

Option – J0485

BIG ROLL UNWINDER HU1800

Operation Manual

Introduction	2
Caution	2
DISCLAIMER OF WARRANTY	2
On this operation manual.....	2
Attention	2
Safety precautions	3
Symbols.....	3
Installation of this option	5
Installation location	5
Part name and function	6
Overall	6
Small roll unwinder	7
BIG ROLL UNWINDER HU1800.....	8
Trolley.....	9
Operation panel	10
About media	11
Available media size	12
Set a media	13
Large-diameter media.....	13
Small-diameter media	16
Pass through the media	18
Print out	19
Switching face out / face in	19
Automatic operation.....	19
User maintenance	20
Troubleshooting	20
Media is skewed or meandering.....	20
Specifications	21
Small roll unwinder	21
BIG ROLL UNWINDER HU1800.....	21

Introduction

Thank you for purchasing the “BIG ROLL UNWINDER HU1800” option for the ML Tiger-1800B series color inkjet printer.

BIG ROLL UNWINDER HU1800 is an option for the ML Tiger-1800B series that enables long roll fabric media to be set on the printer main unit. Using long media can reduce the number of roll changes.

The included Small roll unwinder enables the use of small diameter roll media.

Caution

DISCLAIMER OF WARRANTY

THIS LIMITED WARRANTY OF MIMAKI SHALL BE THE SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND MIMAKI NEITHER ASSUMES NOR AUTHORIZES DEALERS TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY, OR MAKE ANY OTHER WARRANTY, OR MAKE ANY OTHER WARRANTY IN CONNECTION WITH ANY PRODUCT WITHOUT MIMAKI'S PRIOR WRITTEN CONSENT.

THE SAME SHALL APPLY WHEN MIMAKI WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IN NO EVENT SHALL MIMAKI BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR LOSS OF PROFITS OF DEALER OR CUSTOMERS OF ANY PRODUCT.

On this operation manual

- This manual describes the operation and maintenance of “BIG ROLL UNWINDER HU1800” (hereinafter referred to as this option).
- Read carefully and fully understand it before using this option. It is also necessary to keep this operation manual on hand.
- Make arrangement to deliver this operation manual to the person in charge of the operation of this option.
- You can also download the latest manual from our website.

Attention

- Although this operation manual has been carefully prepared for your easy understanding, please do not hesitate to contact your local distributor or our sales office if you have any inquiry.
- The contents of this operation manual are subject to change for improvement without notice.












Reproduction of this manual is strictly prohibited.
© Mimaki Engineering Co., LTD.
All Rights Reserved. Copyright

Safety precautions

Symbols

In this document, symbols are used for explaining the contents of cautions on operation. The symbol to be displayed differs depending on the caution content. Understand the meaning of each symbol and use this unit safely and correctly.

Example of symbol

Description		
	Warning	Failure to observe the instructions given with this symbol can result in death or serious injuries to personnel. Be sure to read it carefully and use the printer properly.
	Caution	Failure to observe the instructions given with this symbol can result in minor or medium injuries to personnel.
	General Warning	This symbol indicates that the items shown need to be noted. Specific notes are drawn in the figure  .
	General Mandatory Action	This symbol indicates that the action shown must be executed. Specific instruction is drawn in the figure  .
	General Prohibition	This symbol indicates that the action shown is prohibited. Specific action that is prohibited is drawn in the figure  .
	Important	Contains important information you need to know when using this option. Use as a reference for operations.
	Hint	Useful information is given with this symbol. Use as a reference for operations.
	Reference	This symbol indicates the reference page for related contents. Click the text to display the corresponding page.

Warning on use



Warning



- The set of power cables provided with this option is for use with this option only, and cannot be used with other electrical devices. Do not use any power cables other than the ones provided with this option. Otherwise, it could cause a fire or electric shocks.
- Take care not to damage, break or work upon the power cable. If a heavy material is placed on the power cable, or if it is heated or pulled, the power cable can break, thus resulting in a fire or electric shocks.
- Avoid using in humid places. Also, do not splash water on this option. Otherwise, a fire, electric shocks, or product breakdown may result.
- Use of this option under an abnormal condition where it produces smoke or strange smell can result in a fire or electric shocks. If such an abnormality is found, be sure to turn Off the power switch immediately and unplug the cable from the wall outlet. Check first that this option no longer produces smoke, and then contact your distributor or our sales office for repair. Never repair this option by yourself, as it is dangerous.
- Never disassemble or modify this option. It could cause electric shocks or breakage.
- Do not use extension cables. Otherwise, it could cause a fire or electric shocks.
- Keep the power plug prong clear of any foreign object such as a piece of metal. Failure to do so may result in a fire or electric shocks.
- Do not plug too many leads into a single socket. Otherwise, it could cause a fire or electric shocks.
- If the power cable is damaged, exposed core wire, disconnection, etc., contact your service representative for replacement. If used as it is, it may cause a fire or electric shocks.
- Do not handle the power plug with wet hands. It could cause electric shocks.
- Grasp by holding the plug itself when removing the power plug from wall outlet, and never hold by the cable. Holding and pulling the cable may damage the cable, leading to a fire or electric shocks.
- Do not use this option with the voltage other than the indicated one. Otherwise, it could cause a fire or electric shocks.
- Do not use this option with the power frequency other than the indicated one. It could cause a fire or electrical shocks.
- Do not place your fingers or other parts of your body close to the dangerous moving parts.
- If a foreign object such as a small piece of metal or a liquid such as water gets inside this option, turn off this option. After that be sure to unplug the power plug from the outlet and consult your, service representative. If used as it is, it may cause a fire or electric shocks.



- Do not use the combustible spray or flammable solvent nearby or inside of this option. Otherwise, it could cause a fire or electric shocks.
- Do not put a vase, flowerpot, glass, cosmetics, medicine, container which water was in, or small metal thing in the top and near this option. When some spills over or enters inside of this option, it could cause a fire or electric shocks.

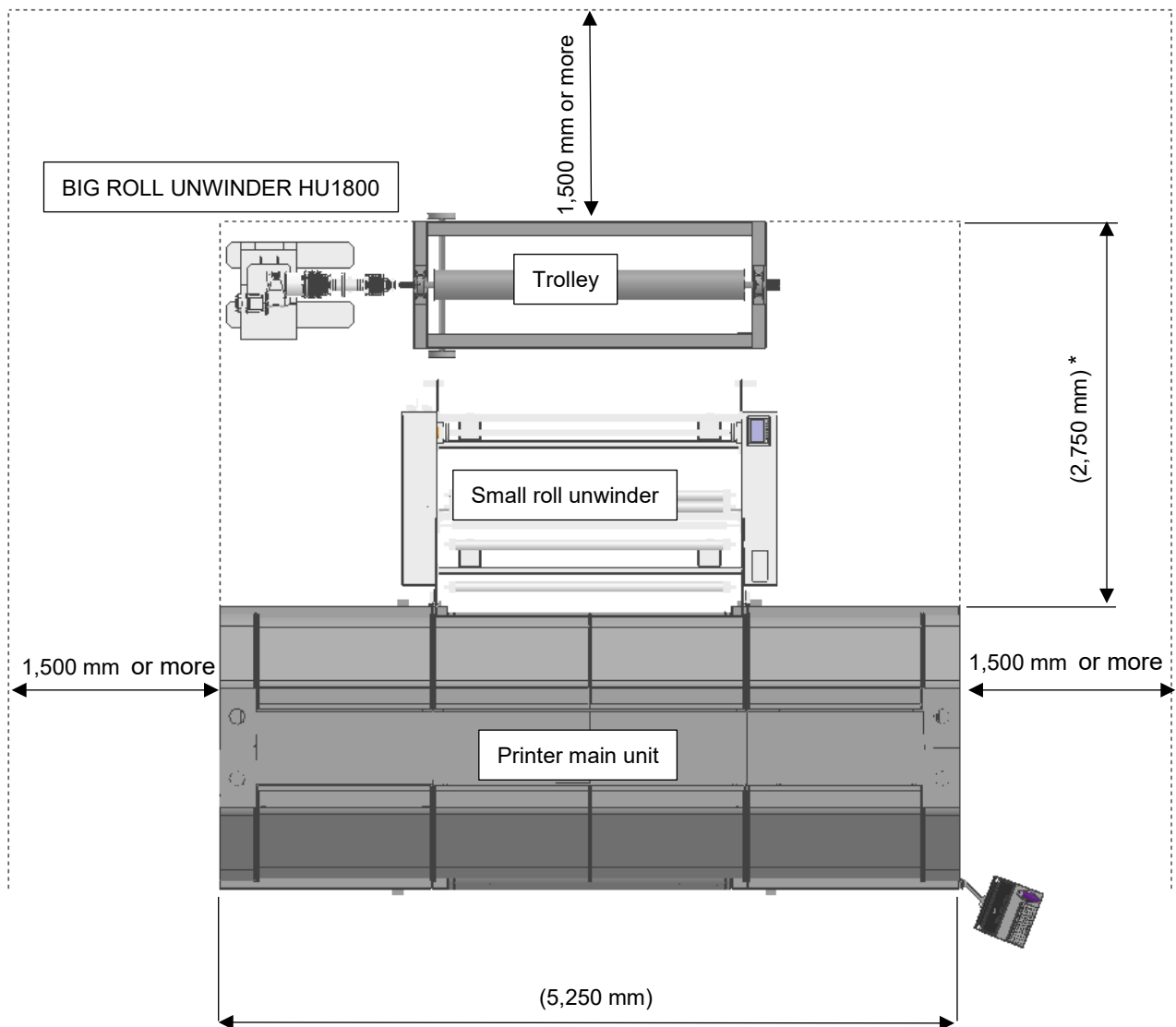
Installation of this option

Installation location

This option kit is for transporting long roll fabric media in the ML Tiger-1800B series (hereinafter referred to as the printer main unit).

The space required when this option is mounted on the printer main unit is shown below.

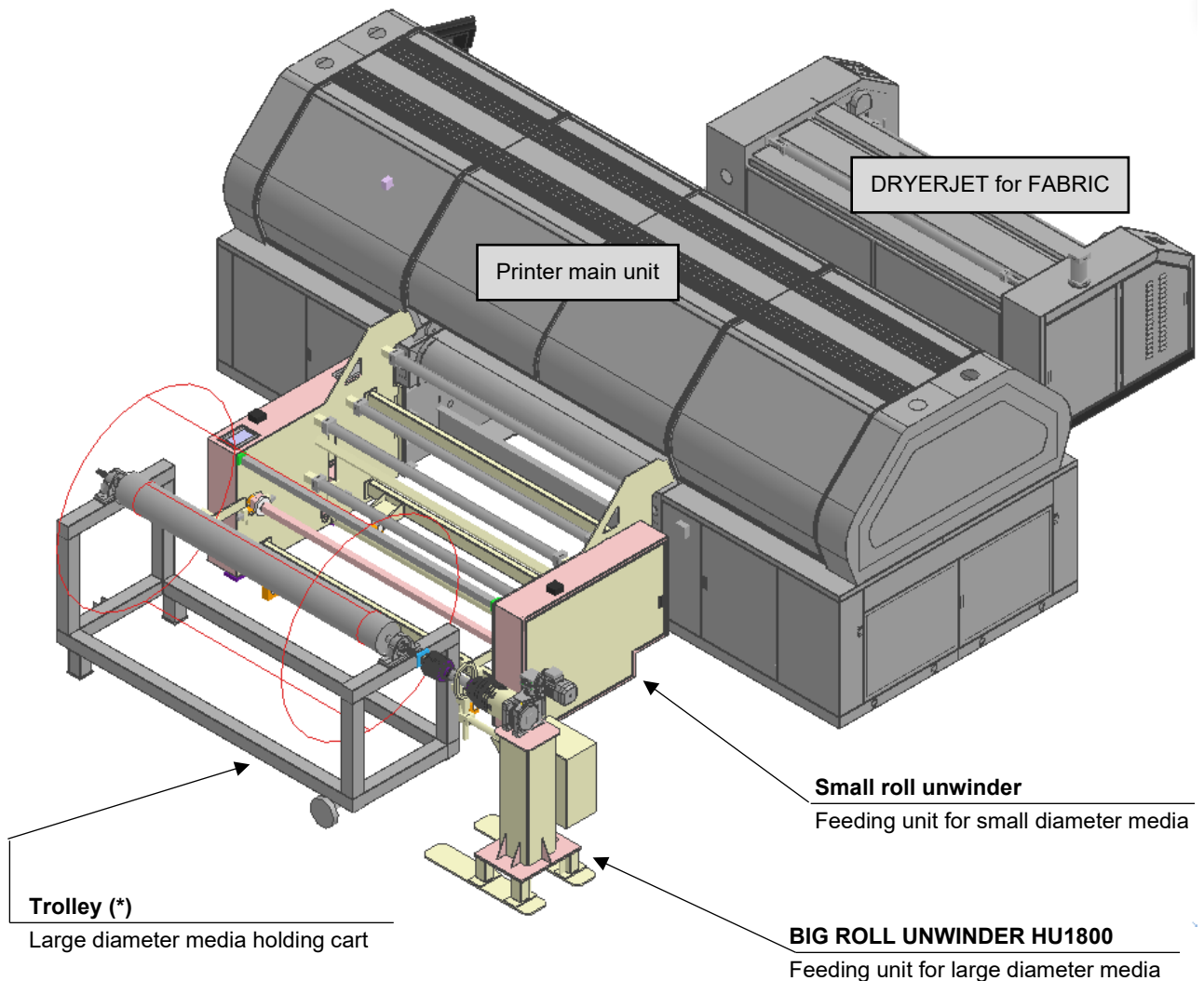
Determine the installation location in consideration of the size when this option is mounted on the printer main unit and the space required for printing (especially the trolley handling).



* It depends on the size of the trolley and the layout of the trolley and small roll unwinder.

Part name and function

Overall



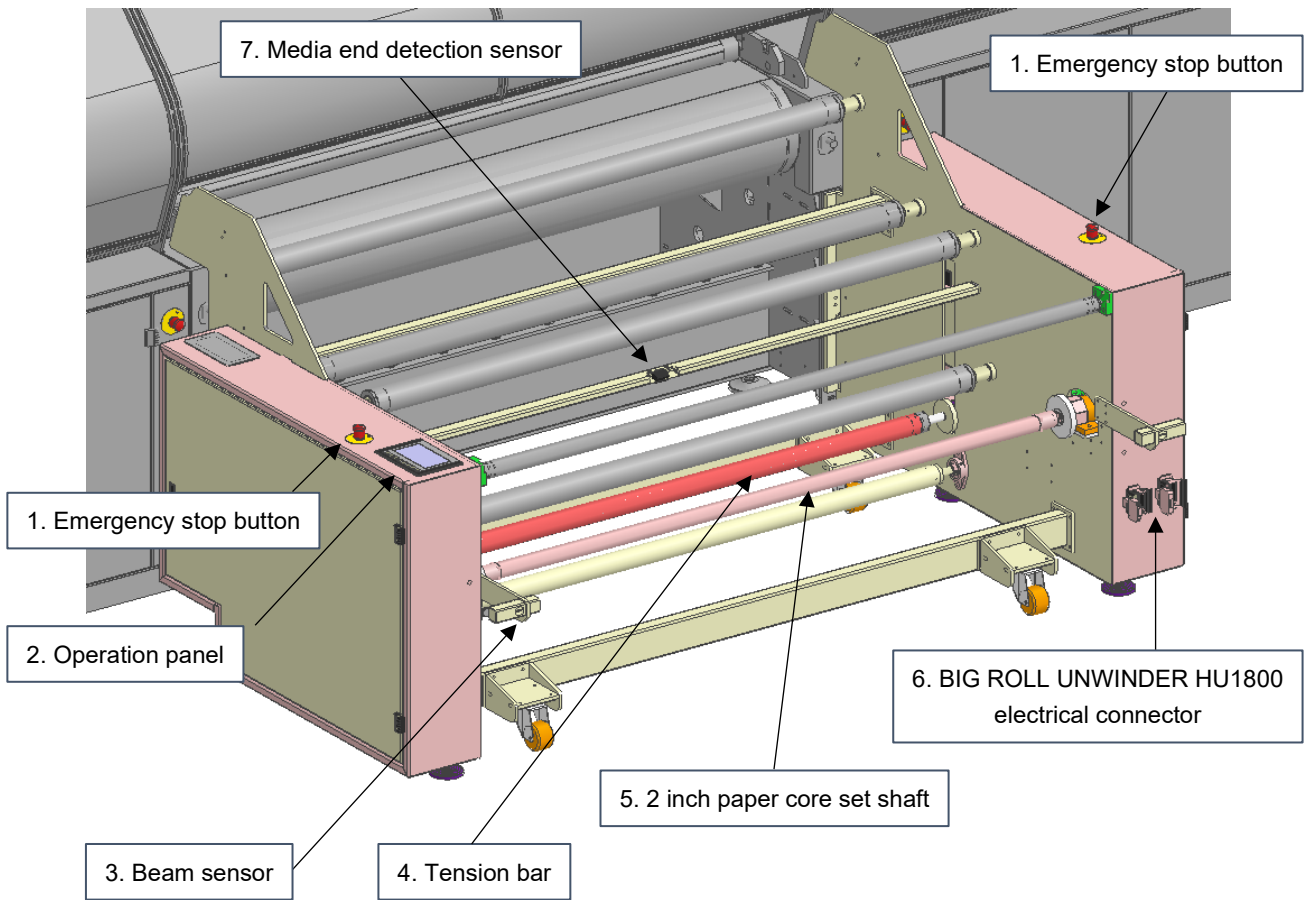
The equipment included in this option is as follows.

- Small roll unwinder 1 unit
- BIG ROLL UNWINDER HU1800..... 1 unit



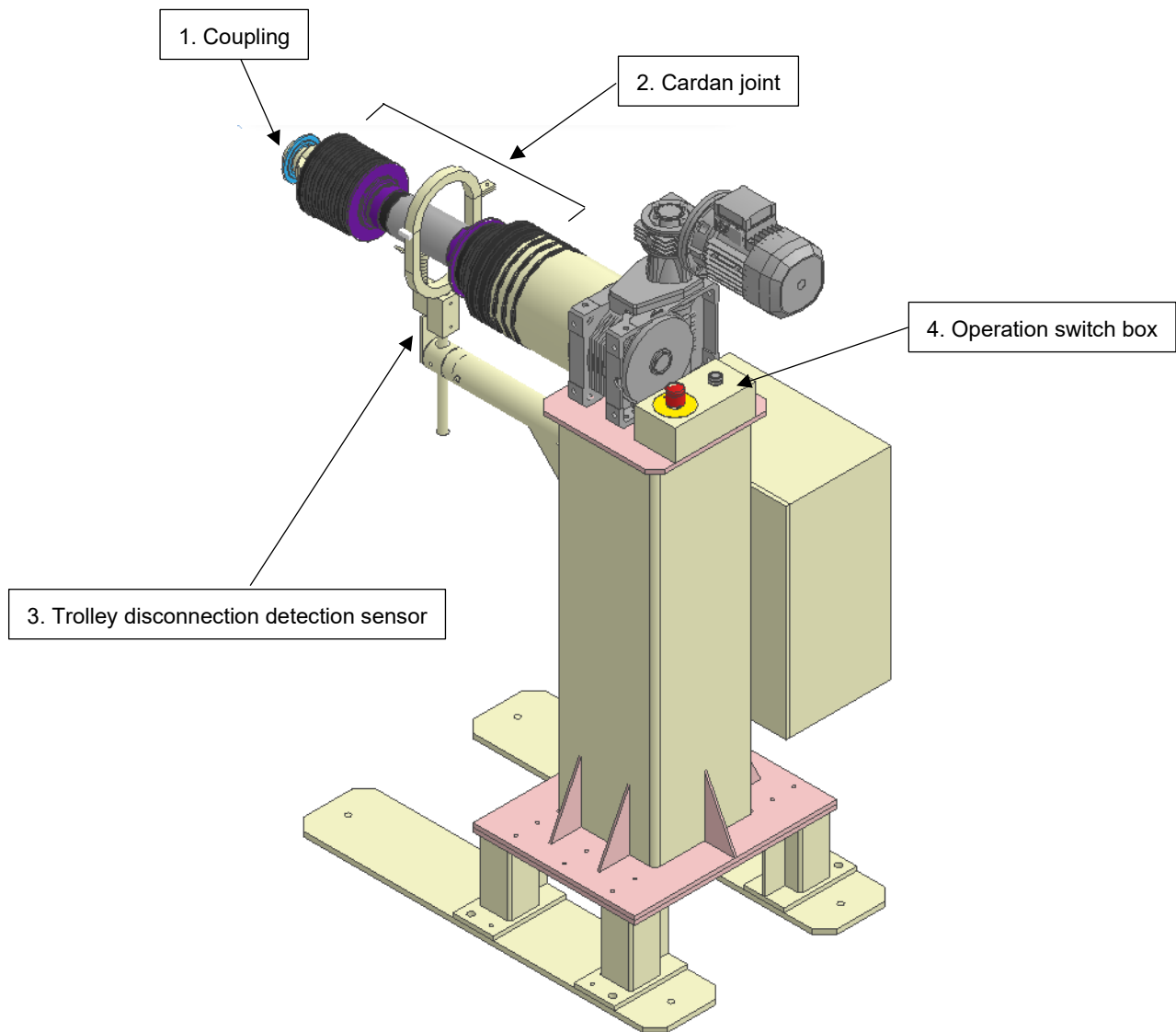
- The trolley must be provided by the customer.
- For the specifications of compatible trolleys, see “Trolley” in this chapter.

Small roll unwinder



No.	Name	Function
1.	Emergency stop button	Button to stop this option in case of emergency.
2.	Operation panel	This panel is used to operate the start / stop and automatic / manual switching of this option.
3.	Beam sensor	This option stops when light is shaded.
4.	Tension bar	Move up and down to automatically and optimally adjust the media tension.
5.	2 inch paper core set shaft	Shaft for attaching a 2 inch paper core.
6.	BIG ROLL UNWINDER HU1800 electrical connector	Connect the BIG ROLL UNWINDER HU1800 cable. <ul style="list-style-type: none"> • X4: For AC power supply • X5: For control signal
7.	Media end detection sensor	A sensor that detects when the media has ended.

BIG ROLL UNWINDER HU1800

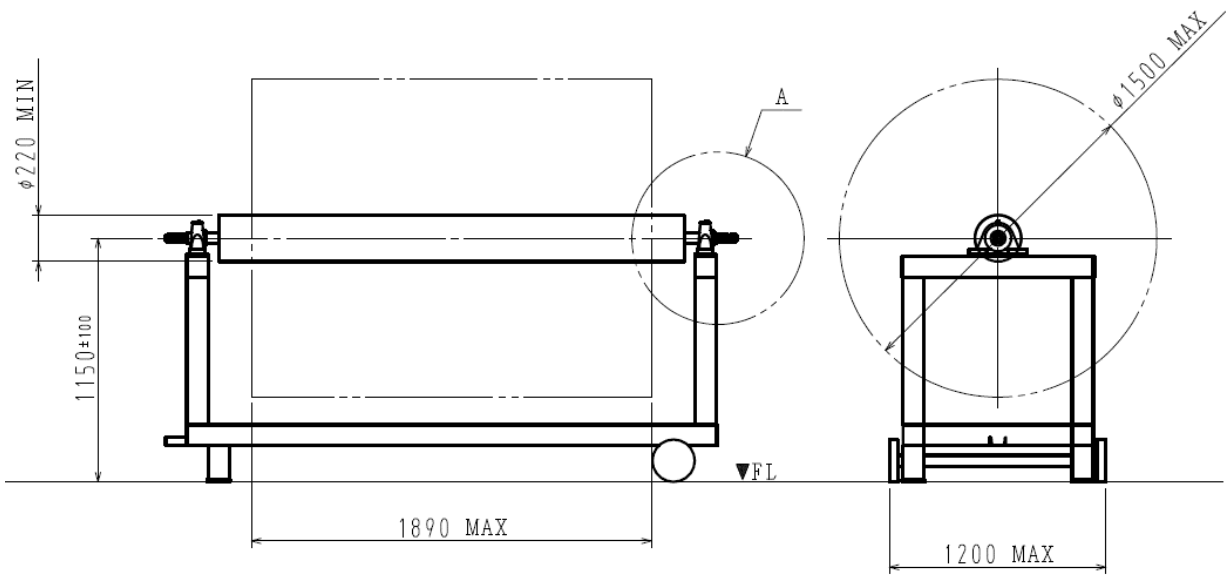
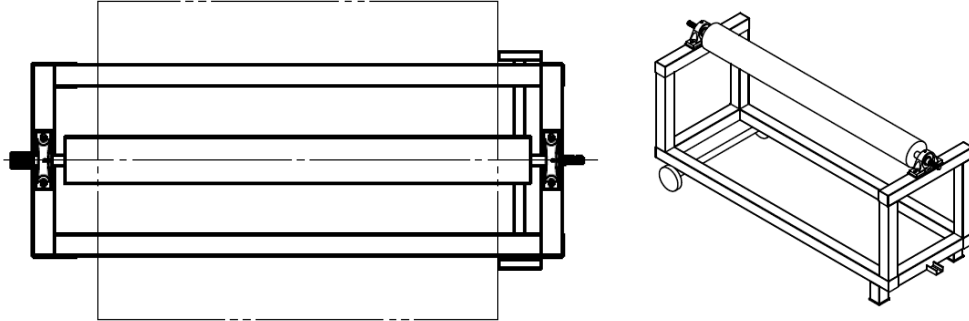


No.	Name	Function
1.	Coupling	Connects to the rotating shaft of the trolley to transmit power.
2.	Cardan joint	Universal joint. Absorbs trolley misalignment.
3.	Trolley disconnection detection sensor	Detects when the trolley is disconnected and No.1,2 falls.
4.	Operation switch box	There are buttons to operate when connecting the trolley. Rotation button to manually match the coupling and shaft, and an emergency stop button.

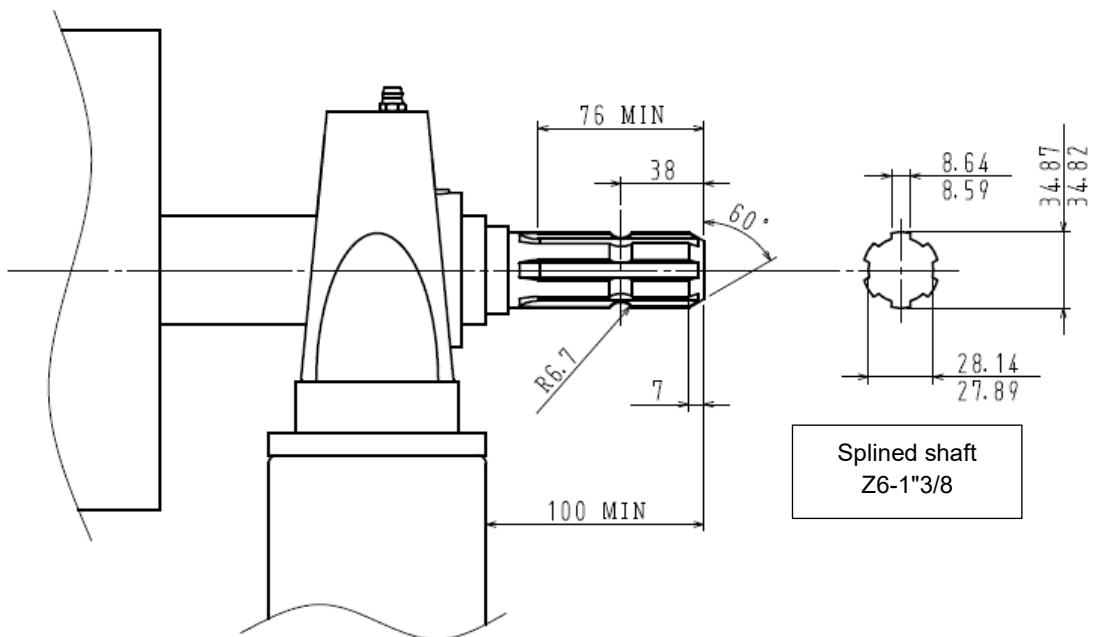
Trolley



- The trolley must be provided by the customer.

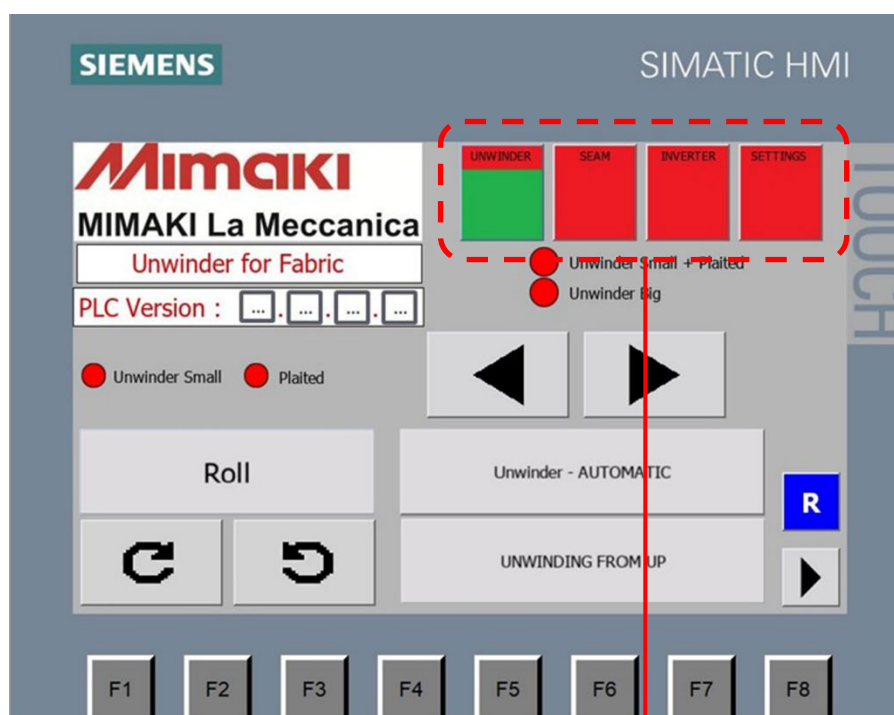


Part A details (coupling connection)



Operation panel

Startup screen



Main menu

The screen changes to each of the following screens.
Items with a green button are currently active.

Name	Function
UNWINDER	Operation screen of Small roll unwinder.
SEAM	This is a setting for the seam detection sensor of another option (Option-J0487). Not covered in this manual.
INVERTER	[For service person only] Setting of the inverter used for BIG ROLL UNWINDER HU1800.
SETTING	Language setting You can switch between English and Italian.

UNWINDER screen

Page 1

The screenshot shows the SIMATIC HMI interface for the Unwinder. At the top, it displays 'SIEMENS' and 'SIMATIC HMI'. The main header includes the 'Mimaki' logo and 'MIMAKI La Meccanica'. Below this, it says 'Unwinder for Fabric' and 'PLC Version : ...'. There are several status indicators: 'Unwinder Small', 'Plaited', 'Unwinder Small + Plaited', and 'Unwinder Big'. The central area contains a 'Roll' button, a 'Rotation by manual button' section (with left and right arrows), an 'Automatic / Manual switch button' (labeled 'Unwinder - AUTOMATIC'), and a 'Face out winding / Face in winding switch button' (labeled 'UNWINDING FROM UP'). A 'To page 2' button is also present. At the bottom, there are function keys F1 through F8. A yellow warning triangle icon is visible on the right side.

Roll / Plaited (*) switch button

(*) Plaited is another option

Error history display (When an error occurs)

Error reset

To page 2

Rotation by manual button
Valid only in manual mode

Automatic / Manual switch button

Face out winding / Face in winding switch button

Page 2

The screenshot shows the SIMATIC HMI interface for the Unwinder, Page 2. It features a 'Media END ON' button, a 'Roll Descarge' button, and a 'Plotter Belt' section with 'REVERSE' and 'FORWARD' buttons. A 'To page 1' button is located at the top right. The bottom of the screen shows function keys F1 through F8.

To page 1

ON: Media end detection enabled
OFF: Media end detection disabled

Roll removal button

Printer main unit belt by manual button

About media

This section describes the media sizes that can be used.

Available media size

Maximum media width		1,890 mm
Minimum media width		500 mm
Media thickness		5 mm or less
For Small roll unwinder	Media outside diameter	400 mm or less
	Media weight	100 kg or less
	Media inner diameter	2 inch (paper core)
For BIG ROLL UNWINDER HU1800	Media outside diameter	1,500 mm or less
	Media weight	700 kg or less
	Media inner diameter	220 mm or more (trolley core diameter)
Printing surface		Both face in and face out are possible
Printing speed		Based on the printer main unit

Set a media

This section mainly describes changes to the media setting method that are caused by using this option. For the basic media setting method in the printer main unit, refer to the operation manual of the printer main unit.

Large-diameter media

Set the large-diameter media set in the trolley to BIG ROLL UNWINDER HU1800.

Preparation

1

Check that the X5 cable is **connected** to the BIG ROLL UNWINDER HU1800 connector.

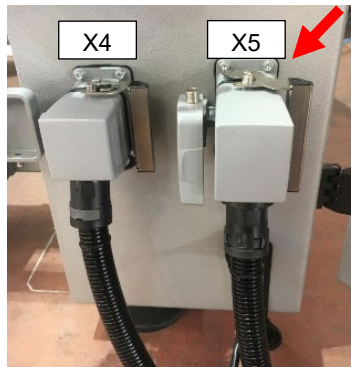
- When using large-diameter media, connect the cable to the connector.
- When using small-diameter media, disconnect the cable from the connector.



- Do not disconnect any cables other than X5.

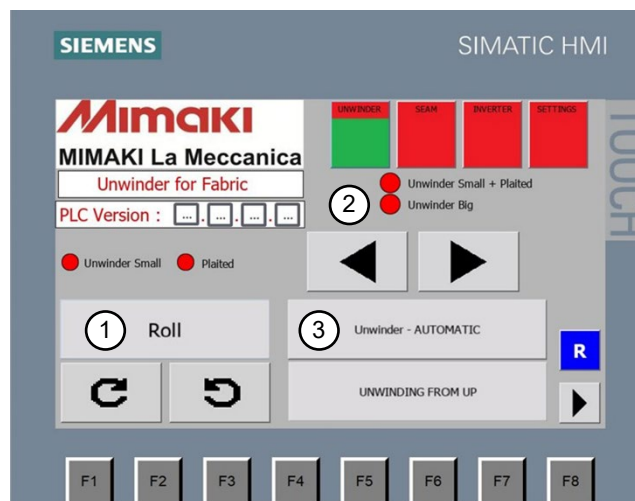


- Turn off the printer main unit before connecting or disconnecting the cable.



2

Setting the operation panel.



1. Set the Roll / Plated switch button to "Roll".
2. Confirm that the "**Unwinder Big**" lamp is green.
3. Set the Automatic / Manual switch button to "Unwinder-MANUAL".

Trolley installation and connection

1

Put the trolley in the default location.

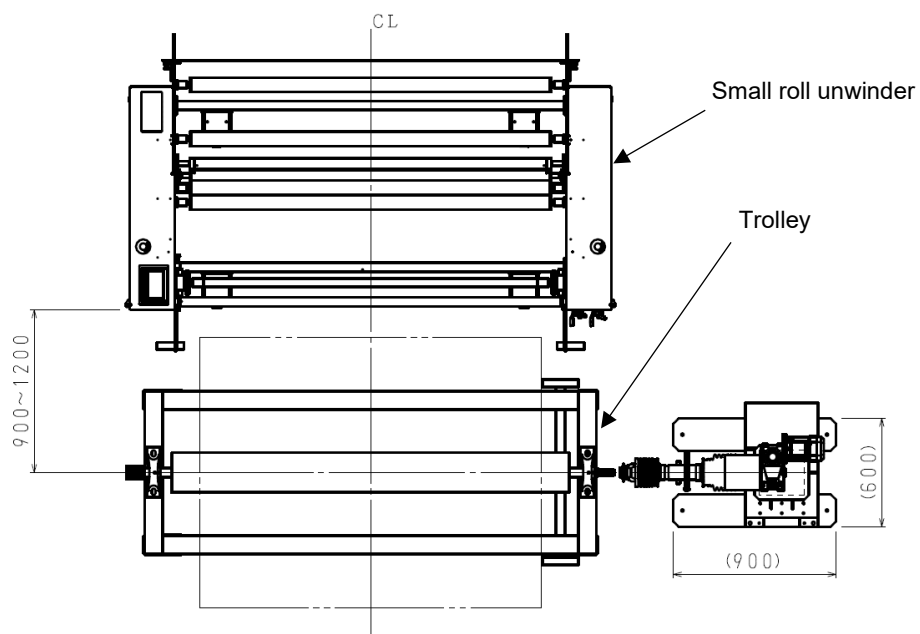
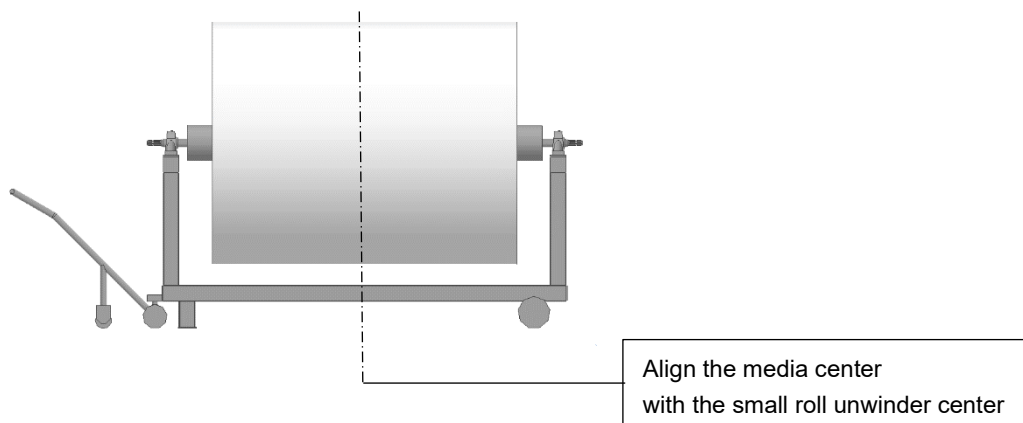
- Place the trolley on which the media is set in the specified position.



- Align the center of the media with the center of the Small roll unwinder as much as possible.



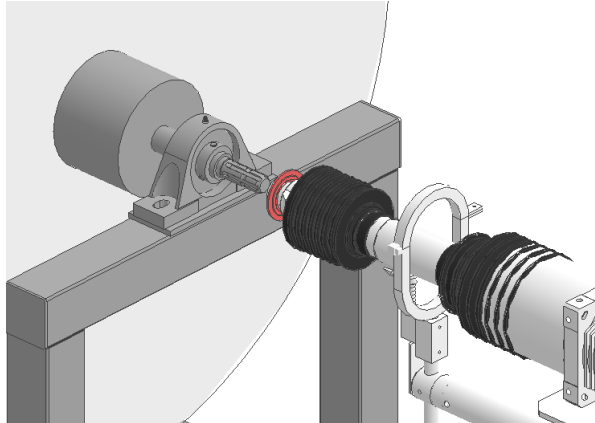
- If the winding position of the media is stable, installing a mechanical stopper etc. on the floor will allow you to work smoothly.
(We do not install a mechanical stopper.)



2

Connect the coupling.

- Lift the cardan joint and insert the coupling into the trolley rotating shaft. The cardan joint expands and contracts.



3

Lock the coupling.

- Push the whole cardan joint to the left while pressing the brim-shaped part of the coupling to the right.



- If it is difficult to connect the coupling because the trolley rotation axis does not match the coupling groove, the cardan joint can be rotated by pressing the "CARDAN ROTATION" button on the operation switch box. However, it only rotates in a certain direction.



- Be careful not to get caught.

Small-diameter media

Set the small-diameter media wound on the paper core in the Small roll unwinder.

Preparation



- Note that the red part is different from that of large diameter media.

1

Check that the X5 cable is **not connected** to the BIG ROLL UNWINDER HU1800 connector.

- If it is, turn off the printer main unit and remove the connector.

2

Setting the operation panel.

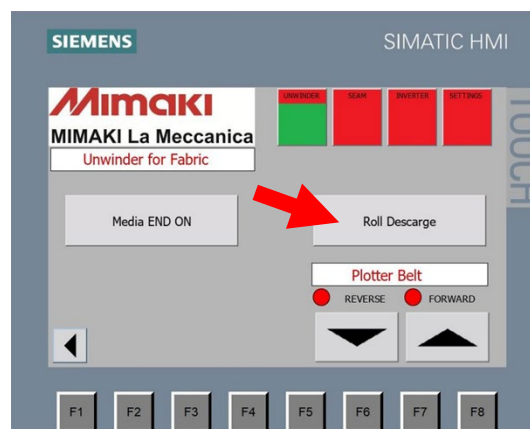
1. Set the Roll / Plaited switch button to "Roll".
2. Check that the "Plaited" lamp is green.
3. Set the Automatic / Manual switch button to "Unwinder-MANUAL" (manual).

Set of a media

1

Operate the operation panel.

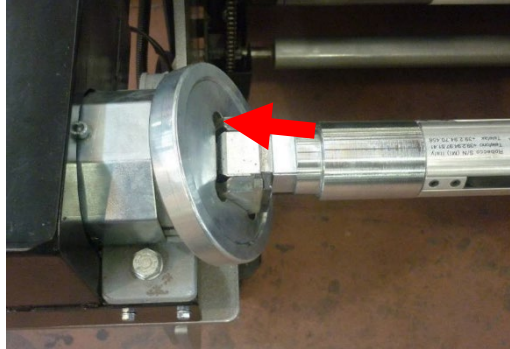
- Press "Roll Discharge" button on the second page of the operation panel UNWINDER screen. The 2 inch paper core set shaft rotates and can be removed.



2

Remove the shaft.

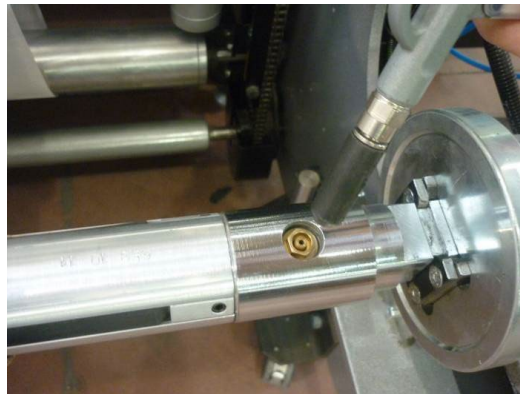
- Open the disc-shaped support and remove the shaft.
- Set the shaft on the media, and attach the shaft to the Small roll unwinder.
- Close the disc-shaped support.



3

Secure media.

- Inject air into the shaft with the supplied air gun to fix the media and shaft.

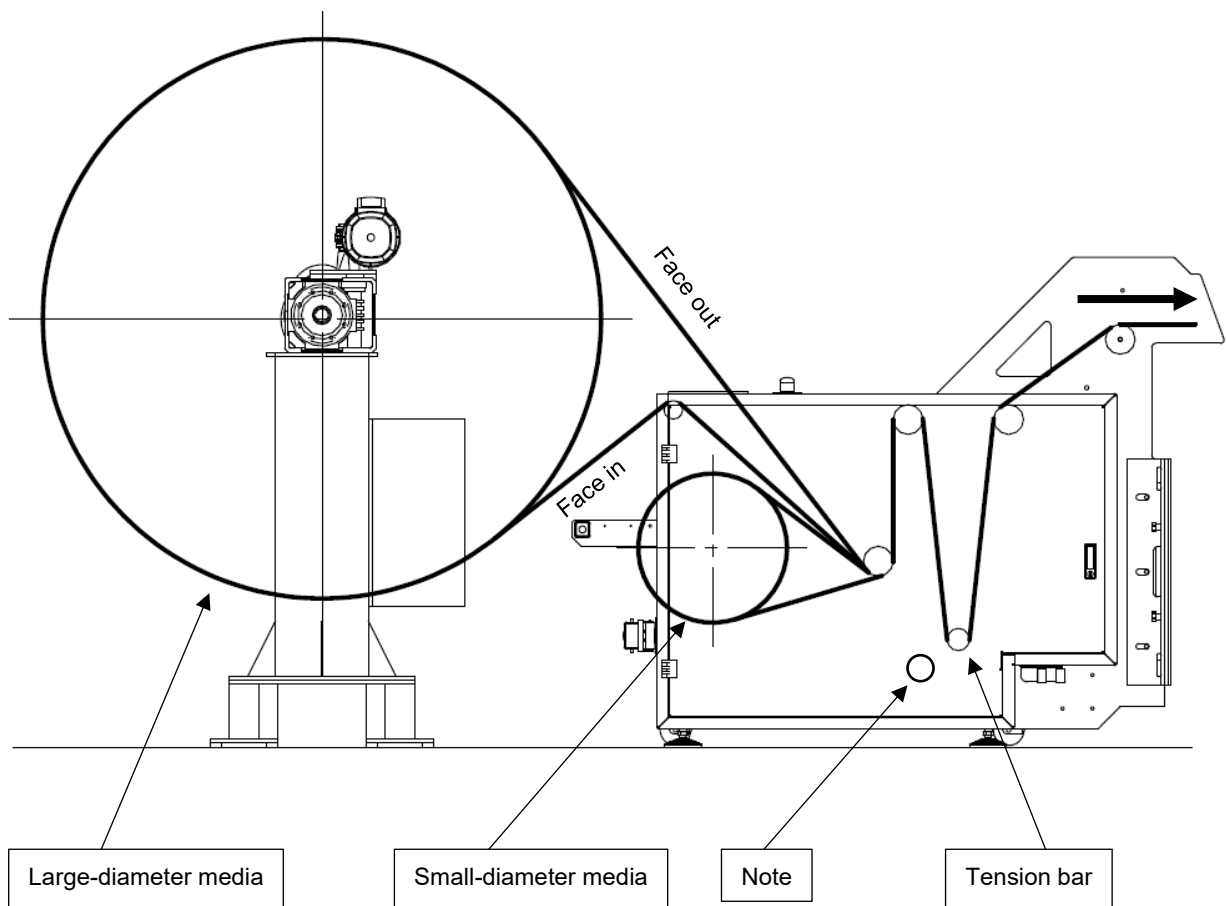


Pass through the media

The media passing method is the same for both large-diameter media and small-diameter media.

For details on how to set media in the printer main unit, refer to the printer main unit's operation manual.

Media path



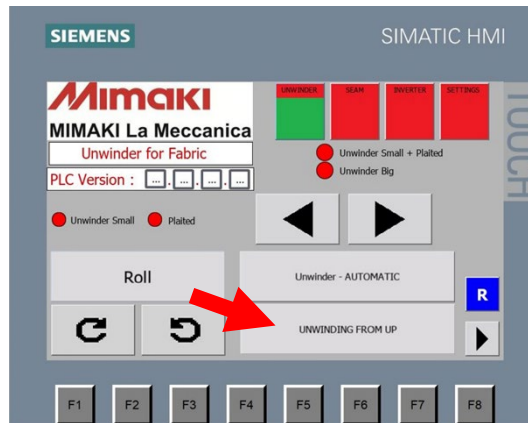
- The roller-shaped bar below the tension bar is the left-right synchronous shaft of the tension bar vertical mechanism. Be careful not to pass the media by error.

Print out

Switching face out / face in

Set using the “Face out / face in switch” button on the first page of the operation panel UNWINDER screen.

- UNWINDING FROM UP Face out winding
- UNWINDING FROM DOWN Face in winding



Automatic operation


1

Check the position of the tension bar.

- Adjust the tension of the media so that the tension bar is almost midway between ascending and descending ends. Use the feed on the printer main unit or the “manual rotation” button on the option operation panel of the printer main unit.

2

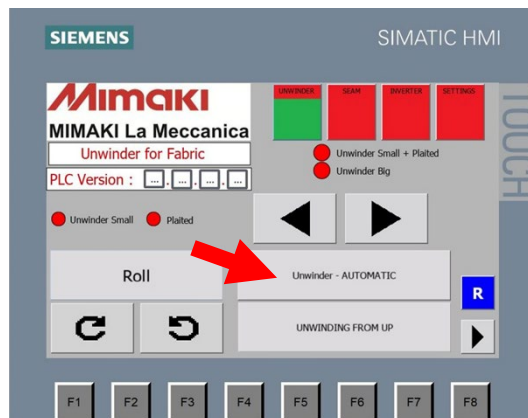
Check the error.

- If an error has occurred, press  (error history display button) to check the content, remove the cause, and then press the reset button.
- An error will occur if the beam sensor is blocked during media setting.

3

Start automatic operation.

- Press the “Automatic / Manual switch” button on the first page of the operation panel UNWINDER screen to set automatic operation.



- Start printing by operating the printer main unit.

User maintenance

User maintenance should be taken according to the frequency of use or on a regular basis so that you can keep using this option for a long time.

- If the exterior of this option becomes dirty, wipe it off with a soft cloth which contains water or a diluted neutral detergent after squeezing it well.
- Remove lint and dry ink immediately.
- Check that the rotating parts work smoothly. If you feel any unusual noise or vibration, contact your dealer or our sales office.
- Apply grease (lithium soap-based grease) every two weeks so that the coupling and trolley shaft of BIG ROLL UNWINDER HU1800 can be smoothly connected / disconnected.



Troubleshooting

Media is skewed or meandering

- Check that the trolley is correctly positioned and oriented with respect to the Small roll unwinder.
- This option does not have a mechanism to correct the media width position. The straightness of the media depends on the condition of the media wound on the trolley. If the trolley does not allow stable winding, consider installing a centering unit (a separate option).

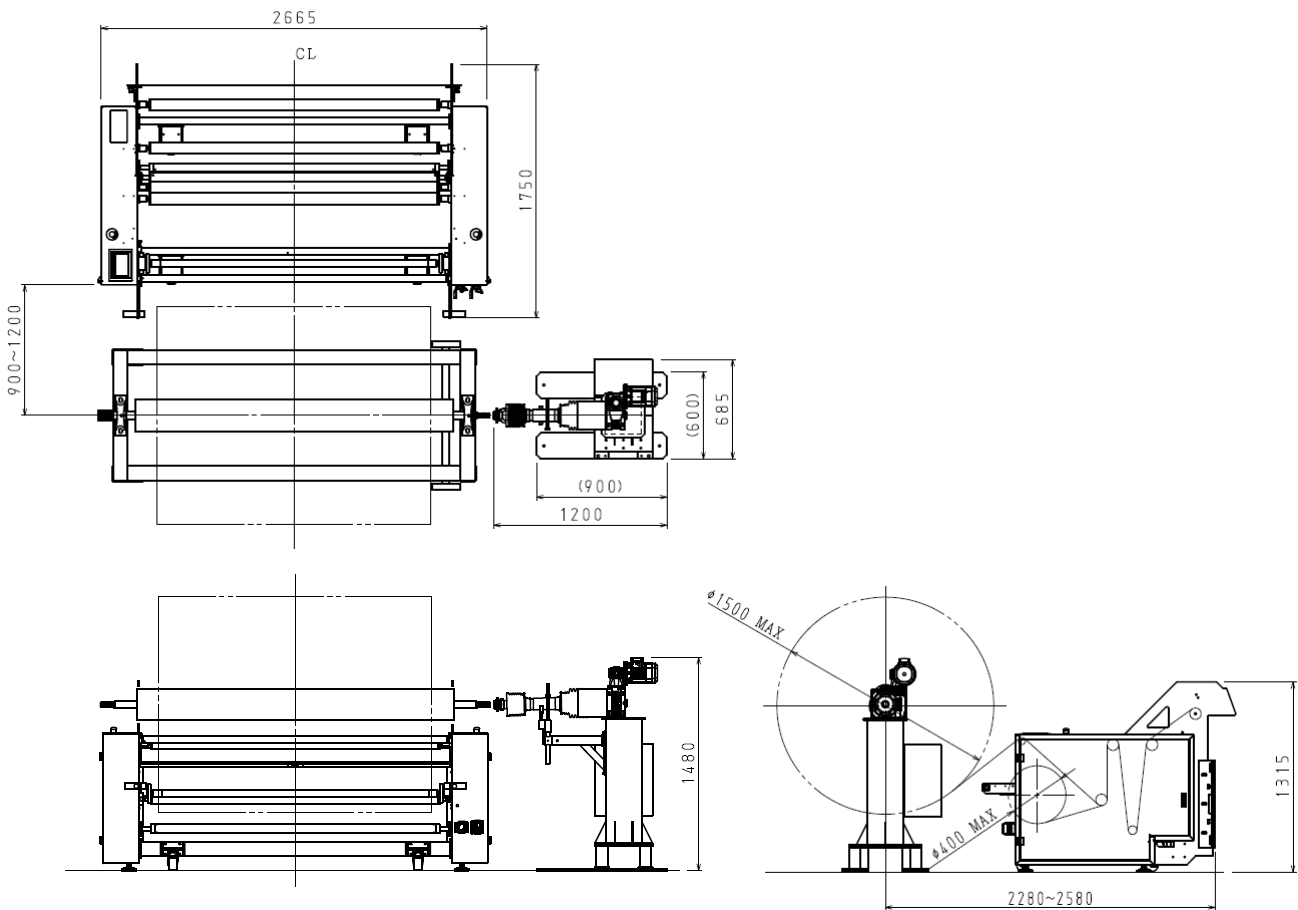
Specifications

Small roll unwinder

Item	Specifications
Overall length	1,750 mm
Overall width	2,665 mm
Overall height	1,315 mm
Weight	575 kg
Operating environment	Compliant with the printer main unit
Power and air sources	Compliant with the printer main unit, supplied from printer main unit

BIG ROLL UNWINDER HU1800

Item	Specifications
Overall length	1,200 mm
Overall width	685 mm
Overall height	1,480 mm
Weight	130 kg
Operating environment	Compliant with the printer main unit
Power	Compliant with the printer main unit, supplied from small roll unwinder



memo

memo

Mimaki™