

# How to load media

HP Latex 820 and 850 printers



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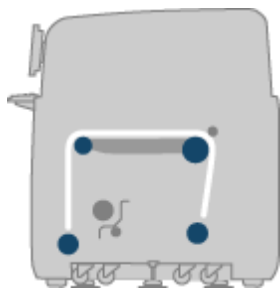
# Media loading configurations

Substrate can be loaded in a variety of different configurations to suit your different needs. There are 3 basic configurations which can be used for single-roll or dualroll printing, and for porous or non-porous substrates. Porous substrates require the use of the ink collector kit (Latex 850 only)

## Configuration options

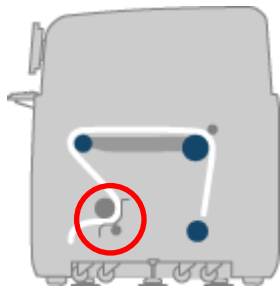
### Roll-to-roll configuration

Is suitable when you intend to print a whole roll without cutting until the input roll is empty. The substrate cannot be cut in mid-roll unless printing double-sided, and then it must be reloaded afterwards.



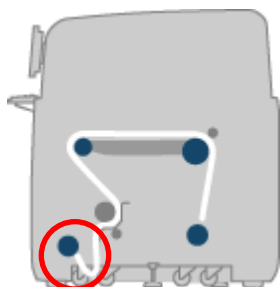
### The roll-to-free-fall configuration (Latex 850 only)

Is suitable when you want to cut and remove each print as soon as it comes out of the printer. The substrate is kept under tension between the input roll and the tension roller, but it can be cut after the tension roller because then it is no longer under tension.



### The roll-to-free-fall with collector configuration (Latex 850 only)

Is suitable when you may want to cut the substrate and remove the output roll before the input roll is empty. The substrate is kept under tension between the input roll and the tension roller, but it can be cut after the tension roller because then it is no longer under tension.



## Load a roll onto the spindle

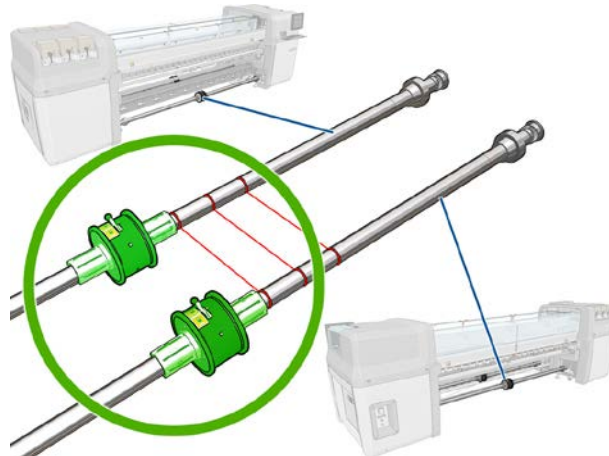
### Single roll printing and double sided printing

1. Rest the roll securely on the spindle supports.
2. Check that the gear is on the correct side (which depends on the intended winding direction).
3. Insert the spindle into the roll.
4. Connect the air gun to the pneumatic connector on the spindle, and inflate the spindle so that it cannot move inside the roll.
5. Note the position of the end of the roll on the scale marked at the geared end of the spindle. Its position should be not less than 3.2 cm (1.25 in) on that scale, otherwise the substrate may go out of the print zone and start touching the printer covers. The input and output rolls should be positioned identically on their respective spindles.

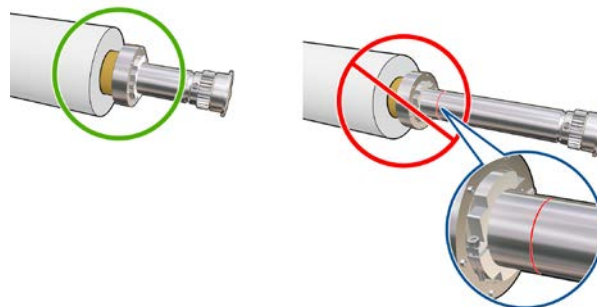
### Dual-roll printing

You can print on two rolls at the same time by using the dual-roll spindles provided with your Latex 850 printer or available as accessories for your Latex 820 printer. The dual-roll spindle is marked to assist you in positioning the differential hub.

1. With the spindles inserted into the spindles supports, 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 to tighten the screws and secure them in place. If a differential hub is loose, the substrate could become skewed during printing.
3. At each end of the spindle, unscrew and remove the outer parts of the hub, using an Allen key, then unscrew and remove the inner part of each hub.
4. Insert the first roll onto the spindle, replace the hub and secure it with the Allen key.
5. Insert the second roll onto the spindle, replace the hub, and secure it with the Allen key.
6. 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.



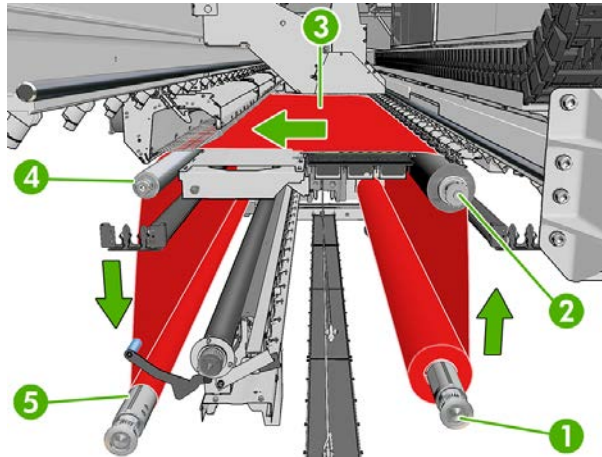
7. Ensure that the roll core fits tightly on the hub ends and on the differential hub

8. Load the spindle at the rear of the printer, and secure the spindle latches.
9. 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 a roll into the printer

### Roll to roll configuration

The substrate roll is mounted on the rear spindle and will be collected on the front spindle. The substrate goes from the rear spindle (1) over the main roller (2), over the platen (3), over the front roller (4) and then to the front spindle (5).

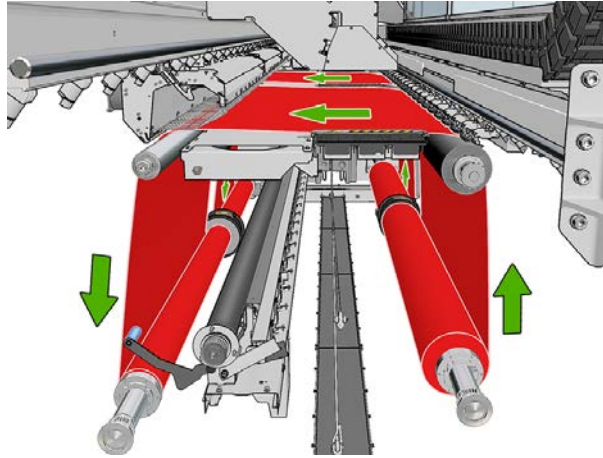


1. Go to the **HP Internal Print Server** and select **Substrate > Load/Unload**, then select the correct configuration.
2. Remove the substrate edge holders in the print platen, or move them aside, so that they do not get in the way while loading the substrate.
3. Lift the substrate pressure handles at the rear of the printer.
4. Go to the **front panel** and select **Carriage beam position > Move to highest position**.
5. Check that the curing plates are in the correct position for the substrate you are loading.
6. Pass the leading edge of the substrate through the printer to the output roll.
7. 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** to unroll some more. The substrate unrolls only when you pull it.
8. If you are loading a vinyl substrate on a Latex 850 printer, you are recommended to use the output diverter from the ink collector kit, to minimize wrinkles.
9. At the rear of the printer, measure the distance between the printer's left side plate and the left edge of the substrate. This distance should be at least 145 mm (5.7 in), otherwise the edge of the substrate may go out of the print zone and start touching the printer covers.
10. At the front of the printer, the right edge of the substrate on the empty core should be at the same distance from the right side plate as the distance measured on the input side.
11. When the substrate is evenly tensioned, attach it to the empty core with adhesive tape. Tape it first in the center, and then at the left and right sides, making sure not to pull the substrate excessively or leave it wrinkled.
12. Go to the **front panel** and 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 two minutes to complete.
13. Lower the substrate pressure handles at the rear of the printer.
14. If you intend to use full bleed, do not use the substrate edge holders, but use **Move to printing (custom)** to raise the carriage. Do not remove the edge holders; just move them aside at each end of the platen.
15. If you do not intend to use full bleed, use the substrate edge holders to prevent the substrate edges from lifting up and jamming while printing.
16. Go to the **HP Internal Print Server** and press the **Load button**. The printer rotates both rolls to check their diameters, and it also checks the width of the roll, the winding direction, the vacuum and the substrate advance calibration.

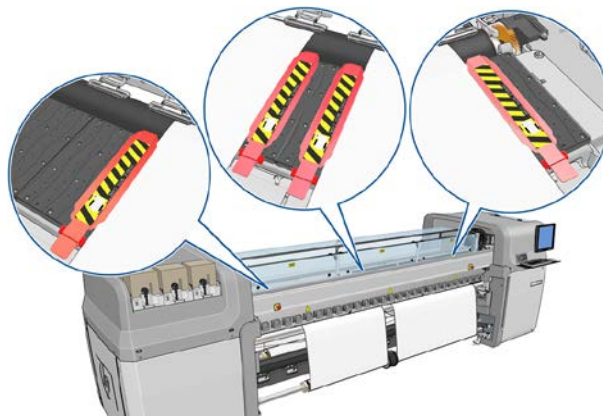
17. In the HP Internal Print Server, choose from the list of substrate types the type that you have loaded.

## Dual roll to roll configuration

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.



1. Go to the **HP Internal Print Server** and select **Substrate > Load/Unload**, then select the correct configuration.
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.
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 **Carriage beam position > Move to highest position**.
5. Lock the differentials on the input and output spindles while loading. 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.
6. Pass the leading edges of both rolls through the printer to the output spindle.
7. 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.
8. 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.
9. Tape the leading edges of both rolls to the empty cores on the output spindle, and install the four edge holders.

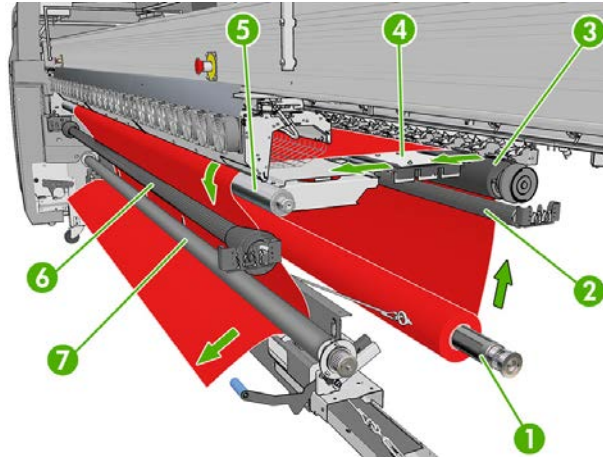


10. Unlock the differentials on the input and output spindles
11. Go to the **front panel** and select **Carriage beam position > Move to printing (normal)** to lower the carriage beam into its normal position, close to the substrate.
12. Go to the **HP Internal Print Server** and press the **Load button**. 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.

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

## Roll-to-free-fall configuration (Latex 850 only)

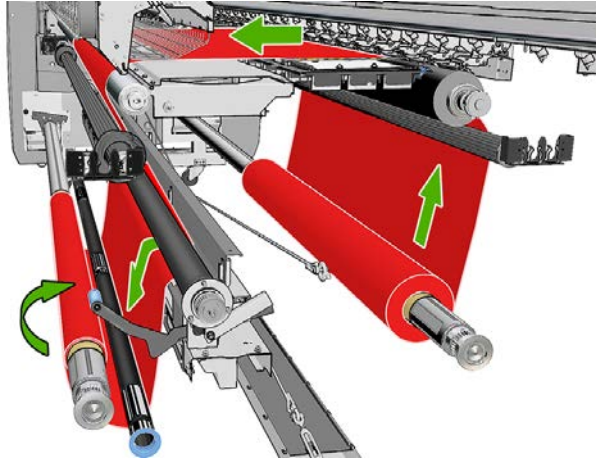
The substrate roll is mounted on the rear spindle (1), the printed substrate will be deposited on the floor in front of the printer. The substrate goes from the rear spindle (1) over the main roller (3), over the platen, over the front roller (5) and then to the tension roller (7), after which it continues to the floor. The diverter rollers (2 and 6) and the ink collectors (4) are installed when printing on porous substrates.



1. Go to the **HP Internal Print Server** and select **Substrate > Load/Unload**, then select the correct configuration.
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.
3. Lift the substrate pressure handles at the rear of the printer.
4. Go to the **front panel** and select **Carriage beam position > Move to highest position**.
5. Pass the leading edge of the substrate through the printer, over the main roller and the front roller to the tension roller.
6. Once in front of the printer, if you find that you haven't unrolled enough substrate, select **Start main roller motion** to unroll some more. The substrate unrolls only when you pull it.
7. At the rear of the printer, measure the distance between the printer's left side plate and the left edge of the substrate. This distance should be at least 145 mm (5.7 in), otherwise the edge of the substrate may go out of the print zone and start touching the printer covers.
8. At the front of the printer, the right edge of the substrate on the tension roller should be at the same distance from the right side plate as the distance measured on the input side.
9. When the substrate edge is correctly positioned and the substrate is evenly tensioned, lower the tension roller lever.
10. Go to the **front panel** and select **Carriage beam position > Move to printing (normal)** to lower the carriage beam into its normal position, close to the substrate.
11. Lower the substrate pressure handles at the rear of the printer.
12. If you intend to use full bleed, do not use the substrate edge holders, but use **Move to printing (custom)** to raise the carriage. Do not remove the edge holders; just move them aside at each end of the platen.
13. If you do not intend to use full bleed, use the substrate edge holders to prevent the substrate edges from lifting up and jamming while printing.
14. Go to the **HP Internal Print Server** and press the **Load button**. The printer rotates the input roll to check its diameter, and it also checks the width of the roll, the winding direction, the vacuum and the substrate advance calibration
15. In the HP Internal Print Server, choose from the list of substrate types the type that you have loaded.

## Roll-to-free-fall with collector configuration (Latex 850 only)

This configuration is similar to the roll-to-free-fall configuration, but with the addition of a collector roller and loop shaper. The following illustration shows a completed configuration with a single roll of porous substrate, so the ink collector kit has been installed.



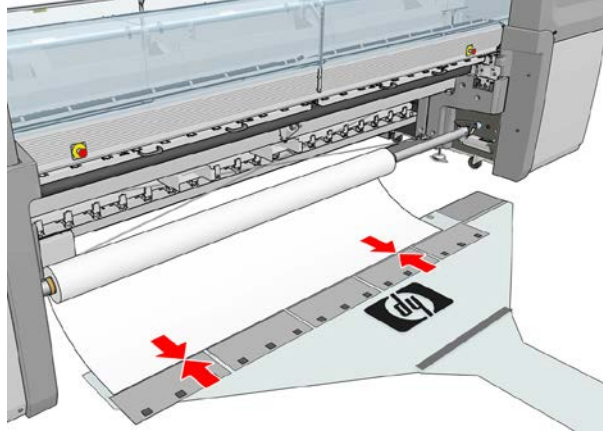
1. Follow the whole loading procedure for the roll-to-free-fall configuration above.
2. Load an empty substrate core onto the collector spindle. For dual-roll printing, load two cores of the same diameter onto a single spindle (it is not recommended to use a dual-roll spindle as the collector).
3. Use the buttons on the front panel to advance the substrate's leading edge until it reaches the core on the collector.
4. Tighten the substrate so that it is evenly tensioned, then attach the leading edge to the core with tape, first at the center and then at the sides. There should be no wrinkles or slackness across the substrate.
5. Use the buttons on the front panel again to advance the substrate so that a substrate loop is created between the tension roller and the collector.
6. Place the loop shaper into the substrate loop.
7. Go to the **HP Internal Print Server** and press the **Enable collector button**.
8. Select the winding direction outwards is recommended, as it permits an output roll up to 230 mm (9 in) in diameter. If you select inwards, the diameter of the output roll is limited to 150 mm (5.9 in).



## Load a roll with the 'Substrate Loading Tool

The Substrate loading tool enables you to load a substrate into the printer quicker as the Carriage Beam does not need to be raised. In the example described here the substrate is loaded through the path, but the tool can also be used to load the substrate through the Roll-to-free-fall configuration.

1. Use the buttons on the front panel to advance the substrate's leading edge until it reaches the ground.
2. On the loading tool are substrate flaps held with magnets, open the flaps and insert the leading edge of the substrate into the flaps.



3. Close the flaps over the leading edge of the substrate.
4. Insert the tab of the Substrate Loading Tool into the substrate path and keep pushing it until it emerges on the other side. You can advance some more substrate using the **Move substrate key** or by turning the substrate input spindle manually.
5. Pull the tab of the Substrate loading Tool through the substrate path, and the substrate will follow. If more substrate is required to pull it through using the **Move substrate key** to advance more substrate.
6. Pull the tab of the Substrate loading Tool through the substrate path. Once the substrate is fully pulled through the printer's substrate path, open the magnetic substrate flaps to release the substrate.

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