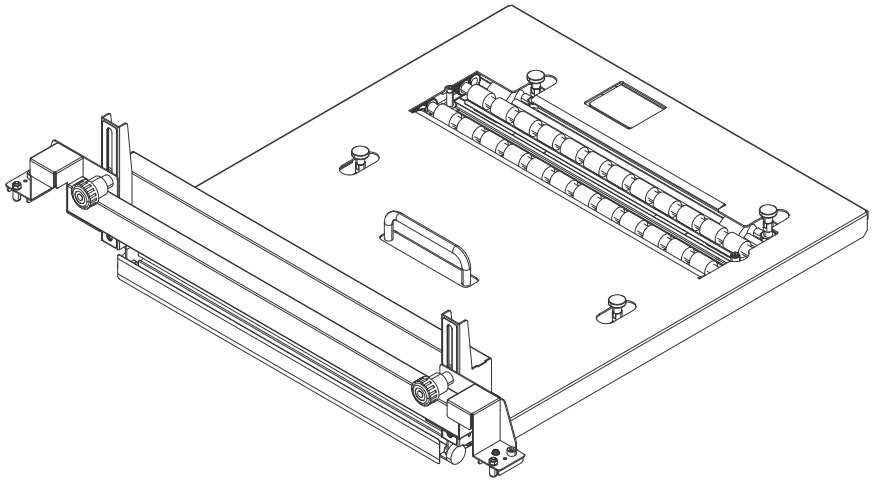
MUTOH

Operation Manual

Rotary Unit
IJ-RTU-04



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- Unauthorized copying or duplication of the whole or part of the contents of this Guide is prohibited.
- Every care has been taken in writing the contents of this manual, but please contact MUTOH or the dealer you purchased the product from if you find any unclear, erroneous or otherwise unsatisfactory content in the manual.
- Please be aware that MUTOH will not be liable in any way for failures or accidents that result from handling or operating the prduct according to any procedures other than those set forth in this manual.

- To return to original place after clicking link in the table of contents or reference, tap "Alt+←" keys.

ROTAUT61PE-A-01

Safety Precautions

Symbols

In this document, information that must be followed is marked with following symbols to avoid risk of harm to human health or damage to the property.

Please understand the meaning of each mark and use this product safely and correctly.

■ The following signs are used to classify and explain the degree of harm or damage that may result from neglect of instructions or incorrect handling.

Warning	Failure to follow the instructions could result in serious injury or death.
Caution	Failure to follow the instructions could result in minor injury or damage to the whole or part of the product.

■ The following symbols are used to classify and explain the types of instructions that must be observed.

	Indicates an action that you must avoid.
	Indicates an important instruction that you must do.

■ Other symbols

Important!	Provides information that require special attention or should be followed.
Note	Provides supplemental or reference information.
➔	Indicates the link to the reference section.

Storage

Warning

Avoid storing this product in any of the following locations: The product may fall from above or be stepped on.

- On the unstable or high table
- Inclined surface
- On floor where people frequently walk

Caution

Avoid storing this product in any of the following locations. This may damage the product and make it unusable.

- Locations exposed to high temperatures, high humidity, or direct sunlight.
- Dusty location
- Locations subject to vibration from the neighboring devices.

Product handling

Caution

Do not sit or place heavy objects on the product.
This may damage the product and make it unusable.

- **When carrying the product, always hold the handle and place your other hand on the rigid part of the product such as attachment or side of the product to support it securely.**
  Holding the rollers or media retainer may damage the product.
- **When carrying the product by its sides, always grip the product frame (silver) as well, not just the cover (black).**
  Do not lift the product by the cover alone. This may cause the product to fall or deform components which could affect print quality.

Do not use volatile chemicals such as thinner, benzine, alcohol, etc.

This may damage to the coating.

Ink and waste fluid

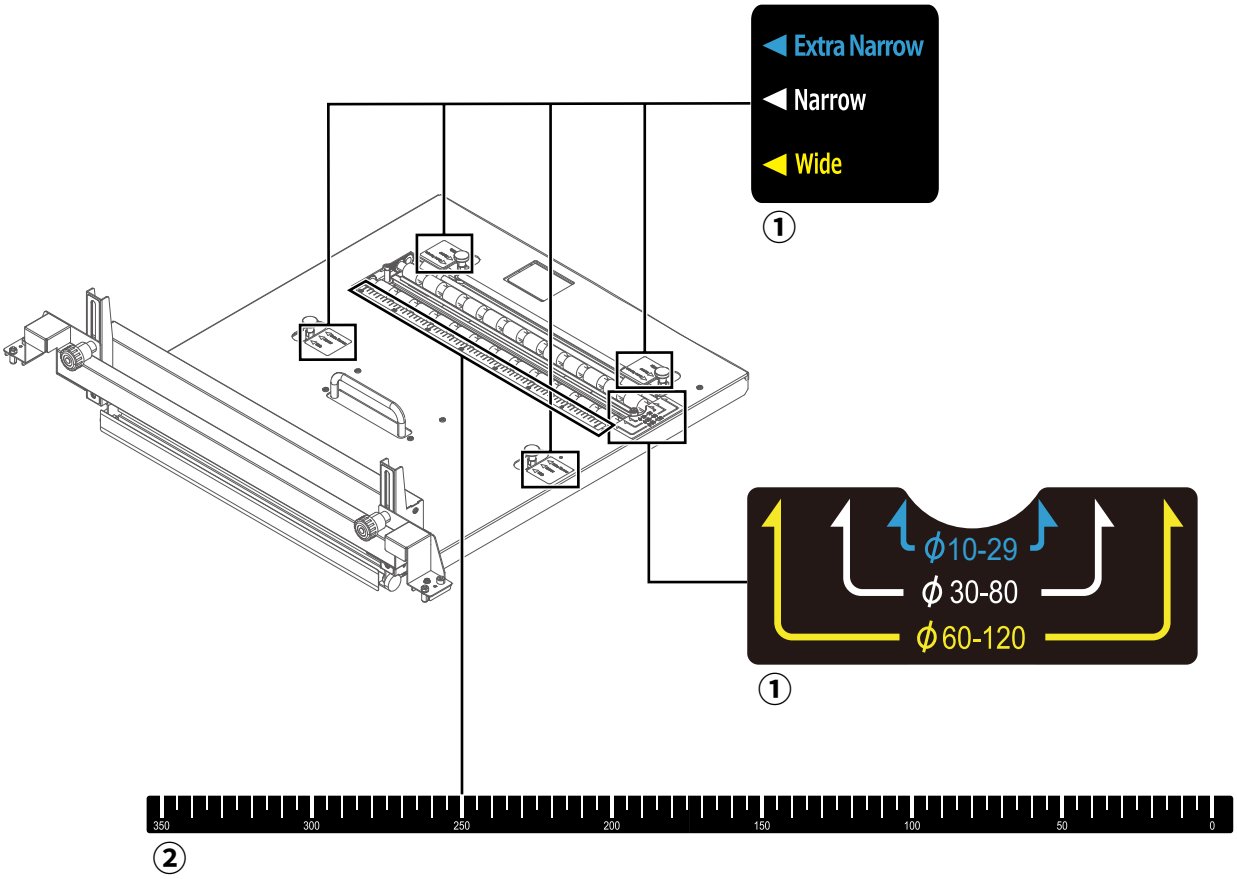
Warning

The safety concerns involved with using and handling of ink, maintenance cleaning solution and waste fluid are detailed in the Safety Data Sheet (SDS). Make sure to read the SDSs when handling these liquid.

Download the latest version of SDSs from our website (https://www.mutoh.co.jp/).

Instruction Labels

Instruction labels are affixed where special attention for operating this product is required. The contents of each label are shown here.



① Pitch adjustment label

② Scale label: Scale marks are provided at 5 mm intervals from the media origin (0)

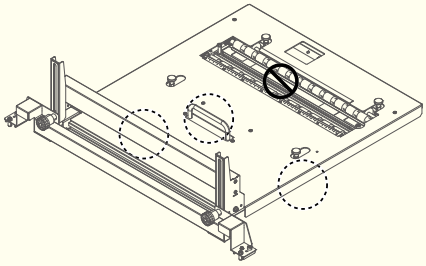
Unpacking

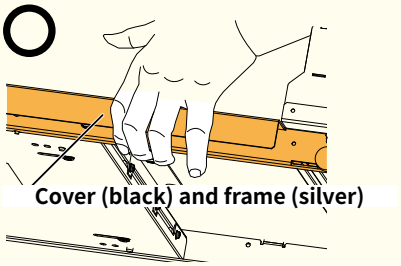
Unpacking the Printer

Check that the following items are included in the box.

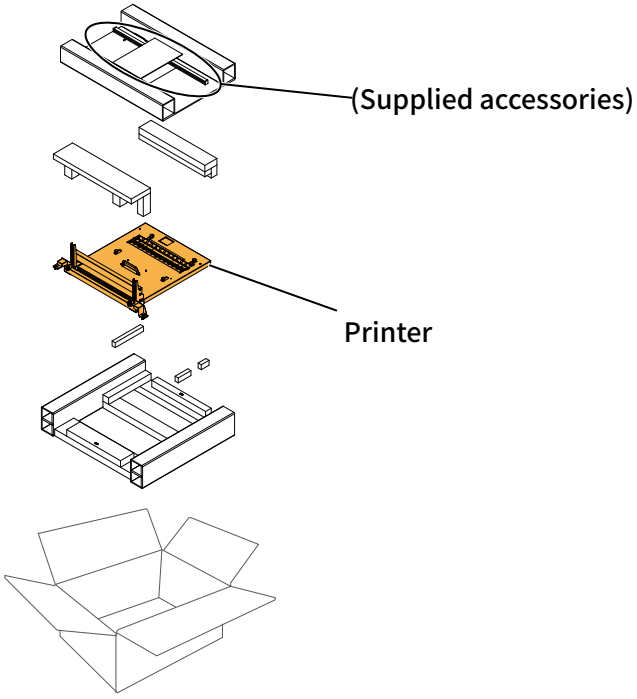
Caution

- **When carrying the product, always hold the handle and place your other hand on the rigid part of the product such as attachment or side of the product to support it securely.**
  Holding the rollers or media retainer may damage the product.
- **When carrying the product by its sides, always grip the product frame (silver) as well, not just the cover (black).**
  Do not lift the product by the cover alone. This may cause the product to fall or deform components which could affect print quality.

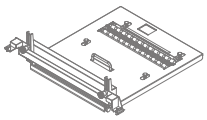
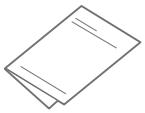
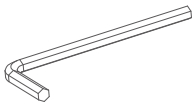
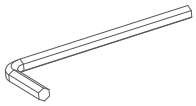
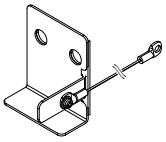




1. Open the packaging box, remove the cardboard and cushioning materials, and take out the product and accessories.

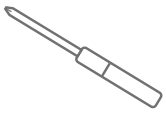


Package Contents

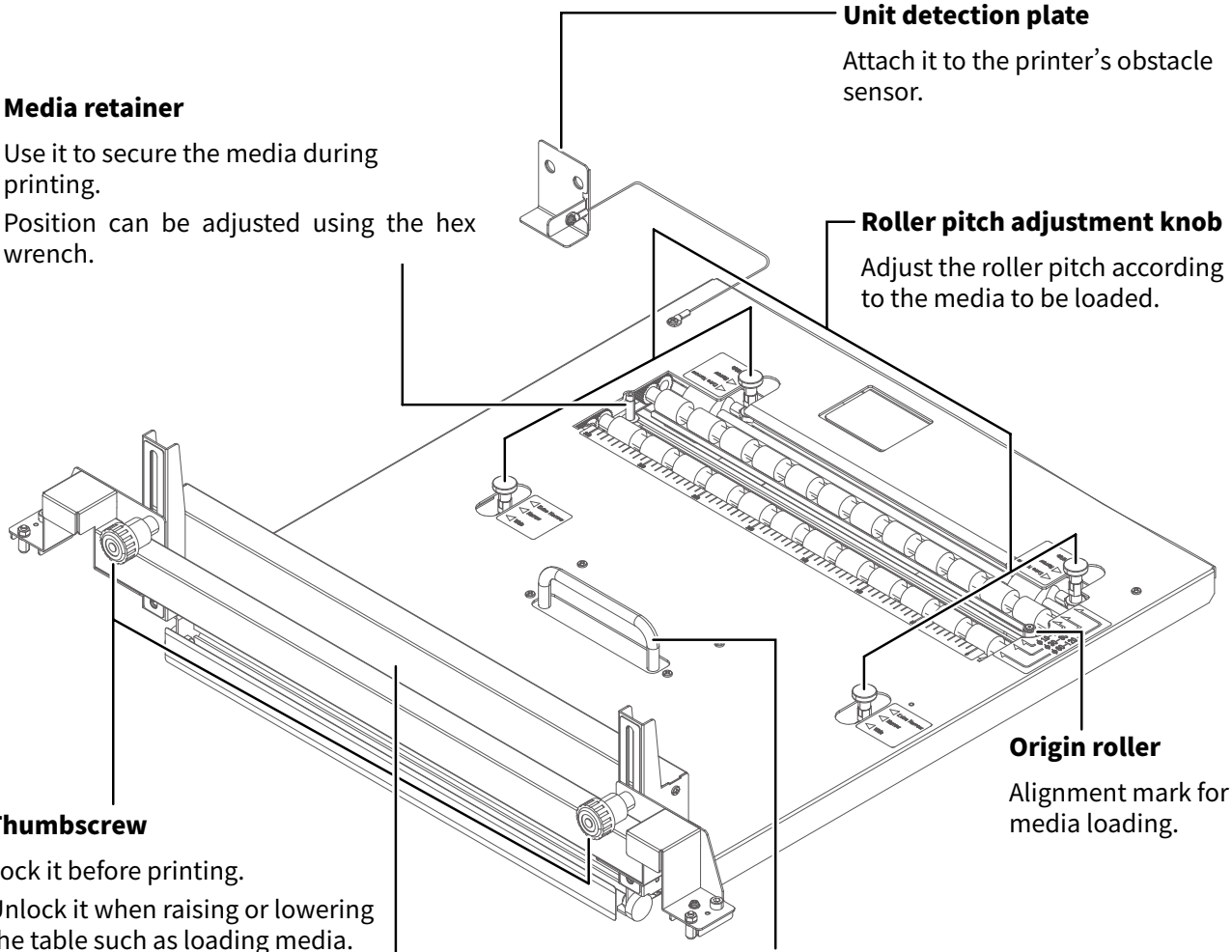
 Printer: 1	 Notes for Unpacking: English/Japanese 1 each	 Operation Manual: English/Japanese 1 each（this document）	 Guide bar: 1	 3 mm Hex wrench: 1
 4 mm Hex wrench: 1	 Unit detection plate: 1			

Required Items

In addition to the supplied accessories, you will need the following items.

 Phillips-head screwdriver: 1

Main components / Functions



Unit detection plate

Attach it to the printer's obstacle sensor.

Media retainer

Use it to secure the media during printing.

Position can be adjusted using the hex wrench.

Roller pitch adjustment knob

Adjust the roller pitch according to the media to be loaded.

Origin roller

Alignment mark for media loading.

Thumbscrew

Lock it before printing.

Unlock it when raising or lowering the table such as loading media.

Handle

Handle for carrying this product.

Attachment

Loosening the thumbscrew will move the unit up and down.

It allows the table height to be adjusted according to the media diameter.

***1 When the rotary unit is removed or not used, secure the unit detection plate to the rotary unit. (It attaches magnetically.)**

Environmental Requirements

Use this product under conditions that the printer can operate properly.

➔ **XPJ-661UF-P" Startup Guide"**

Environmental Requirements (Same as the operating environment conditions of the printer)	Operation environment	Temperature: 20 °C to 32 °C, Humidity: 40% to 60% Non-condensing
	Recommended printing environment	Temperature: 22 °C to 30 °C, Humidity: 40% to 60% Non-condensing
	Printer storage environment	Temperature: -20 °C to 60 °C, Humidity: 20% to 80%

Supported media

This product supports the following media.

Media size

Shape	Cylindrical rigid media* *Cylindricity: 0.5 mm or less (Print quality is not guaranteed
Diameter	Φ 10 mm to Φ 120 mm
Supported width	30 mm to 360 mm
Maximum weight	1.0 kg

⚠ Warning

Do not print on a food or beverage container or packaging materials. In addition, do not print on any area that comes into direct contact with the mouth or may come into contact with the mouth.

Important!

The minimum media width and length that can be set in the media type for the printer are 30 mm x 30 mm.

Be careful that when printing on media smaller than this size, the table may be stained with ink. If stained ink is cured by UV light, it may not be removable.

Note

For recommended media, please contact your local MUTOH dealer.

Media handling cautions

Note the following points when handling media. Failure to follow these instructions could result in damage to the printer.

- **Do not use media that is sensitive to heat.**

  The heat given off by the UV rays could deform such media.
- **Printing on a light reflective material may have a chance to cure the ink on the print head, causing malfunction or damage to the product.**

  To print on such materials, it is recommended to mask the non-print area on the material.
- **Before printing, clean the print surface of the media using ethanol or commercially available disinfecting alcohol.**

  In addition to removing oil and dirt from the print surface, this helps reduce static electricity.

Media loading cautions

- **When loading a new media, make sure to place it on an appropriate position and input correct media information.**

  If wrong information is entered, the printer can print on an unintended position of the table. It may also cause print quality issues, ink mist generation or head strike.

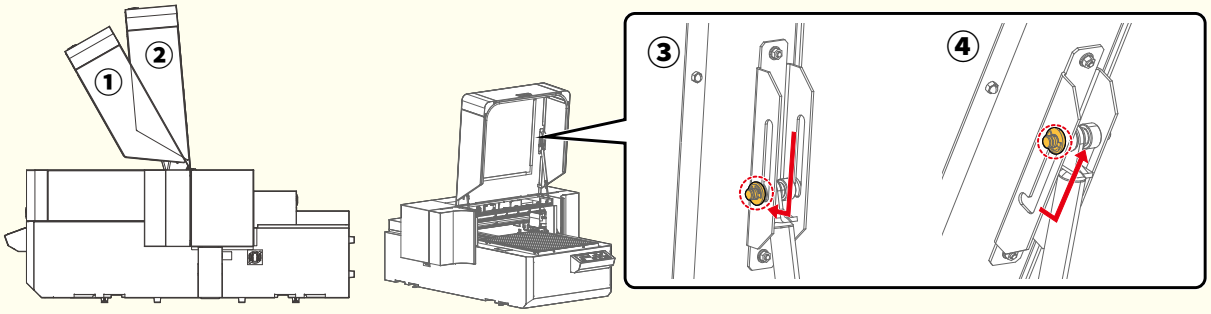
  Enter the diameter of the media as accurately as possible. Measure the media and enter the actual diameter before loading.

> **Note**
>
> **For printing precautions, refer to the printer's operation manual.**

Opening and closing printer covers

Caution

- **The front cover has two positions: normal position (①) and full open position (②). The full open position is intended for table maintenance only. For all other operations, keep the front cover in the normal position.**
- **When using the full open position, observe the following precautions. Improper operation may cause the front cover to close suddenly, resulting in injury.**
  - Make sure to lock the damper when using the full open position (③).
  - Before closing the front cover, make sure to unlock the damper (④).

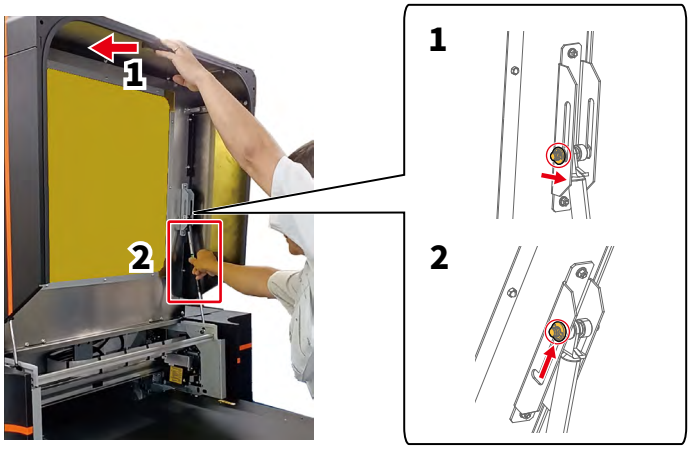


Important!

When the front cover is opened to the full open position, always unlock the damper and then close the front cover. Closing the front cover while the damper is locked may cause damage.

Unlocking the damper

1. Push the front cover backward to release the damper lock.
2. Hold the damper at the position shown in the illustration and close the front cover while the damper lock is released.



Installing the Rotary Unit

Note

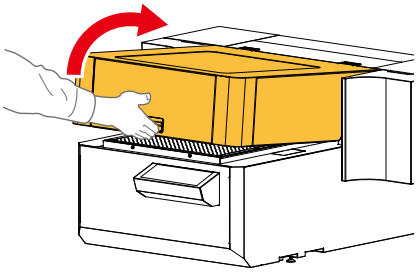
For details of menu operation, refer to the printer's operation manual.

Put printer into Rotary Mode

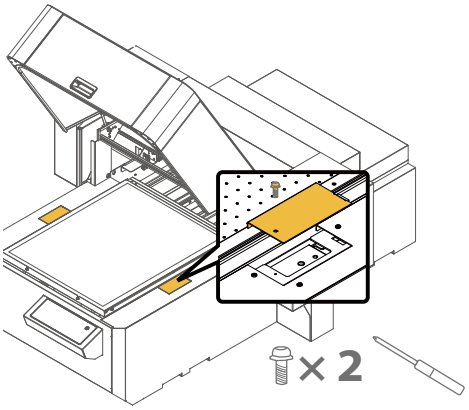
You will need a Phillips-head screwdriver for this procedure. Use your personal screwdriver.

1. Check that the printer is powered on.

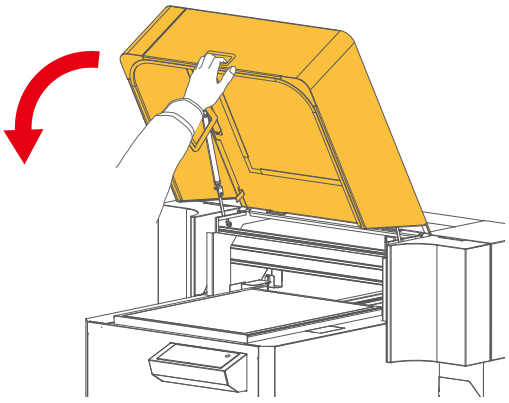
2. Hold the front cover at the position shown in the illustration and gently open it.



3. Use the Phillips-head screwdriver to remove the screws, and then remove the attachment covers (x2) from the printer.
   - If it is difficult to remove the covers, put the printer into Rotary Mode, then remove them from the printer.
   - Make sure to keep the screws and attachment covers removed from the printer.



4. Hold the front cover at the position shown in the illustration and gently close it.



5. Tap **[Home]** key.

6. Access the “Rotary Unit” menu.
Menu flow



- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

7. Tap **[>]** key.

8. When the following appears, tap **[Enter]** key.



9. Use **[∧]** / **[∨]** key to select **[Execute? Yes]** and tap **[Enter]** key.



- **[Please wait]** appears.

10. When **[Unload Media then Tap Enter]** appears, remove media and jig from the table and tap **[Enter]** key.

- **[Please wait]** appears.
- The table move to the installation position of the rotary unit.

11. When **[Install Rotary Unit then Tap Enter]** appears, start installing the rotary unit onto the printer.



Note

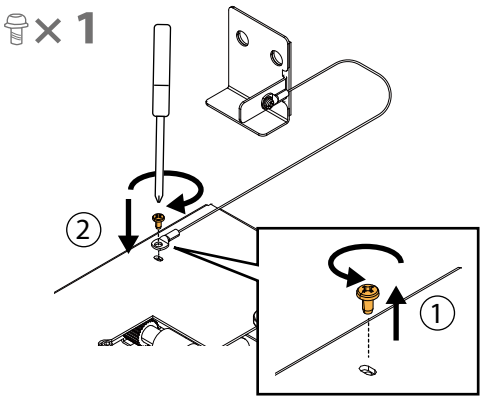
Tapping **[<]** key while the following message is displayed will cancel switching to Rotary Mode.

- **[Unload Media then Tap Enter]**
- **[Install Rotary Unit then Tap Enter]**

Attach the unit detection plate

You will need a Phillips-head screwdriver for this procedure. Use your personal screwdriver.

1. **Attach the unit detection plate to the rotary unit.**
Tighten the supplied screw with the Phillips screwdriver to secure the unit detection plate to the rotary unit.



Install the rotary unit on the printer

This procedure requires the supplied hex wrench.

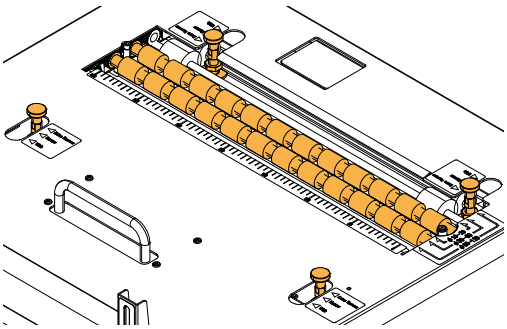
⚠ Caution

- **When carrying the product, always hold the handle and place your other hand on the rigid part of the product such as attachment or side of the product to support it securely.**
  Holding the rollers or media retainer may damage the product.
- **When carrying the product by its sides, always grip the product frame (silver) as well, not just the cover (black).**
  Do not lift the product by the cover alone. This may cause the product to fall or deform components which could affect print quality.

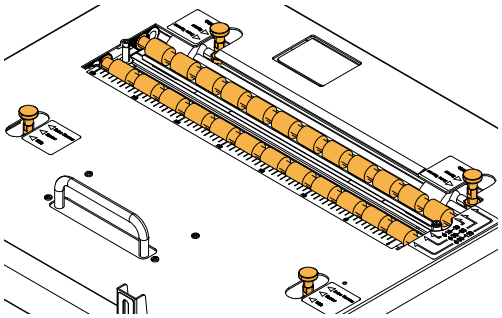
Procedure

1. Adjust the roller pitch of the rotary unit according to the diameter of the media.

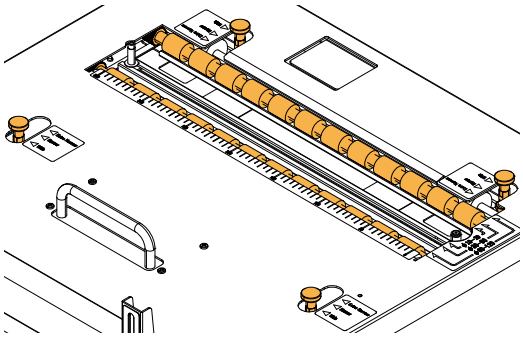
- **Ex Narrow:** Φ 10 mm to Φ 29 mm
- **Narrow:** Φ 30 mm to Φ 80 mm
- **Wide:** Φ 60 mm to Φ 120 mm



<Roller pitch: Ex Narrow>



<Roller pitch: Narrow>



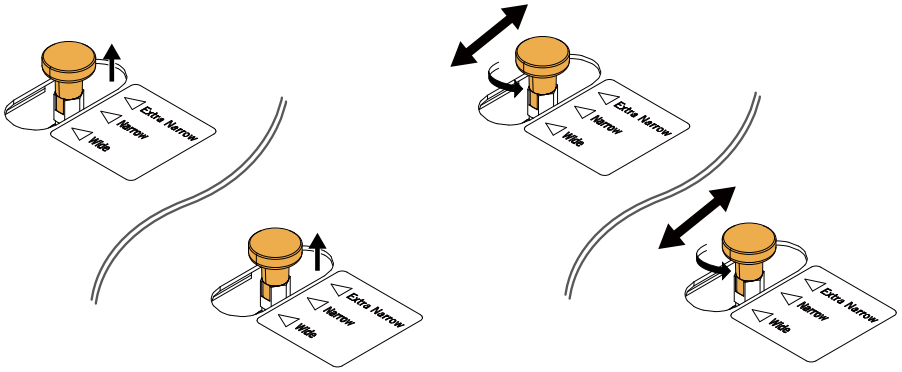
<Roller pitch: Narrow>

How to change roller pitch

a. Pull up the knob and rotate it by 90 degrees to unlock it.

b. Then adjust the roller pitch.

c. Once the pitch has been adjusted, rotate the knob to lock it.



Important!

When adjusting the roller pitch, move the left and right adjustment knobs in parallel at the same time.

Do not move only one adjustment knob or adjust the knobs while they are tilted. The roller pitch may not be adjusted properly.

Note

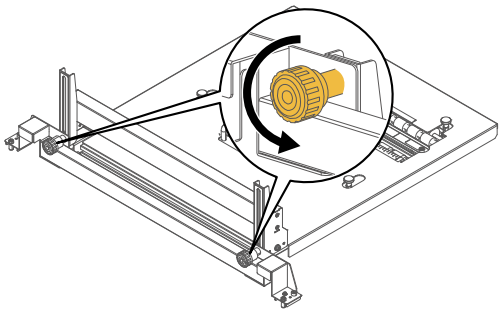
- Make sure to set all adjustment knobs to the same position (Ex Narrow, Narrow, or Wide). Otherwise, printing may not be performed properly.
- For media with diameter of Φ60 mm to Φ80 mm, you can use either pitch setting. However, the Wide setting is recommended for more consistent printing results.

2. Loosen the thumbscrews to unlock the attachment.

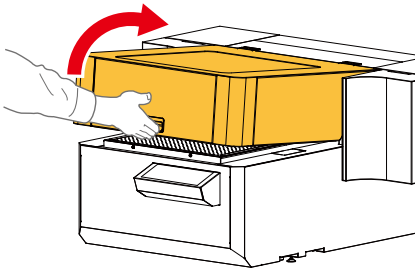
Check that the attachment can slide smoothly.

Important!

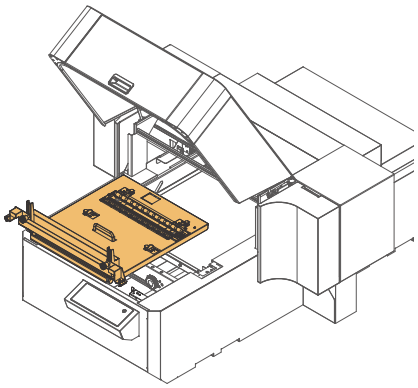
Rotate the thumbscrews more than half a turn. Be careful not to loosen too much.



3. Hold the front cover at the position shown in the illustration and gently open it.



4. Install the rotary unit on the printer.

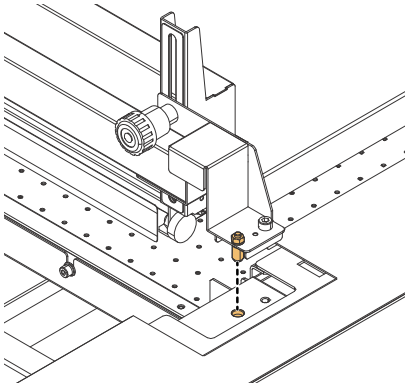


Important!

When installing the rotary unit, be careful not to hit any parts inside the printer.

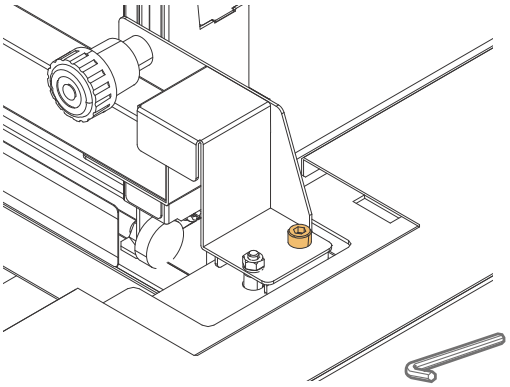
This may result in deterioration of print quality.

a. Align the registration pin on the rotary unit with the hole on the printer and insert it.



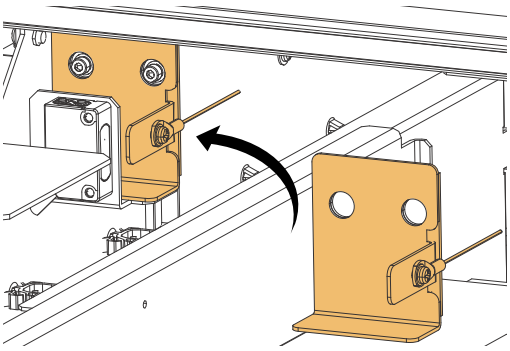
b. First, tighten the screw on the right side of rotary unit using the supplied hex wrench.

c. Then tighten the screw on the other side.



5. Attach the unit detection plate to the obstacle detection sensor. (it attaches magnetically.)

Make sure that the wire does not get twisted.



Important!

Make sure to attach the unit detection plate to the obstacle detection sensor. If not, you will not be able to move on to the next step.

6. Close the front cover.

7. Tap **[Enter]** key.



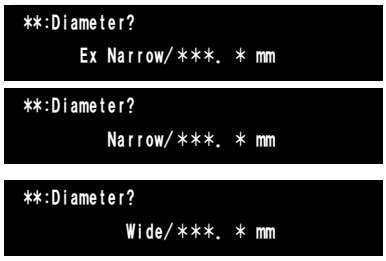
8. Use **[∧]** / **[∨]** key to select **[Installed? Yes]** and then tap **[Enter]** key.



9. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.



10. Check the diameter and roller pitch setting displayed on the control panel.



- To change the setting, tap **[Cancel]** key.
- If correct, tap **[Enter]** and go to the step 12.

Note

Depending on the settings in the selected media type, the appropriate message appears.

11. Enter the diameter of media and tap **[Enter]** key.



■ **When the media diameter entered is between 60.0 and 80.0 mm,**

- Use **[∧]** / **[∨]** keys to select a roller pitch and tap **[Enter]** key.



Note

You can get more consistent result with the “Wide” setting.

12. Adjust the roller pitch according to the message displayed on the printer control panel.

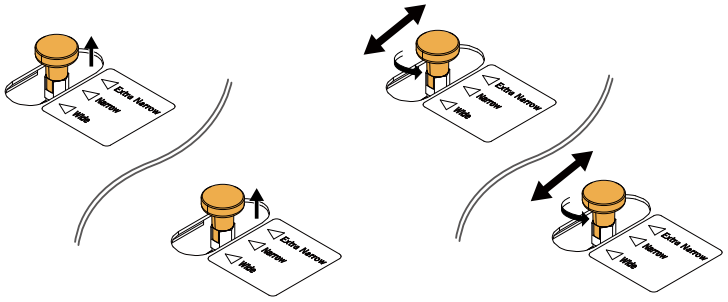
```
Set pitch ExNarrow
Then tap Enter.
```

```
Set pitch Narrow
Then tap Enter.
```

```
Set Pitch Wide
Then tap Enter.
```

a. Open the front cover.

b. Adjust the roller pitch.



Important!

When adjusting the roller pitch, move the left and right adjustment knobs in parallel at the same time.

Do not move only one adjustment knob or adjust the knobs while they are tilted. The roller pitch may not be adjusted properly.

13. Close the cover, then tap **[Enter]** key.

14. Use **[∧]** / **[∨]** key to select **[Changed Pitch? Yes]** and then tap **[Enter]** key.

```
Changed Pitch?
                Yes
```

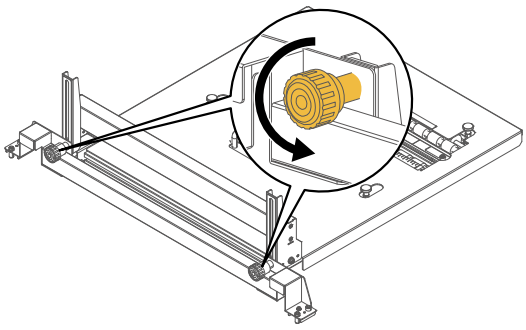
- The following message will appear.

```
Tighten Thumb Screw
Then tap Enter.
```

15. Check that the thumbscrews are loosened.

a. Open the front cover.

b. After ensuring that both thumbscrews are loosened, close the front cover and tap **[Enter]** key.



Note

- **Rotate the thumbscrews more than half a turn. Be careful not to loosen too much.**
- **The printer illustration is omitted for simplicity.**

16. Use [∧] / [∨] key to select **[Loosen Thumb Screw? Yes]** and then tap **[Enter]** key.

```
Tighten Thumb Screw?
                Yes
```

a. **[Please wait]** appears.

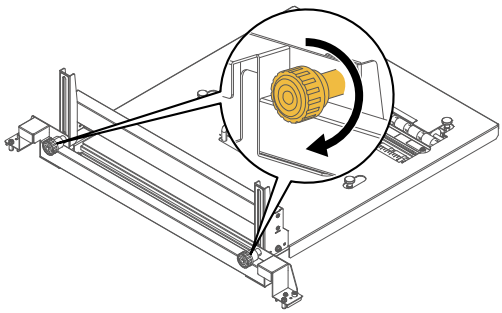
b. The table moves to the specified height.

17. When the following message appears, open the front cover.

```
Tighten Thumb Screw
Then tap Enter.
```

18. Tighten the thumbscrews until the attachment is locked securely.

- After ensuring that both thumbscrews are loosened, close the front cover and tap **[Enter]** key.



Note

- Do not tighten too much. This will cause damage to the rotary unit.
- The printer illustration is omitted for simplicity.

19. Select **[Tighten Thumb Screw? Yes]** and then tap **[Enter]** key.

```
Tighten Thumb Screw?
                Yes
```

- Now, the rotary unit is installed in the printer.

```
Set media, then
Tap [∧] key.
```

Nozzle check and head cleaning

Before you start daily printer operation, run a nozzle check. If there are clogged nozzles (missing lines), perform a head cleaning.

Run a nozzle check

Print a nozzle check pattern to check if all nozzles are firing ink properly.

The following nozzle check can be performed with the rotary unit installed.

Nozzle check menus

Nozzle Check L	Print the nozzle check pattern outside the printable area of the table on the non-origin side. The nozzle check pattern can be printed without removing the print media from the table.

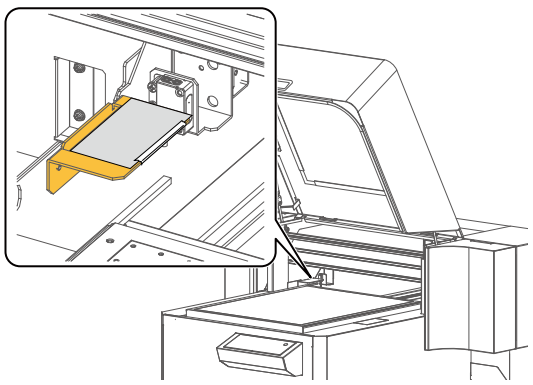
Note

When using white ink, colored media, transparent films or semi-transparent films (such as OHP film, tracing paper and more) are recommended to use for nozzle check.

Procedure

1. Load the media in the nozzle check L space on the non-origin side.

- Align the right edge of the media with the right side of the space.
- Secure the media with tape such as masking tape to keep it flat.



Important!

Required media size:

- Nozzle Check L: width 50 mm x length 55 mm
  Thickness: 1.5 mm or less

Using small media may cause the print to extend beyond the media. If UV ink stains on the table, it will be cured by UV light and will not be removed from the table.

2. Tap **[<]** key while **[Print Ready]** or **[Set media, then Tap [^] key.]** is displayed on the panel.

3. Tap **[Enter]** key.

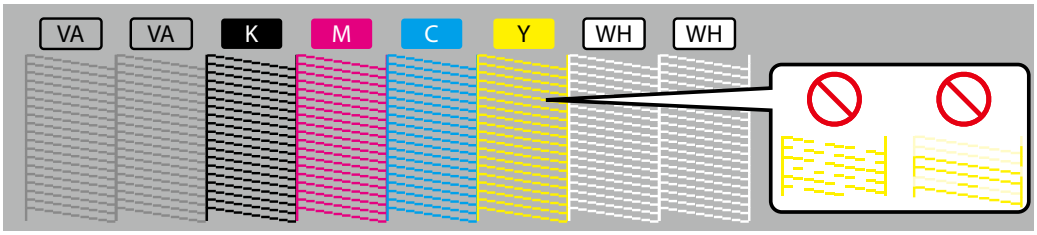


The printer begins printing a nozzle check pattern.

> **Note**
>
> You can select a nozzle check pattern from the setup menu of the printer control panel.
> ➔ **Operation Manual "Menu3: Test Print"**

4. Check the pattern printed.

- If the nozzle is clogged, go to "Perform a head cleaning".
  ➔ **"Perform a head cleaning" P.22**
- If all lines are clearly printed, you can start printing.



> **Note**
>
> In this example, non-colored background area is shown in gray.

Perform a head cleaning

If the nozzle is clogged, perform a head cleaning. The product has several cleaning modes. Use an appropriate mode depending on the nozzle check print result.

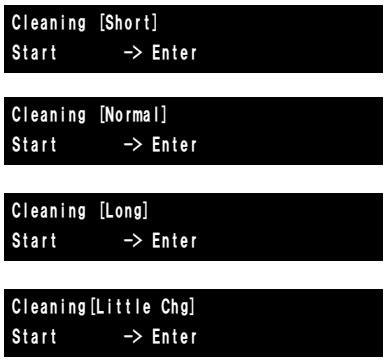
Head cleaning mode

Cleaning "Short"	Select this mode if there are clogging on about 10 nozzles. Consumes a small amount of ink.
Cleaning "Normal"	Select this mode if there are clogging on more than 10 nozzles.
Cleaning "Long"	Select this mode if nozzle clogging persists even after Cleaning "Normal" was performed. Consumes more ink than Cleaning "Normal".
Cleaning "Little Charge"	Gives higher cleaning efficiency than cleaning "Long", but consumes a lot of ink.

Procedure

1. Tap **[>]** key while **[Print Ready]** is displayed on the panel.

2. Use **[∧]** / **[∨]** key to select a head cleaning mode and tap **[Enter]** key.



- The cleaning cycle begins.



Note

You can also perform a head cleaning from the setup menu of the printer control panel.
➔ **Operation Manual "Menu2: Maintenance"**

3. Run a nozzle check print again to see if all nozzles are clear.

➔ "Run a nozzle check"P.20

Note

If nozzle clogging persists even after repeated Cleaning “Normal” attempts, try following troubleshooting steps:

1. Perform a cleaning "Long" two or three times. (If the problem persists, move to the next one)
   ➔ **“Perform a head cleaning” P.22**
2. Clean each part of the printer. (If the problem persists, move to the next one)
   ➔ **Operation Manual “Printer main components / Functions”**
3. Perform a "Little Charge" 2 or 3 times. (If the problem persists, move to the next one)
   ➔ **Operation Manual “Little Charge”**
4. Perform a "Soak Cleaning".
   ➔ **Operation Manual “Soak Cleaning”**

The problem still persists, contact your local Mutoh dealer.

Loading the media

Select Print Settings

Procedure

1. Tap **[Home]** key.

2. Access the “Media Type” menu.

Menu flow



- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

3. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.



- When the currently selected media type is chosen, the media type setting menu (Size) appears.
- Otherwise, move on to the next step.

4. Check the diameter and roller pitch setting displayed on the control panel.





- To change the setting, tap **[Cancel]** key.
- If correct, tap **[Enter]** and go to the step 6.

Note

Depending on the settings in the selected media type, the appropriate message appears.

5. Enter the diameter of media and tap **[Enter]** key.

```
**:Diameter:
(10-125)       ***. * mm
```

■ **When the media diameter entered is between 60.0 and 80.0 mm,**

- Use **[∧]** / **[∨]** keys to select a roller pitch and tap **[Enter]** key.

```
**:Roller Pitch:
                  Narrow
```

```
**:Roller Pitch:
                  Wide
```

Note

You can get more consistent result with the “Wide” setting.

- **[Please wait]** appears.

6. If media is loaded, remove it and tap **[Enter]** key.

```
Unload Media
Then tap Enter.
```

7. Adjust the roller pitch according to the message displayed on the printer control panel.

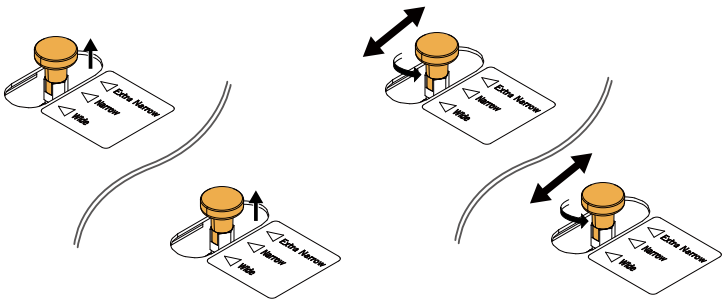
```
Set Pitch Wide
Then tap Enter.
```

```
Set pitch Narrow
Then tap Enter.
```

```
Set pitch ExNarrow
Then tap Enter.
```

a. Open the front cover.

b. Adjust the roller pitch.



Important!

When adjusting the roller pitch, move the left and right adjustment knobs in parallel at the same time.

Do not move only one adjustment knob or adjust the knobs while they are tilted. The roller pitch may not be adjusted properly.

8. Close the cover, then tap **[Enter]** key.

9. Use **[∧]** / **[∨]** key to select **[Changed Pitch? Yes]** and then tap **[Enter]** key.



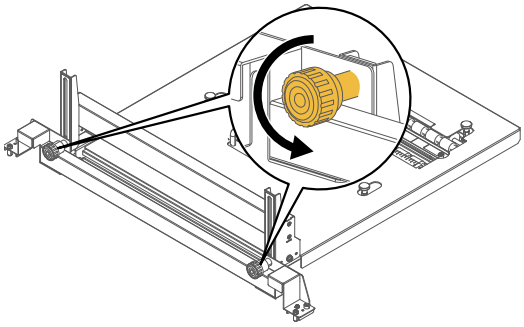
- The following message will appear.



10. Loosen the thumbscrews to unlock the attachment.

a. Open the front cover.

b. After ensuring that both thumbscrews are loosened, close the front cover and tap **[Enter]** key.



Note

- Rotate the thumbscrews more than half a turn. Be careful not to loosen too much.
- The printer illustration is omitted for simplicity.

11. Use **[∧]** / **[∨]** key to select **[Loosen Thumb Screw? Yes]** and then tap **[Enter]** key.



a. **[Please wait]** appears.

b. The table moves to the specified height.

12. When the following message appears, proceed to the media loading procedure.

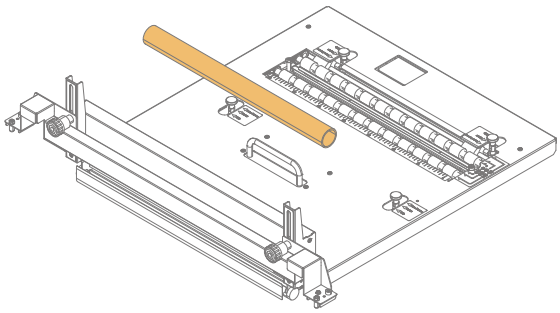


Loading the media

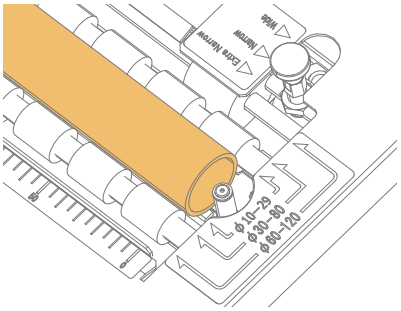
Procedure

1. Open the front cover.

2. Load a cylindrical object on the rotary unit.



a. Align the edge of the object with the media registration pin.



Note

Align the object with the origin of print data and load it.

➔ “Correspondence Between the Unit Origin and the Application Screen Origin” P.37

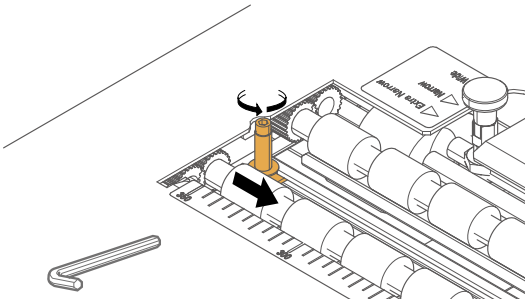
Note

If a cylindrical object does not stay on the rollers, use the media retailer to hold it on the rollers.

- Depending on the shape of object, the media retainer cannot hold the object properly.
- If you are using lightweight object, the object might be lifted by the media retainer. In such cases, do not use the media retainer.

<How to adjust the media retainer>

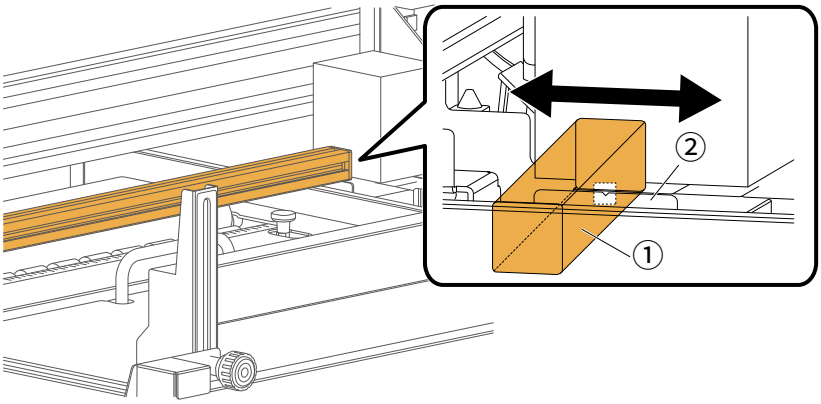
1. Use the supplied 3 mm hex wrench to loosen the media retainer.
2. Slide the media retainer until it lightly contacts the loaded media.
3. Use the supplied 3 mm hex wrench to tighten the media retainer.



If the media retainer is pressed too hard against the media, the media may not rotate properly.

3. Place the guide bar onto the guide plate of the printer and check the following points:

- The object does not touch the guide bar (①).
- The gap between the object and guide bar is not too large.



■ **<How to Check Appropriate Head Height>**

a. Align the guide bar with the center notch of guide plate (②).

b. Slide the guide bar back and forth a few times.

Important!

If the gap between the print head and object is not adequate, measure the diameter of the object again and input the correct diameter.

Printing without correcting this condition may result in print head damage or defective printing.

4. Close the front cover.

5. Tap **[∧]** key.



6. Tap **[Enter]** key.



Note

About the "Detailed-Set" menu

This menu is only displayed when the media type is selected for the first time.

- On: Each time media is loaded, tap[∧] key and enter the values in the following menus.
  - **[Height]** - **[Obstacle Detect]** - **[Width]** - **[Length]** - **[Origin]**
- Off: Each time media is loaded on the table, "Ready to Print" will be displayed after tapping **[∧]** key. The settings in the above menu uses the settings specified in the currently selected media type.

  Even if **[Off]** is selected, you can enter media height, obstacle detect, media size and origin position from the **[∗∗: Media Setting1 Set Media]** by tapping **[Cancel]** while the message **[Print Ready]** or **[Set media, then Tap [∧][key.]** appears on the panel.

Enter width and length of media, print start position

Procedure

1. Enter the width of media.

Use **[∧]** / **[∨]** key to enter the width of media and tap **[Enter]** key.



Note

Setting range (width): 30 to 360 mm

2. Enter the length of media.

Use **[∧]** / **[∨]** key to enter the length of media and tap **[Enter]** key.



Note

Setting range (length): 20 to 405 mm

3. Sets the print start position (origin).

- **[∧]** / **[∨]** key: PF (media feeding) direction
- **[<]** / **[>]** key: CR (carriage moving) direction



Note

The origin can be set within the following range:

- PF: 0.0 to 385.0 mm
- CR: 0.0 to 340.0 mm

4. Tap **[Enter]** key.

- The table moves to the back.
- The carriage moves to the specified position with the LED pointer turned on.

5. Check if the LED pointer shows the correct position.

Make sure to run this calibration in the following cases:

- **[∧]** / **[∨]** key: PF (media feeding) direction
- **[<]** / **[>]** key: CR (carriage moving) direction

6. Tap **[Enter]** key to finish the procedure.

- The following will appear.



End the media loading.

Change the media type

To print on other cylindrical object with different diameter, select an appropriate media type (from Type 1 to Type 15).

When changing the media type, you can also change the diameter or roller pitch setting in the selected media type.

Procedure

1. Tap **[Home]** key.

2. Access the “Media Type” menu.

Menu flow



- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

3. Use **[∧]** / **[∨]** key to select a media type and tap **[Enter]** key.



- When the currently selected media type is chosen, the media type setting menu (Size) appears.
- Otherwise, move on to the next step.

4. Check the diameter and roller pitch setting displayed on the control panel.





- To change the setting, tap **[Cancel]** key.
- If correct, tap **[Enter]** and go to the step 6.

Note

Depending on the settings in the selected media type, the appropriate message appears.

5. Enter the diameter of media and tap **[Enter]** key.



■ **When the media diameter entered is between 60.0 and 80.0 mm,**

- Use **[∧]** / **[∨]** keys to select a roller pitch and tap **[Enter]** key.





Note

You can get more consistent result with the “Wide” setting.

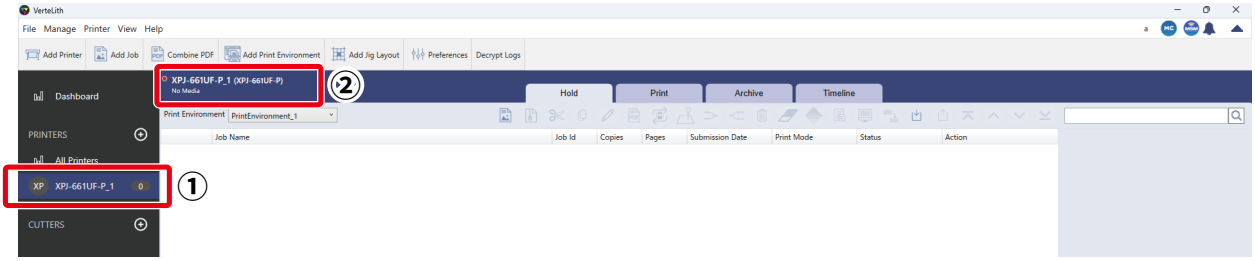
6. The entered diameter and roller pitch setting are saved to the selected media type.
For subsequent procedures, see Step 6 in **“Select Print Settings” P.24**.

Basic printing instructions

Here we will explain basic printing printing procedure using MUTOH RIP software **“VerteLith”**.
For more details of VerteLith setup and operation, see the **“VerteLith user manual”**.

Procedure

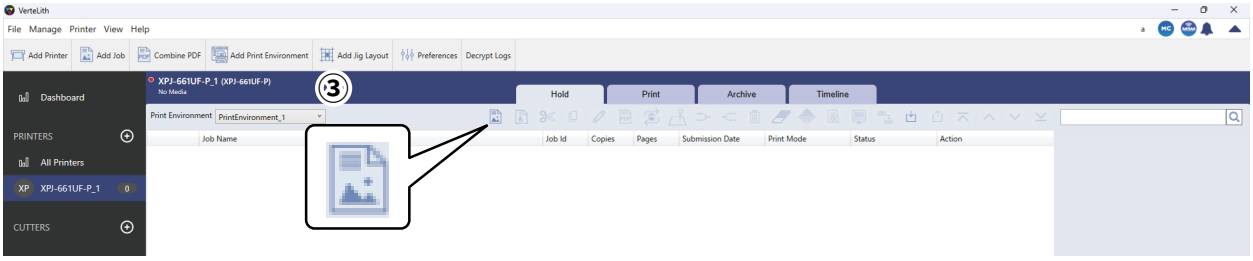
1. Start VerteLith. Select “XPJ-661UF-P” from the list of printer (①).
“XPJ-661UF-P” appear (②).



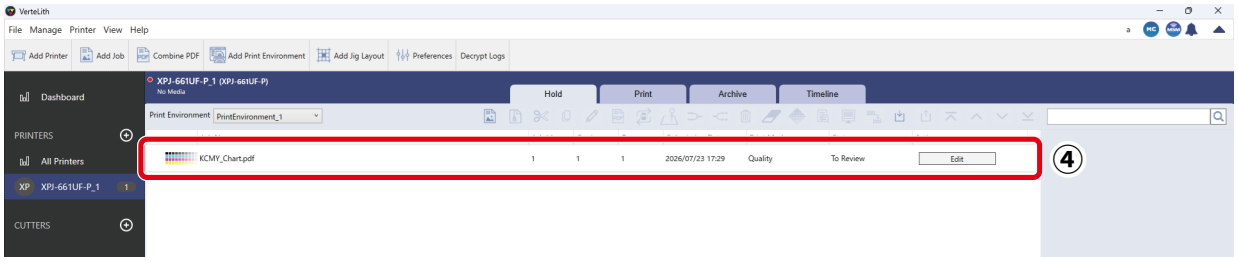
> **Note**
> For how to add a printer to VerteLith, see the “VerteLith user manual”.

2. Add an image file you want to print.

- In the Hold queue, click the **[Add Job]** icon (③) so that the open dialog appears.

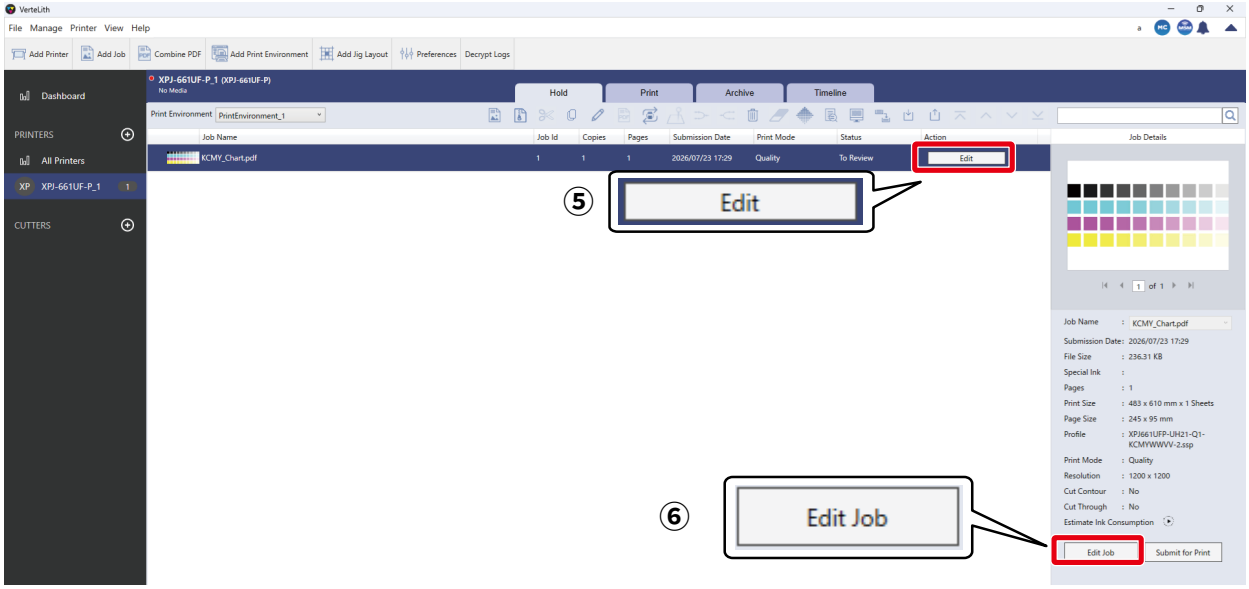


- Select an image file and click **[OK]** to add it to the Hold queue (④). You can add multiple files here.

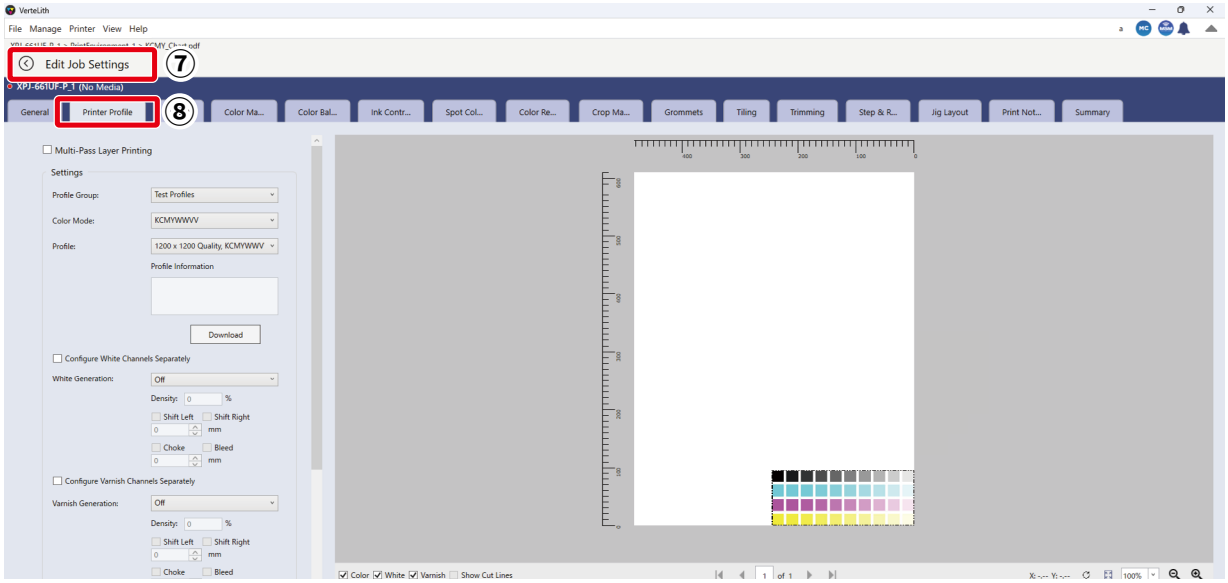


> **Note**
> You can also drag and drop files in the Hold queue.

3. Select a print job and click **[Edit]**(⑤) or **[Edit Job]**(⑥).

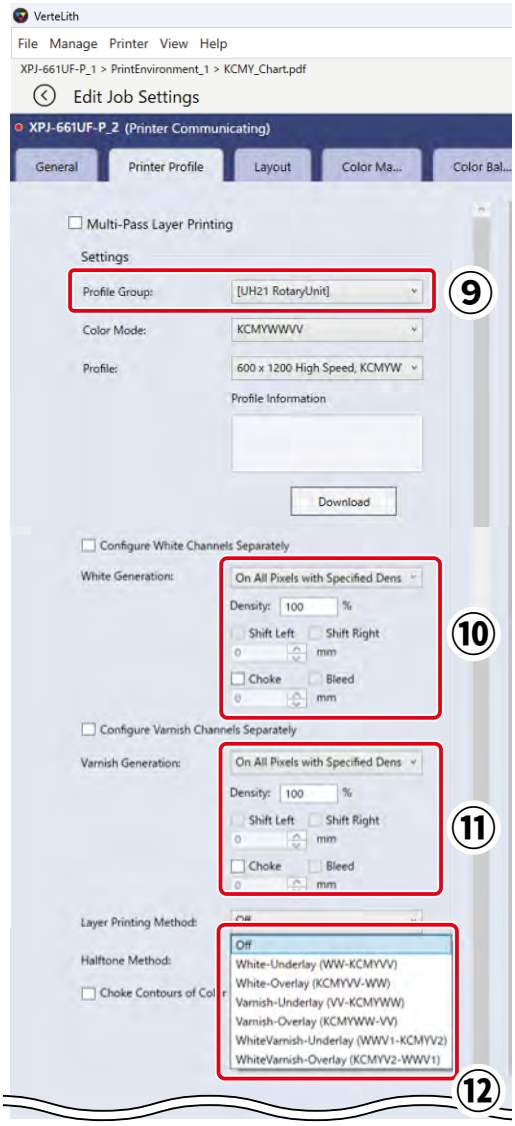


4. **[Edit Job Settings]** (⑦) appears. Click the Printer Profile tab (⑧).



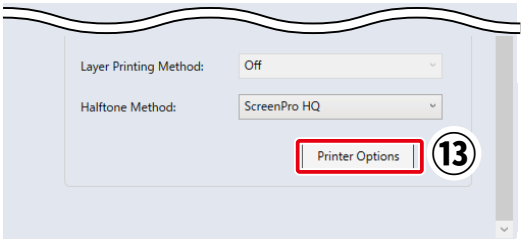
5. Select Print Settings.

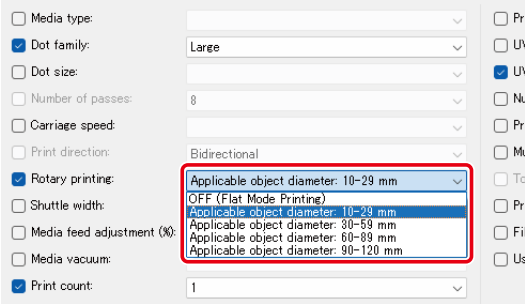
- Profile Group (⑨)
  - Select a profile group named **[XXX RotaryUnit]**. **[XXX]** indicates the ink type.
- White data generation (⑩)
  - Select the data generation method, density, position correction and edge correction.
- Varnish data generation (⑪)
  - Select the data generation method, density, position correction and edge correction.
- Layer printing method (⑫)
  - Set an appropriate layer order for your application. Select either “Overlay” or “Underlay”.



> **Note**
>
> For details of layer printing, refer to the separate **“Printing Guide”**.

- Rotary Printing
  - Click Printer Options (⑬) and select the diameter of the object from **[Rotary printing]**.



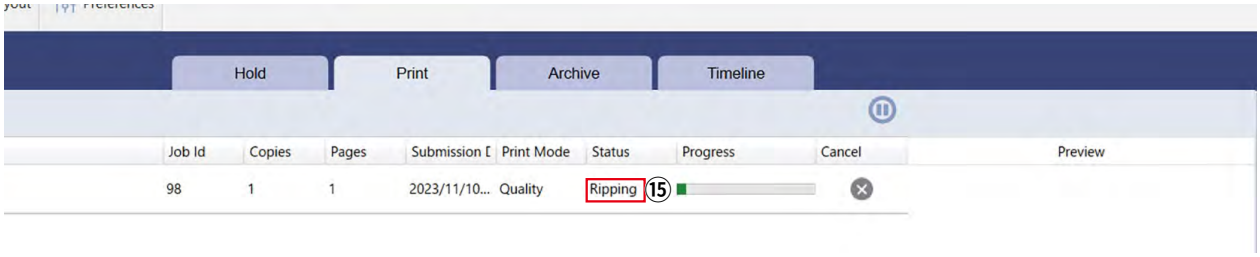


6. Click **[Submit for Print]** (⑭).

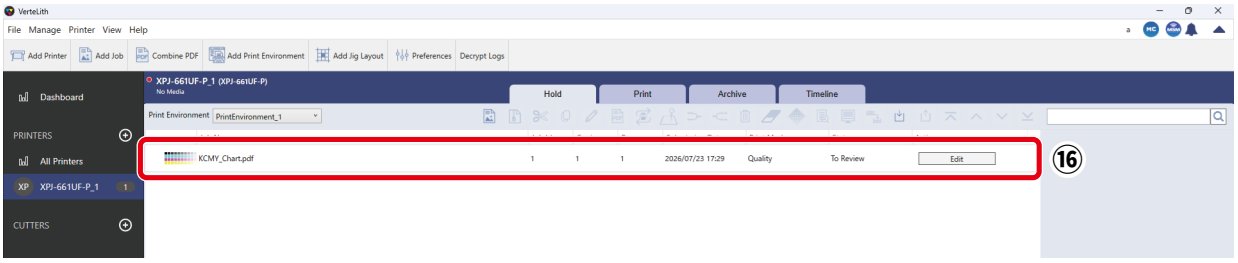
- The job will move to the Print queue. Printing begins after RIP processing.



- The processing status of the job (Sending, Waiting for ripping, Ripping, Waiting for Print) can be viewed (⑮).



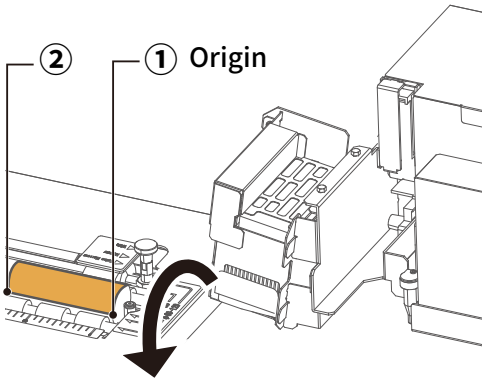
- The job will automatically move to the Hold queue after printing (⑯).



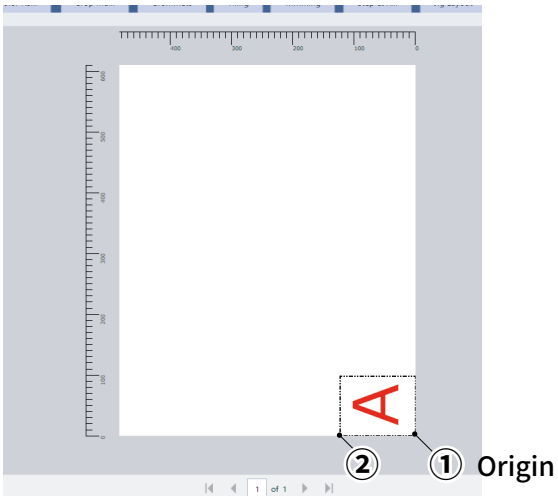
Correspondence Between the Unit Origin and the Application Screen Origin

The unit origin corresponds to the application screen origin as shown below.

Be careful when creating print data or loading media.



Unit Origin
(The illustration shows an image of printing in progress.)



Origin on VerteLith

Removing the Rotary Unit

Exit Rotary Mode

Procedure

1. Tap **[Home]** key.

2. Access the “Rotary Unit” menu.
Menu flow



- **[∧]** / **[∨]** key: Select a menu item.
- **[>]** key: Enter the menu.

3. Tap **[>]** key.

4. Use **[∧]** / **[∨]** key to select **[Remove Rotary Unit then tap Enter]** and tap **[Enter]** key.



5. Use **[∧]** / **[∨]** key to select **[Execute? Yes]** and tap **[Enter]** key.



- **[Please wait]** appears.

6. When **[Unload Media then Tap Enter]** appears, remove media and jig from the table and tap **[Enter]** key.

- **[Please wait]** appears.
- The table move to the installation position of the rotary unit.

7. When **[Remove Rotary Unit then Tap Enter]** appears, remove the rotary unit from the printer.

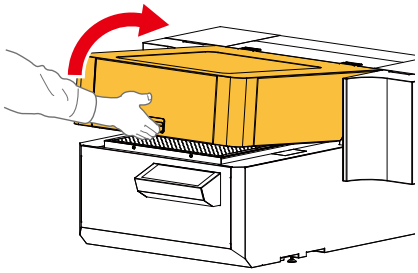


Removing the Rotary Unit

You will need a Phillips-head screwdriver for this procedure. Use your personal screwdriver.

Procedure

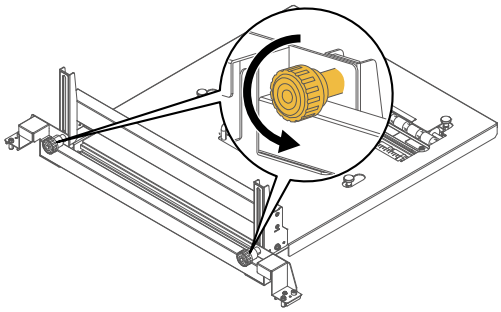
1. Hold the front cover at the position shown in the illustration and gently open it.



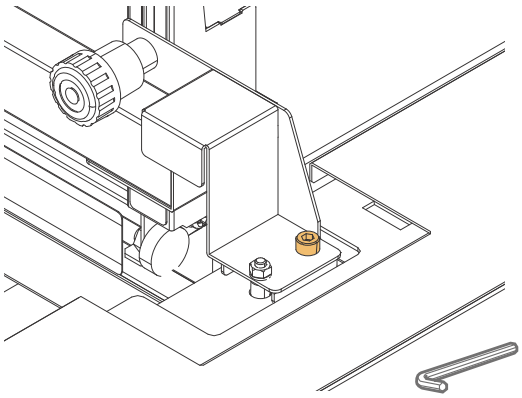
2. Loosen the thumbscrews to unlock the attachment.

Important!

- Rotate the thumbscrews more than half a turn. Be careful not to loosen too much.
- The printer illustration is omitted for simplicity.



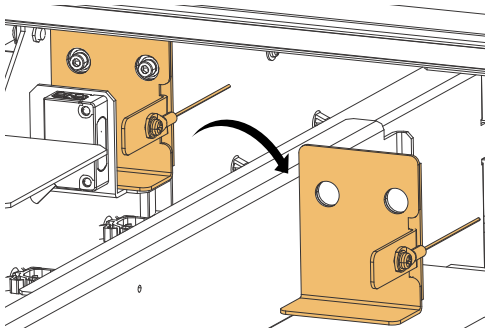
3. Use the supplied hex wrench to loosen the screw.
Loosen the opposite side in the same way.



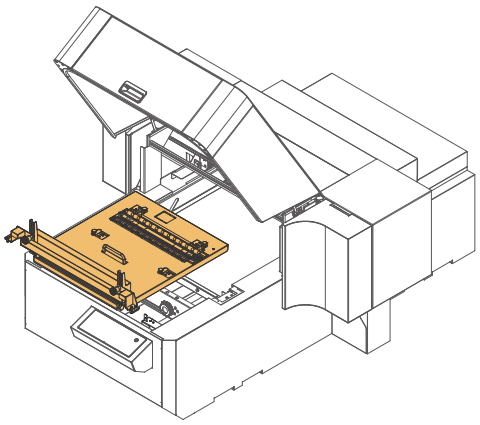
4. Remove the unit detection plate from the obstacle sensor.

Important!

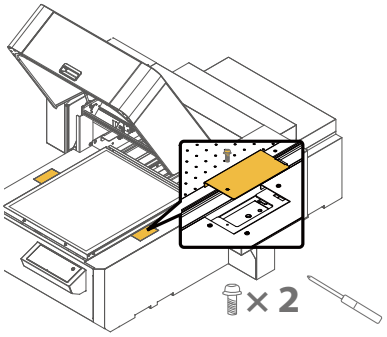
Make sure to remove the unit detection plate. Otherwise, you cannot move to the next step.



5. Remove the rotary unit from the printer.



6. Attach the printer's attachment cover (x2).
Tighten the screw with phillips-head screwdriver.



7. Close the front cover.

8. Tap **[Enter]** key.

```
Remove Rotary Unit
Then tap Enter.
```

9. Use **[∧]** / **[∨]** key to select **[Removed? Yes]** and tap **[Enter]** key.

```
Removed?
                    Yes
```

- **[Initializing]** will appear.
- Now, the rotary unit is removed from the printer.

```
Set media, then
Tap [∧] key.
```

Recovery Procedure After Powering Off the Printer

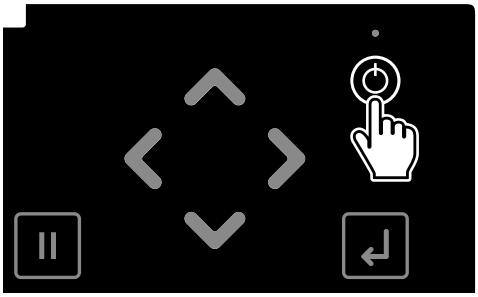
If an error requiring reboot occurs and the printer must be powered off, or if the power must be turned off for any unavoidable reason, follow these steps to restore the printer to normal operation.

Rotary Mode is automatically exited when the printer is powered off.

Procedure

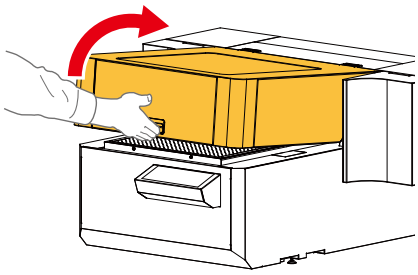
1. Press the Power button to restart the product.

- **[Initializing]** will appear.

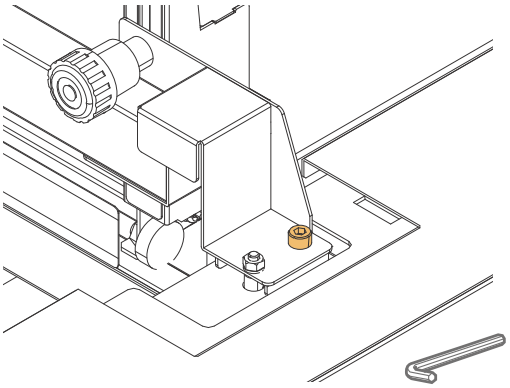


2. When **[Remove Rotary Unit then Tap Enter]** appears, remove the rotary unit from the printer.

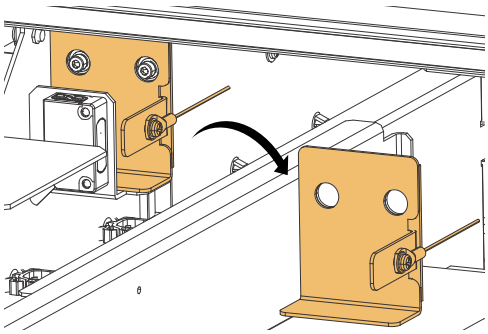
3. Hold the front cover at the position shown in the illustration and gently open it.



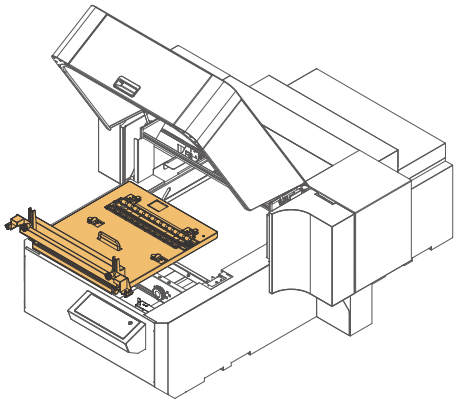
4. Use the supplied hex wrench to loosen the screw.
Tighten the opposite side in the same way.



5. Remove the unit detection plate from the obstacle sensor.



6. Remove the rotary unit from the printer.



7. Close the front cover.

8. Tap **[Enter]** key.

```
Remove Rotary Unit
Then tap Enter.
```

9. Use **[∧]** / **[∨]** key to select **[Removed? Yes]** and tap **[Enter]** key.

```
Removed?
                    Yes
```

- **[Initializing]** will appear.
- Now, the rotary unit is removed from the printer.

```
Set media, then
Tap [∧] key.
```

Note

To print using the rotary unit, put the printer into Rotary Mode.

➔ “Put printer into Rotary Mode” P.11

Maintenance

To maintain your printer performance, please conduct maintenance by yourself.

The types of maintenance are shown below.

- Maintenance on rotary unit: Clean the rubber the on the rollers and surface of rotary unit.
  ➔ “Maintenance on Rotary Unit”P.44
- Maintenance on Printer: Perform a daily maintenance including print head cleaning.
  ➔ “Maintenance on Printer”P.46

Maintenance on Rotary Unit

At the end of printing operation, follow these steps to clean the following parts:

- Rubber parts on the roller
- Surface of rotary unit and instruction labels

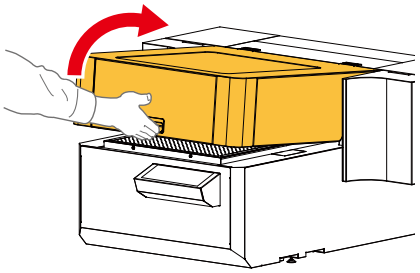
> **Note**
> The ink already cured on the rotary unit may not be removable with this maintenance.

What you need:

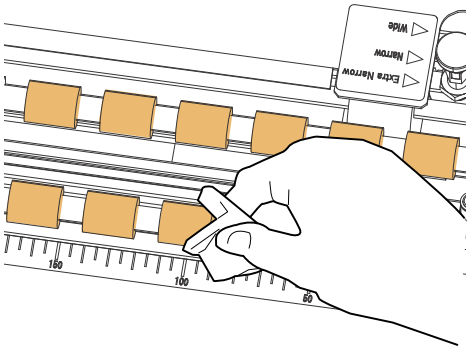
- Soft cloth
- Neutral detergent (if needed)

Procedure

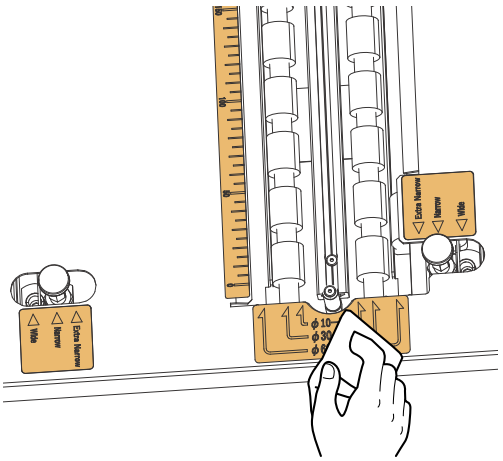
1. Hold the front cover at the position shown in the illustration and gently open it.



2. Moisten a soft cloth with water or neutral detergent diluted with water and thoroughly wring it. Use this cloth to clean off dirt on the rubber parts of rollers.



3. Clean off dirt on the surface of rotary unit and instruction labels.



Maintenance on Printer

Do not power off the product. Make sure to put it into sleep mode. The printer can be put into sleep mode with rotary unit installed.

Failure to do so will cause ink settling, leading to print defects or printer failure.

The printer performs the following operation during sleep mode.

- Ink circulation

While in sleep mode, the LED above the power button flashes every 5 seconds and key operation is invalid except **[Enter]** key.

Important!

To leave the printer in sleep mode for seven days or more, perform followings once a week:

- During sleep mode, check the ink level. When the message **[Ink Low]** appears on the control panel, replace them with new ones.
  ➔ **Operation Manual "Checking ink level and replacing ink"**
- Agitate the ink.
  ➔ **Operation manual "Agitate Ink"**

Important!

- The message **[Perform Daily Maint.]** is prompted on the control panel after a certain period of time passed from the last daily maintenance. Make sure to perform a daily maintenance.
- Even if you print all day long without entering to sleep mode, you need to perform a daily maintenance once a day. Insufficient maintenance will cause print defects or printer failure. If the printer is not put into sleep mode or turned off, see "Cleaning each part of the printer".
  ➔ **Operation Manual "Printer main components / Functions"**

Start the sleep mode

Before putting the printer into sleep mode, follow the instructions on the printer control panel to perform a daily maintenance. For daily maintenance procedure, refer to **"Daily Maintenance Sheet"** or operation manual.

Messages and Error Messages

This section describes the messages that appear and solution to the messages

Status messages

When the product is operating normally, the following statuses are displlayed on the printer control panel.

For other messages, refer to the printer's operation manual.

Display	Description
Install Rotary Unit then Tap Enter	Install the rotary unit. Once installed, tap **[Enter]** key.
Installed? No	Check that the rotary unit is installed. Tap **[∨]** key.
Installed? Yes	Check that the rotary unit is installed. Tap **[Enter]** key.
Tighten Thumb Screw then Tap Enter	The table moves to the back. Loosen the thumb screw and tap **[Enter]** key.
Loosen Thumb Screw? No	Check that the thumbscrew on the rotary unit is loosened and then tap **[∨]** key.
Loosen Thumb Screw? Yes	Check that the thumbscrew on the rotary unit is loosened and then tap **[∨]** key.
∗∗ : Diameter? Narrow／∗∗∗. ∗ mm	Change the media type. Check the diameter and roller pitch. ➔ **"Change the media type" P.31**
Set Pitch Wide Then tap Enter.	Set the roller pitch to **[Wide]**.
Set pitch Narrow then Tap Enter	Set the roller pitch to **[Narrow]**.
Changed Pitch? No	Check that the roller pitch has been changed and then tap **[∨]** key.
Changed Pitch? Yes	Check that the roller pitch has been changed and then tap **[Enter]** key.
Tighten Thumb Screw then Tap Enter	The table moves to the back. Tighten the thumb screw and tap **[Enter]** key.
Tighten Thumb Screw? No	Check that the thumbscrew is tightened and then tap **[∨]** key.
Tighten Thumb Screw? Yes	Check that the thumbscrew is tightened and then tap **[Enter]** key.
Set media, then Tap [∧] key.	Load a new media and tap **[Enter]** key.

Remove Rotary Unit then Tap Enter	Remove the rotary unit. Once removed, tap **[Enter]** key. ➔ "Recovery Procedure After Powering Off the Printer" P.41
Removed? No	Check that the rotary unit is removed. Tap **[∨]** key.
Removed? Yes	Check that the rotary unit is removed. Tap **[Enter]**.

Error message display and remedies

These errors appear when some failure occurs while the product is operating.

For other messages, refer to the printer's operation manual.

Display	Description
Check Rotary Unit	• When installing the rotary unit: The unit is not installed correctly. Refer to the following procedure to install the rotary unit. ➔ "Installing the Rotary Unit" P.11 • When removing the rotary unit: The unit is not removed correctly. Refer to the following procedure to remove the rotary unit. ➔ "Removing the Rotary Unit" P.38

Troubleshooting

Troubleshooting During Unit Installation

Symptom	Cause and Remedy
Unable to install the rotary unit	**Did you select [Rotary Unit] on the printer control panel before installation?** Select **[Option]** > **[Option1 Rotary Unit]** on the printer control panel and follow the instructions to install the rotary unit. ➔ "Put printer into Rotary Mode" P.11
	Do the media registration pins on both sides of the unit align with the insertion holes on the printer? Align the left and right pins with the insertion holes and then install the unit. ➔ "Install the rotary unit on the printer" P.14
	Is the unit deformed, damaged, or missing parts? The unit cannot be used if it is deformed, damaged, or missing any parts. Contact your local MUTOH dealer.
The installation procedure displayed on the panel does not proceed.	**Did you attach the unit detection plate to the obstacle sensor?** You cannot proceed to the next step until the unit detection plate is attached to the sensor. ➔ "Install the rotary unit on the printer" P.14

Media Loading Troubleshooting

Symptom	Cause and Remedy
Media is unstable.	**Do you use straight cylindrical media?** Check that you are not using conical, barrel-shaped or hourglass-shaped media. Example: Place the media on a flat table and check that it rolls straight.
	Are there any protrusions on the cylindrical object surface? If the protrusions are small, position the media so that the protrusions do not contact the rubber portions of the rollers. It helps keep the media stable. Position the media so that the protrusions are located outside the print area. If there are any protrusions within print area, it may cause head strike.
	Is the media too light or too short? Do not use the media that is extremely light or too short. ➔ "Supported media" P.8

Symptom	Cause and Remedy
Unable to use the media retainer properly.	**Are you using media that cannot be securely held by the media retainer due to its shape, length or weight?** Depending on the shape of object, the media retainer cannot hold the it properly. Object that is too light may be lifted by the force of the media retainer and cannot be held securely. ➔ **"Loading the media" P.27**
The guide bar contacts the media.	**Did you enter correct media diameter?** When measuring the media diameter, measure at several points and use the average value.
	Did you enter the value smaller than the actual media diameter? Increase the value by approximately the amount that the media contacts the guide bar, and then reenter the adjusted value.
The gap between the guide bar and media is too large	**Did you enter correct media diameter?** When measuring the media diameter, measure at several points and use the average value.
	Did you enter the value smaller than the actual media diameter? Decrease the value by approximately the amount of the gap between the guide bar and media and reenter the adjusted value.
The height is still incorrect even after reentering the diameter	**Does the roller pitch position match the label indication (Narrow or Wide)?** Set both rollers to the same label indication (Narrow or Wide). ➔ **"Loading the media" P.27**
	Does the roller pitch settings on the unit and the control panel match? Media cannot be loaded correctly unless the two settings match. ➔ **"Loading the media" P.27**
	Is the guide bar positioned correctly when checking the media height? Place the guide bar on the guide plate of the printer and check the media height. ➔ **"Loading the media" P.27**

Operation Troubleshooting

Symptom	Cause and Remedy
Abnormal noise occurs during printing.	**Is the media loaded in a stable position without wobbling?** Reinstall the media to ensure that it is stable and secure. ➔ "Loading the media" P.27
	Are there any foreign materials on the surface of the media? Clean the surface of the media and install it again. If foreign materials are present on the media surface, you may not be able to achieve proper print results.
	Is there any cured ink or foreign material adhering to the rubber rollers that the media is loaded? Clean the surface of rubber rollers and install the media again. If foreign materials are present on the surface, you may not be able to achieve proper print results. ➔ "Maintenance on Rotary Unit" P.44 Do not use the rotary unit if cured ink is not removable. Please contact your local MUTOH dealer.
	Are any moving parts of the unit(such as rollers, belt or bearing) damaged? If any part is damaged, stop using the unit immediately and contact your local MUTOH dealer.
Unable to change the roller pitch	**Are there any damage on the roller pitch adjustment knob?** If any part is damaged, contact your local MUTOH dealer.
	Did you pull up the roller pitch adjustment knob, rotate it 90-degrees and then move it? Change the roller pitch with the adjustment knob released.
	Did you move the left and right roller pitch adjustment knobs in parallel? Do not move only one adjustment knob or adjust the knobs while they are tilted. The roller pitch may not be adjusted properly. If you cannot adjust the unit properly while it is installed on the printer, remove the unit from the printer and adjust it.
Abnormal noise or vibration occurs when changing the table height. **Important!** If abnormal noise occurs, remove the unit and restart the printer (No error message will appear). ➔ "Recovery Procedure After Powering Off the Printer" P.41	**Did you loosen or tighten the thumbscrew according to the instructions displayed on the panel?** Follow the message displayed to loosen or tighten the thumbscrew. Raising or lowering the table without loosening the thumbscrew may cause damage to the unit.
	When loosening the thumbscrew, did you loosen it by more than half a turn? Loosen the thumbscrew by at least half a turn and ensure that the attachment moves smoothly.
	Did you check the weight of the loaded media? Supported media weight is up to 1.0 kg.

Printing Troubleshooting

Symptom	Cause and Remedy
Unable to achieve proper print results. (Color unevenness, bleeding or faint printing occurs)	**Do you use straight cylindrical media?** Check that you are not using conical, barrel-shaped or hourglass-shaped media. Example: Place the media on a flat table and check that it rolls straight.
	Are there any labels applied on the media? Remove the label before printing.
	Is the media too light or too short? Do not use the media that is extremely light or too short. ➔ "Supported media" P.8
	Do you use the media retainer. Use the media retainer only when it is necessary to secure the media. Check if printing can be performed without using the media retainer. ➔ "Loading the media" P.27
	Are nozzles in good condition? • Run a nozzle check. If the nozzle is clogged, perform a head cleaning. ➔ "Nozzle check and head cleaning" P.20
	Is the ink bag within its expiration date? Use ink bags that are within the expiration date.
	Did you agitate ink in the cartridge? When **[Agitate XX Ink]** message appears, perform ink agitation.
	Do you perform a daily maintenance properly? Follow the instructions on the operation manual to perform a daily maintenance. ➔ "Maintenance on Printer" P.46
Printed color is not accurate	**Are nozzles in good condition?** Run a nozzle check. If the nozzle is clogged, perform a head cleaning. ➔ "Nozzle check and head cleaning" P.20
	Did you agitate ink in the cartridge? When **[Agitate XX Ink]** message appears, perform ink agitation.

Nozzle clogging persists even after head cleaning	**Are the cleaning wiper or the parts around the print head dirty?** • Perform a head cleaning or “Little Charge” , then check the print result. • Perform a daily maintenance and check the print result. The problem still persists, contact your local Mutoh dealer. • Do not use highly reflective media that reflects UV light from its surface like mirrors, or transparent media that reflects UV light internally. Reflected UV light may cure ink on the print head.
The image is printed at a different size. (Enlarged, reduced, stretched vertically or horizontally)	**Is the media setting in the application set to other than “Rotary Unit”?** Check that “Rotary Unit” is selected in the media setting. ➔ **“Basic printing instructions” P.33** **Are you printing from RIP software?** Print data set to other than 600×1200 dpi, L dot, effect: Rotay Unit will not be printed correctly. ➔ **“Basic printing instructions” P.33**

Revision history

Date	Version	Manual control number	Supported firmware
2026.9	00	ROTAUT61PE-A-00	V.1.00
2026.10	01	ROTAUT61PE-A-01	V.1.01 or later

MUTOH