



HP 104-in Dual Roll Kit

User's guide

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1 Introduction

Purpose

The Dual Roll Kit enables you to print on two rolls of substrate simultaneously.

Main components

The Dual Roll Kit includes the following components.

- Two dual-roll spindles, each including one differential hub
- One pair of substrate edge holders
- One Allen key 4
- One Allen key 6
- Spindle supports on which to rest the spindle when it is not in use

Requirements

Before using the Dual Roll Kit with an HP Designjet L65500 printer, you must check that the printer's firmware and HP Internal Print Server software are up to date.

Go to <http://www.hp.com/> and click **Support & Drivers > Download drivers and software (and firmware)**, enter the product name L65500, click the name of your operating system, and download the latest firmware and the latest Internal Print Server, if you do not already have them.

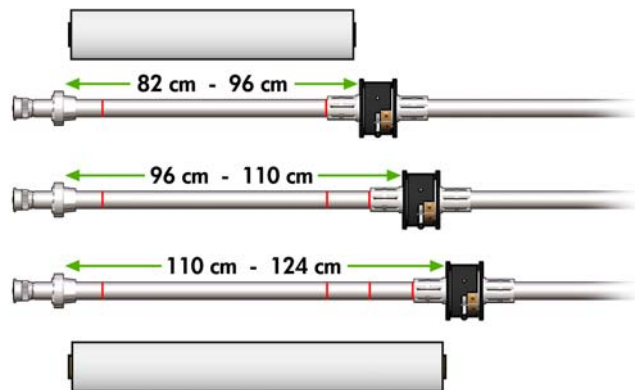
If the firmware and software versions on HP's Web site are still dated 2009, try the following FTP site.

FTP System	ftp://ftp.usa.hp.com/ (15.192.32.78)
Login	dualroll
Password (case-sensitive)	Milieux2
Access type	read-only
FTP Access	ftp://dualroll:Milieux2@ftp.usa.hp.com/ or ftp://dualroll:Milieux2@15.192.32.78/

2 Use of the dual-roll spindle

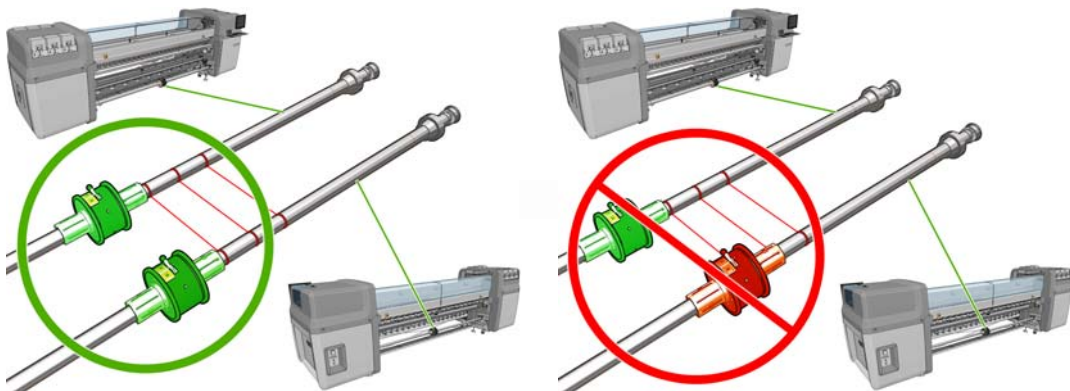
Load rolls onto the spindle

The dual-roll spindle is marked to assist you in positioning the differential hub.

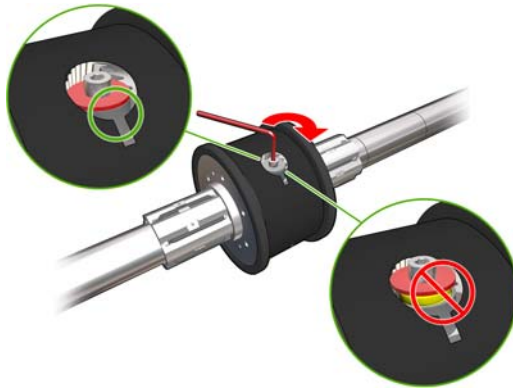


Loading the dual-roll spindles

1. Ensure that the differential hubs on the input and output spindles are aligned with each other.

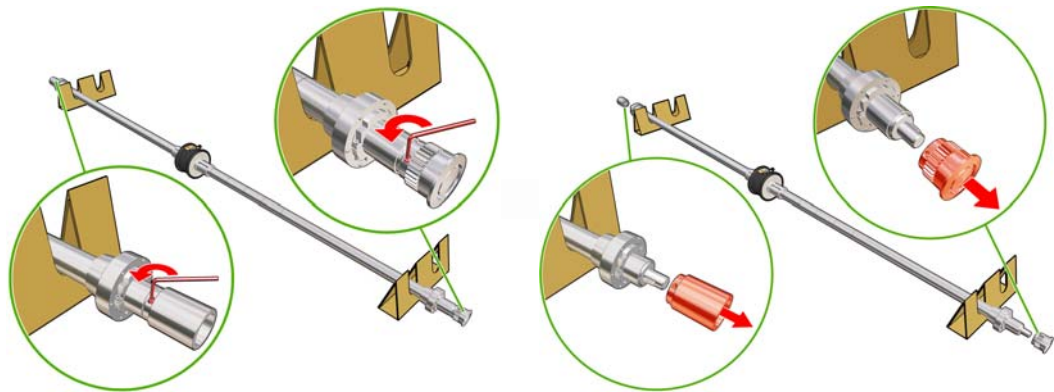


2. When both differential hubs are correctly positioned, use an Allen key 6 to tighten the screws and secure them in place. If a differential hub is loose, the substrate could become skewed during printing.

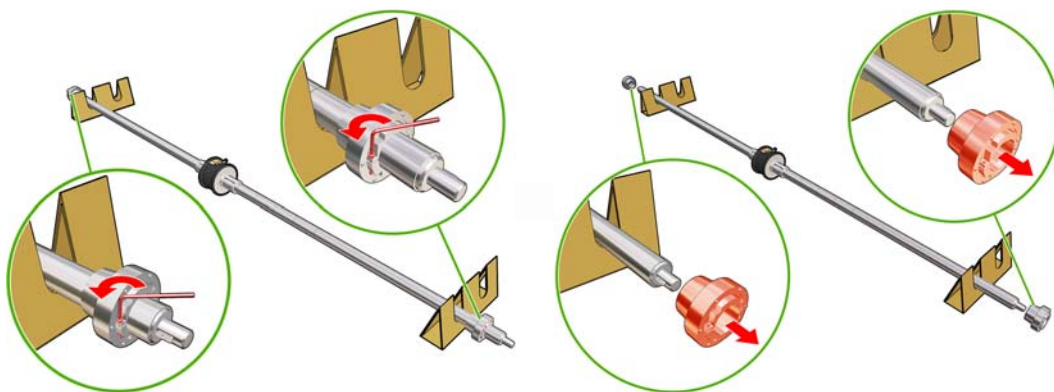


TIP: You should tighten the screw until the washer touches the bolt. If you can still see the yellow spring, tighten the screw further.

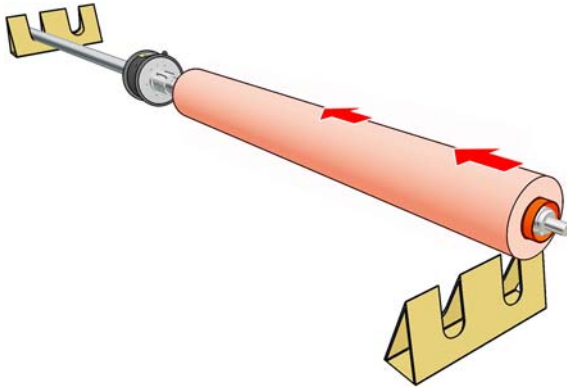
3. At each end of the spindle, unscrew and remove the outer parts of the hub, using an Allen key 4.



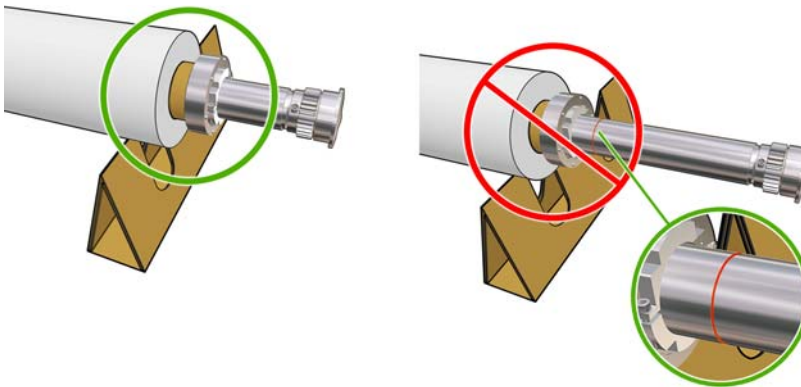
4. Unscrew and remove the inner part of each hub.



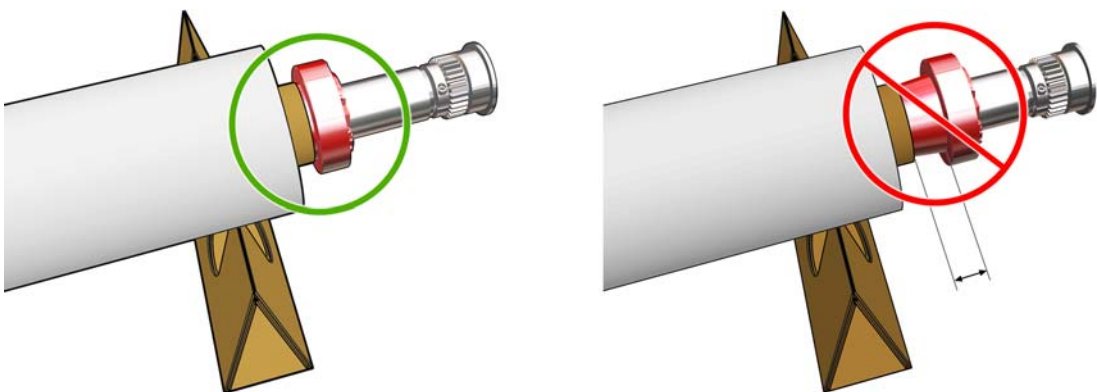
5. Insert the first roll on the spindle.



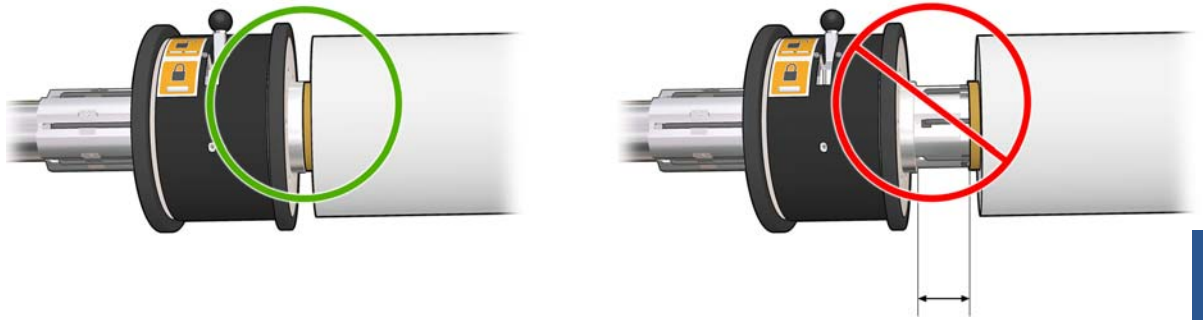
6. Replace the hub, and secure it with the Allen key.
7. Insert the second roll on the spindle.
8. Replace the hub, and secure it with the Allen key.
9. Ensure that the end of the right-hand roll is located within the maximum allowed distance from the right-hand end of the spindle: it should be between the gear and the dashed line.



10. Ensure that the roll core fits tightly on the hub.



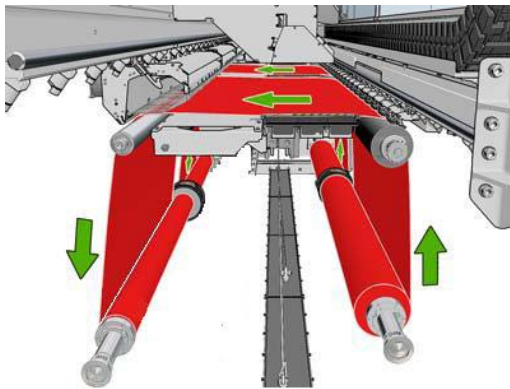
11. Ensure that the roll core fits tightly on the differential hub.




12. Load the spindle at the rear of the printer, and secure the spindle latches.
13. Use the same process to load the output spindle at the front of the printer, but load the spindle with two empty cores to receive the printed substrate.

Load rolls into the printer


The two substrate rolls are mounted on the rear dual-roll spindle and will be collected on the front dual-roll spindle. The substrate goes from the rear spindle over the main roller, over the platen, over the front roller and then to the front spindle.




 **NOTE:** You can load substrate with the printed face inwards or outwards on the spindle, in which case the spindle will turn in the opposite direction. The printer asks you for the winding direction if it cannot detect it automatically.

Before loading two rolls into the printer, you must have both rolls loaded on the rear dual-roll spindle and two empty cores loaded on the front dual-roll spindle. See [Load rolls onto the spindle on page 2](#).

1. Tell the printer that you are going to begin loading for dual-roll printing.
2. Remove the substrate edge holders in the print platen, or move them aside, so that they do not get in the way while loading the substrate.

 **CAUTION:** Loading the substrate on top of the edge holders could severely damage the printheads and carriage.


3. Lift the substrate pressure handles at the rear of the printer.

4. If you need to raise the carriage beam, go to the front panel and select the Substrate menu , then **Substrate management**, and press **OK**. Select **Carriage beam position > Move to highest position**. This process takes about 2 minutes to complete.

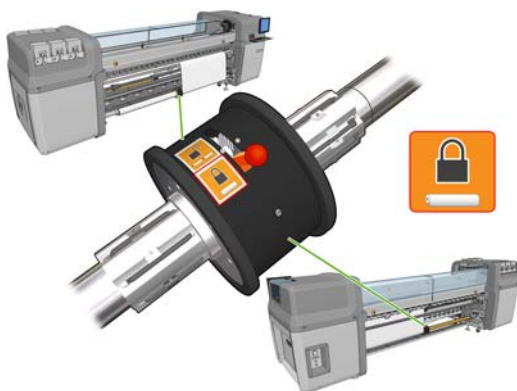
Carriage beam position

- ▶ Move to highest position
- ▶ Move to printing (custom)
- ▶ Move to printing (normal)

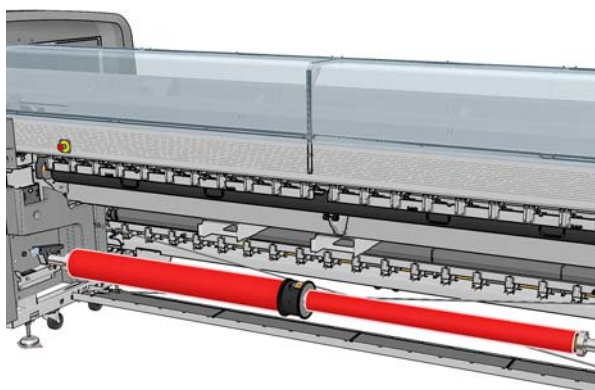
The printer raises the carriage beam, making it easy to insert the substrate. This process takes about 2 minutes to complete. During this period, you can load the input and output rolls.


 **NOTE:** While the carriage beam is rising, you can stop it by pressing the **Cancel** key.

5. You may find it helpful to lock the differentials on the input and output spindles while loading.



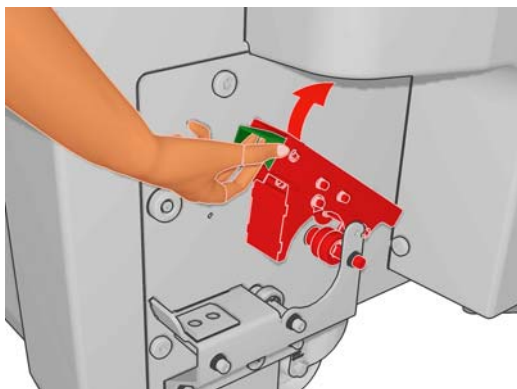
6. Bring the new rolls on their spindle to the rear of the printer, with the geared end of the spindle on the left.
7. If the two rolls are of unequal lengths, the longer roll should be on the right as seen from the front of the printer; on the left as seen from the rear.




 **NOTE:** When the shorter roll comes to an end, you should lock the differential hub if you intend to continue printing on the longer roll.

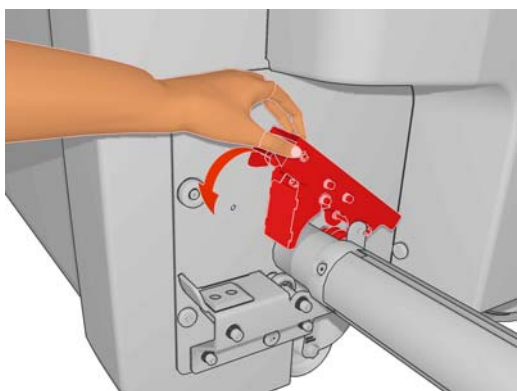
8. Rest the ends of the spindle on the platforms provided at the rear of the printer; plastic pads are provided to absorb the impacts.

9. Open the latches at both ends of the spindle (if they were closed) and push the roll on its spindle into the printer.




10. Close the latches to secure the spindle in place.

 **TIP:** If you cannot close the gear side latch, try sliding the spindle towards the side plate to make sure the end flange is not sitting on the bearings.




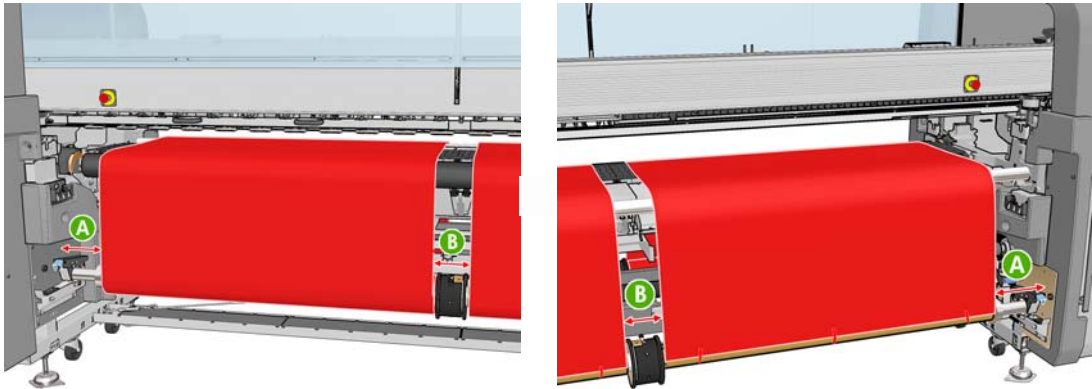
11. In the same way, load the spindle with the empty cores into the front of the printer. In this case, the geared end of the spindle should be on the right.
12. Check that the printer has finished raising the carriage beam.
13. Pass the leading edges of both rolls through the printer to the output spindle.

 **TIP:** Two people are recommended for this operation (one per roll).

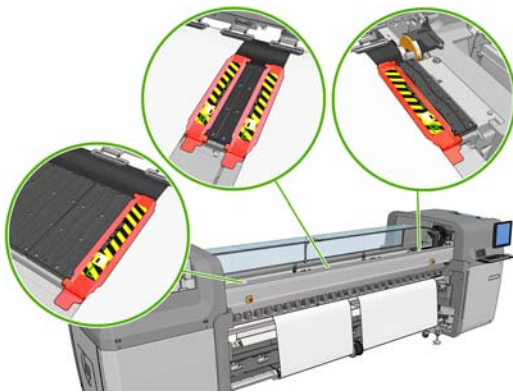


14. Install the two central edge holders, which can be done most easily at this stage.

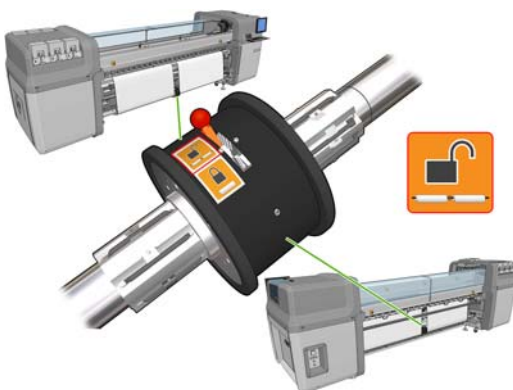
15. Once in front of the printer, if you find that you haven't unrolled enough substrate, select **Start main roller motion** from the front panel's Substrate menu  to unroll some more. The substrate unrolls only when you pull it.
16. Before taping the leading edges of the two substrate rolls to the empty cores on the output spindle, check by measurement that they are in the same positions on the output spindle as on the input spindle.





17. Tape the leading edges of both rolls to the empty cores on the output spindle.
18. Ensure that the four edge holders are correctly positioned, leaving the substrate free to move.




19. Unlock the differentials on the input and output spindles.




20. Go to the front panel and select the Substrate menu , then **Substrate management**, and press **OK**. Select **Carriage beam position > Move to printing (normal)** to lower the carriage beam into its normal position, close to the substrate. This process takes about 2 minutes to complete.

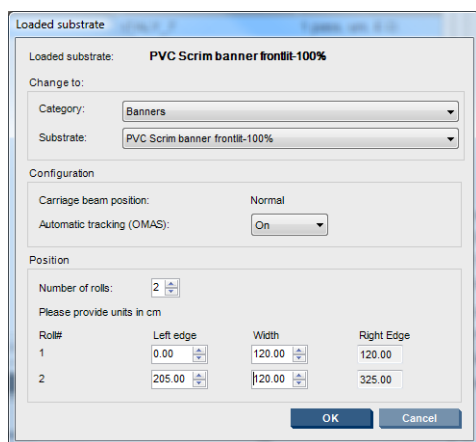
 **NOTE:** The **Move to printing (custom)** position allows you to set the printhead-to-substrate distance for thick substrates or substrates that may wrinkle in the print zone, to avoid ink smearing. Be aware that raising the printhead from the substrate may give poorer print quality.

 **WARNING!** Do not insert your hands or anything else into the printer while the carriage beam is descending.

21. Tell the printer to check the loaded substrate. The printer rotates the rolls to check their diameters, and it also checks the width of the roll, the winding direction, the vacuum and the substrate advance calibration (this takes 3–4 min).

 **NOTE:** Some substrates (such as transparent substrates) cannot be measured by the printer in this way. In such cases, you will be asked to enter the required information manually. Use the scale on the curing module to see the value for the right-hand edge that must be entered manually.

22. In the HP Internal Print Server, choose from the list of substrate types the type that you have loaded.



Loaded substrate: PVC Scrim banner frontlit-100%

Change to:

Category: Banners

Substrate: PVC Scrim banner frontlit-100%

Configuration

Carriage beam position: Normal

Automatic tracking (OMAS): On

Position

Number of rolls: 2

Please provide units in cm

Roll#	Left edge	Width	Right Edge
1	0.00	120.00	120.00
2	205.00	120.00	325.00

OK Cancel

The contents of the Loaded Substrate window are determined automatically when the substrate is loaded and checked. However, if the printer is unable to detect the edges of the substrate (for instance, in the case of a transparent substrate), you will have to measure the distance of the left edge from the printer's side plate, and complete the Left Edge and Width fields yourself.

An alert regarding substrate advance tracking may appear at this point. For more information, see your printer's documentation.

The printer is now ready to print.

3 Troubleshooting

If you see an error message numbered 78.2:01, it means that the substrate may have become detached from the rear spindle, or the core is slipping on the spindle. This could mean that you have reached the end of the roll, or the spindle is not correctly inflated, or the dual-roll differential hub is locked. The substrate is automatically unloaded when this error occurs.

You should respond to this error in the following ways.

- Check whether you have reached the end of a roll.
- For dual-roll printing, check that the differential hub is unlocked.
- Check that the hubs are tightly secured to the spindle.
- Check that the diameter of each substrate core is not too large for the spindle.
- Check that each substrate core is tightly connected to the hubs on each side of it.

If the substrate is skewed, check that the hubs are tightly connected to the spindle and to the substrate core.

If you experience banding or lack of tension in the substrate, check that the differential hub is unlocked and tightly connected to the spindle. Lack of tension can also occur when successive layers of substrate stick to each other on the roll.

If you experience ink smears on the substrate after a period of dual-roll printing, try removing the central edge holders.

4 Specifications

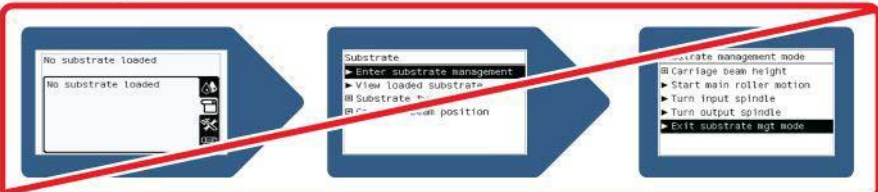
Minimum roll width	914 mm (36 in)
Maximum roll width	1245 mm (49 in)
Minimum gap between rolls	152 mm (6 in)
Maximum roll diameter	250 mm (9.84 in)
Maximum total weight of both rolls	100 kg (220 lb)

A Changes to roll loading and unloading

After installing the new firmware and software, you must go to the HP Internal Print Server and select **Substrate > Load/Unload** in order to load or unload substrate, instead of using the front panel as before. When loading substrate, you will see a Printer Configuration window in which you can choose whether to load a single roll or dual rolls.


READ ME FIRST
LOAD/UNLOAD SUBSTRATE HAS CHANGED

No longer through the Front Panel



Substrate > Enter substrate management > Exit substrate mgt mode

Now through the HP Internal Print Server



Substrate > Load/Unload...

Click Next and then Load, substrate loading will start.

To unload, use the HP Internal Print Server again