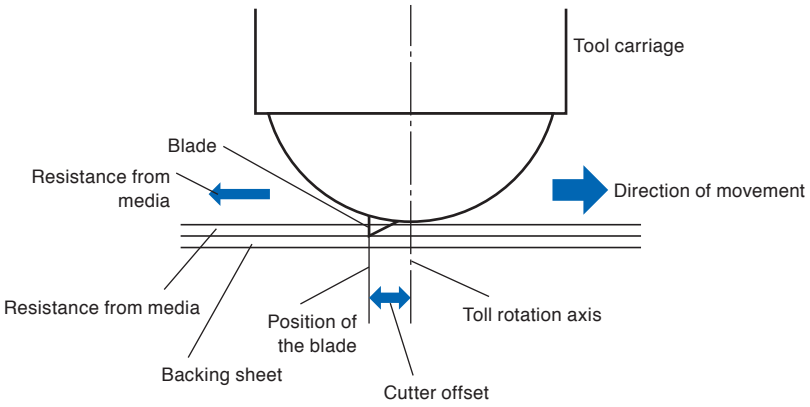
▷ It will return to READY screen.

Supplement

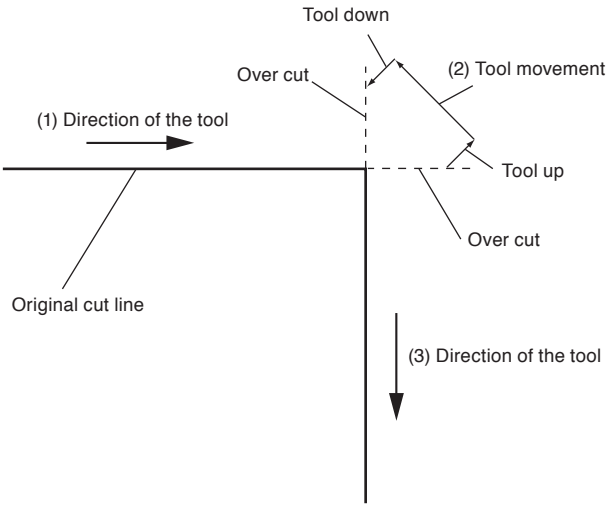
Settable range is 0.0 to 0.9 mm.

Outline of Tangential Emulation (TANGENTIAL MODE)

The blade needs to be facing toward the direction of cut when cutting the media. The tip of the blade is shaped as shown so the blade is facing the cutting direction even when it is cutting curved lines or corners. The tip of the blade is off from the rotation axis of the blade (CUTTER OFFSET). The blade will automatically turn and face the cutting direction when the tool carriage moves, because the blade is forced to move from the rotation center, and the blade tip gets resistance by the media.



The blade tip gets sunk into the media with 0.3 mm or thicker, making the blade hard to rotate. Especially for the corners where two straight lines meet, cutting becomes very hard because it cannot rotate smoothly.
Tangential emulation is a control method to precisely cut corners where two straight lines meet. (See below)
With the tangential emulation, the blade is advanced so it will overcut at the corners before raising the tool. Then, it will be lowered at the position slightly before the next line, and start to cut with slight overcut.



There are 2 modes for tangential emulation.

Mode 1 ..... Overcuts the start and end points and acute-angle corners to eliminate uncut sections. In addition, the cutter blade is moved on the surface of the medium during cutting when it is rotated significantly, ensuring sharp cutting unaffected by the hardness or thickness of the media.

Mode 2 ..... Overcuts the start and end points only. In addition, the cutter blade is rotated on the medium surface for the start cutting position only. Mode 2 uses simpler cutter control than Mode 1, and provides a shorter cutting time.

The length of the overcuts by tangential emulation can be set individually for start of the line and for end of the line.

2.12 Adjusting the Blade Length

When the blade length is not adjusted in accordance with the label material and cutter blade type to be used, optimal cut results are not obtained. Adjust the blade length accurately while performing a test cut.

⚠ CAUTION

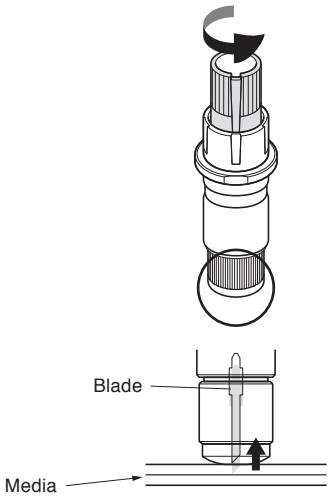
- To avoid bodily injury, handle cutter blades with care.
- It may result in damaging the cutter blade or the cutting mat if the blade is extended too much. Make sure the blade length is set less than the thickness of the media.

Supplement

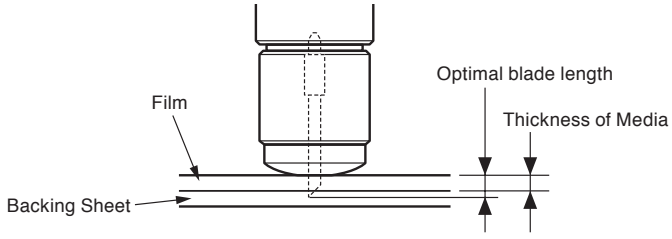
For the cut test, refer to “Running Cutting Tests” described below.

Operation

1 Align the blade tip to the tip of the cutter pen, and make it touch the surface of the media.



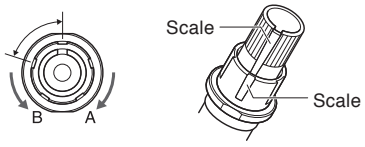
2 Extend the blade little by little to the thickness of the media. Optimal blade length is less than the thickness of film and backing sheet combined, but more than the thickness of the film.
Try cutting the film, and adjust so there is slight cutting on the backing sheet. If the backing sheet gets cut completely, reduce the blade length, and if the film does not get cut completely, increase the blade length.



Supplement

- Blade length can be changed by spinning the adjustor on the blade. Spinning it in the A direction pushes it out, while spinning it in the B direction pulls it in. One scale unit is equal to 0.1 mm.

Cutter blade moves approximately 0.1 mm turning one scale unit.



- Guideline to set the blade length

  For the thickness of the media refer to “Setting Tool Condition”.

2.13 Running Cutting Tests

Test cutting can be performed after making the tool, speed, force, and acceleration settings to ensure that the selected cutting conditions actually produce the desired cutting results.

Check how far the blade cuts into the media and how the corners are being cut.

If the cutting results are not satisfactory, adjust the various settings and repeat the test cutting until the optimal settings are achieved.

Cutting Test

Here, you can either cut one test pattern based on the current values, or do Four tests with ±1 values added.

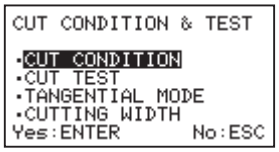
To make 1 cut with set value (CUT TEST : BASIC)

Operation

1 Load the media for test cutting in the machine.

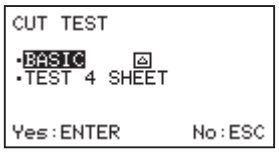
2 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.

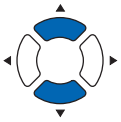


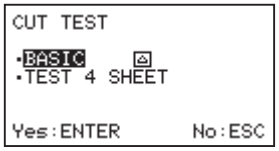
3 Press the POSITION (▲▼) keys to select the CUT TEST (The selected item is highlighted.). Then, press [ENTER] key.

▷ CUT TEST selection screen is displayed.

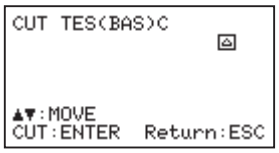


4 Press the POSITION (▲▼) keys to select the BASIC.

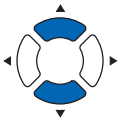




5 Press [ENTER] key.



6 Press the POSITION (▲▼) keys to move the tool carriage to the position to perform the CUT TEST.



Supplement

It is impossible to move to the feeding direction (X-axis movement) by operating the POSITION (◀ ▶) keys.)

7 Press [ENTER] key.

▶ Only one test cut pattern is cut.

⚠ CAUTION

Pressing [ENTER] key activates the tool carriage. Take care to ensure that you do not cut your fingers on the cutter blade.

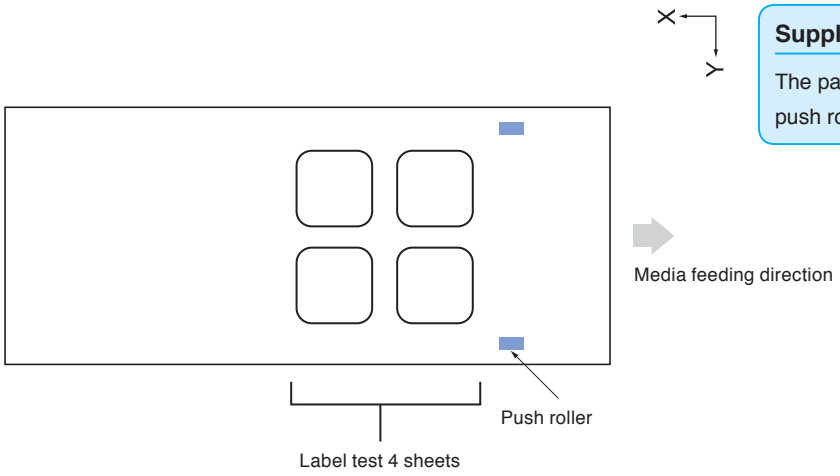
8 Press the [ENTER] key after completion.

▶ The CUT TEST screen is displayed.

9 Press the [ESC] key.

▶ It will return to READY screen.

When Cutting the Desired Rounded Rectangle (Label test 4 sheets)



Supplement

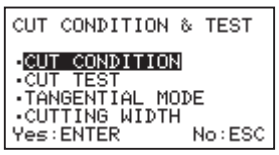
The pattern size depends on the position of the push roller.

Operation

1 Load the media for test cutting in the machine.

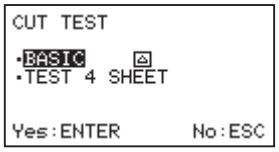
2 Press the [COND/TEST] key in READY status.

▶ CUT CONDITION & TEST screen is displayed.

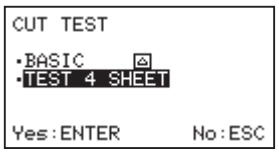


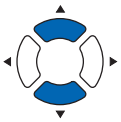
3 Press the POSITION (▲▼) keys to select the CUT TEST (The selected item is highlighted.). Then, press [ENTER] key.

▷ CUT TEST selection screen is displayed.

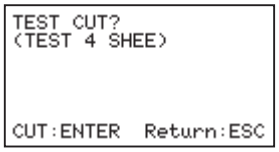


4 Press the POSITION (▲▼) keys to select the TEST 4 SHEET.





5 Press the [ENTER] key.



Supplement

It is impossible to change to the start position by operating the POSITION (▲▼◀▶) keys.

6 Press the [ENTER] key.

▷ The test cut patterns are cut.

⚠ CAUTION

Pressing [ENTER] key activates the tool carriage. Take care to ensure that you do not cut your fingers on the cutter blade.

7 Press [ENTER] key after completion.

▷ The CUT TEST screen is displayed.

8 Press the [ESC] key.

▷ It will return to READY screen.

Confirm the Results of the Cutting Test

Confirm the cutting test results, and adjust to optimal setting. Repeat cutting test and adjustment until optimal cut is achieved.

Adjustment of Offset

Check the corners of the triangle and rectangle. Refer to "Setting Tool Condition" and adjust the offset value if the corner is not cut properly or if it is cut too much.

Supplement

How to check offset

Check if the offset value is set correctly by following.

Not enough adjustment.
Increase the offset value.

Optimal offset value.

Too much adjustment.
Decrease the offset value.

Adjustment for Half Cutting

Peel off the triangle area, and adjust so it cuts slightly into the backing sheet.

If the backing sheet has been cut through, either the FORCE setting is too high or the cutter-blade tip is extended too far.

If the backing sheet shows only a few traces of the cutter blade, either the FORCE setting is too low or the cutter blade tip is not sufficiently extended.

Supplement

Refer to “Adjusting the Blade Length” and “Setting the Force” and adjust the tool conditions properly.

2.14 Stop during operation

During operation, the operation of the machine can be stopped by pressing [ESC] key.

In this case, the cutting operation is stopped at the separation of data/action and then the READY screen is displayed.

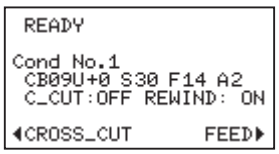
When [ESC] key is pressed in the middle of the cut, the label that has never been cut is not cut properly.

After stopping the operation, if you want to do it again, please perform by selecting the "COPY".

Operation

1 Press [ESC] key during operating.

When the cutting operation is stopped at the separation of data/action, the following screen is displayed.



2.15 Display Cutting Area

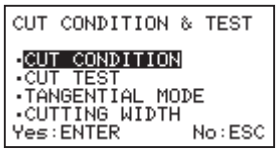
Check the width of cutting area.

Press [ESC] key after checking it.

Operation

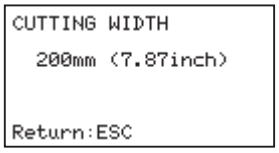
1 Press the [COND/TEST] key in READY status.

▷ CUT CONDITION & TEST screen is displayed.



2 Press the POSITION (▲▼) keys to select the CUTTING WIDTH (The selected item is highlighted.). Then, press [ENTER] key. The width of cutting area is displayed.

▷ CUTTING WIDTH selection screen is displayed.



3 Press [ESC] key.

▷ It returns to the CUT condition screen.

Chapter 3 Driver Software

This chapter explains the driver software.

PRODUCT SUMMARY

3.1 Driver Software
3.2 Driver Software Operation

3.1 Driver Software

Driver Software

The driver software (OPS680) is for use with the Windows DLC1000 driver.

By using this driver software, it will be possible to use the DLC1000 with Windows and to create labels with software that runs on Windows.

This machine (DLC1000) can output the only media (such as being printed by the Graphtec DLP1000) that registration marks and start mark with a predefined format are printed.

When cutting the media that is output from the DLP1000, we strongly recommend that the media is cut by using the cutter output function of DLP1000.

This driver software can be run on Windows Vista/7/8/8.1.

When using this driver software, please understand that it may not comply with functions in Windows based on the functional limitations of this machine. In addition, display screens from Windows 7 will be used to explain the menu.

Supplement

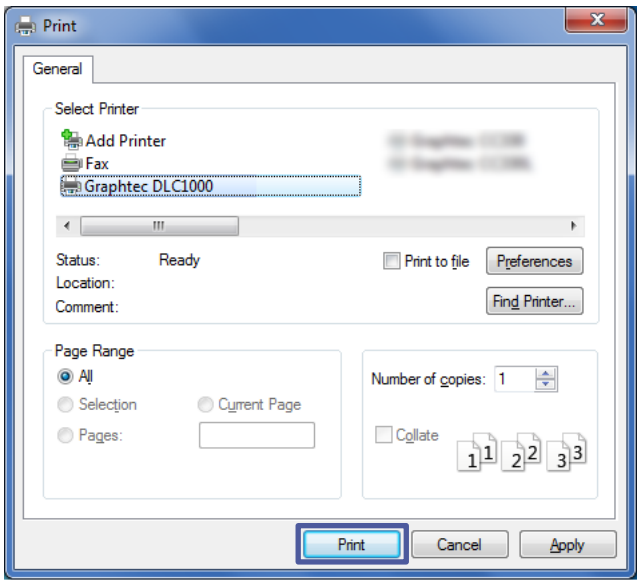
- Display screen varies depending on respective application software.
- When “bitmap print” appears in the Display screen, un-check the check box.
- When using software that can set the color mode, set to RGB color.

3.2 Driver Software Operation

This is a description with regard to the driver software use when printing label data created in the application software etc.

* The display screens are different in each application software.

Open the Print window



Select each of the following tabs and make settings.

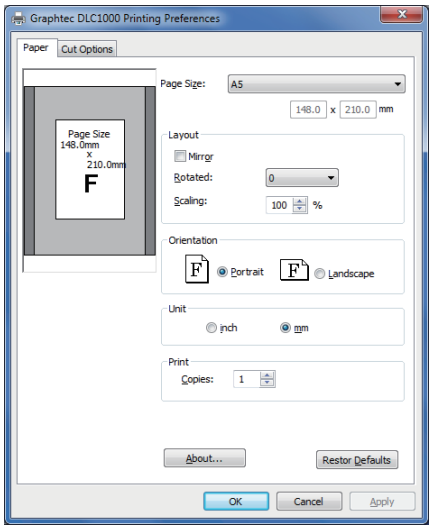
• [Paper] tab: Used to set Media width, Page size, Layout, Orientation, Unit of length, and Number of print copies.

• In [Cut Option] tab, set the Cut Line, etc.

Click [Print], and open the window.

[Paper] Tab

When you click [Paper] tab, the following screen appears.



Page Size ..... Set the page size of the driver in order to determine the paper size on the application when creating the label data.

There are the following 17 types of selectable page sizes.

“A5”, “A6”, “A7”

“4in x 3in”, “4in x 6in”, “6in x 4in”, “6in x 8in”

“User-definable size 1 to 10”

When the page size is defined, you can register a free size by changing the definition name.

Mirror ..... Used to cut the media after the label is mirror-reversed.

Rotated ..... Set one of OFF, 90-degree, 180-degree, or 270-degree.

Scaling ..... Set the scaling ratio of the data to be cut.

Orientation ..... Set the orientation to either “landscape” or “portrait”.

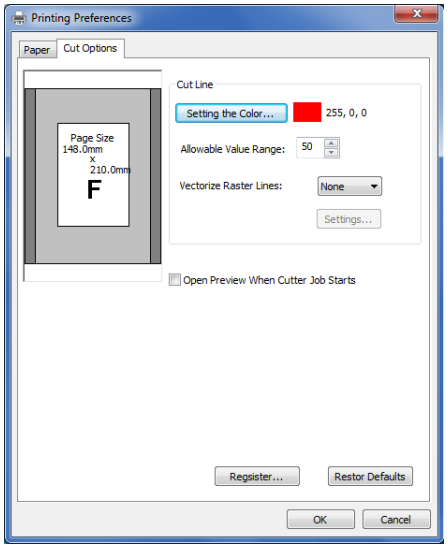
Unit ..... Change the unit used to display on the screen.

About ..... Click to display the copyright and version information of the driver software currently in use.

Restore Defaults ..... Restores the set value to the initial value.

*** The minimum size of the media feed direction of the DLC1000 main unit is 76.2 mm.**
Even if a value lower than 76.2 mm is set, the output will be 76.2 mm.

[Cut options] Tab



Setting the Color..... Setting the color of the line data, which carries out the label's half-cutting.

The cutline recognized by the driver is the color specified here and is only the thinnest line that can be set in the application.

The exact wording differs according to the application, but please use the thinnest line thickness such as zero and make the cutline as a hairline.

When thin lines with the same colors as those set for the cutlines are present on the data, depending on the application being used, said lines may be perceived as being cutlines and cut as a result. In such instances, either widen the width of the lines that were excessively cut, or change the data-based color of the lines set for the cutlines, followed by changing the color under “Select Cutline” in the driver to match the actual cutlines.

Color..... When clicking "Setting the Color" will be displayed. You can then choose from the basic colors, or add a new one through "Add to Custom Colors".

The allowable value range for a given color is set as ± 50 as default.

Allowable

Value Range..... The allowable value range with respect to color setting 255 is displayed, which can then be set in the 0 - 100 range.

For example, if the value is set to 50, up to 205 is recognized as a set color.

Vectorize

Raster Lines..... Depending on the application, the line processing method is different, and the cutline extraction may not be possible. Using this function allows the cutline extraction in some cases.

Typically, please use it with "None".

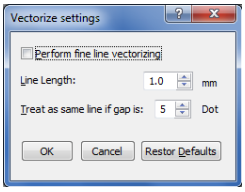
None: ..... Raster lines are not vectorized. Only data, which has been sent as vector lines from the application, is handled as Cutlines.

Method 1: ..... The same as "None", with one addition. Certain types of rectangular solid fill data are handled as thick vector line data.

Method 2: ..... The cut line is extracted from the raster data. Please use if there is the problem such as the divided quadrangles are output in Method 1.

Setting the vectorization

of raster line..... Only when the vectorization of raster line is set to “Process 2”, you can set the vectorization.



Perform fine

line vectorizing ..... Vectorizing is performed after the data has been converted to fine lines.

If the lines to be vectorized are too wide, the driver will not recognize them as Cutlines and they will not be output. If you want to output such lines as Cutlines, check this box.

Use this option with applications where fine lines cannot be output.

Line Length ..... Specifies the minimum length of the cutlines to be output.

The driver ignores lines which are shorter than this length, and does not output them.

The settings range is 0.1 mm - 5.0 mm.

Treat as same

line if gap is ..... Specifies the dot gap, which is acceptable as same line data.

Depending on the application used, gaps can occur in an output raster line, making it difficult to determine whether the segments are from the same line or separate lines. This option fills in the dots and enables output as one continuous line. However, if this value is too large, separate lines may be treated as one continuous line.

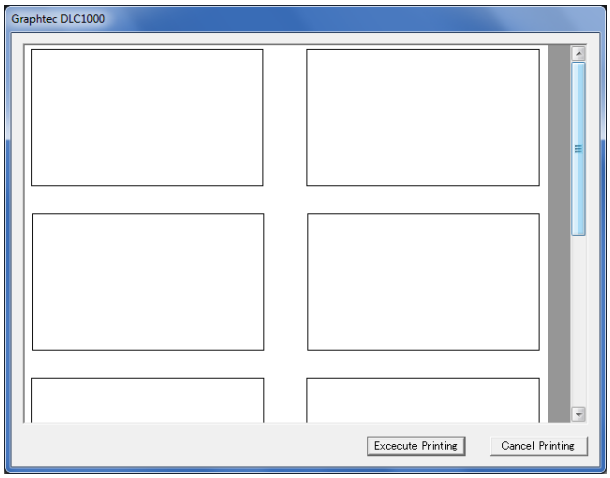
The settings range is 0 to 20 dots.

Previewing

the cut line..... Used to select whether or not to preview the cut line.

You can confirm the presence or absence of the cut line.

* If setting output port to file, the cut line is not displayed.



Restore Defaults ..... Restores the set value to the initial value.

Chapter 4 Menu Operation

This chapter describes basic operation, menu operation, and cut menu operation.

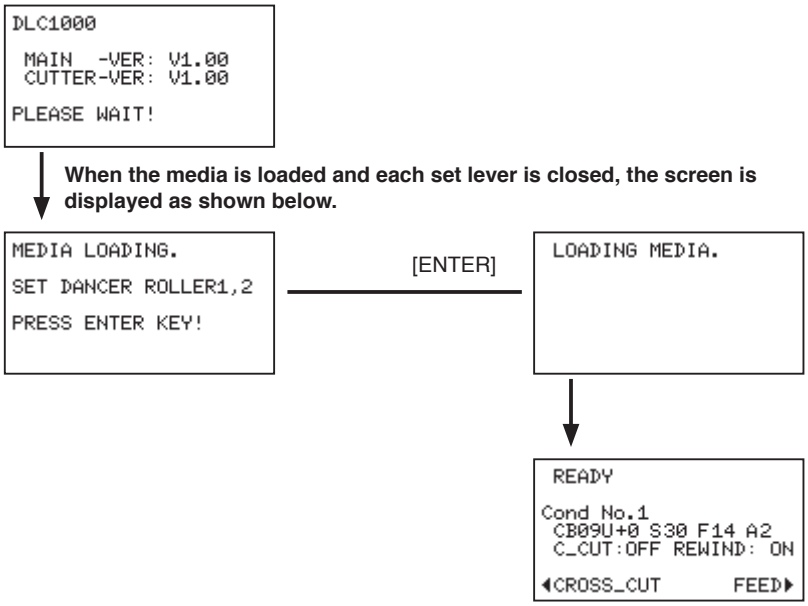
PRODUCT SUMMARY

4.1 Display When the Power is Turned On
4.2 Display During Processing
4.3 Display During Feeding (Media)
4.4 Menu Items
4.5 COPY / ENDING FEED
4.6 SEARCH START-MARK
4.7 CHANGE SETTINGS
4.8 NUMBER OF POINTS
4.9 SENSING SPEED
4.10 SENSOR OFFSET ADJUST
4.11 PAPER-WEIGHT
4.12 BAR CODE
4.13 FRAME CUT
4.14 OFFSET FORCE
4.15 DISTANCE ADJ.
4.16 LENGTH UNIT

4.1 Display When the Power is Turned On

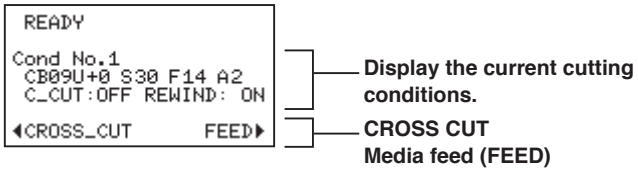
Turn on the power to the machine.

When the media is loaded and each set lever is closed, the screen is displayed as shown below.



READY Screen (READY)

The following items are displayed in the READY screen.



The Condition No. (Cutting conditions) that has been set is displayed.

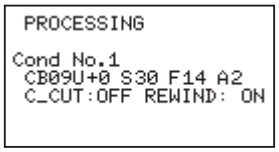
Supplement

- This screen is referred to as "Basic Screen: READY status" in the manual
- Using [MENU] and [COND/TEST] keys, set the settings such as cutting and communication conditions in this status.

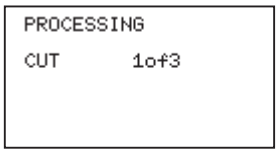
4.2 Display During Processing

Displays during processing are as follows;

Display during processing (When cut with the received data)

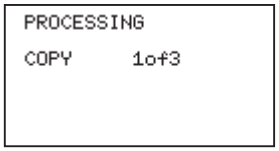


Processing for the multiple number (When cut with the received data and the multiple number specified)



Display the number of cuts.
(Current number/Total number)

Display during copying (When copying)



Display the number of copies.
(Current number/Total number)

When the multiple number is set, the current number is displayed.

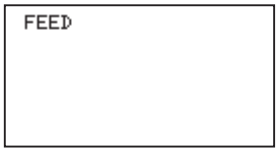
After the cut processing, it returns to the READY status.

4.3 Display During Feeding (Media)

The screens are displayed during feeding.

The following is displayed when the [▶] (Media Feed) key is pressed in the READY screen.

Feed menu



When [ENTER] key is pressed at the same time in this status, the media is fed even if you release the key.

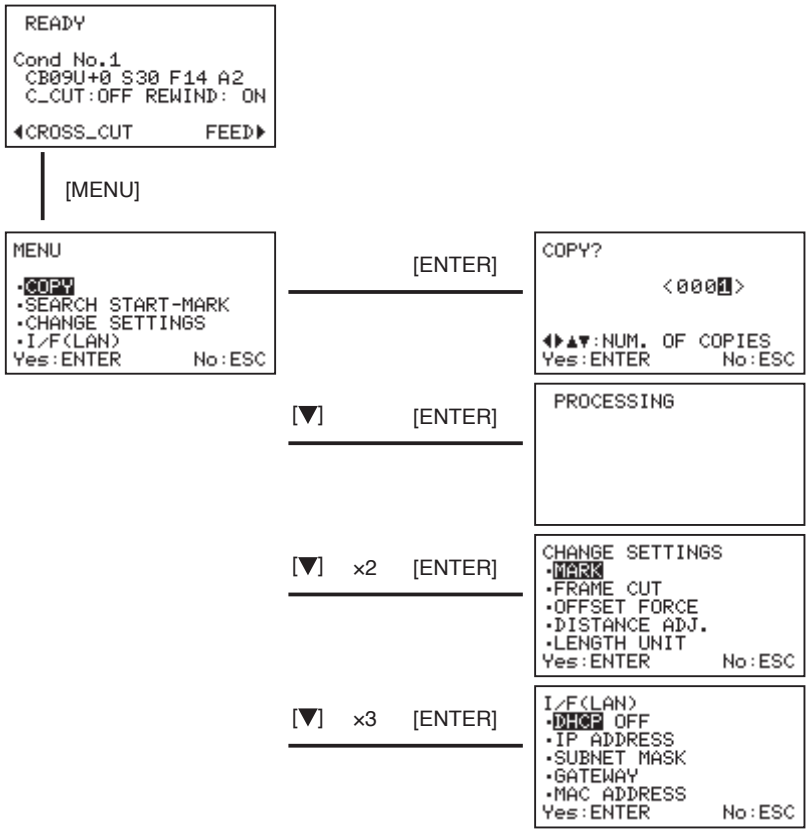
Pressing [▶] key again stops the media feed.

4.4 Menu Items

COPY:	The cutting operation is performed repeatedly using the transferred data. (Number of repetitions: Specify the number of copies.)
SEARCH START-MARK:	The START-MARK is searched. (You can check the cut start position.)
CHANGE SETTINGS:	Change the settings in this machine (DLC1000).
I/F (LAN):	Set the LAN interface. (Required when the LAN I/F is used.)

When [MENU] key is pressed in the READY screen, the following is displayed.

Menu Configuration



4.5 COPY / ENDING FEED

The designated number of copies of newest incoming data in memory is reproduced.
The designated number can be copied from 0001 to 9999.
When the copy operation is enabled, you can set the Ending Feed.

Operation

1 Try to cut once the data you want to cut.
(The cut data is stored in the buffer.)

2 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

·COPY
·SEARCH START-MARK
·CHANGE SETTINGS
·I/F(LAN)
Yes:ENTER        No:ESC
```

3 Press the POSITION (▲▼) keys to select “COPY” (The item is highlighted.). Then, press [ENTER] key.

▷ COPY screen is displayed.

```
COPY?

          <0001>

◆▶▲▼:NUM. OF COPIES
Yes:ENTER        No:ESC
```

Supplement

When there is no data to be output, the following is displayed.

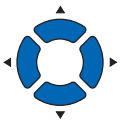
```
NO DATA for COPY



Return:ESC
```

Pressing [ESC] key (RETURN) returns to previous screen.

4 With the POSITION keys (◀▶), select the digit you want to enter, then with the POSITION keys (▲▼), change the number (0 to 9), and set the number of copies.

Execute the COPY with the ENTER key.

Press the ESC key to return to the previous screen.



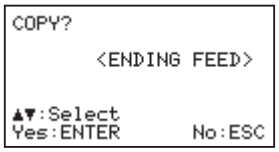
If you want to stop in the middle of the copy, press [ESC] key. After a while, it returns to the READY screen.

Supplement

Pressing the POSITION (▼) key from "0001" allows you to set the "Ending Feed".

5 Perform the Ending Feed.
Press the POSITION (▼) key from "<0001> Copies" in the following screen.

▶ “ENDING FEED” is displayed in the Copy screen



When the [ENTER] key is pressed, the label material cut by the cutter unit is fed to the ejection part.

Feeding operation (approx.1 m) is executed.

After completing the cutting operation with the cutter unit, it is used to eject the data that is between to the cutter unit and cross cutter.

In this case, The cutter unit is not used to cut.

Pressing the ESC key returns to previous screen.

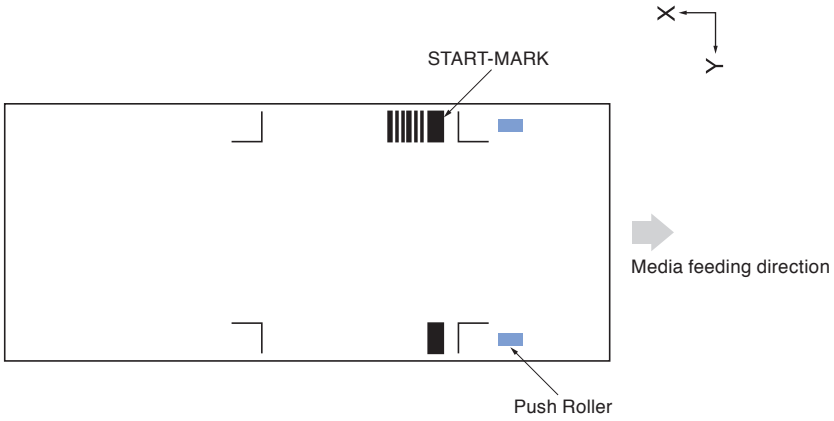
Press the POSITION (▲▼) keys to display the “<0001> Copies” in the screen that indicates the number of copies.

4.6 SEARCH START-MARK

The START-MARK is searched from current media set position using the sensor of the cutter unit.

You can check the first cut start position.

Feed the media to where the START-MARK of the data you want to cut passes the vicinity of the dancer roller 1.



Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

·COPY
·SEARCH START-MARK
·CHANGE SETTINGS
·I/F(LAN)
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select “SEARCH START-MARK” (The item is highlighted.). Then, press [ENTER] key.

▷ PROCESSING screen is displayed.

```
PROCESSING
```

The START-MARK is searched.

When the START-MARK is sensed, the machine stops the search near the sensed position.

After sensing, it returns to the MENU screen.

⚠ CAUTION

The cutter unit starts operating as soon as this function is set. To avoid injury to yourself, keep your hands, face and other obstacles out of the vicinity of any moving parts.

Supplement

If the START-MARK is not sensed, the following message is displayed.

```
No starting mark.


Yes:ENTER
```

Make sure the set status of media, the position of push roller, and print status of START-MARK. Next, to sense the START-MARK again, press [ENTER] key (Yes).

4.7 CHANGE SETTINGS

Set the following settings from the CHANGE SETTINGS;

MARK (registration marks), FRAME CUT, OFFSET FORCE, DISTANCE ADJ. (Distance Adjustment), and LENGTH UNIT.

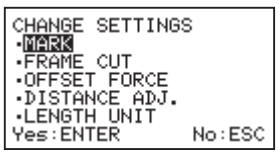
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.



Perform the various settings in the screen above.

4.8 NUMBER OF POINTS

Set the number of registration marks from the “NUMBER OF POINT”.

The number of registration marks that has been set is loaded to the cutter unit and the media is cut in accordance with the registration marks.

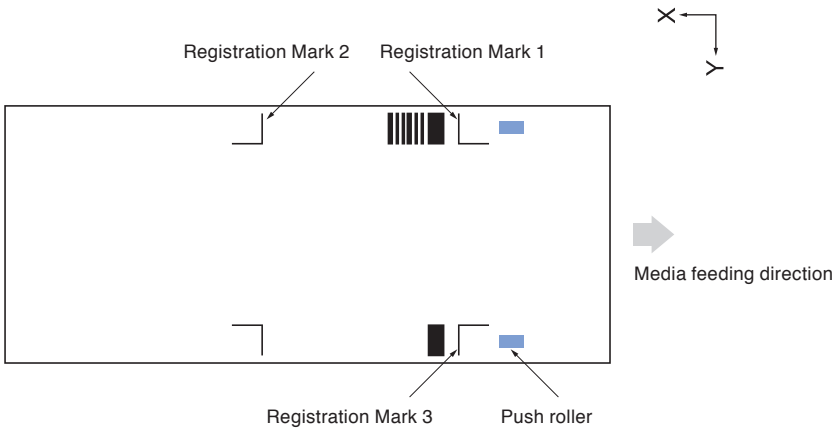
Select the axis adjustment (inclination adjustment) from “1POINT”, “3POINT” or “OFF”.

To perform the axis adjustment (inclination adjustment) and distance adjustment, use as follows.

1POINT ..... For 1-point adjustment, the axis is adjusted, based on the position of data start point (origin point).

3POINT ..... For 3POINT adjustment, the axis is adjusted, based on the three registration marks of the origin, X-axis direction, and Y-axis direction.

OFF ..... The Axis is adjusted, based on the position of data start point (origin point) (This is high-speed version of the 1POINT). Operating time is shorter, however the position error may be greater than the 1POINT.



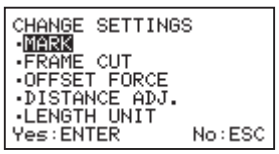
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

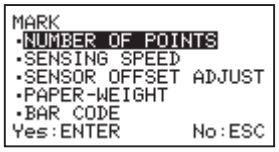
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.



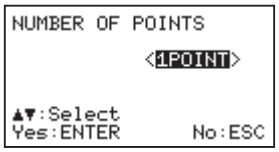
3 Press the POSITION (▲▼) keys to select “MARK” (The item is highlighted.). Then, press [ENTER] key.

▷ MARK of the screen is displayed.

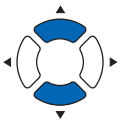


4 Press the POSITION (▲▼) keys to select “NUMBER OF POINTS” (The item is highlighted.). Then, press [ENTER] key.

▷ NUMBER OF POINTS screen is displayed.



5 Press the POSITION (▲▼) keys to set the number of registration marks.



Settable NUMBER OF POINTS are “1POINT”, “3POINT”, and “OFF”.

Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

6 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to MARK.

7 Press the [MENU] key.

▷ It will return to READY screen.

4.9 SENSING SPEED

Set the registration mark detection speed from “SENSING SPEED”.

Usually, set to “NORMAL”.

Due to the media to be sensed and the registration mark printing state, the machine may fail to sense the registration mark. In such the case, “NORMAL” should be changed to “ISM”. By doing so, the sensing performance of the registration mark will be improved.

When the "NORMAL" is set to the "ISM", the reading time of registration mark reading takes longer than "NORMAL".

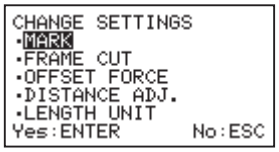
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

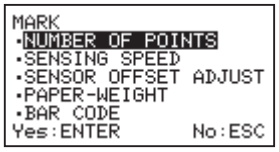
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.



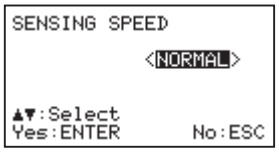
3 Press the POSITION (▲▼) keys to select “MARK”. Then, press [ENTER] key.

▷ MARK screen is displayed.

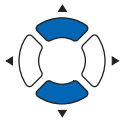


4 Press the POSITION (▲▼) keys to select “SENSING SPEED”. Then, press [ENTER] key.

▷ SENSING SPEED screen is displayed.



5 Press the POSITION (▲▼) keys to set the sensing speed.



Settable sensing speed as “SENSING SPEED” are “NORMAL” and “ISM”.

6 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to MARK.

7 Press the [MENU] key.

▷ It will return to READY screen.

Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

4.10 SENSOR OFFSET ADJUST

Adjust the position of the registration mark sensor from the SENSOR OFFSET ADJUST.
Usually, set the setting values of both X and Y to “0.0”.
You can adjust the cut position if the cut position is shifted always in the same direction.

Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

·COPY
·SEARCH START-MARK
·CHANGE SETTINGS
·I/F(LAN)
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.

```
CHANGE SETTINGS
·MARK
·FRAME CUT
·OFFSET FORCE
·DISTANCE ADJ.
·LENGTH UNIT
Yes:ENTER        No:ESC
```

3 Press the POSITION (▲▼) keys to select “MARK”. Then, press [ENTER] key.

▷ MARK screen is displayed.

```
MARK
·NUMBER OF POINTS
·SENSING SPEED
·SENSOR OFFSET ADJUST
·PAPER-WEIGHT
·BAR CODE
Yes:ENTER        No:ESC
```

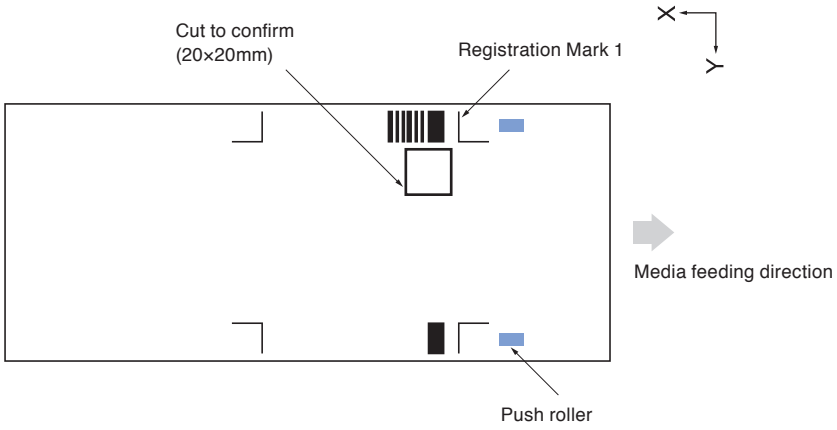
4 Press the POSITION (▲▼) keys to select “SENSOR OFFSET ADJUST”. Then, press [ENTER] key.

▷ SENSOR OFFSET ADJUST screen is displayed.

```
SENSOR OFFSET ADJUST

READ MARK and
 CUT TEST?


Yes:ENTER        No:ESC
```

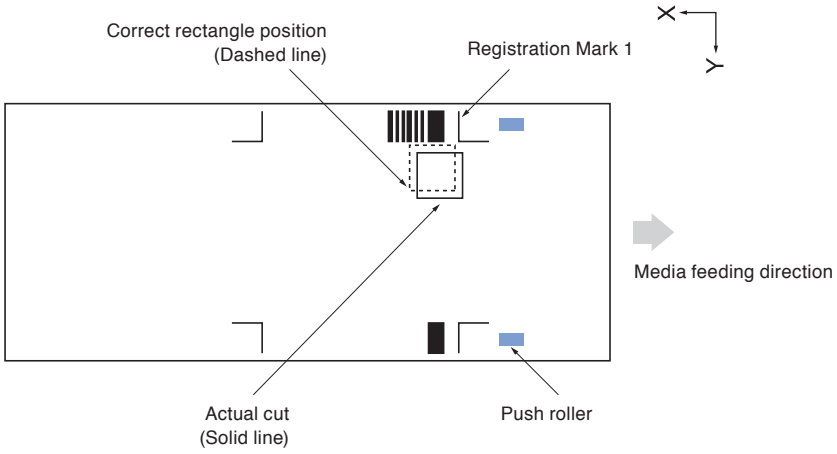
6 Press [ESC] key (NO) to display the adjustment value setting menu without cutting with adjustment patterns. (The screen goes to “Numerical entry of registration mark position adjustment”).

When [ENTER] key is pressed, the registration mark of origin position (Registration Mark 1) is sensed and the media is cut to confirm it (0 x 20 mm from the origin position)



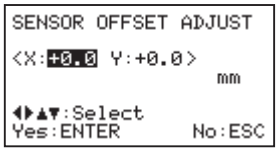
Check this cut position (deviation volume) and then go to “Numerical entry of registration mark position adjustment”.

Numerical entry of registration mark position adjustment



7 Perform the numerical entry of registration mark position adjustment.

▷ SENSOR OFFSET ADJUST screen is displayed.



The range of X and Y are -3.0 to +3.0 mm.

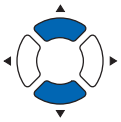
When the inch unit is used, adjust the position of registration mark sensor by setting both X and Y to the range of -0.118 to 0.118 inches.

8 When actual cut position is shifted as shown with rectangle (Solid line) in the figure, set X value to negative (-) value and set Y value to positive (+) value as deviation amount to move (adjust) the rectangle to the correct position (Dashed line).

⚠ CAUTION

- Do not use for other than the registration mark position adjustment. When a value is set to anything other than adjustment purposes, the registration mark sensing error will occur.
- Since some error occurs in the sensing of the registration mark, 0.2 mm or less value may not be reflected in the cut position.

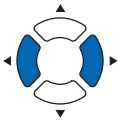
9 Press the POSITION (▲▼) keys to increase or decrease the X value.

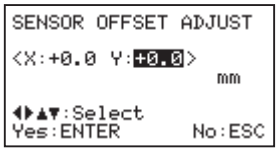


Supplement

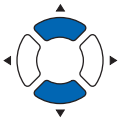
Settable range is -3.0 to +3.0 mm.

10 Press the POSITION (◀▶) keys to select “Y”.





Press the POSITION (▲▼) keys to increase or decrease the Y value.



Supplement

Settable range is -3.0 to +3.0 mm.

11 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to MARK.

12 Press the [MENU] key.

▷ It will return to READY screen.

4.11 PAPER-WEIGHT

Set the paper restrain from the “PAPER-WEIGHT”.

Usually, set to “ON”.

Due to the media to be sensed and the registration mark printing state, the machine may fail to sense the registration mark. In such the case, “OFF” should be changed to “ON”. By doing so, the sensing performance of the registration mark will be improved.

When you do not want to use the PAPER-WEIGHT depending on the conditions such as the media to be sensed and the registration mark printing state, set to “OFF”.

The paper weight is located at the bottom of the tool carriage (Invisible from the outside).

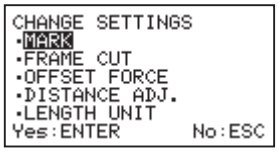
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

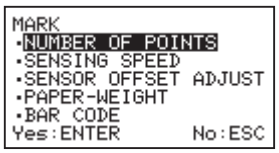
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.



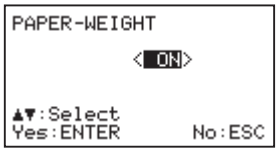
3 Press the POSITION (▲▼) keys to select “MARK”. Then, press [ENTER] key.

▷ MARK screen is displayed.

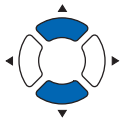


4 Press the POSITION (▲▼) keys to select “PAPER-WEIGHT”. Then, press [ENTER] key.

▷ PAPER-WEIGHT screen is displayed.



5 Press the POSITION (▲▼) keys to select either “ON” or “OFF”.



Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

6 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to MARK.

7 Press the [MENU] key.

▷ It will return to READY screen.

4.12 BAR CODE

Set the bar code from the “BAR CODE”.

When the bar code is printed by the DLP1000, the bar code to identify the print data can be added.

Usually, set to “ENABLE”.

Due to the media to be sensed and the bar code printing state, the machine may fail to sense the bar code. In such the case, “ENABLE” should be changed to “DISABLE”. By doing so, the sensing of the registration mark is not performed.

If set to "ENABLE", the machine reads in the printed bar code with the sensor in the cutter unit and determines if the code matches with the code stored in the transferred data.

If matched, the cutting operation is performed continuously.

If not matched, the cutting operation is suspended and the message is displayed and then a key input is requested.

When “DISABLE” is set, the match determination of bar code, such as when to set to “ENABLE”, is not performed. (Since it does not take action to sense the bar code, the total processing time will be shorter.)

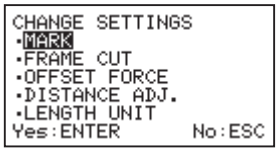
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

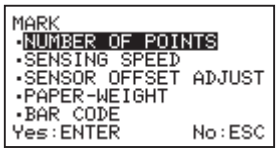
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.



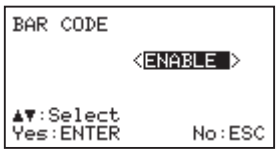
3 Press the POSITION (▲▼) keys to select “MARK”. Then, press [ENTER] key.

▷ MARK screen is displayed.

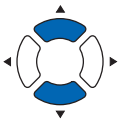


4 Press the POSITION () keys to select “BAR CODE”. Then, press [ENTER] key.

▷ BAR CODE screen is displayed.



5 Press the POSITION (▲▼) keys to select either “ENABLE” or “DISABLE”.



Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

6 Confirm the setting and press the [ENTER] key.

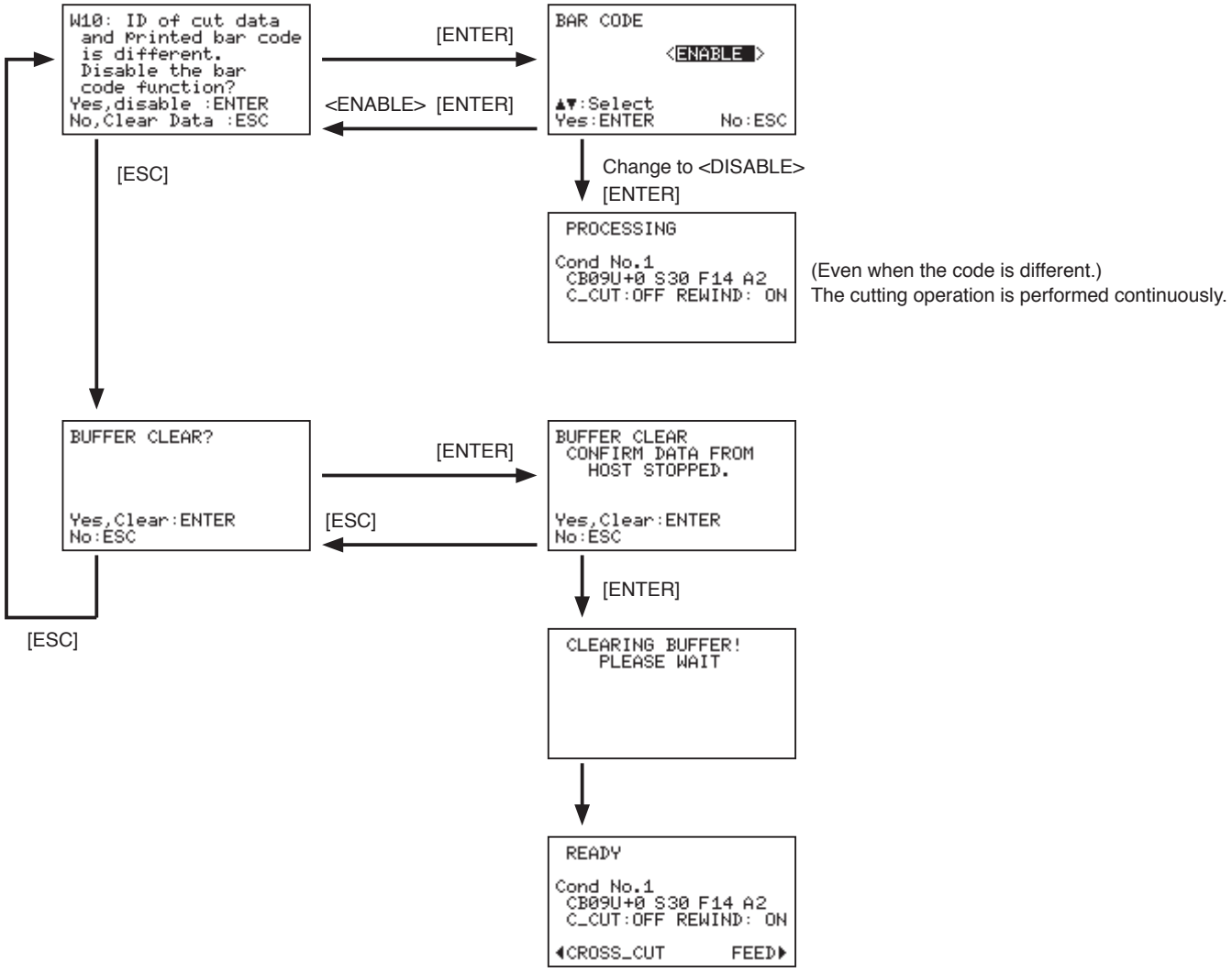
▷ Setting will be set, and it will return to MARK.

7 Press the [MENU] key.

▷ It will return to READY screen.

If the bar code does not match

When “BAR CODE” is set to "ENABLE" and the machine reads in the printed bar code with the sensor in the cutter unit and then the code does not match with the code stored in the transferred data, the cutting operation is suspended and a key input is requested after the following message (W10) is displayed.



4.13 FRAME CUT

Set the frame cut from the “FRAME CUT”.

Usually, set to “OFF”.

Set whether or not to use the frame cut (outer frame cut).

When setting “FRAME CUT” to “ON”, the outer frame is cut in accordance with the specified cutting area.

Supplement : What is the frame cut (outer frame cut).

It may be difficult to weed by the separator unit due to the label shape to be created and the label material (25 µm thickness materials or paper-based materials). In such the case, you need to be peeled off later manually. The post-processing is much easier by placing the cut line to the outer frame on the sheet, weeding with the separator unit and cross-cutting it.

* When the frame cut is enabled, the weeding may not be performed in the separator unit.

* If the length of the media feeding direction is 300 mm or greater, the frame cut will be OFF.

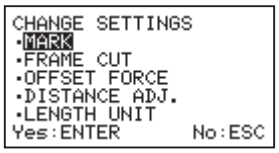
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

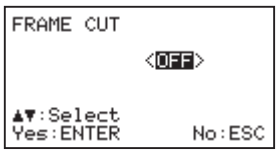
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.

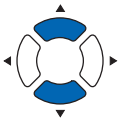


3 Press the POSITION (▲▼) keys to select “FRAME CUT”. Then, press [ENTER] key.

▷ FRAME CUT screen is displayed.



4 Press the POSITION (▲▼) keys to select either “OFF” (not used) or “ON” (used).



5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CHANGE SETTINGS.

6 Press the [MENU] key.

▷ It will return to READY screen.

Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

4.14 OFFSET FORCE

Set the offset force from the “OFFSET FORCE”.

To confirm the blade direction at the time of initial operation, set the offset force of the initial blade control.

The initial value is set to "4". If the number is larger, the cutting pressure will be higher.

To point the blade tip to the correct cut direction, perform the cutting operation only slightly before cutting. In this case, set the lower cutting pressure than usual as OFFSET FORCE because that high cutting pressure is not required.

Setting range: 1 to 31

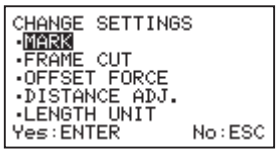
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

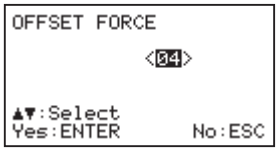
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.

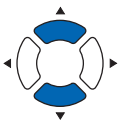


3 Press the POSITION (▲▼) keys to select “OFSET FORCE”. Then, press [ENTER] key.

▷ OFFSET FORCE screen is displayed.



4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

Settable range is 1 to 31.

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CHANGE SETTINGS.

6 Press the [MENU] key.

▷ It will return to READY screen.

4.15 DISTANCE ADJ.

Adjust the distance from the “DISTANCE ADJ”.

The DISTANCE ADJ. is used to correct any discrepancies in the line lengths of the cutting area, which the discrepancies is generated due to the media type and thickness to be used. The DISTANCE ADJ. is used to correct the media feeding direction only.

DISTANCE ADJ. is disabled when the “NUMBER OF POINT” is set to “3POINT”.

DISTANCE ADJ. value is -2.00% to +2.00%. Set the value in 0.05 increments.

(Reference example)

[When the “NUMBER OF POINT” is set to “1POINT” or “OFF” and the cutting results of the media feeding direction is shorter.]

For example, the cutting operation is performed in 99 mm rather than 100 mm, The setting value should be set to +1.00%.

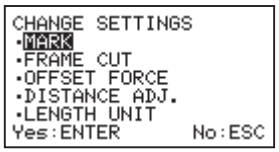
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

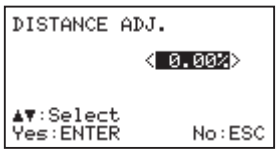
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.

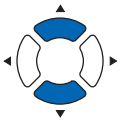


3 Press the POSITION (▲▼) keys to select “DISTANCE ADJ.”. Then, press [ENTER] key.

▷ DISTANCE ADJ. screen is displayed.



4 Press the POSITION (▲▼) keys to increase or decrease the setting value.



Supplement

Settable range is -200% to +200%.

5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CHANGE SETTINGS.

6 Press the [MENU] key.

▷ It will return to READY screen.

4.16 LENGTH UNIT

Set the display length unit from the “LENGTH UNIT”.

The display unit in coordinate values indicated on the display can be switched from/to millimeters to/from inches.

The switched length unit is reflected in the items of position adjustment and numeric entry of registration mark. Other units are fixed in the meter-based unit.

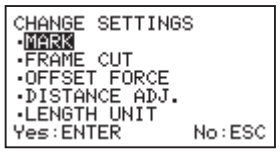
Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

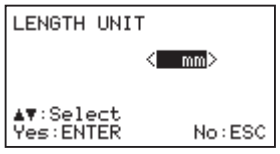
2 Press the POSITION (▲▼) keys to select “CHANGE SETTINGS” (The item is highlighted.). Then, press [ENTER] key.

▷ CHANGE SETTINGS screen is displayed.

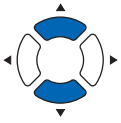


3 Press the POSITION (▲▼) keys to select “LENGTH UNIT”. Then, press [ENTER] key.

▷ LENGTH UNIT screen is displayed.



4 Press the POSITION (▲▼) keys to select either “mm” or “inch”.



5 Confirm the setting and press the [ENTER] key.

▷ Setting will be set, and it will return to CHANGE SETTINGS.

6 Press the [MENU] key.

▷ It will return to READY screen.

Supplement

Pressing [ESC] key (NO) returns to previous screen without changing the settings.

Chapter 5 Setting the Interfaces

This chapter provides the various settings for the Interfaces.

PRODUCT SUMMARY

5.1 SETTING INTERFACE
5.2 I/F LAN

5.1 SETTING INTERFACE

This section will explain how to program the interface.
There is a USB/network (LAN) interface in this machine, and each switch will run automatically.

The interface setting is needed only when connecting with a network (LAN) cable.

It is not needed when connecting with a USB cable.

When using this machine, it will be necessary to install the driver software in your computer. Refer to "Setup Manual" regarding installing the driver software.

USB Interface

When using the USB interface, make sure the driver software is installed in your computer.

> ⚠ **CAUTION**
>
> Operation cannot be guaranteed in the following cases:
> - When connection has been made to a USB hub or an add-on USB board
> - When you are using a custom-built computer or one that you have modified
> - When a driver other than the one provided was used

> Cautions when USB 3.0 interface is used:
> - Note that some personal computer equipped with the USB 3.0 interface may not be backward-compatible with USB2.0 interface.

> Be sure to observe the following:
> - Do not connect or disconnect the USB cable while you are installing the USB driver
> - Do not connect or disconnect the USB cable while starting up the computer or the printer. Do not disconnect the USB cable within a 5-second period of connecting it.
> - Do not connect or disconnect the USB cable while data is being transferred. Do not connect our multiple products to a single computer.

Network (LAN) Interface

When using the network (LAN) interface, complete the machine settings such as your computer and network hub. In addition, disable the firewall function temporarily, or change the settings. When disabling the firewall function, disconnect the network from the Internet.

> ⚠ **CAUTION**
>
> - A network (LAN) cable or network hub is needed in order to connect to the landmarked separate preparations.
> - Network device configurations and the availability of router functions will vary depending on the environment you are using. Refer to your device's manual, or contact the manufacturer or network administrator for details.
> - Ethernet conforms to 10BASE-T/100BASE-TX. Confirm the network environment you are using.

5.2 I/F LAN

Set the interfaces (LAN).

> **Supplement**
>
> When the network settings are changed, ”PLEASE WAIT!” message is displayed in case of time-consuming process. This message display is omitted from this procedure description.

When using the network (LAN) connection, the following items should be set.

- DHCP settings
- IP address input
- Subnet mask input
- Gateway input
- MAC address display

DHCP settings

The DHCP settings depend on the configuration of network equipment and your environment. For details, refer to your equipment manual or consult your network administrator.

The default setting of the DHCP is “Off”.

Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

•COPY
•SEARCH START-MARK
•CHANGE SETTINGS
•I/F(LAN)
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select the I/F (LAN) (The selected item is highlighted.). Then, press [ENTER] key.

▷ I/F(LAN) screen is displayed.

```
I/F(LAN)
•DHCP OFF
•IP ADDRESS
•SUBNET MASK
•GATEWAY
•MAC ADDRESS
Yes:ENTER        No:ESC
```

3 Press the POSITION (▲▼) keys to select the DHCP. Then, press [ENTER] key.

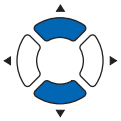
▷ DHCP screen is displayed.

```
DHCP

          <OFF>


▲▼:Select
Yes:ENTER        No:ESC
```

Supplement

The current DHCP settings are displayed on the right side of the "DHCP" screen.

4 Press the POSITION (▲▼) keys to select “ON” (enabled) or “OFF” (disabled).



(When the DHCP is set to “ON” (enabled), it takes time to reset)

Supplement

Pressing the [ESC] key (NO) returns to previous screen without changing the settings.

5 Confirm the setting and press the [ENTER] key.

▷ I/F(LAN) screen is displayed.

6 Press the [MENU] key.

▷ It will return to READY screen.

IP address setting

Program the IP address setting when "OFF" is selected in the DHCP settings.

The IP address obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

Operation

1 Press the [MENU] key in READY status.

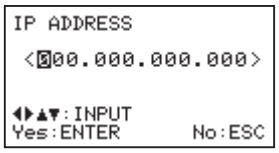
▷ MENU screen is displayed.

2 Press the POSITION (▲▼) keys to select the I/F (LAN) (The selected item is highlighted.). Then, press [ENTER] key.

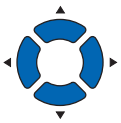
▷ I/F(LAN) screen is displayed.

3 Press the POSITION (▲▼) keys to select the IP ADDRESS. Then, press [ENTER] key.

▷ IP ADDRESS screen is displayed.



4 Select the digits you wish to input with the POSITION keys (◀▶), change the numerical value (0 to 9) with the POSITION keys (▲▼), and program the IP address.



Supplement

Pressing the [ESC] key (NO) returns to previous screen without changing the settings.

5 Confirm the setting and press the [ENTER] key.

▷ I/F(LAN) screen is displayed.

6 Press the [MENU] key.

▷ It will return to READY screen.

Subnet mask setting

Program the subnet mask setting when "OFF" is selected in the DHCP settings.

The subnet mask obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

·COPY
·SEARCH START-MARK
·CHANGE SETTINGS
·I/F(LAN)
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select the I/F (LAN) (The selected item is highlighted.). Then, press [ENTER] key.

▷ I/F(LAN) screen is displayed.

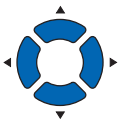
```
I/F(LAN)
·DHCP OFF
·IP ADDRESS
·SUBNET MASK
·GATEWAY
·MAC ADDRESS
Yes:ENTER        No:ESC
```

3 Press the POSITION (▲▼) keys to select the SUBNET MASK. Then, press [ENTER] key.

▷ SUBNET MASK screen is displayed.

```
SUBNET MASK
 <000.000.000.000>

◆▶▲▼:INPUT
Yes:ENTER        No:ESC
```

4 Select the digits you wish to input with the POSITION keys (◀▶), change the numerical value (0 to 9) with the POSITION keys (▲▼), and program the subnet mask.



Supplement

Pressing the [ESC] key (NO) returns to previous screen without changing the settings.

5 Confirm the setting and press the [ENTER] key.

▷ I/F(LAN) screen is displayed.

6 Press the [MENU] key.

▷ It will return to READY screen.

Gateway setting

Program the gateway setting when "OFF" is selected in the DHCP settings.

The gateway IP address obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

Operation

1 Press the [MENU] key in READY status.

▷ MENU screen is displayed.

```
MENU

·COPY
·SEARCH START-MARK
·CHANGE SETTINGS
·I/F(LAN)
Yes:ENTER        No:ESC
```

2 Press the POSITION (▲▼) keys to select the I/F (LAN) (The selected item is highlighted.). Then, press [ENTER] key.

▷ I/F(LAN) screen is displayed.

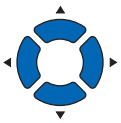
```
I/F(LAN)
·DHCP OFF
·IP ADDRESS
·SUBNET MASK
·GATEWAY
·MAC ADDRESS
Yes:ENTER        No:ESC
```

3 Press the POSITION (▲▼) keys to select the GATEWAY. Then, press [ENTER] key.

▷ GATEWAY screen is displayed.

```
GATEWAY
 <000.000.000.000>

◆▶▲▼:INPUT
Yes:ENTER        No:ESC
```

4 Press the POSITION (◀▶) keys to select the desired digit. Then, press the POSITION (▲▼) keys to set the GATEWAY by changing the numeric value (0-9).



Supplement

Pressing the [ESC] key (NO) returns to previous screen without changing the settings.

5 Confirm the setting and press the [ENTER] key.

▷ I/F(LAN) screen is displayed.

6 Press the [MENU] key.

▷ It will return to READY screen.

MAC address display

Confirm the MAC address.

Operation

1 Press the [MENU] key in READY status.

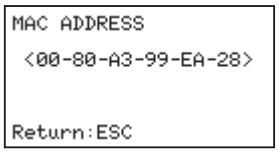
▷ MENU screen is displayed.

2 Press the POSITION (▲▼) keys to select the I/F (LAN) (The selected item is highlighted.). Then, press [ENTER] key.

▷ I/F(LAN) screen is displayed.

3 Press the POSITION (▲▼) keys to select the MAC ADDRESS. Then, press [ENTER] key.

▷ MAC ADDRESS screen is displayed.



A unique address will be displayed

4 Confirm that it is correct and press the [ESC] key (RETURN).

▷ I/F(LAN) screen is displayed.

5 Press the [MENU] key.

▷ It will return to READY screen.

Chapter 6 Troubleshooting

Refer to this chapter when you feel that the printer is operating strangely, or if you are not sure what to do.

PRODUCT SUMMARY

6.1 Troubleshooting
6.2 Error Messages
6.3 Warning Messages

6.1 Troubleshooting

The printer does not work when the power is on

Symptom	Cause	Solution
Nothing appears on the control panel.	This machine is not being supplied with power. This machine is defective.	Verify that the power cable is properly plugged into the machine. Verify that the power switch is ON.
The control panel's DATA lamp does not light or flash.	Data is not being properly transmitted.	Verify that the interface cable is properly plugged into the printer.
	Data remains in the PC's driver software.	After deleting the data that remains in the driver software properties, resend the data.
The control panel's READY lamp lights up, but the machine does not operate.	The machine is defective.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.

When an Error Message is Displayed

Symptom	Cause	Solution
On the LCD panel "E04: Position Error" is displayed.	The load to cutter unit is large, and the current to the motor exceeds specifications.	Remove whatever is interfering with the operation, and reconnect the power.
	There is something wrong with the cut materials condition setting.	Reduce the cut speed and acceleration. Reduce the cut pressure.
	Something is contacting the tool carriage.	Remove whatever is interfering with the operation, and reconnect the power.
	An external force is added to the tool carriage during the cut.	Remove whatever is interfering with the operation, and reconnect the power.
	The material scraps have entered the moving parts and degraded performance.	Remove whatever is interfering with the operation, and reconnect the power.
	When this occurs frequently, please contact the distributor where you purchased this product or your nearest Graphtec vender.	

When Operation is Strange

Symptom	Cause	Solution
The DATA lamp does not light or blink even when data is transmitted.	Data is not being properly transmitted	Verify that the interface cable is properly plugged in.
Media is bowed.	The media is set at a slant.	Correct the setting of the media.
The media has been set, but even when the set lever is raise, "Please set the media !" is displayed.	There is a possibility that something wrong has occurred in the operation of the set lever sensor.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
"E05 : RMS sensor error" is displayed.	Mark is not printed in black on a white background, or is faded.	Check the print status of registration marks.
	Media is set in a deviated state and the mark is out of the search range.	Re-set the media.
	(Rather than the above cause) when this error frequently occurs, the registration mark sensor failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
"E50 : Command error" is displayed.	Unrecognizable data was received.	Check the data.
Cross cut (CROSS CUT) cannot be done.	The cross cut setting is OFF.	Please turn ON the cross cut setting in the CUT CONDITION settings.
	The separator (weeding) is not separating.	When the separator (weeding) does not separate, the cross cut does not perform. Perform the separating (wedding) operation.
The cutting operation is not performed.	Cutting data is not contained within the data.	Verify the data.
A "Jamming" comes up.	The dancer roller has not been set.	Set the dancer roller 1 and 2.
	(Rather than the above cause) when this error frequently occurs, the dancer roller failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.

When Cut Results Are Poor

Symptom	Cause	Solution
The cut corners are rounded or too pointed.	The OFFSET is incompatible with the cutter blade being used.	Adjust the OFFSET value of CUT CONDITION. Match the setting to the blade being used. > If it is too low, the corners become rounded. > If it is too high, the corners are too pointed.
	There is abrasion of the blade.	Replace the cut blade.
The cut line starts out crooked.	The cutter blade does not rotate smoothly.	Remove any foreign matter inside the holder.
	The Offset Cut Pressure is too low.	Raise the Offset Pressure setting. (The Offset Pressure is separate from the cutting FORCE)
The blade skips and does not completely cut lines that should be solid. Solid lines are not cut at a constant depth. (Slight skipping of the blade)	The cutter blade is extended too far.	Adjust the blade length.
	The cutting SPEED is too high.	Reduce the SPEED setting value of CUT CONDITION.
Coarse resolution of curved lines.	The output data resolution is too low.	Increase the output data resolution.
The cutting medium curls up at the corners.	The cutter blade is extended too far.	Adjust the blade length.
	The OFFSET is incompatible with the cutter blade being used.	Change the OFFSET setting value of CUT CONDITION.
	The cutting SPEED is too high.	Reduce the SPEED setting value of CUT CONDITION.
	The blade is dull.	Adjust the blade length. Or, replace the cutter blade with the new one.
The cutter blade is cutting into the backing sheet.	The cutter blade is extended too far.	Adjust the blade length.
	The cutting FORCE is too high.	Reduce the FORCE setting value of CUT CONDITION.
The cutter blade has fallen out of the cutter plunger.	The cutter blade is the incorrect diameter for the plunger.	Use a cutter blade that matches the plunger's diameter.
	The spring of the cutter blade (CB09UA) has fallen out.	Replace the cutter blade with a new one fitted with a spring.
The medium can be cut but is hard to weed afterward.	The medium gets entangled during cutting.	Reduce the blade length.
		Reduce the FORCE setting value of CUT CONDITION.
Abnormal noise generated by the cutter plunger during cutting. The medium is discolored where the cutter blade has passed.	The medium is stuck in the tip of the plunger.	Adjust the blade length and the FORCE of CUT CONDITION.
The setting value of CUT CONDITION cannot be maintained. The setting value of CUT CONDITION cannot be changed.	The [ENTER] key was not pressed after a setting was changed.	Make sure you are setting the conditions correctly.
Media is bowed.	The media is set at a slant.	Correct the setting of the media.
	The media flange is not set properly.	Re-set the media flange properly.
The specified length is not plotted or cut. (slight distance error)	The distance adjustment value is not appropriate.	Specify the appropriate distance adjustment value.
The starting and end points do not match.	The data is not connected.	Verify the data in the application.
	The backing sheet is too soft.	Change to media with a hard backing sheet.
	Cutter blade rotation is not smooth.	Verify that refuse, etc. is not stuck on the blade.
	The life of the cutter plunger.	Replace the cutter plunger with new one.

6.2 Error Messages

When the following error messages are displayed, turn off the power, and turn the power on after the error has been solved.

LCD Display	Cause	Solution
E01:Jam error. Check the dancer roller 1 Turn off the Power.	The dancer roller 1 is not set.	Set the dancer roller 1.
	(Rather than the above cause) when this error frequently occurs, the dancer roller failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
E02:Jam error. Check the dancer roller 2 Turn off the Power.	The dancer roller 2 is not set.	Set the dancer roller 2.
	(Rather than the above cause) when this error frequently occurs, the dancer roller failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
E03:Jam error. Check the CUTTER or No-media Turn off the Power.	A paper jam occurs in the cutter part.	Re-set the media properly.
	Perforated to media, Media is deviated from the path, or Media is floated.	Identify the cause related to media and set the correct media.
E04:RMS sensor error Check the condition for the starting mark. or media setting	Mark is not printed in black on a white background, or is faded.	Check the print status of mark.
	Media is set in a deviated state and the mark is out of the search range.	Re-set the media.
	(Rather than the above cause) when this error frequently occurs, the dancer roller failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
E05:RMS sensor error Check the condition for the Regist. mark. or media setting	Mark is not printed in black on a white background, or is faded.	Check the print status of registration marks.
	Media is set in a deviated state and the mark is out of the search range.	Re-set the media.
	(Rather than the above cause) when this error frequently occurs, the dancer roller failure is considered.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.
E06:CUTTER Position error. The slider movement was blocked. Turn off the Power.	The load to cutter unit is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
	The condition setting of media to be cut is not appropriate.	Reduce the cut speed and acceleration. Reduce the cutting pressure (FORCE).
	Something is hitting the tool carriage.	Remove the factors that interfere with the operation and turn off the power then turn on again.
	External force was applied to the tool carriage.	Remove the factors that interfere with the operation and turn off the power then turn on again.
	Scraps of the medium in the cutter's moving parts are impeding operation.	Remove the factors that interfere with the operation and turn off the power then turn on again.
	When this error frequently occurs, please contact the distributor where you purchased this product or your nearest Graphtec vender.	

LCD Display	Cause	Solution
E07:Cross cutter jam. Check the cross cutter. Turn off the Power.	The load to cross cut unit is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
	The separator (weeding) is not separating.	If the media is not separated (weeded), the cross cut cannot be performed well. Separate the media properly.
E10:Label-winder motor no.1 error. Turn off the Power.	The load to winding motor 1 is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
E11:Label-winder motor no.2 error. Turn off the Power.	The load to winding motor 2 is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
E12:Laminate-winder error. Turn off the Power.	The load to winding motor for laminate backing sheet is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
E13:Waste media winder error. Turn off the Power.	Since the winding amount of the separator (weeding) became thick (Scrap amount was increased), the separator can no longer be rotated.	Replace the bobbin wound the media with the new one.
	The load to separator (weeding) motor is large, and the current to the motor exceeds specifications.	Remove the factors that interfere with the operation and turn off the power then turn on again.
E50:Command error. Check the sending data. Yes:ENTER	Unrecognizable data was received.	Check the data.
E90:Cutter unit communication error. Turn off the Power.	The cutter unit is not turned on. The cable connected to the cutter unit is disconnected.	Check the power cable, power switch, and connection cable in the cutter unit.
	(Internal or communication error occurs, rather than the above cause) when this error frequently occurs, please contact the distributor where you purchased this product or your nearest Graphtec vender.	Please contact the distributor where you purchased this product or your nearest Graphtec vender.

6.3 Warning Messages

LCD Display	Cause	Solution
W01:END OF MEDIA. ◀CROSS_CUT FEED▶	Media was all used.	Set the new media.
	The media is not fed properly in the media stocker. The media is not set in the stocker properly.	Set the media properly.
	The media is not fed properly in the media stocker. The flange is not set in the media properly.	Set the flange properly.
W02:PRESS ROLLER LEVER IS OPEN	After the media is passed through the cutter unit, the press roller lever is opened in a state which the cutter unit lever has been set.	Close the press roller lever.
W03:OUTPUT ROLLER LEVER IS OPEN	After the media is passed through the cutter unit, the ejection roller lever is opened in a state which the cutter unit lever has been set.	Close the ejection roller lever.
W04:Laminate winder Winder full! Replace the bobbin. Yes:ENTER	Winding amount of the laminate backing sheet is full.	Replace the winder bobbin with the new one.
W05:The waste media winder full! Replace the bobbin. Yes:ENTER	Winding amount of the separator (weeding) is full.	Replace the winder bobbin with the new one.
W06:Push roller Confirm the Push roller Position.	The push roller position of the cutter unit is not correct.	Re-align the position of push roller in the cutter unit correctly.
W07:No laminate. Yes:ENTER	Laminate is gone.	Set the new laminate.
	The laminate is not fed properly. The laminate is not set properly.	Set the laminate properly.
W08:Slitter blade Position error. Confirm the slitter blade Position. Yes:ENTER	The blade position of slitter is not correct.	Set the blade of slitter to correct slitting position. (When the slitter is not used, please move the blade to the retracted position.)
W10: ID of cut data and Printed bar code is different. Disable the bar code function? Yes,disable :ENTER No,Clear Data :ESC	The read bar code does not match the data code. (For details, please refer to “Bar code Enable/Disable setting”.)	Set the bar code to “Disable” and then continue to cut.
		Stop the cutting to clear the data.

Appendix

This chapter describes the specification of this machine.

PRODUCT SUMMARY

A.1 General Specifications
A.2 Supplies, Optional Accessories
A.3 External Dimensions

A.1 General Specifications

Items			DLC1000
Paper feed unit			
	Loadable width	Maximum	216mm
		Minimum	100mm
	Page length	Maximum	1200mm *1
		1-page size	Maximum: 300mm / Maximum: 76.2mm
	Loadable roll media	Max.	254mm (10inch)
		Max. weight	10 kg or less
		Paper core inner diameter	76mm (3-inch paper core)
Laminate Section			
	Loadable width	Maximum	196mm
		Minimum	80mm
	Loadable roll media	Maximum	200 m, or up to outer diameter 210 mm
		Max. weight	8 kg or less
		Paper core inner diameter	76mm (3-inch paper core)
	Windable roll media	Max. outer diameter	200mm
		Paper core inner diameter	25.4mm (1-inch paper core)
		Paper core length	227mm
Separator Section			
	Windable roll media *2	Max. outer diameter	220 mm, or 200 m roll media paper can be wound up *
		Paper core inner diameter	25.4mm (1-inch paper core)
		Paper core length	227mm
Winding Section 1			
	Loadable width	Maximum	216mm
		Minimum	55mm
	Windable roll media*2	Max. outer diameter	254 mm, or 200 m roll media paper can be wound up
		Max. weight	14 kg or less
		Paper core inner diameter	76mm (3-inch paper core)
Winding Section 2			
	Loadable width	Maximum	108mm
		Minimum	55mm
	Windable roll media*2	Max. outer diameter	220 mm, or 200 m roll media paper can be wound up
		Max. weight	7 kg or less
		Paper core inner diameter	76mm (3-inch paper core)
Slitter Section			
	.		3 locations
Cross Cut Section			
	Cut		Cross Cut

Items		DLC1000
Cutting section		
	Cutout system	Half cut using blade (Supersteel)
	Cutter type	Supersteel
	Drive system	Digital servo
	Force	0.2 to 2.9N (20 to 300gf): 31 steps
	Maximum cut area	WITH R. MARK : 186mm×1200mm NO R. MARK : 203mm×300mm (Slitter cannot be used.)
	Maximum cut speed	600mm/s
Main Unit Specifications		
	Interface	USB2.0 (Full Speed), Network (Ethernet 10BASE-T/100BASE-TX)
	LCD display	Graphic Type (128dots×64dots): 21 (characters) x 7
	Rated power supply	AC100 to 120 V, AC200 to 240 V, 50/60 Hz (Automatic changeover)
	Power consumption	170VA or less
	Usage environment	10 to 35°C, 35 to 70% R.H. (non-condensing)
	Conditions for guaranteed precision	16 to 32°C, 35 to 70% R.H. (non-condensing)
	External dimension (approximate) [W×H×D]	1904×994×1297mm
	Weight (approximate)	151kg

*1: When setting media for long-plotting.

*2: It depends on Graphtec-specified conditions.

* The external appearance, ratings, specifications, etc., of the product are subject to change without notice for the sake of improvements, etc.

A.2 Supplies, Optional Accessories

Supplies (Laminate)

Type	Model Name	Specifications
Laminate	DLC-1110R-PP-R1	LAMI transparent PP 111mm x 200m: 1 roll
	DLC-1150R-PP-R1	LAMI transparent PP 115mm x 200m: 1 roll
	DLC-1580R-PP-R1	LAMI transparent PP 158mm x 200m: 1 roll
	DLC-1620R-PP-R1	LAMI transparent PP 162mm x 200m: 1 roll
	DLC-1110R-PET-R1	LAMI transparent PET 111mm x 200m: 1 roll
	DLC-1150R-PET-R1	LAMI transparent PET 115mm x 200m: 1 roll
	DLC-1580R-PET-R1	LAMI transparent PET 158mm x 200m: 1 roll
	DLC-1620R-PET-R1	LAMI transparent PET 162mm x 200m: 1 roll

Supplies (Paper core for winding up)

Type	Model Name	Specifications
Paper core to wind up for media Inner diameter: 3 inches DLP1000 DLC1000 Common	DLP-1315R-3CORE-R5	Without slit 131.6 mm: 5 per set
	DLP-1825R-3CORE-R5	Without slit 182.4mm: 5 per set
	DLP-1780R-3CORE-R5	Without slit 178mm: 5 per set
	DLP-1350R-3CORE-R5	Without slit 135mm: 5 per set
	DLP-1065R-3CORE-R5	Both edges slit 106.6mm: 5 per set
	DLP-1575R-3CORE-R5	Both edges slit 157.4mm: 5 per set
	DLP-1530R-3CORE-R5	Both edges slit 153mm: 5 per set
	DLP-1110R-3CORE-R5	Both edges slit 110mm: 5 per set
Paper core to wind up for media Inner diameter: 3 inches (DLC1000 only)	DLC-535R-3CORE-R5	Both edges + Center slit 53.5mm: 5 per set
	DLC-790R-3CORE-R5	Both edges + Center slit 79mm: 5 per set
Paper core to wind up for laminate Inner diameter: 1 inch (with matrix removing, laminate)	DLC-2270R-1CORE-R5	Laminate 227 mm: 5 per set

Recommended initial supply kit

Type	Model Name	Specifications
Recommended initial supply kit	DLC1000-RIS-KIT	DLC-1620R-PP-R1
		DLC-2270R-1CORE-R5
		DLC-1575R-3CORE-R5
		DLC-790R-3CORE-R5
		OPH-A28
		OPH-A29

Supplies (Cutter)

Type	Model Name	Specifications
Cutter plunger	PHP33-CB09N-HS	For Ø 0.9 mm cutter blade
	PHP33-CB15N-HS	For Ø 1.5 mm cutter blade

For detailed information about the cutter blade, refer to the Cutter Blade Manual.
Please check our company's home page for the latest information on supplies.

Supplies (Consumable Items)

Type	Model Name	Specifications
Cutting mat	CE6-CM40-2	Cutting mat for CE6000-40DLC (2 sht. per set)

Optional Accessories (Flange Set)

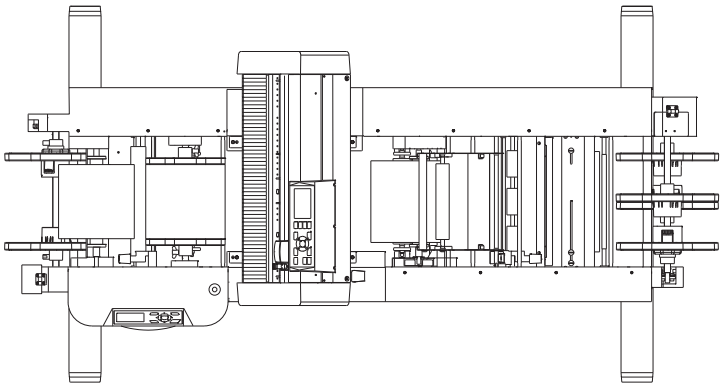
Type	Model Name	Specifications
Flange set for DLC1000 paper feeding	OPH-A28	1 set: With scale (Shaft)
Flange set for DLC1000 media rewinding	OPH-A29	1 set: Width of paper core 50 to 90 mm, for rewinding

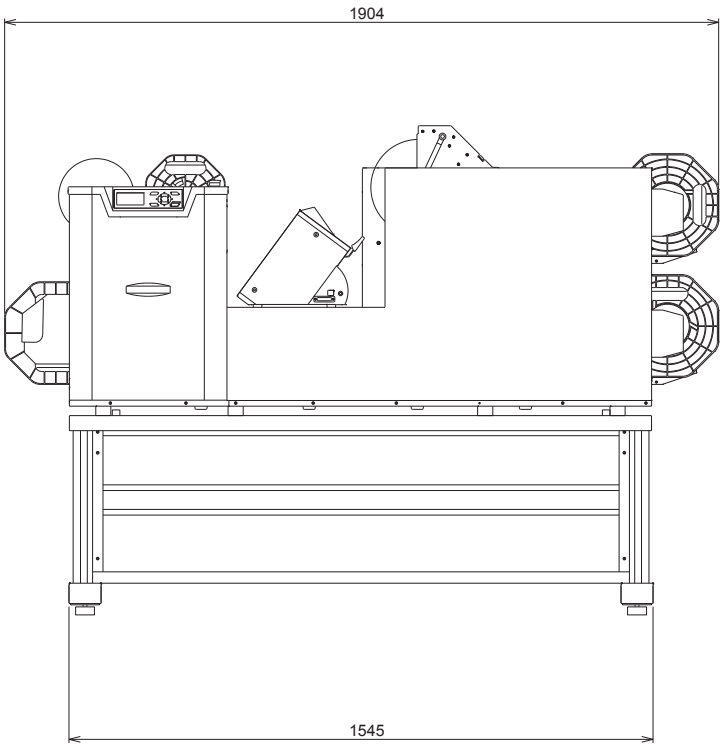
Optional Accessories (Box Set)

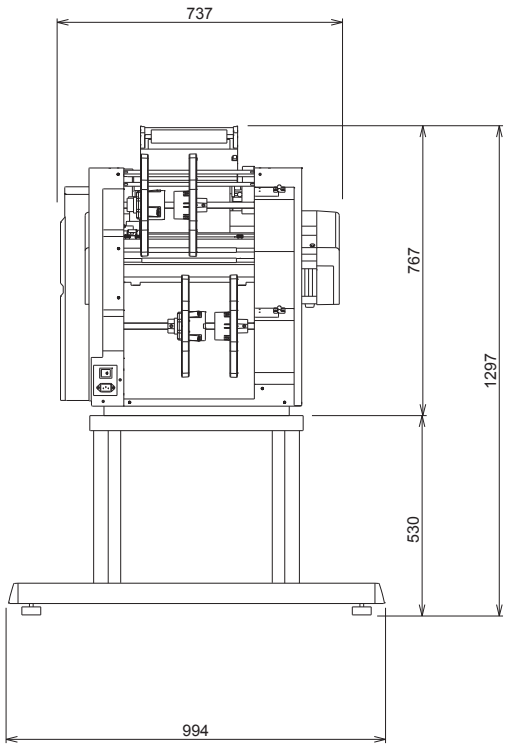
Type	Model Name	Specifications
Box set for DLC1000	OPH-A31	1 set: Paper ejection box, Media receiving box

A.3 External Dimensions

DLC1000







Unit: mm

Dimensional accuracy: ±5mm

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Specifications are subject to change without notice.

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