Chapter 18: Take-up

This chapter describes how to take up function (option).

18.1 *Precautions (Take-up)*

The TAKE-UP unit is an optional product for FC 9000-140/160.

Notes on the basket

Be sure to use the supplied basket. If not used, it will affect the take-up operation.

Note on the media (paper)

Please observe the following precautions.

● Cut media cannot be used.

● The maximum diameter of roll media that can be loaded is 180 mm and the maximum weight is 20 kg.

● Please make sure to store the paper at the same environment (temperature/humidity) as this machine.

● Please always line up the edge of the paper.

Misalignment may cause media skewing and mis-cuts.

Media skewing can cause plotting and cut offs.

● Set up the tip of the roll media and the paper core properly by referring to "Preparing for cutting".

By setting the end of the roll media and the paper core properly, the taking-up operation can be performed properly.

● About the paper core:

This machine uses rolls with an internal diameter of 3 inches, or 76.2 mm.

● Mis-cuts or plotting deviations and take-up failure may occur if the paper core is warped or has a larger internal diameter. Do not use deformed paper core or paper core with a large inner diameter.

● About media flange for take-up

Using the media flange for take-up, the roll media should be loaded .

Secure the roll media so that there is no gap between the media flange and the paper core.

● Always use the "AUTO PRE FEED (PrFEED)" function.

The roll media can start to stretch or contract immediately upon removal from the machine's roll.

The expansion/contraction amount and saturation time of the media changes depending on the temperature and humidity.

Mis-cuts or plotting deviations and taking-up failure may occur due to the influence of expansion and contraction.

In order to reduce this effect, be sure to try the "AUTO PRE FEED (PrFEED)" function on media to be used.

For details on how to change these settings, see "Perform Automatic Pre Feed When Media is Set (Initial Feed)".

- About using strong resilient media.

  The roll media taken up may swell and affect the take-up operation.

  If the roll media swells, put tension on the roll media by inserting a paper core with the same width into the slack part of the roll media. The swell may stop. Be sure to try it before using it.

  When a heavy paper core is used, the media deviations may occur. Please use a light paper core that can take up slack.

The trajectory of roll media

Paper core
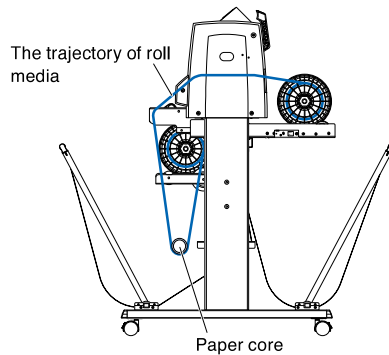
Notes on plotting data

- When taking up, do not cut the perforations.
- In consideration of the overlap of the support media, print a design with a margin of about 500 mm on the leading edge of the roll media.
- When creating a data, the length of one data should be within 1.2m.
- Set the number of data that can fit on a roll of up to 20 m for the amount of one take-up.

18.2 *Nomenclature (Take-up)*

Front View

This section explains in the FC9000-140.
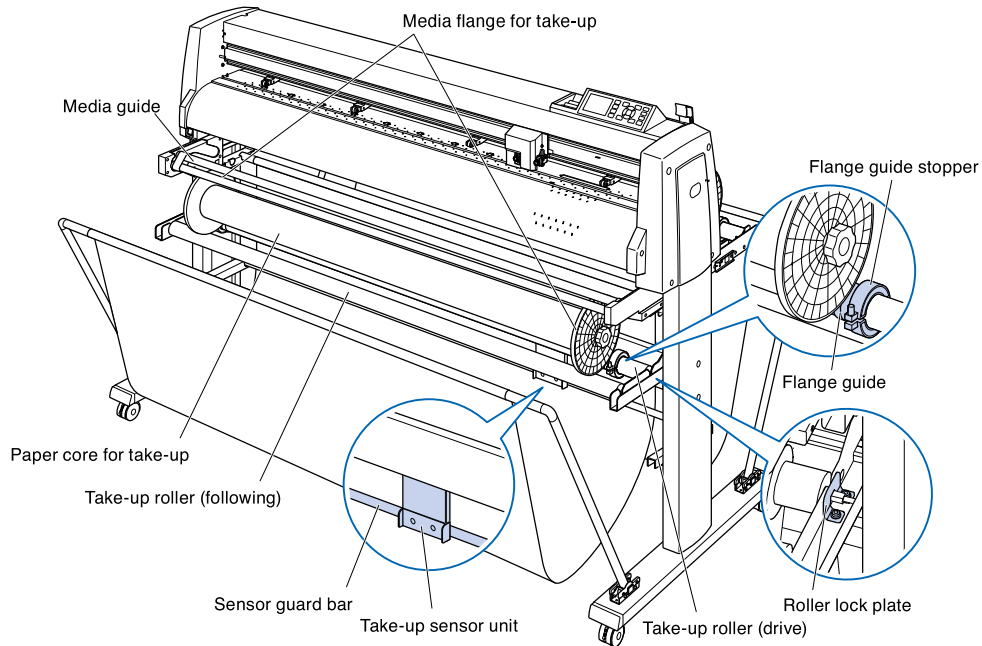
Take-up roller (drive/following)

.... Media that has finished plotting is taken up while rotating.

Media guide ....Supports media feeding.

Paper core for take-up ....A core for taking up media. *1

Flange guide ....A part to receive the media flange for take-up.

Flange guide stopper..............Secures the flange guide.

Take-up sensor unit ....Detects the presence of media to be taken up.

Sensor guard bar ....Protects the basket from touching the take-up sensor unit.

Roller lock plate ....This is a plate for fixing the take-up roller (drive).

*1: Please prepare a 3-inch (76.2 mm) paper core of the same length as the roll media to be taken up.

Rear view

This section explains in the FC9000-140.

Media flange for take-up
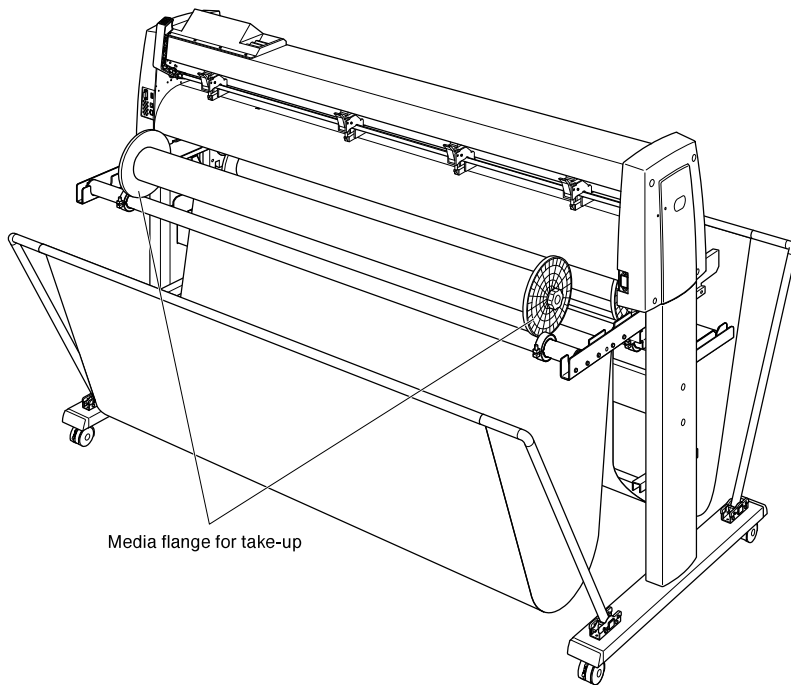
Media flange for take-up ....Supports media feeding.

18.3 Preparation for plotting/cutting (Take-up)

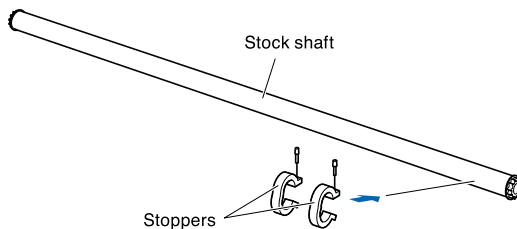## Loading roll media (paper)

This section explains in the FC9000-140.

> ⚠ **CAUTION**
>
> ● Please be careful not to get your fingers pinched on the media flange and rollers etc. when loading the media.
>
> ● Deviations and errors may result if the stock shaft is misaligned when plotting begins.

Mounting (Mounting the stock shaft)

1 Set up the stopper supplied in the cutting plotter in one stock shaft.

(Keep the stopper screws slightly loose preliminarily.)

Stock shaft

Stoppers

2 Insert the stock shaft into the media stocker.

Make sure the stock shaft touches the roller.

* If using a TAKE-UP unit, insert the stock shaft into the U-shaped groove on both ends of the media stocker.

Media stocker

Stock shaft
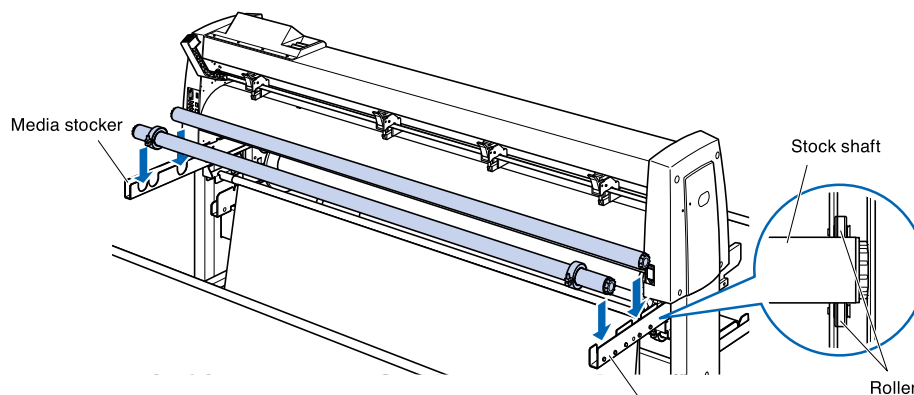
Roller

Operation (Loading roll media)

1   Lower the media set lever to raise the push rollers.


Push roller

Media set lever

Media sensor
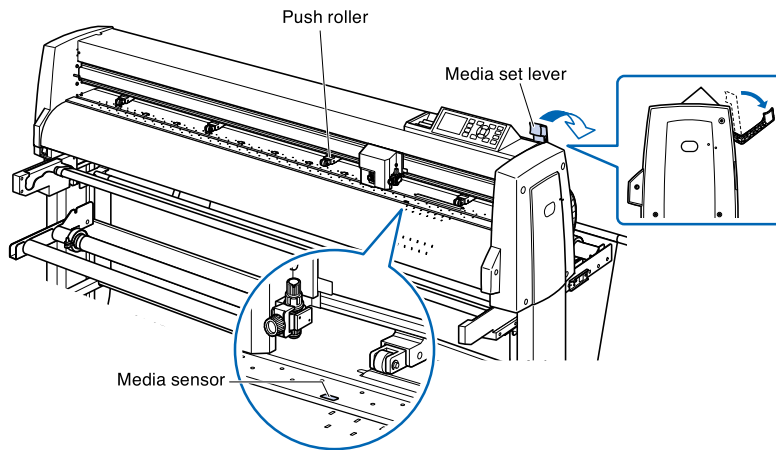
2   Loosen the knob of the media flange and insert it firmly to both ends of the paper core of the media as shown in the figure. Then turn the knob and tighten it firmly.

* Secure the roll media so that there is no gap between the media flange and the paper core. It can cause media skewing.


Supplement

● The size of roll media that can be loaded depends on the size of the machine.

● The maximum diameter of roll media that can be loaded is 180 mm and the maximum weight is 20 kg.

Knob

Roll media

Media flange

Secure the roll media so that there is no gap between the media flange and the paper core.

Media flange
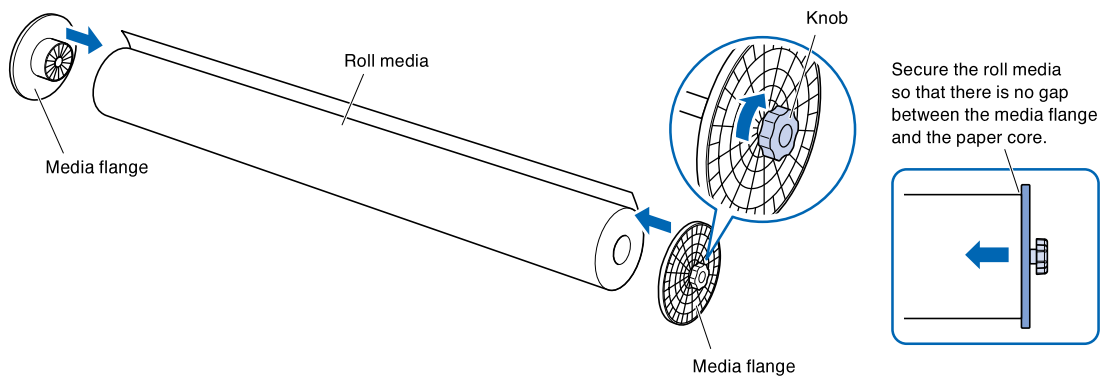
**3** Load the roll media on the stock shaft so that the tip of roll media is facing upward.

Determine the position of the roll media and hold the roll media with the supplied stopper. Once the position is determined, tighten the stopper screw to secure it.
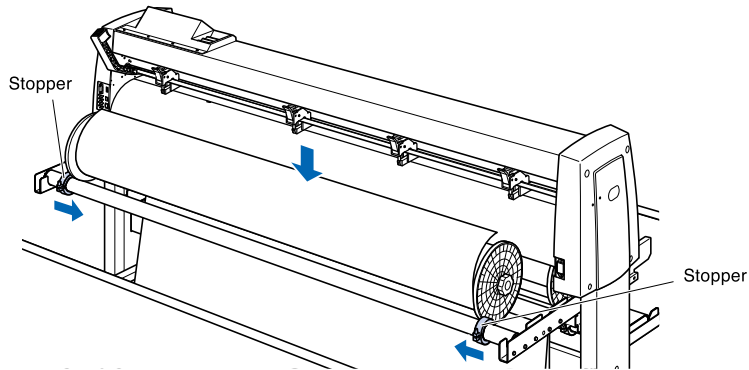
Stopper

Stopper

4 Push the tip of the roll media forward from the back of the FC9000. Make sure to pull it so that there is no slackening across the roll media's route.
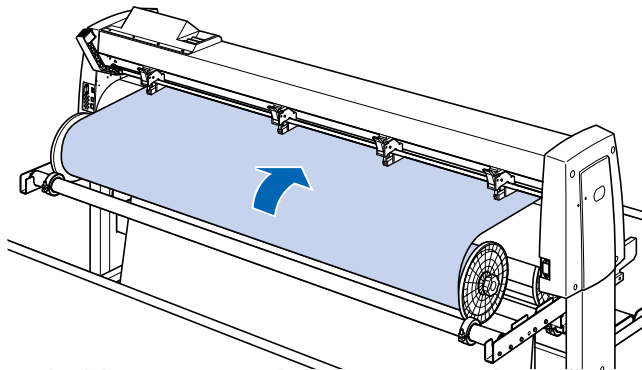
5 Lock the media stopper (Raise while pulling forward) and pull it out evenly so that the roll media is straight. Please load so that the roll media always rests on the media sensor.

Media sensor

Media sensor

Lock

Media stopper
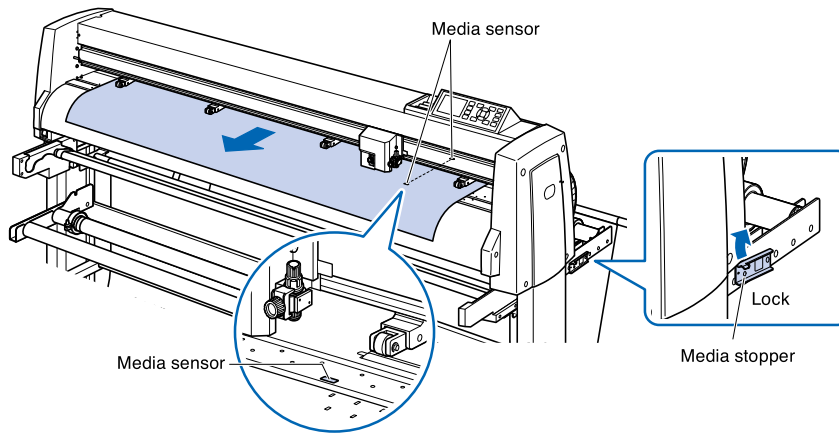
6 Position the media and the push rollers to correspond with the width of the media.

See "Loading Media (Paper or Marking Film)" and "Aligning the Push Rollers" in Chapter 2.

7 Pull the media taut to make sure that there is no slack in the conveyance path, and then raise the media set lever to lower the push rollers.

Release the lock from the media stopper (Pull the media stopper forward and lower it.)

⚠ **CAUTION**

● During a cutting operation, be sure to keep your hands, hair, and so forth away from the media stocker and stock shaft.

● Please be careful not to get your fingers pinched on the media flange for take-up and stock shafts etc. when loading the media.

● Deviations and errors may result if the stock shaft is misaligned when plotting begins.

Media set lever

Slide the media stopper

Media stopper
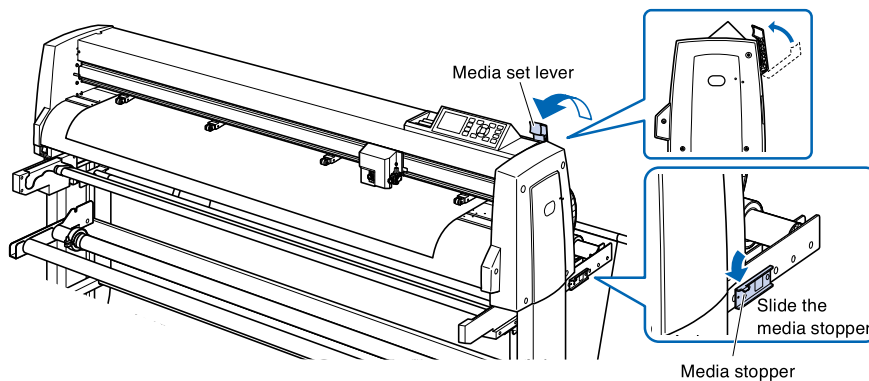
Preparing for take-up

This section explains in the FC9000-140.

> ⚠️ **CAUTION**
>
> ● During a cutting operation, be sure to keep your hands, hair, and so forth away from the media stocker, media flange and rollers.
>
> ● Please be careful not to get your fingers pinched on the media flange and rollers etc. when loading the media.
>
> ● Deviations and errors may result if the stock shaft is misaligned when plotting begins.
>
> ● Always open the basket during the take-up operation.
>
> ● Due to the structure, the roll media is slacked by about 200 mm after the completion of the take-up operation.

Attaching (Setting the paper core)

1 Loosen the knob of the media flange and insert it firmly to both ends of the paper core for take-up as shown in the figure. Then turn the knob and tighten it firmly.

* Secure the roll media so that there is no gap between the media flange and the paper core. The gap can cause media skewing.

* Use a paper core of the same size as the width of the media to be taken up.

Knob

Secure the roll media so that there is no gap between the media flange and the paper core.

Paper core for take-up

Media flange
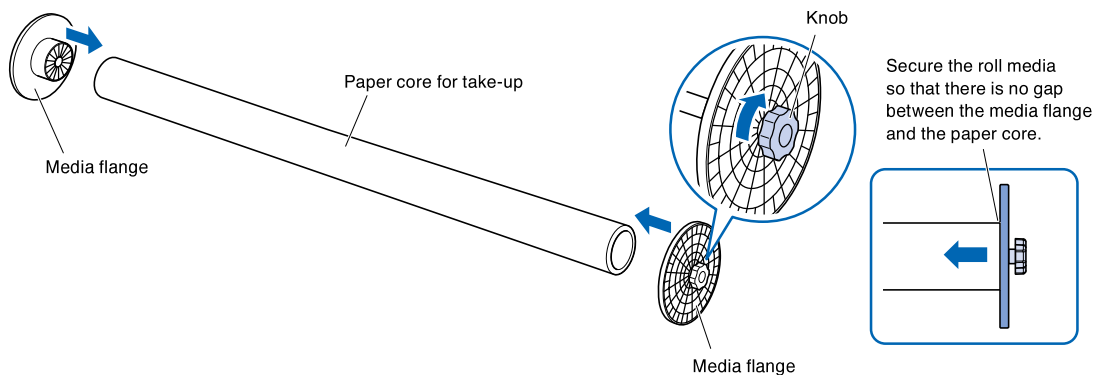
Media flange

2 Loosen the screw of the flange guide stopper and move the flange guide. Place the media flange for take-up on the rubber part and take-up roller (following).

* If the media flange is not placed properly on the flange guide, it can cause take-up problems.


Stopper

Flange guide

Take-up roller (following)   Take-up roller (drive)
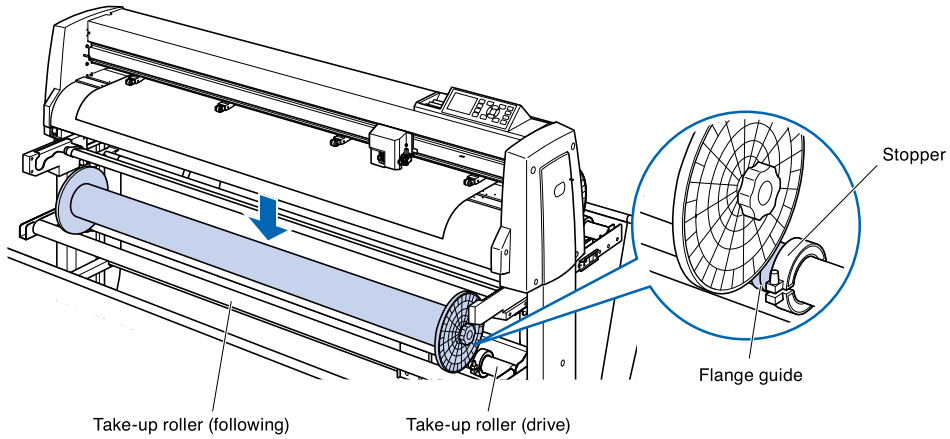
3 Make sure that the take-up side flange end face and the stocker side flange end face are aligned and set them. After setting, tighten the screw of the flange guide stopper.

* If the end faces are not aligned properly, the roll media may not be taken up well.

⚠ **CAUTION**

If the screw of the flange guide stopper is loose, media skew may occur. Please tighten the stopper screw firmly.

Media flange (media stocker side)

Align the end faces

Align the end faces

Media flange (take-up side)

Flange guide stopper
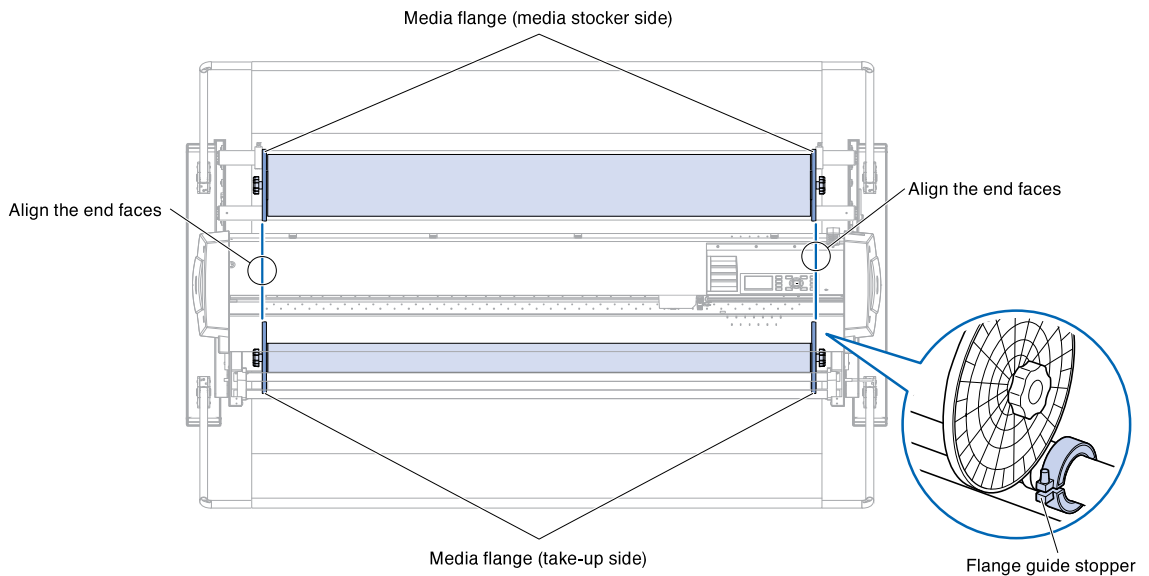
4 Cut the loaded roll media (or media of the same width) to about 1.2 m and prepare the support media. Make the cutting end face as straight as possible.

Same width as loaded roll media

Feed direction of media

Approx. 1.2 m

90° 90°

90° 90°

Cut straight horizontally
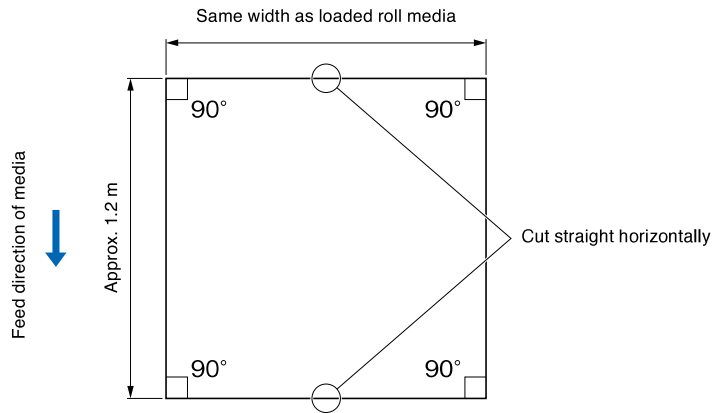
5 Paste a support media straight and evenly to the paper core for take-up.

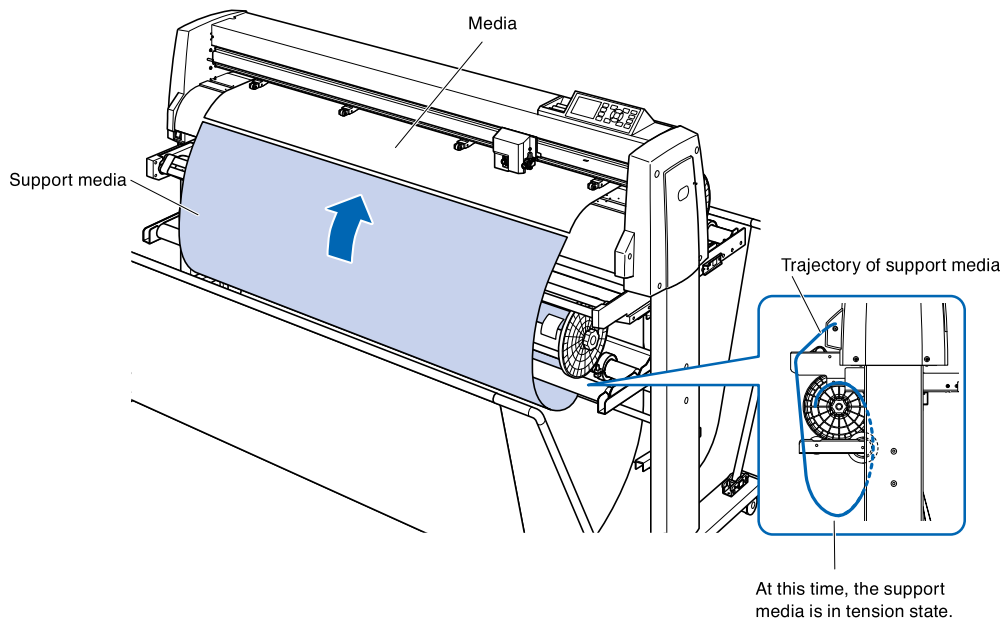Pass the pasted support media between the take-up roller (drive) and the center bar.

* If the support media is not pasted straight, it may cause take-up problems.

* Please change the pasting place according to the length of the media.

Tape

Center bar

Support media

Trajectory of support media
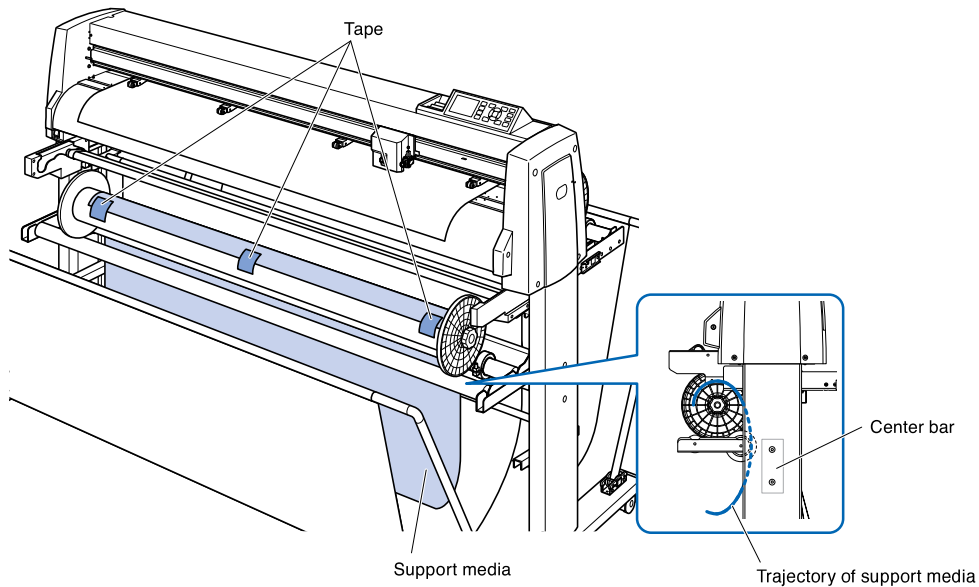
6 Hold the center portion of the media guide and pull it along the groove in the media guide bracket.

Media guide

Media bracket

Media guide
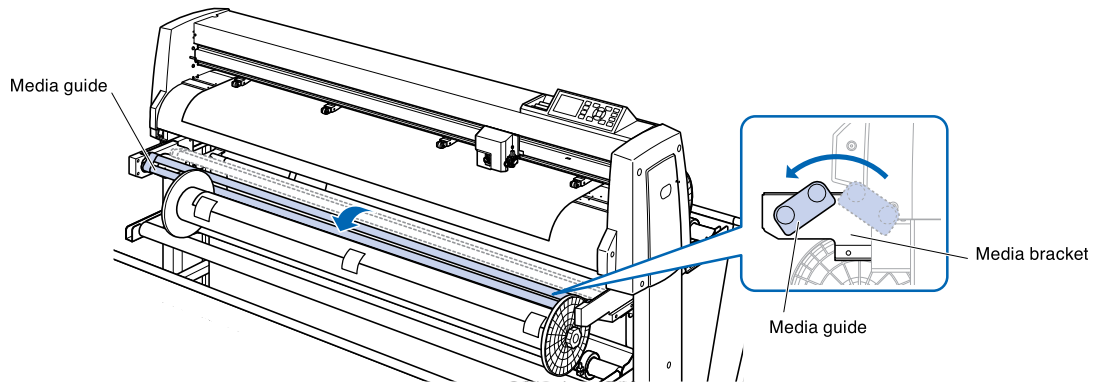
7 Pull up the support media to the machine's cutting mat surface.

Media

Support media

Trajectory of support media

At this time, the support media is in tension state.

8 Stick and secure the loaded roll media and the support media using tape.

At the time of pasting, make sure that the end of the roll media is facing up and stick straight.

The overlapping area should be approximately 1 cm.

* Please change the pasting place according to the media length.

* In consideration of overlapping with the support media, print a design with a margin of approx. 500 mm at the leading edge of the roll media.

Roll media

Tape

Roll media

Approx. 1 cm
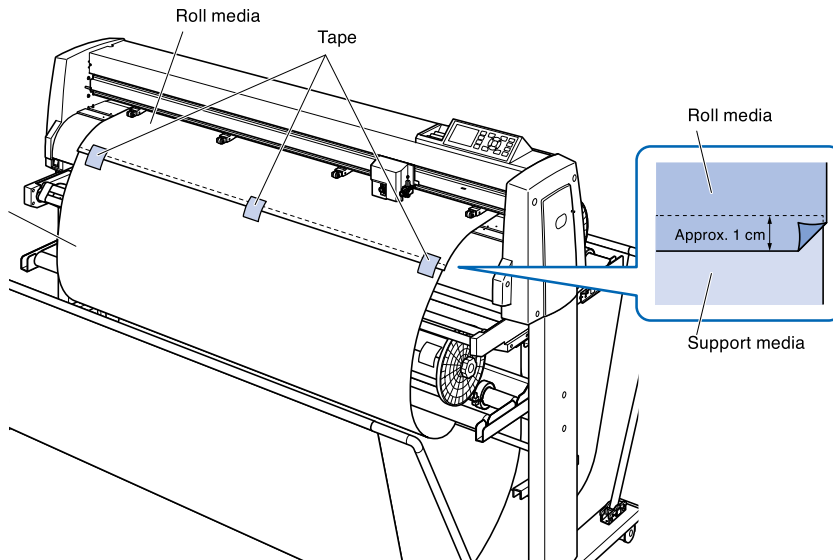
Support media

9 After securing with tape, feed the roll media to a position where the overlapping portion between the roll media and support media does not overlap the media guide, and set that position as the origin.

See "Loading Media (Paper or Marking Film)" in Chapter 2.

Media guide

Overlapping portion
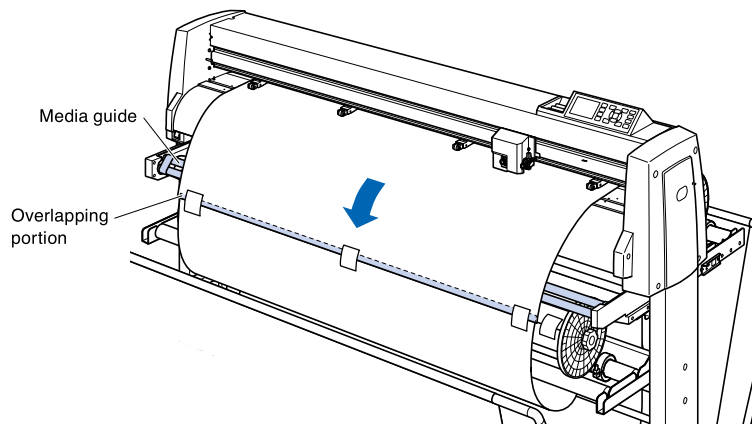
Set the take-up function

When using the take-up function, set the take-up sensor to ON and AUTO PRE FEED (PrFEED) to ON, and set the same setting as the length of one job.

> ⚠ **CAUTION**
>
> ● When taking up, do not cut the perforations.
>
> ● In consideration of overlapping with the support media, print a design with a margin of approx. 500 mm at the leading edge of the roll media.
>
> ● The length of one job should be set within 1.2 m.
>
> ● When setting the number of data, take up to 20 m at one time.
>
> ● If the TAKE-UP unit is not properly installed, the take-up menu will not be displayed.
>
> ● When applying "continuous operation", the media feed operation dedicated to continuous operation is performed even if Automatic Pre Feed (PrFEED) is not set to ON.
>
> ● Always open the basket during the take-up operation.
>
> ● Due to the structure, the roll media is slacked by about 200 mm after the completion of the take-up operation.
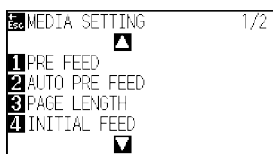
Operation: Setting the take-up to ON

1 Press the [PAUSE/MENU] key.

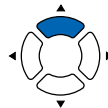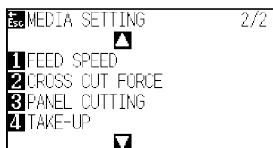▷ MENU screen is displayed.

2 Press the [4] key (MEDIA).
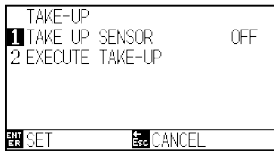
▷ MEDIA SETING screen (1/2) is displayed.

3 Press the POSITION (▲) key.
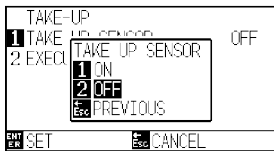
▷ MEDIA SETING screen (2/2) is displayed.

## 4   Press the [4] key (TAKE-UP).

▷ TAKE-UP screen is displayed.

```
 TAKE-UP
1 TAKE UP SENSOR        OFF
2 EXECUTE TAKE-UP



ENTER SET          ESC CANCEL
```

5   Press the [1] key (TAKE UP SENSOR).

▷ TAKE-UP SENSOR screen is displayed.

```
 TAKE-UP
1 TAKE UP SENSOR       OFF
2 EXEC TAKE UP SENSOR
        1 ON
        2 OFF
        ESC PREVIOUS
ENTER SET          ESC CANCEL
```

6   Press the [1] key (ON) or the [2] key (OFF).

▷ Setting will be confirmed and it will return to TAKE-UP screen.

```
 TAKE-UP
1 TAKE UP SENSOR        ON
2 EXECUTE TAKE-UP



ENTER SET          ESC CANCEL
```
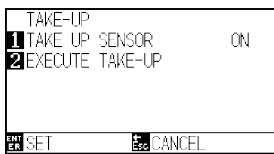
> **Supplement**
>
> It will return to MEDIA SETTING screen (2/2) without changing the settings when you press the [ESC] key (CANCEL).

7   Press the [2] key (EXECUTE TAKE-UP) to take up.

8   Press the [ESC] key (CANCEL) after taking up.

▷ It will return to MEDIA SETING screen (2/2).

> **Supplement**
>
> When "TAKE UP SENSOR" is set to ON, take-up operation is executed after completing one cut job.
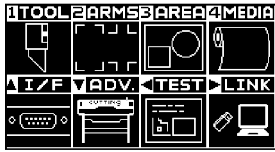
9   Press the [PAUSE/MENU] key.

▷ It will return to default screen.

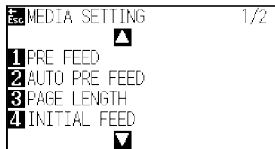## Operation: Set AUTO PRE FEED (PrFEED) to ON

1 Press the [PAUSE/MENU] key.

▷ MENU screen is displayed..

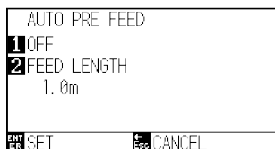**2** Press the [4] key (MEDIA).

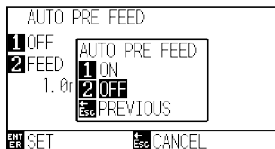▷ MEDIA SETING screen (1/2) is displayed.

3 Press the [2] key (AUTO PRE FEED).

▷ AUTO PRE FEED screen is displayed.

4 Press the [1] key (OFF).
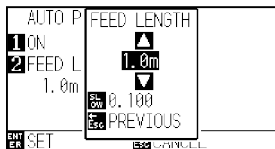
▷ AUTO PRE FEED screen is displayed.

5 Press the [1] key (ON) or the [2] key (OFF).

▷ AUTO PRE FEED is selected, and it returns to the AUTO PRE FEED screen.
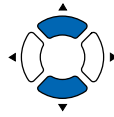
6 Press the [2] key (FEED LENGTH).

▷ FEED LENGTH screen is displayed.

> **Supplement**
>
> It will return to MEDIA SETTING screen (1/2) without changing the settings when you press the [ESC] key (RETURN).

7 Increase or decrease the setting value using POSITION (▲▼) key.

8 Confirm the setting and press the [ENTER] key (PREVIOUS).

▷ The feed length will be selected and it will return to AUTO PRE FEED screen.

9 Confirm the setting and press the [ENTER] key (SET).

▷ Setting will be confirmed and it will return to MEDIA setting screen (1/2).

Supplement

It will return to MEDIA SETTING screen (1/2) without changing the settings when you press the [ESC] key (CANCEL).

10 Press the [PAUSE/MENU] key.

▷ It returns to default screen.

Supplement

When AUTO PRE FEED is set, the [PRE FEED] mark is displayed on the right side of the screen. See "How to Use Control Panel".