

Fold Line and Perforated Cut Guide

What This Document Assumes

Before performing any operations described in this guide, make sure that all the following preparations have been complete.

- All the setups of hardware including assembly and installation of your machine are complete.
- All the setups of software including installation of VersaWorks on your computer and connection of your machine with the computer are complete.
- You are familiar with the basic operations of your machine and Versa Works.

For setups and basic operations of your machine, refer to the User's Manual coming with the machine. For basic operations of VersaWorks, refer to "VersaWorks Quick Start Guide."



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R1-100825

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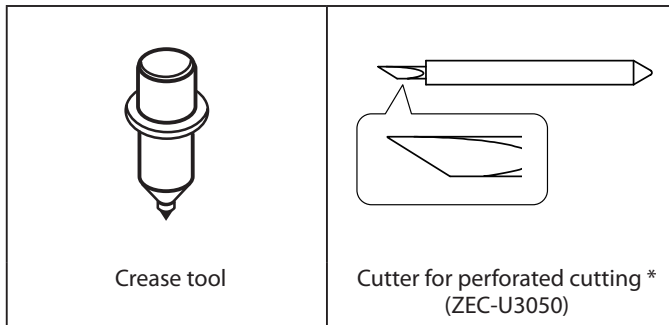
Chapter1

Getting Ready

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1-1 Before Starting Operations

Checking the Tool to Be Used



* This is shipped with a black cap on.

Fold Line and Perforated Cut

The fold line is a feature to make a crease on media.

The perforated cut is a feature to make an external cutoff line by performing "die-cutting" and "half-cutting" alternately.

Using these features, you can produce product packages and cards.

NOTE: To the areas where the "emboss finish" is performed in printing with gloss inks, you cannot apply the fold line and perforated cut.

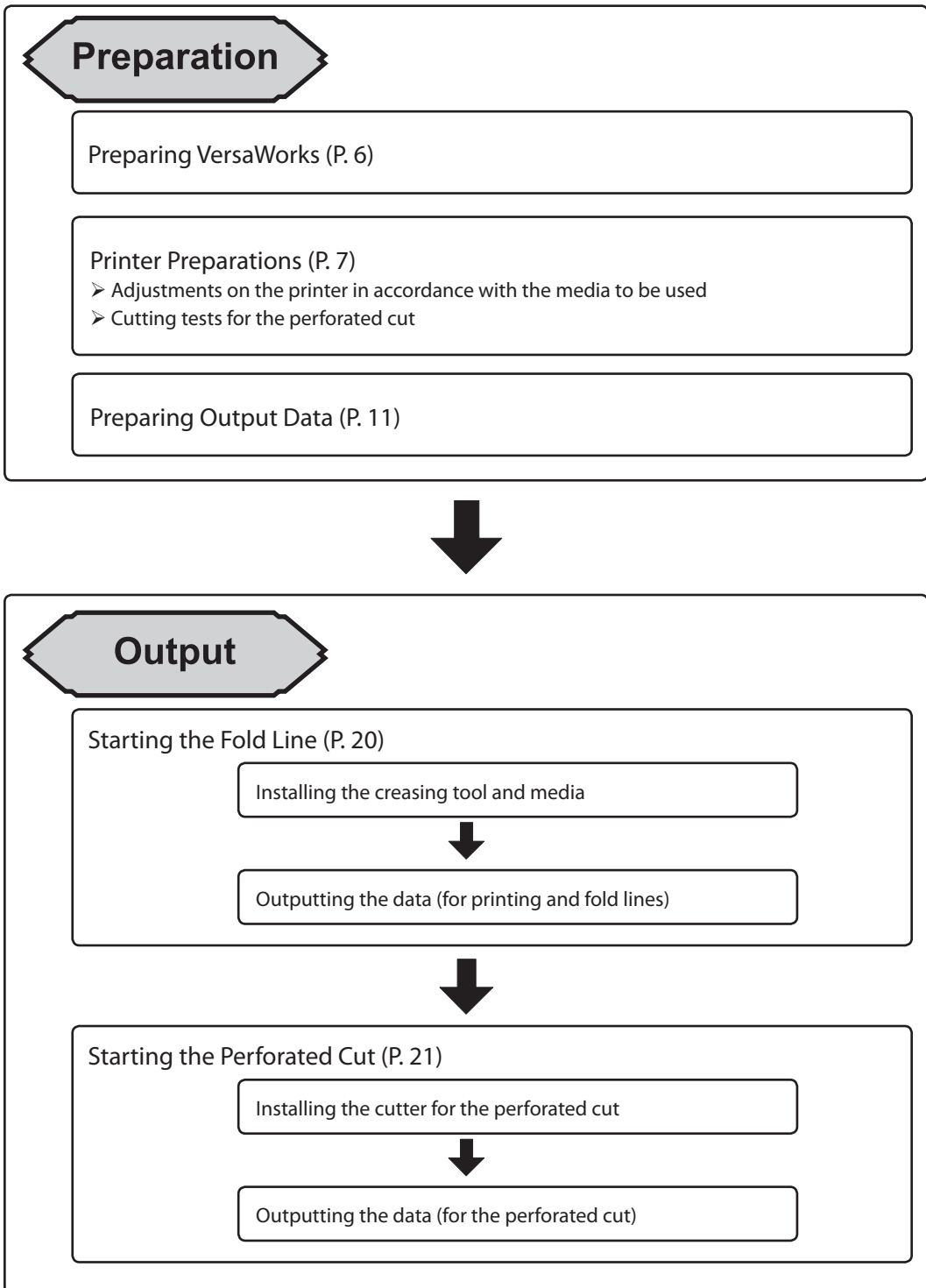
Conditions of Media

- **Glammage (Thickness) :** About 200 to 300 g/m² (Paperboard including clay coated newsback board)
- **Width and Length:** According to the specifications of your printer

* This is a unit to show the thickness of the paper.

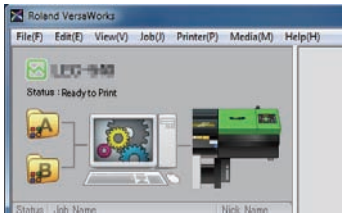
You may not be able to make clear fold lines or cut off the media with some types of media. Be sure to perform the test in advance to see if you can perform the output with the media as intended.

Checking the Workflow



1-2 Preparing VersaWorks

Starting VersaWorks



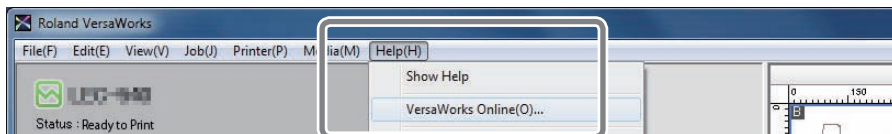
"On the computer you are using, start VersaWorks. For information on how to start the program, see the Roland VersaWorks Quick Start Guide. After starting the program, go to the upper left of the main screen and check to make sure that ""Model (or Nickname) of Your Printer"" is displayed, and that ""Status"" is set to ""Ready to Print.""

VersaWorks Online

This document describes the basic output method to perform the fold line and the perforated cut feature. You can see other output methods requiring more complicated settings and the latest information of VersaWorks at VersaWorks Online.

URL : <http://dg4.roland.co.jp/en/RVW2forWeb/index.html>

VersaWorks Online can be displayed by clicking [help] - [VersaWorks Online] from the main menu.

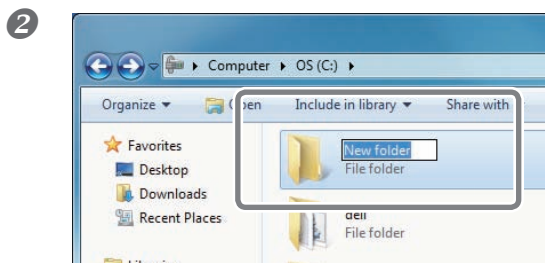


Creating a Folder for Saving PS Files

In the output printing operation described in this document, the data for the output printing is read out in the form of a PS file from application software such as Adobe Illustrator, and then the PS file is used for the actual output. For this reason, it is useful to create a folder in advance for saving the PS files. It is recommended to locate the folder in the root directory on your computer's local disk.

Procedure

1 Open [Computer] (or [My Computer]), and then open [Local Disk (C:)].



For Windows 7:

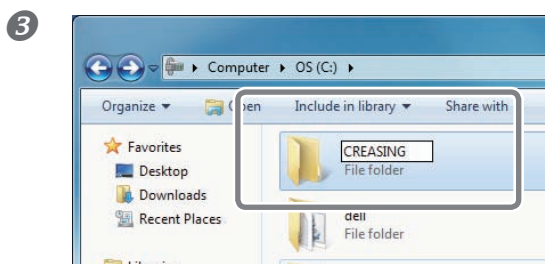
On the menu, click [New Folder].

For Windows Vista:

On the [Organize] menu, click [New Folder].

For Windows XP/Windows 2000:

On the [File] menu, click [New], and then click [Folder].



Enter the name for the folder, and then press the Enter key.

Here you name "CREASING", for example.

1-3 Printer Preparations

Printer Preparations

To prepare the printer, various settings and adjustments are to be made according to the media you use. As the cutting tests are also performed in this section, **be sure to use the same type of media here as the one you use for the actual printing.**

For methods to make settings and adjustments, see the User's Manual of your machine.

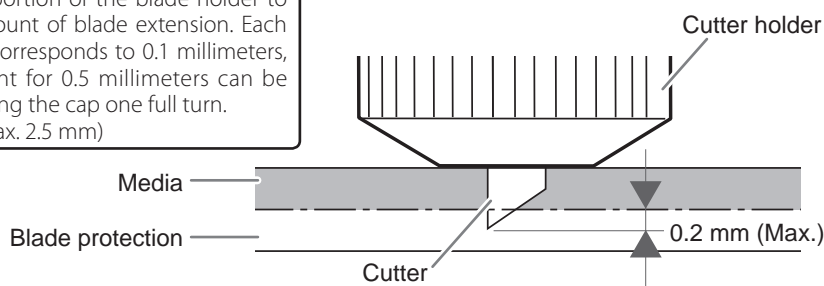
Procedure

1 Replace the cutter with the one for processing perforated cut.

The guide of the cutting-in amount of the cutter for the perforated cut

Amount of blade extension = Thickness of the media + 0.2 mm (maximum)

Turn the cap portion of the blade holder to adjust the amount of blade extension. Each indicator tick corresponds to 0.1 millimeters, and adjustment for 0.5 millimeters can be made by rotating the cap one full turn. (Min. 0 mm, Max. 2.5 mm)



2 Load media into the printer.

3 Make various settings and the adjustments according to the media used.

POINT!

The printing and cutting features are to be used for the fold line and perforated cut operation. Be sure to perform the following adjustments accordingly. (For other operational instructions than the cutting tests, see the User's Manual of your machine.)

➤ Cutting test

☞ P. 8, "Cutting Test Method (for Perforated Cut)"

➤ Setting the blade force

➤ Correcting misalignment between the printing positions and the cutting positions

Adjust the following settings as necessary.

➤ Advanced settings for cutting parameters ([SPEED], [OFFSET], and [UP-SPEED])

POINT!

For the thick media, set the head height at "HIGH." (Indication: Thicker than 0.5mm)

All the preparations for the printer are complete. When you actually perform the fold line and perforated cut operations, set the media without making any changes in the settings and the adjustments having made here.

Cutting Test Method (for Perforated Cut)

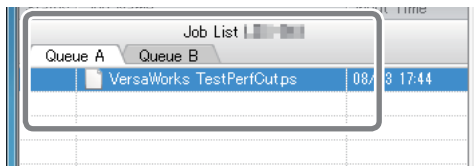
When performing the perforated cut, be sure to conduct the cutting test for the perforated cut in advance. The test method is different from the normal cutting test. Follow the below descriptions to perform the test.

The cutter, media, and test data to be used for the test

- Cutter: a cutter for perforated cutting (ZEC-U3050)
- Media: the same type of media as the one used for the actual perforated cut operations (in terms of the manufacturer, thickness, and material).
- Test data: "VersaWorks TestPerfCut.ps"
 - This is contained in the DVD to install VersaWorks. ("DVD-ROM drive (D:)">"Tools" folder >"Perforated_Cut_File" folder)
 - (".ps" may not be displayed depending on the setting of your computer.)
 - *This is a drive containing the DVD for installation.

Procedure

1

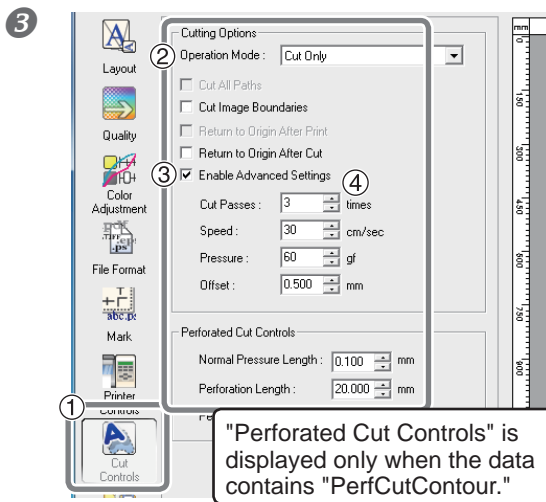


Drag and drop the test data (VersaWorks TestPerfCut.ps) on the job list of VersaWorks.

2

Double-click the job dropped.

The "Job Setting" window appears.



① Click .

② Select "Cut Only" for the operation mode.

③ Check the box for "Enable Advanced Settings."

Uncheck the boxes for the other items.

④ Enter the parameters to "Enable Advanced Settings)" and "Perforated Cut Controls."

Referring to the chart on the next page, enter the values based on the grammage of the media to be used. (The values are indications.)

Grammage *1 (Thickness)	210 g/m ² (0.25 mm)	230 g/m ² (0.30 mm)	270 g/m ² (0.35 mm)	310 g/m ² (0.41 mm)
Cutting Passes *2	3 times	3 times	3 times	3 times
Speed *3	30 cm/sec	30 cm/sec	30 cm/sec	30 cm/sec
Pressure *4	Max. 60 gf	Max. 70 gf	Max. 80 gf	Max. 100 gf
Offset *5	0.5 mm	0.5 mm	0.5 mm	0.5 mm
Normal Pressure Length *6	0.1 mm	0.1 mm	0.1 mm	0.1 mm
Perforation Length *7	20 mm	20 mm	20 mm	20 mm
Perforation Pressure *8	Max. 60 gf	Max. 70 gf	Max. 80 gf	Max. 100 gf

*1 This is a unit to show the paper thickness. The thickness may be presented in other units.

*2 This is a cutting frequency in the perforated cutting part. Please increase the frequency when the clipping is not made enough. Smaller values for "Pressure" and "Die-Cut Pressure" and a bigger value for "Cutting Frequency" can make the better cutout.

*3 This is the moving speed of the cutter. The values in the chart are recommended. If you make the operation too fast, you cannot make good cutouts.

*4 The force set here is the blade force for the half-cut part. Be sure that the value in the chart is the upper limit. Exceeding this limit may result in cutting off the object or damaging the cutter blade.

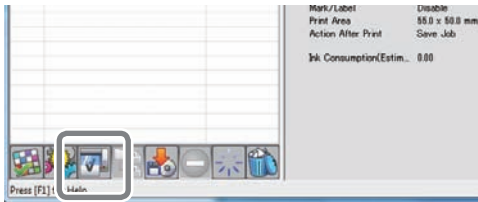
*5 You can set the correction amount of the cutter blade edge here. Enter the offset value written on the cutter. (The offset value for the included cutter for the perforation is 0.5mm.)

*6 You can set the length of the part "to be left uncut (half-cut) here. The smaller value you use, the more easily the object can be cut out. If you want to keep the strength on the half-cut part, set here to make the length longer.

*7 This indicates the part "to be cut out (die-cut)." With the longer die-cut length and the shorter half-cut length, you can make the object which can be cut out more easily.

*8 This is the cutter pressure to the die-cut part. Note that the value in the chart is the upper limit. Exceeding this limit may result in difficulties in cutting out or damages of the cutter blade.

4

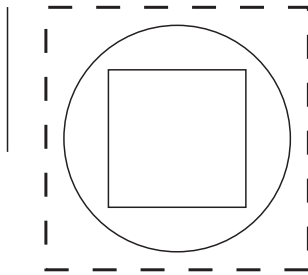


Click .

The cutting test starts.

Adjust the parameters and repeat the test until you can perform the output as intended.

Results of the tests on
the perforated cut



The dotted line region shown above is cut in the line of perforation. (The solid line region is cut out.)

POINT!

Once the parameter values are decided, write them down on a piece of paper. The values decided here are to be used when the actual perforated cut is performed.

➡ P. 21, "Starting the Perforated Cut"

1-4 Preparing the Output Data

Concept of Output Data Creation

To perform the fold line and perforated cut operations, you can create the output data by assigning the spot colors with the following names to the respective lines to be processed.

- Fold line: CutContour
- Perforated Cut: PerfCutContour

By outputting these data through VersaWorks, the fold line or the perforated cut can be performed.

☞ P. 19, "Chapter 2 Output"

Creating Data for Printing

"The program used to create the printing data is Adobe Illustrator CS4. For detailed information on drawing methods and how to work with palettes, refer to the documentation or online help for Adobe Illustrator CS4. If you're using another version of Adobe Illustrator, operations may be somewhat different from those explained here."

1. Open the exclusive swatch library

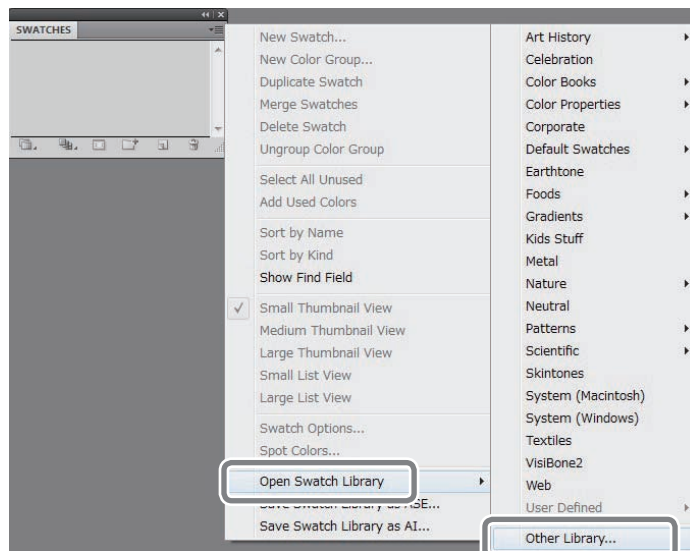
1 Set the VersaWorks installation DVD in the DVD-ROM drive of your computer.

If any windows for installation, such as "Choose Setup Language," are displayed, click  to close the windows.

2 At the swatch palette menu, select [Open Swatch Library], then [Other Libraries].

The "Select Library" window appears.

* The swatch palette is displayed by going to the menu, selecting [Window], and then selecting [Swatch].



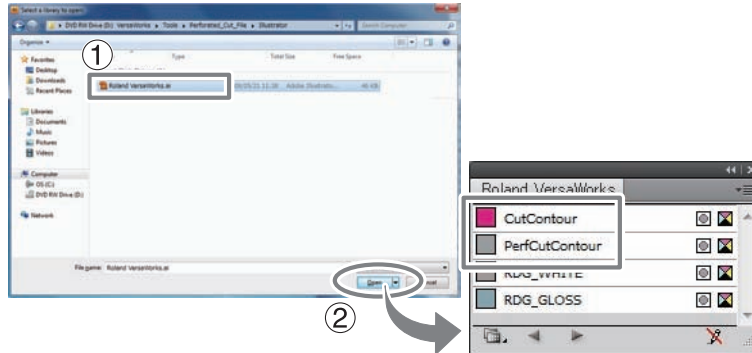
- 3** ① Open the folder in order of "DVD-ROM Drive (D)*," "Tools," "Perforated_Cut_File," and "Illustrator," and select "Roland VersaWorks."

Depending on the settings of your computer, the extension ".ai" might not be shown.

* This is the drive where the VersaWorks installation DVD is set in the procedure ①.

- ② Click [Open].

The swatch library containing "CutContour" and "PerfCutContour" opens.



Tips!

By saving the ".ai" file selected in step ① into the folder below, you can register each swatch library to the Adobe Illustrator's library.

C:\Program Files\Adobe\Adobe Illustrator CS4\Preset\Swatch

("C" is the name of your computer's local disk.)

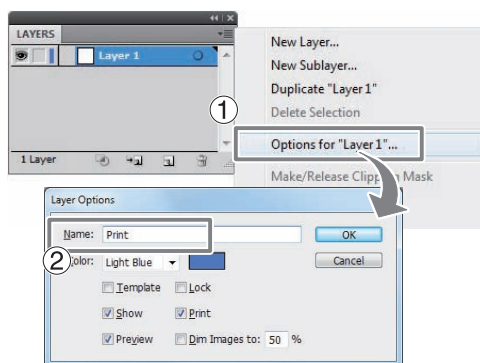
Once the registration is performed, you can open the library directly from the swatch palette menu, eliminating the need to search the file every time you start Adobe Illustrator.

2. Creating Layers for Printing

- 1** Preparing the illustration for printing.

Be sure to draw the illustration in the CMYK mode.

2



- ① Click "Options for Layer 1" from the layer pallet menu.

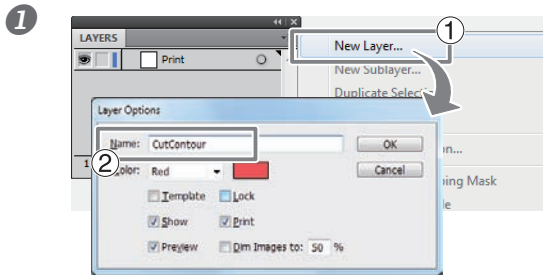
* The layer palette is displayed by going to the menu, selecting [Window], and then selecting [Layer].

- ② Enter a "Name" in the "Layer Option" window.

Enter "Print" here, for example. It is recommended to use a name easily understood as for layer for printing.

- ③ Click [OK].

3. Creating the layer for the fold line

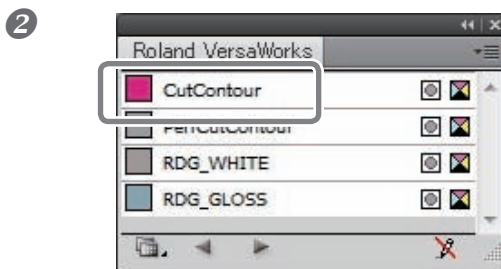


① Click "New Layer" from the layer pallet menu.

② Enter a "Name" in the "Layer Option" window.

Enter "CutContour" here, for example. It is recommended to use a name easily understood as the layer for the fold line.

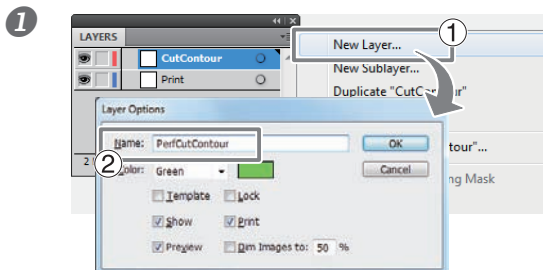
③ Click [OK].



① Create the line for fold line

② Assign the spot color, "CutContour," to the created line.

4. Creating the layer for the perforated cut

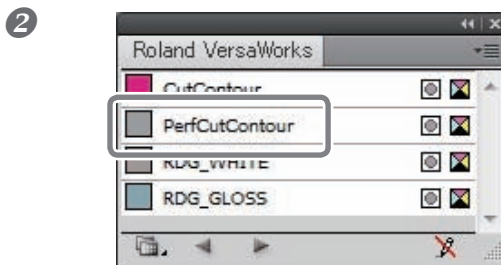


① Click [New Layer] from the layer pallet menu.

② Enter a "Name" in the "Layer Option" window.

Enter "PerfCutContour" here, for example. It is recommended to use a name easily understood as for the layer for the perforated cut.

③ Click [OK].

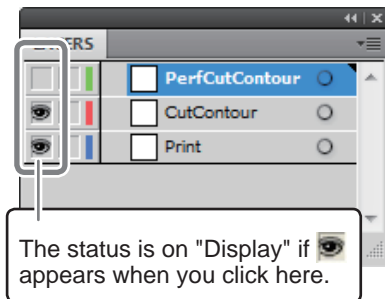


① Create the line for the perforated cut.

② Assign the spot color, "PerfCutContour," to the created line.

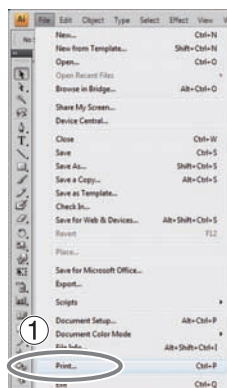
5. Creating the PS file for the fold line

1



Hide only the layers for the perforated cut from the layer pallet.

2



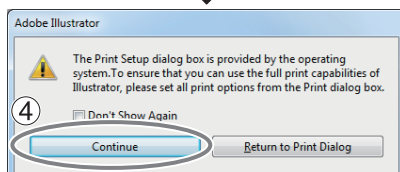
① Select [Print] from the [File] menu.

② Select [Roland VW].

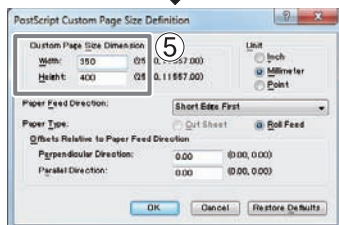
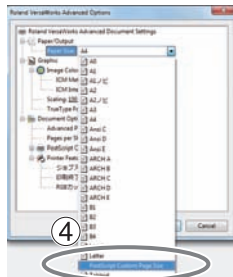
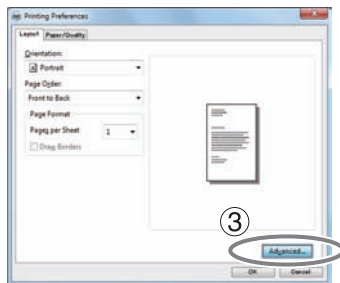
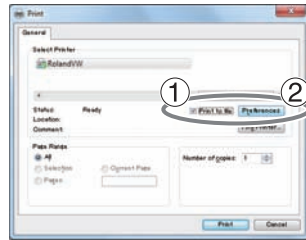
When a nickname is set, or when more than one printer is connected, select "Roland VW_(the nickname of the printer used for output)."

③ Click [Setup].

④ Click [Continue].



3



① Turn on the [Print to file] option.

② Click [Preferences].

③ Click [Advanced] in the [Layout] tab.

For Windows 2000: In the "Print" dialog box (the window at the very top of this page), go to the "Layout" tab and click [Advanced].

④ Click the down arrow to the right of the [Paper Size] box, and then click [PostScript Custom Page Size] from the list that appears."

⑤ For "Custom Page Size Dimensions," enter the values in the "Width" and "Height" "fields."

"Enter values for the same size as the illustration you created from step 2. to step 4."

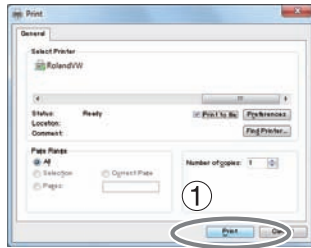
4

Click [OK] three times to close the "PostScript Custom Page Size Definition," "Roland VersaWorks Advanced Options," and "Printing Preferences" dialog boxes.

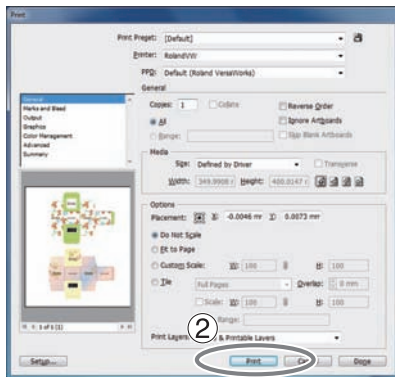
The "Print" dialog box returns.

1-4 Preparing the Output Data

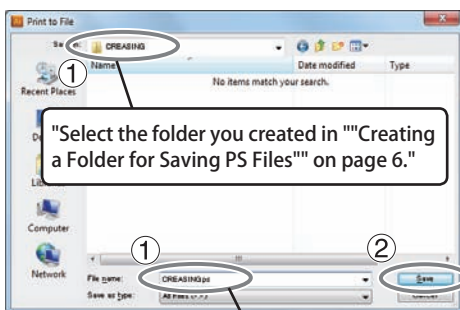
5



- ① Click [Print].
- ② Click [Print].



6



- ① **Specify the destination and file name.**
"Example: "" C:¥CREASING "" for the folder to save to, and "" CREASE.ps "" as the file name."

- ② **Click [Save].**

The PS file is created in the specified folder.

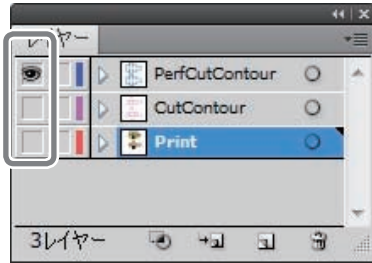
Provide an arbitrary name for the file. It is recommended to use a name easily understood as the file for the fold line.

7

- ⑦ **Open the folder you saved to and make sure the file has been created.**

6. Creating the PS file for the perforated cut

1



Display only the layers for the perforated cut on the layer pallet.

POINT!

When saving the data in the EPS file, be sure to display the layers for printing and those for the perforated cut. If the layer for printing is not displayed, the position where the perforated cut is performed will be misaligned.

2

Save the PS file in the same way as shown in the procedure 5. from ② to ⑦.

For the file to be saved, it is recommended to use a name easily understood as one for the perforated cut.

Example: "PerfCut.ps"

Chapter 2

Output

2-1 Starting Output.....20

 Starting the Fold Line20

 Starting the Perforated Cut.....21

2-1 Starting Output

Starting the Fold Line

POINT!

Be sure to perform the output operation for "Fold Line" first and then for "Perforated Cut."

In performing both operations of the fold line and the perforated cut, be sure to perform the fold line first. If the perforated cut is done first, it may result in misalignment as it causes difficulties in fixing the position of the media when the fold line is performed.

Procedure

- 1 **Confirm that all the preparation for VersaWorks, the printer, and the output data have been complete.**

☞ P. 3, "Chapter 1 Getting Ready"

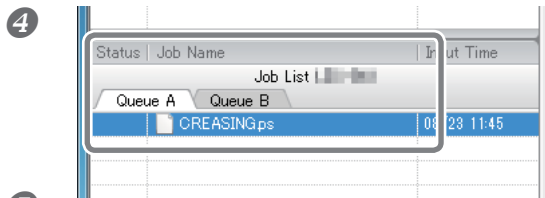
- 2 **Replace the cutter with the crease tool.**

For the exchange procedures, refer to the User's Manual of your machine.

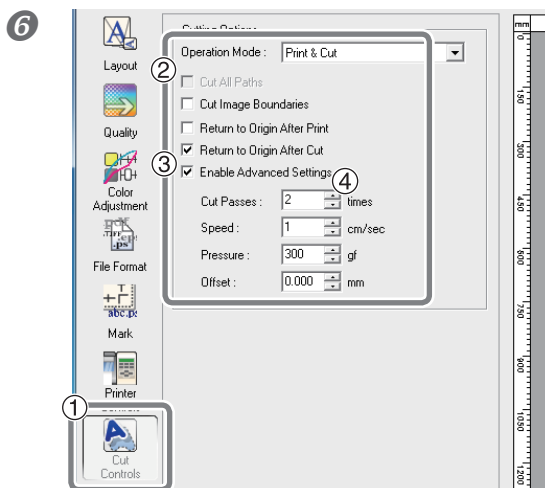
- 3 **Load media into the printer.**

Be sure to use the same media as one used for the various settings, adjustments, and test printing in the section of P. 7, "Printer Preparations)."

☞ P. 7, "Printer Preparations"




- 5 The "Job Setting" window appears.



- 1 Click the "Queue A" tab of the job list.
- 2 Drag and drop the data for the fold line on the job list for the queue A.

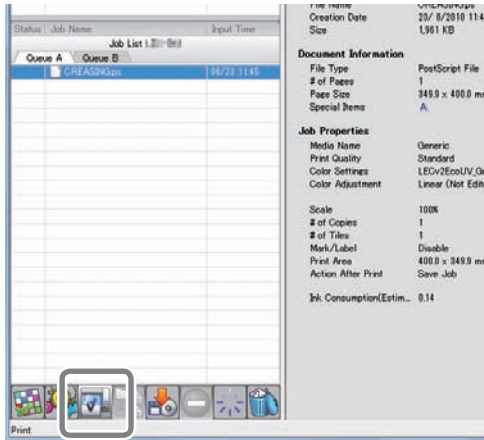
Double-click the job dropped.

- 1 Click .
- 2 Select "Print & Cut" in the operation mode.
- 3 Check the boxes of the following items.
 - Return to Origin After Cut
 - Enable Advanced SettingsEnter the values for "Enable Advanced Settings."

Cut Passes	2 times
Speed	1 cm/sec
Pressure	300 gf
Offset	0.000 mm

7 Check the other settings.

For the other settings, refer to VersaWorks Online Help.

8

Click

Starting the Output Operation

To perform the perforated cut operation subsequently, go on to "Starting the Perforated Cut."

Starting the Perforated Cut

POINT!

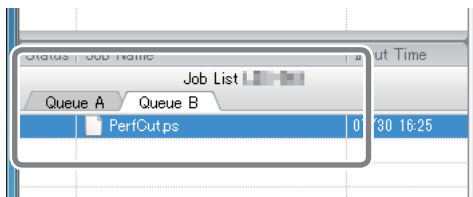
Be sure to perform the output operation for "Fold Line" first and then for "Perforated Cut."

In performing both operations of the fold line and the perforated cut, be sure to perform the fold line first. If the perforated cut is done first, it may result in misalignment as it causes difficulties in fixing the position of the media when the fold line is performed.

Procedure

1 Replace the cutter with one for the perforated cut.

☞ P. 7, "Printer Preparations" Procedure **1**

2**1** Click the "Queue B" tab of the job list.

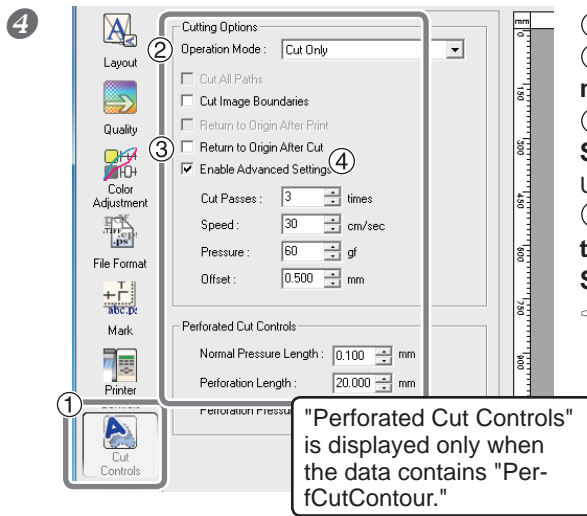
2 Drag and drop the data for the fold line on the job list for the queue B.

3

Double-click the job dropped.

The "Job Setting" window appears.

2-1 Starting Output

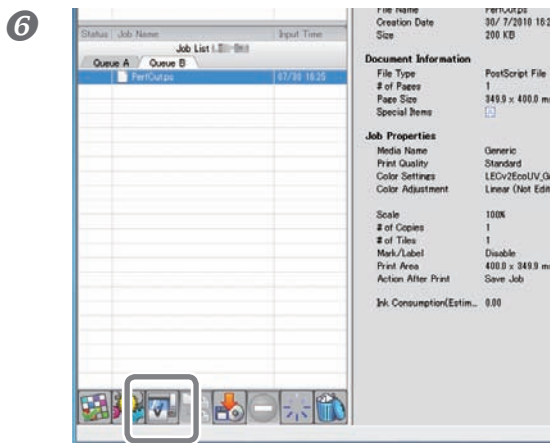


- ① Click [Icon].
- ② Select "Cut Only" for the operation mode.
- ③ Check the box of "Enable Advanced Settings."
- ④ Enter the values decided at the cutting test for the parameters of "Enable Advanced Settings" and "Perforated Cut Controls."

☞ P. 8, "Cutting Test Method (Perforated Cut)"

5 Check the other settings.

For the other settings, refer to VersaWorks Online Help.



Click [Icon].

The output operation starts.

Chapter 3

Maintenance/FAQ

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3-1 Maintenance

Daily Maintenance

The perforated cut operation is likely to generate paper dust, and the diligent cleaning is recommended. For the cleaning method, refer to the descriptions regarding "Maintenance" of the User's Guide for your machine. The cutter is likely to get exhausted faster in the perforated cut operation due to the deeper cutting process. The strain on the cutter protection is also heavier. Be sure to perform the maintenance periodically.

Maintenance of Crease Tool

The tip of the crease tool may get attached with dust and the like. Wipe the tool gently with a cloth wrung out well of water-down mild detergent.

When the ball part on the tip gets out of rotation, the tool comes to the end of its usefulness. To purchase another one, contact your authorized Roland DG Corp. dealer or us.

3-2 What to Do If (FAQ)

What to Do If...

During the perforated cut operation, sufficient cutout cannot be performed.

Adjust the cutting-in amount of the cutter for the perforated cut. "Media thickness + 0.2mm" is the upper limit for the cutting-in amount. When the cutting-in amount is adjusted, increase the cutting frequency, and perform the cutting tests.

☞ P. 8, "Cutting Test Method (Perforated Cut)"

If you cannot perform the sufficient cutout despite the process above, the problem may be due to exhaustion of the cutter. Contact your authorized Roland DG Corp. dealer or us for your machine.

Cutting is performed on the area you want to leave without cutting out in performing the perforated cut.

Adjust the cutting-in amount of the cutter for the perforated cut. "Media thickness + 0.2mm" is the upper limit of the cutting-in amount. When the cutting-in amount is adjusted, perform the cutting tests applying the adjustments below.

- Make the parameter value for "Normal Pressure Length (the length of the region to be left without cutting out)" larger.
- Lower the parameter value for "Pressure (the blade force on the half-cut region or the region to be left without cutting out)" by 5g.

The print line and the fold line or the perforated cut line are misaligned.

Have the adjustments and tests for the machine unit been done?

Before performing the fold line and the perforated cut operation, conduct the adjustments and tests for the machine unit. To perform the perforated cut operation, be sure to conduct the test for the perforated cutting.

☞ P. 7, "Printer Preparations," p. 8, "Cutting Test Method (Perforated Cut)"

Are you using the middle pinch roller?

Without the middle pinch roller, the media transfer may be unstable. For the method to use the middle pinch roller, refer to the User's Manual for your machine.

Is the media rolled back or strained?

If the media is rolled back or strained, the media transfer may become unstable to result in misalignment between the print line and the fold line or the perforated cut line.

When the humidity is high, the paper board is likely to get rolled back or strained.

The offset values for the cutter is correctly set up?

For the fold line, set the offset value at "0," and for the perforated cut, enter the offset value for your cutter. (The offset value for the included cutter for the perforated cut is 0.5mm.)

☞ P. 9, "Cutting Test Method (Perforated Cut)," Procedure ③, P. 20, "Starting Fold Line," Procedure ⑥

* The position accuracy and the repetition accuracy for printing and cutting depend on the specifications of your printer.

For the perforated cut, you want to adjust the length of "the region to be cut out" and "the region to be left without cutting out."

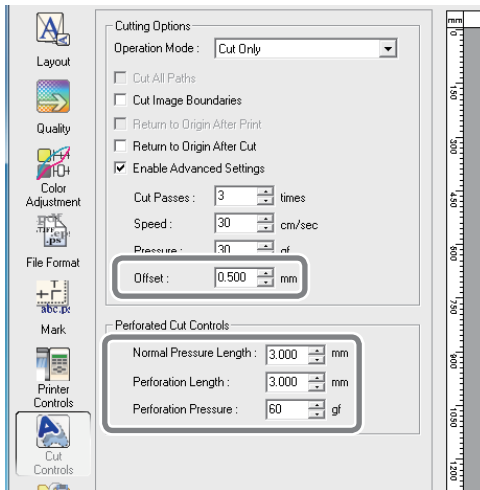
Adjust "Perforated Length (the length of the region to be cut out)" and "Normal Pressure Length (the length of the region to be left without cutting out)."

☞ P. 9, "Cutting Test Method (Perforated Cut)," Procedure ③

You want to make the fold line with the perforated cutting line.

By applying the dotted cut, you can make the fold line with the perforated cut. Make the following settings with VersaWorks.

- Make the settings of "Normal Pressure Length (the length of the region to be left without cutting out) and "Perforated Length (the length of the region to be cut out)" at the same value. (about 3 to 5 mm)
- Make the setting of the pressure at the low level. (Minimum: 30gf)



Note the following points when performing the above output operation as using the normal perforated cut.

- Make the separate data from the data for the normal perforated cut.
- Output the data for the above process before the data for the normal perforated cut.

