



DESIGNJET L26500 / L26100 printer series

User's guide

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1st edition

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NOTE:

The HP Designjet L26100 Printer is available in selected countries only. Please contact HP to check availability in your country.

For the HP Designjet L26100 Printer, please note that any information in the documentation about the take-up reel (including loop shapers) and loading accessory should be ignored unless you have purchased those parts as [accessories](#).

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1 Introduction

Safety precautions


Before using your printer, read the following safety precautions to make sure you use the equipment safely.

You are expected to have the appropriate technical training and experience necessary to be aware of hazards to which you may be exposed in performing a task, and take appropriate measures to minimize the risks to yourself and to other people.

General safety guidelines

- Refer to the installation instructions before connecting the printer to the supply.
- There are no operator-serviceable parts inside the printer except those covered by HP's Customer Self Repair program (see <http://www.hp.com/go/selfrepair/>). Refer servicing of other parts to qualified service personnel.
- Turn off the printer, unplug both power cords from the power outlets, and call your service representative in any of the following cases.
 - The power cord or plug is damaged.
 - Liquid has entered the printer.
 - There is smoke or an unusual smell coming from the printer.
 - The printer has been dropped or the drying or curing module damaged.
 - The printer's built-in Residual Current Circuit Breaker (Ground Fault Circuit Interrupter) has been repeatedly tripped.
 - The printer is not operating normally.
- Turn off the printer and unplug both power cords from the power outlets in either of the following cases.
 - During a thunderstorm
 - During a power failure

Electrical shock hazard

 **WARNING!** The drying and curing modules operate at hazardous voltages capable of causing death or serious personal injury.

The printer uses two power cords. Unplug both power cords before servicing the printer. The printer must be connected to earthed mains outlets only.

To avoid the risk of electric shock:

- Do not attempt to dismantle the drying and curing modules or the electrical control cabinet.
- Do not remove or open any other closed system covers or plugs.
- Do not insert objects through slots in the printer.
- Test the functionality of the Residual Current Circuit Breaker (RCCB) every 6 months.

Heat hazard

The drying and curing subsystems of the printer operate at high temperatures and can cause burns if touched. To avoid personal injury, take the following precautions.

- Do not touch the internal enclosures of the printer's drying and curing modules. Even after opening the window latch that disconnects drying and curing power, the internal surfaces could be hot.
- Take special care when accessing the substrate path.

Fire hazard

The drying and curing subsystems of the printer operate at high temperatures. Call your service representative if the printer's built-in Residual Current Circuit Breaker (Ground Fault Circuit Interrupter) is repeatedly tripped.

To avoid the risk of fire, take the following precautions.

- Use the power supply voltage specified on the nameplate.
- Connect the power cords to dedicated lines, each protected by a branch circuit breaker according to the rating of the wall socket. Do not use a power strip (relocatable power tap) to connect both power cords.
- Use only the power cords supplied by HP with the printer. Do not use a damaged power cord. Do not use the power cords with other products.
- Do not insert objects through slots in the printer.
- Take care not to spill liquid on the printer.
- Do not use aerosol products that contain flammable gases inside or around the printer.
- Do not block or cover the openings of the printer.
- Do not attempt to dismantle the drying or curing module, or the electrical control cabinet.
- Ensure that the operating temperature of the substrate loaded recommended by the manufacturer is not exceeded. If this information is not available from the manufacturer, do not load substrates that cannot be used at an operating temperature under 125°C (257°F).
- Do not load substrates with auto-ignition temperatures below 300°C (572°F). See note below.



NOTE: Test method based on EN ISO 6942:2002; Evaluation of materials and material assemblies when exposed to a source of radiant heat, method B. The test conditions, to determine the temperature when the substrate starts ignition (either flame or glow) were: Heat flux density: 30 kW/m², copper calorimeter, K type thermocouple.

Mechanical hazard

The printer has moving parts that could cause injury. To avoid personal injury, take the following precautions when working close to the printer.

- Keep your clothing and all parts of your body away from the printer's moving parts.
- Avoid wearing necklaces, bracelets and other hanging objects.
- If your hair is long, try to secure it so that it will not fall into the printer.
- Take care that sleeves or gloves do not get caught in the printer's moving parts.
- Avoid standing close to the fans, which could cause injury and could also affect print quality (by obstructing the air flow).
- Do not touch gears or moving rolls during printing.

Heavy substrate hazard

Special care must be taken to avoid personal injury when handling heavy substrates.

- Handling heavy substrate rolls may require more than one person. Care must be taken to avoid back strain and/or injury.
- Consider using a forklift, pallet truck or other handling equipment.
- When handling heavy substrate rolls, wear personal protective equipment including boots and gloves.

Ink handling

Your printer does not use solvent inks and does not have the traditional problems associated with them. However, HP recommends that you wear gloves when handling ink system components.

Warnings and cautions

The following symbols are used in this manual to ensure the proper use of the printer and to prevent the printer from being damaged. Follow the instructions marked with these symbols.


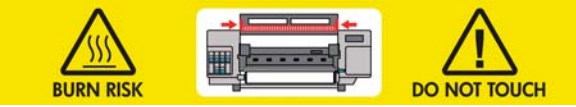








WARNING! Failure to follow the guidelines marked with this symbol could result in serious personal injury or death.



CAUTION: Failure to follow the guidelines marked with this symbol could result in minor personal injury or damage to the product.

Warning labels

Label	Explanation
	<p>Risk of burns. Do not touch the internal enclosures of drying and curing modules of the printer.</p>
	<p>Risk of burns. Do not touch the drying enclosure of the printer. Even after opening the window latch, which disconnects the power to the drying and curing modules, the internal surfaces could be hot.</p>
	<p>Electric shock hazard. The printer has two input power cords. A voltage is still present in the drying and curing modules after the main switch is turned off. There are no operator-serviceable parts inside the printer. Refer servicing to qualified service personnel. Disconnect all power cords before servicing.</p>
	<p>See installation instructions before connecting to the supply. Ensure that the input voltage is within the printer's rated voltage range. The printer requires two dedicated lines, each protected by a branch circuit breaker according to the rating of the wall socket outlet. Use only earthed mains outlets and the power cords supplied by HP with the printer.</p>
	<p>Risk of trapped hands. Do not push the roll while loading. Lift the loading table to ease the spindle into the printer.</p>
	<p>Risk of trapped fingers. Do not touch spindle gears while moving.</p>
	<p>Do not put objects on top of the printer. Do not cover the top fans.</p>
	<p>You are recommended to wear gloves when handling ink cartridges, printhead cleaning cartridges and the printhead cleaning container.</p>

The printer's main features

Your printer is a color inkjet printer designed for printing high-quality images on flexible substrates from 0.584 m (23 in) to 1.55 m (61 in) wide. Some major features of the printer are shown below:

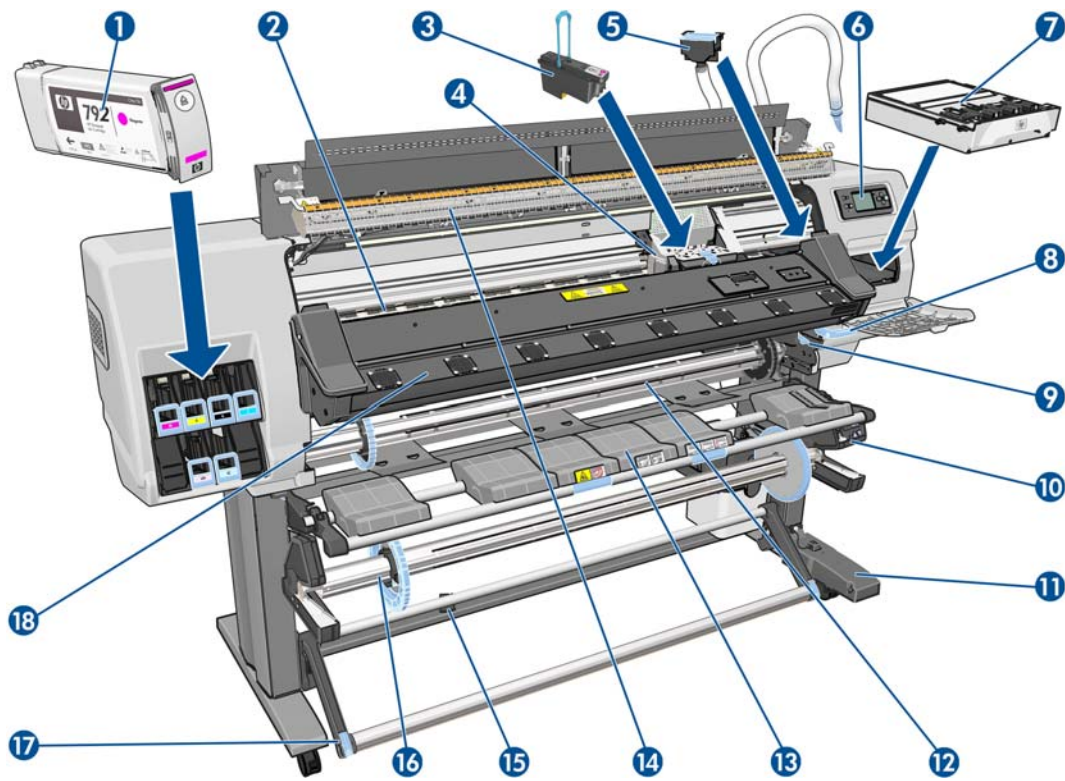
- Printing speeds in draft mode of up to 22.8 m²/h (246 ft²/h).
- Environmentally friendly, odorless, aqueous latex inks in six colors
- No special ventilation required, no hazardous waste
- 775 ml ink cartridges
- Print on a wide range of substrates—including most low-cost, uncoated, solvent-compatible substrates
- A range of HP recyclable substrates is available
- Durable prints with outdoor display permanence up to three years unlaminated, five years laminated
- Accurate and consistent color reproduction with automatic color calibration (built-in spectrophotometer) for most substrates

To send print jobs to your printer, you will need Raster Image Processor (RIP) software, which should be run on a separate computer. RIP software is available from various different companies; it is not provided with the printer.

The printer's main components

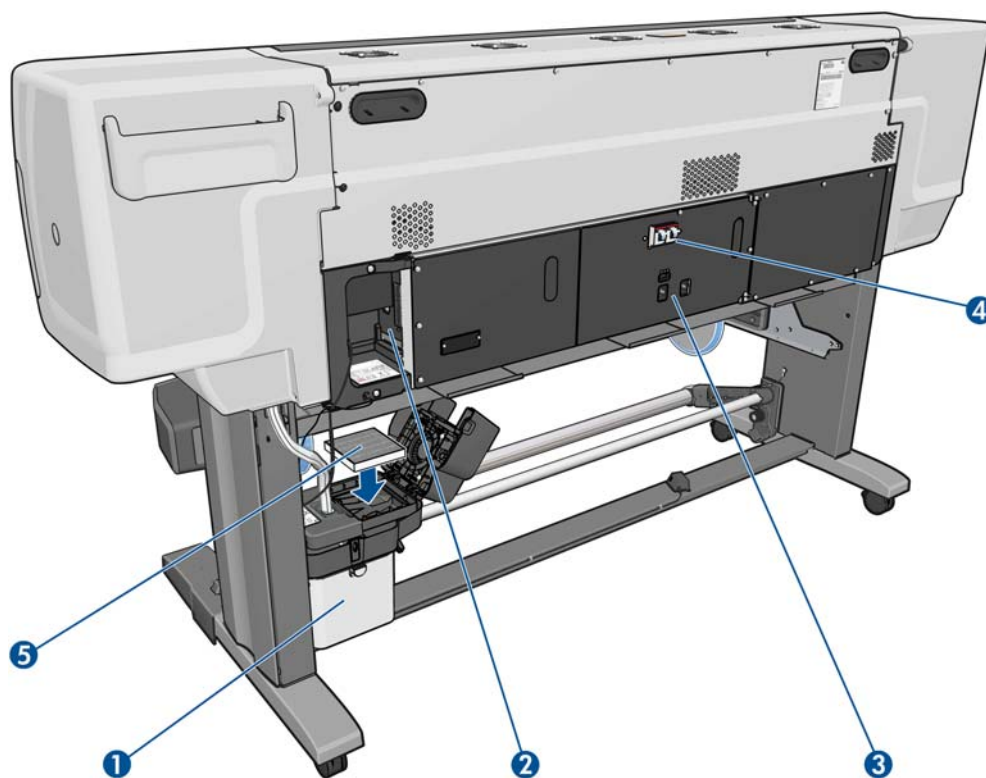
The following views of the printer illustrate its main components.

Front view



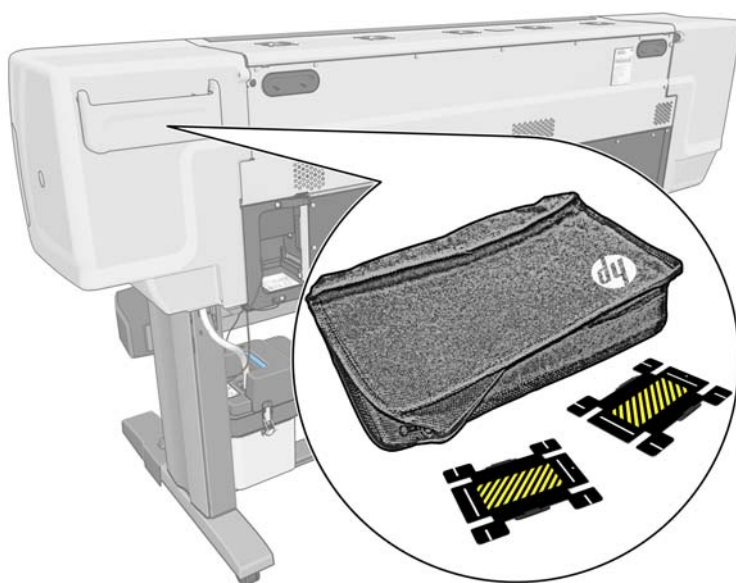
1. Ink cartridge
2. Platen
3. Printhead
4. Printhead carriage
5. Ink funnel and ink tube assembly
6. Front panel
7. Printhead cleaning cartridge
8. Substrate-adjustment lever
9. Spindle lock lever
10. Take-up reel motor
11. Take-up reel cable and sensor housing unit
12. Spindle
13. Loading table/take-up reel deflector
14. Drying module
15. Take-up reel sensor
16. Take-up reel spindle stop
17. Loop-shaper
18. Curing module

Rear view



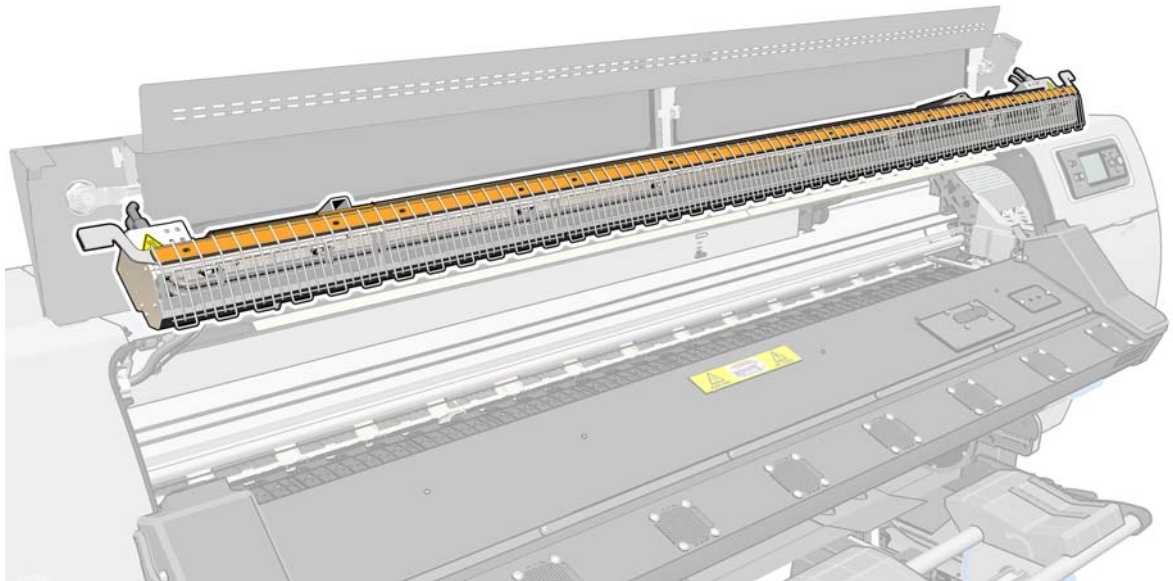
1. Printhead cleaning container
2. Sockets for communication cables and optional accessories
3. Power switch and power sockets
4. Residual current circuit breakers for the heating components
5. Ink filter

Edge holders case

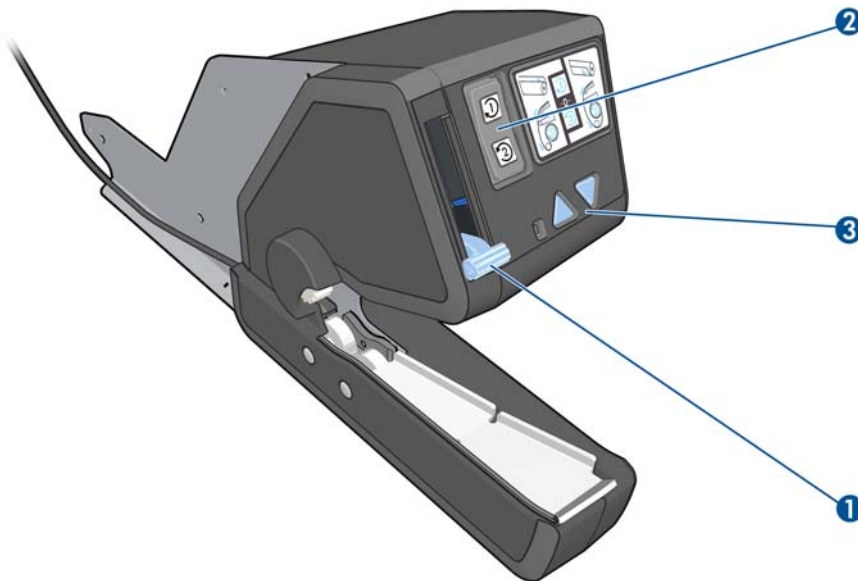


The case is normally attached to the rear of the printer, and contains the two edge holders when they are not in use.

Drying enclosure

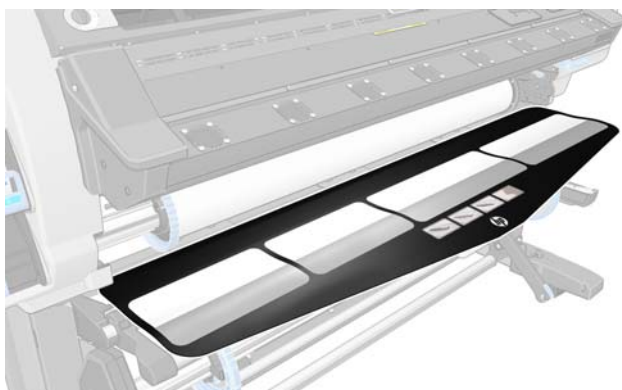


Take-up reel motor



1. Take-up reel spindle lever
2. Wind-direction switch
3. Manual winding buttons

Loading accessory

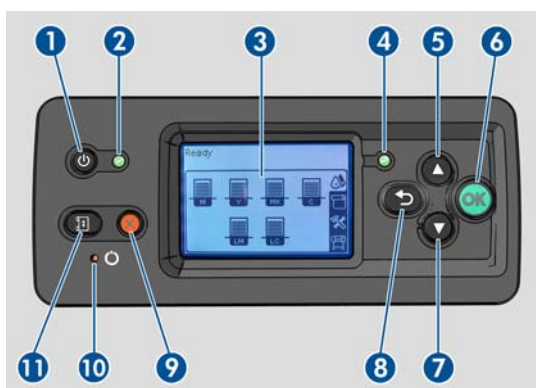


The loading accessory helps you to load some substrate types that are difficult to load without it. See [The loading accessory on page 50](#).

The front panel

Your printer's front panel is located at the front right of the printer. It has the following important functions:

- Assists you in troubleshooting issues
- Is used when performing certain physical operations, such as unloading substrate and maintaining the printer
- Displays information in brief about the status of the printer
- Displays warning and error messages, when appropriate, along with audio alerts to call attention to a warning or message



The front panel has the following components:

- 1. Power key:** To turn the printer off. See [Turn the printer on and off on page 11](#).
- 2. Power light:** Indicates the printer's power status. If the light is off, the printer is off. If it is solid green, the printer is on. If it is flashing green, the printer is in transition between on and off.
- 3. Front-panel display:** Displays error, warnings and information on using your printer.
- 4. Status light:** Indicates the printer's operational status. If the light is off, the printer is not ready. If it is solid green, the printer is ready and idle. If it is flashing green, the printer is busy: receiving data, processing or printing. If it is flashing amber, your intervention is required. If it is solid amber, a serious error has occurred.

5. **Up** key: To go up in a menu or option, or to increase a value.
6. **OK** key: To confirm an action while in a procedure or interaction. To enter in a submenu in the menu. To select a value when given an option.
7. **Down** key: To go down in a menu or option, or to decrease a value.
8. **Back** key: To go to the previous step in a procedure or interaction. To go to the upper level, or leave the option in the menu, or when given an option.
9. **Cancel** key: To cancel a procedure or interaction.
10. **Reset** key: To restart the printer (as if it were switched off and switched on again). You will need an implement with a narrow tip to operate this key.
11. **Move substrate** key: To move the loaded substrate forwards or backwards. While the printer is printing, it can be used to fine-tune the substrate advance on the fly.

To **highlight** an item in the front-panel display, press the **Up** or **Down** key until the item is highlighted.

To **select** an item in the front-panel display, first highlight it and then press the **OK** key.

When this guide shows a series of front-panel display items like this: **Item1** > **Item2** > **Item3**, it means that you should select **Item1**, then select **Item2**, then select **Item3**.

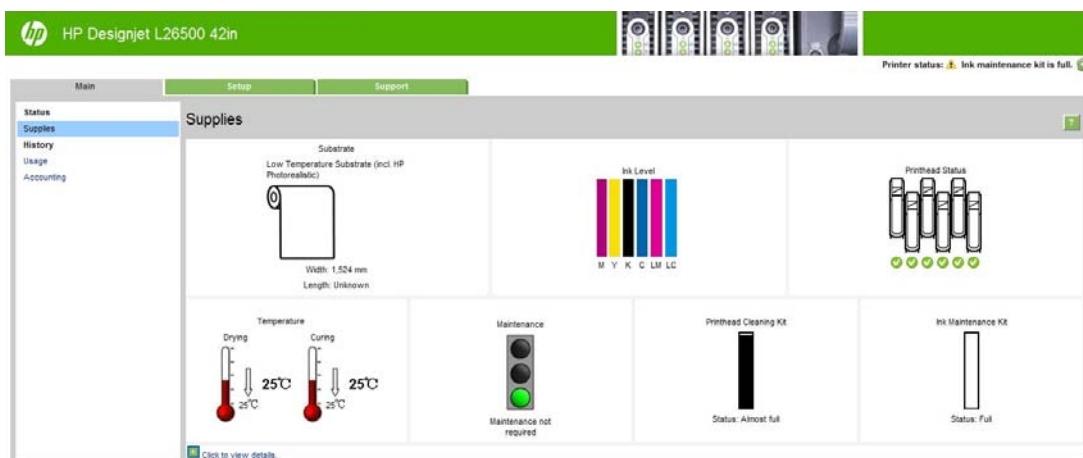
Information about specific uses of the front panel can be found throughout this guide.

The Embedded Web Server

The Embedded Web Server is a Web server running inside the printer. You can use it to obtain printer information, manage settings and presets, align printheads, upload new firmware and troubleshoot problems. Service engineers can use it to retrieve internal information that helps to diagnose printer problems.

You can access the Embedded Web Server remotely by using an ordinary Web browser running on any computer. See [Access the Embedded Web Server on page 17](#).

The Embedded Web Server window displays three separate tabs. Buttons near the top of each page provide access to online help and supplies reordering.



Main tab

The **Main** tab provides information about the following items.

- Substrate, ink, printhead and maintenance status
- Temperatures of the drying and curing modules
- Substrate and ink usage and accounting

Setup tab

The **Setup** tab enables you to complete these tasks.

- Specify printer settings such as units of measurement and refresh date
- Specify network and security settings
- Set the date and time
- Update firmware
- Align printheads
- Upload media presets

Support tab

The **Support** tab offers various kinds of help with your printer.

- Browse helpful information from a variety of sources
- Troubleshoot problems
- Access HP Designjet links for technical support with your printer and accessories
- Access service support pages that show current and historical data on the usage of your printer

Turn the printer on and off

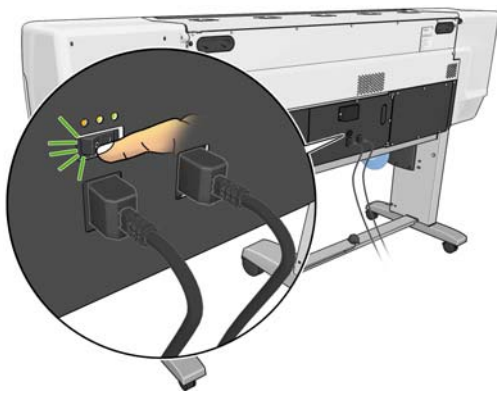
To turn on the printer, ensure that the power switch at the rear of the printer is turned on, ensure that the residual current circuit breakers are in the up position, then press the **Power** button on the front panel. You can leave the printer on without wasting energy. Leaving it on improves response time. When the printer has not been used for a certain period of time, it saves power by going into sleep mode. Any interaction with the printer returns it to active mode, and it can resume printing immediately.

If you want to turn the printer on or off, the normal and recommended method is to use the **Power** button on the front panel.



When you turn off the printer this way, the printheads are automatically stored with the printhead cleaning cartridge, which prevents them from drying out.

However, if you plan to leave the printer turned off for a long period of time, you are recommended to turn it off using the **Power** button, and then also turn off the power switch at the rear.



To turn it back on later, use the power switch at the rear, and then press the **Power** button.

When the printer is turned on, it takes about 5 minutes to initialize itself.

Restart the printer

In some circumstances you may be advised to restart the printer. Please proceed as follows:


1. Press the **Power** button on the front panel to turn the printer off. Wait a few moments, then press the **Power** button again. This should restart the printer. If it does not, continue with step 2.
2. Use the **Reset** button on the front panel. You will need a non-conductive implement with a narrow tip to press the **Reset** button. This normally has the same effect as pressing the **Power** button, but may work if the **Power** button does not.
3. If neither steps 1 nor 2 seems to have any effect, turn off the printer by using the power switch at the rear of the printer. Check that the residual current circuit breakers are in the up position.
4. Remove the power cords from the power sockets.
5. Wait for 10 seconds.
6. Reinsert the power cords into the power sockets and turn on the printer by using the power switch.
7. Make sure that the Power light on the front panel illuminates. If it does not, use the **Power** button to turn on the printer.

2 Connectivity and software instructions

Connection method

Your printer can be connected in the following way.

Connection type	Speed	Maximum cable length	Other factors
Gigabit Ethernet	Fast; varies according to network traffic	Long (100 m=328 ft)	Requires extra equipment (switches)

 **NOTE:** The speed of any network connection depends on all the components that are used in the network, which can include network interface cards, hubs, routers, switches, and cables. If any one of these components cannot operate at high speed, you will have a low-speed connection. The speed of your network connection can also be affected by the total amount of traffic from other devices on the network.

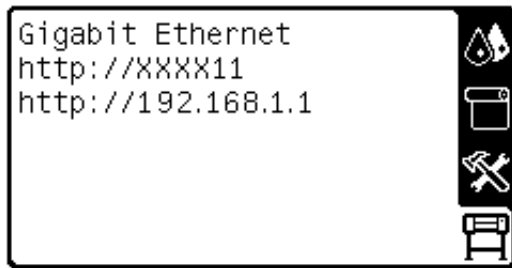
Connect to a network

Before you begin, check your equipment:

- The printer should be set up and turned on.
- The Gigabit switch or router should be on and functioning correctly.
- All computers on the network should be turned on and connected to the network.
- The printer should be connected to the switch.

When the printer is connected to the network and turned on, you should see the printer's IP address appear on the front panel (192.168.1.1 in this example). Make a note of the IP address: you can use it later to access the Embedded Web Server.

Ready for substrate



If you see this screen without the IP address, either the printer is not successfully connected to the network, or your network has no DHCP server. In the latter case, you will have to set the IP address manually: see the *Maintenance and troubleshooting guide*.


Refer to the RIP instructions (not provided by HP) to install the software RIP.

3 Basic setup options

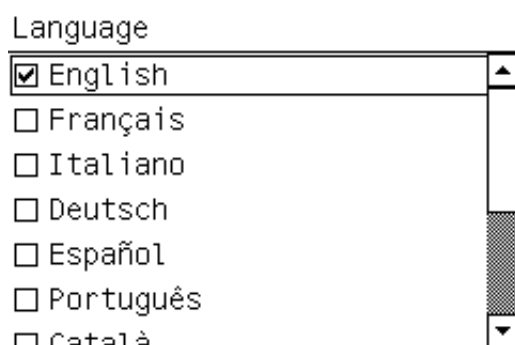
Printer setup options

Change the language of the front panel

Two methods are available to change the language that is used for the front-panel menus and messages.


- If you can understand the current front panel language, go to the front panel and select the  icon, then select **Front panel options** > **Select language**.
- If you cannot understand the current front panel language, start with the printer powered off. At the front panel, press the **OK** button and hold it down. While holding down the **OK** button, press the **Power** button and hold it down. Continue to hold down both buttons until the green light on the left side of the front panel starts flashing, then release both buttons. You can expect a delay of about one second. If the green light starts flashing without any delay, you may need to start again.

Whichever method you used, the language selection menu should now appear on the front panel.




Highlight your preferred language, then press the **OK** button.

View or set the date and time

To view or set the printer's date and time, go to the front panel and select the  icon, then **Front panel options** > **Date and time options**.


Set altitude

If your printer is operating at a significant altitude above sea level, go to the front panel and select the  icon, then **Select altitude**, to tell the printer its operating altitude.


Request e-mail notification of specific error conditions

1. In the Embedded Web Server, go to the E-mail server page on the **Setup** tab and ensure that the following fields are correctly filled in:
 - **SMTP server.** This is the IP address of the outgoing mail server (Simple Mail Transfer Protocol [SMTP]) that processes all e-mail messages from the printer. If the mail server requires authentication, e-mail notifications will not work.
 - **Printer e-mail address.** Each e-mail message that the printer sends must include a return address. This address does not need to be a real, functional e-mail address, but it should be unique, so that recipients of the message can identify the printer that sent it
2. Go to the Notification page, which is also on the **Setup** tab.
3. Click the **New** icon to request new notifications, or click the **Edit** icon to edit notifications that have already been set up. Then specify the e-mail addresses to which notifications are sent, and select the incidents that result in notification messages.


Change the cool-down delay

When there are no more jobs to print, the printer's drying and curing heaters remain on for a while, in case another job arrives. To choose how long they remain switched on in this situation, go to the front panel and select the  icon, then **Substrate handling options** > **Cooldown wait when idle**. Select a time from 5 to 60 minutes, then press the **OK** button.


Change the sleep mode setting

If the printer is left turned on but unused for a certain period of time, it automatically goes into sleep mode to save power. The default period of time it waits is 30 minutes. To change the time the printer waits before it goes into sleep mode, go to the front panel and select the  icon, then select **Front panel options** > **Sleep mode wait time**. Highlight the wait time that you want, then press the **OK** button.


Turn the buzzer on or off

To turn the printer's buzzer on or off, go to the front panel and select the  icon, then **Audio alert**, then on or off. By default, the buzzer is on.

Change the front panel display contrast


To change the contrast of the front-panel display, select the  icon, then **Front panel options** > **Select display contrast**, then select a value by using the **Up** or **Down** button. Press the **OK** button to save the value.


Change the units of measurement

To change the units of measurement that appear on the front panel, select the  icon, then **Front panel options** > **Select units**, then **English** or **Metric**.

The units of measurement can also be changed in the Embedded Web Server.

Restore factory settings

To restore the printer settings to their original values as set in the factory, go to the front panel and select the  icon, then **Resets > Restore factory settings**. This option restores all of the printer settings except the Gigabit Ethernet settings.

To restore the Gigabit Ethernet factory settings, select the  icon, then **Connectivity > Gigabit Ethernet > Restore factory settings**.

Embedded Web Server setup options

Access the Embedded Web Server

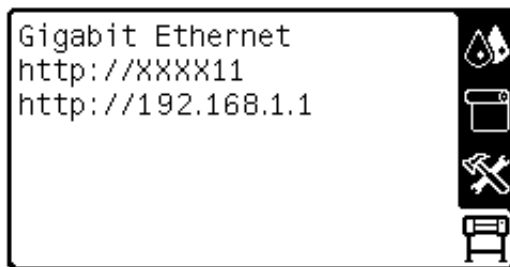
Use the Embedded Web Server to view printer information remotely through an ordinary Web browser running on any computer.

The following browsers are known to be compatible with the Embedded Web Server:

- Internet Explorer 6 and later for Windows
- Safari 2 and later for Mac OS X
- Mozilla Firefox 2 and later
- Google Chrome 7

To use the Embedded Web Server on any computer, open your Web browser and type the printer's URL. The printer's URL appears on the status screen on the printer's front panel (`http://192.168.1.1` in this example):

Ready for substrate



If you follow these instructions but fail to open the Embedded Web Server, see the *Maintenance and troubleshooting guide*.

Change the language of the Embedded Web Server

The Embedded Web Server functions in the following languages: English, Portuguese, Spanish, Catalan, French, Italian, German, Simplified Chinese, Traditional Chinese, Korean, and Japanese. It uses the language that you specified in your Web browser options. If you specify a language that it cannot support, it functions in English.

To change the language, change your Web browser's language setting. For example, in Internet Explorer version 6, go to the **Tools** menu and select **Internet Options > Languages**. Make sure that the language you want is at the top of the list in the dialog box.


To complete the change, close and reopen your Web browser.

Restrict access to the printer

From the Embedded Web Server, you can select **Setup > Security** to set an administrator password. Once set, this password must be given in order to perform the following printer functions.

- Change printer settings.
- Update the firmware.
- Change the printer's date and time.
- Clear accounting information.

For more information, see the Embedded Web Server's online help.

If you forget the administrator password, you can delete the current password from the front panel: select the  icon, then **Connectivity > Advanced > Embedded Web Server > Reset EWS password**.

4 Handle the substrate

Overview

You can print on a wide variety of printing materials, all of which are referred to in this guide as substrates.

Substrate tips

Choosing the correct substrate for your needs is an essential step in ensuring good print quality.

Here are some tips about substrate usage.


- Allow all substrates to adapt to room conditions, out of the packaging, for 24 hours before using them for printing.
- Handle film and photo substrates by the edges, or wear cotton gloves. Skin oils can be transferred to the substrate, leaving fingerprint marks.
- Keep the substrate tightly wound on the roll throughout the loading and unloading procedures. To make sure that the roll stays tightly wound, consider using tape to stick the leading edge of the roll to the core just before removing the roll from the printer. You can keep the roll taped during storage. If the roll starts to unwind, it can become difficult to handle.





NOTE: The use of tape to stick the leading edge of the roll to the core is especially important for heavy substrates, because the inherent stiffness of the substrate can cause it to loosen and unwind from the core.

- Using the take-up reel gives the printer better control of the substrate.
- Print quality could be impaired if you use a substrate that is unsuitable for your image.
- Make sure that the appropriate print-quality setting is selected in the RIP.
- Whenever you load a roll, the front panel prompts you to specify the substrate family that you are loading. For good print quality, it is essential to specify this correctly. Check that the substrate


belongs to the family named on the front panel, and check also that it matches the substrate profile in the RIP.

- If the substrate family shown on the front panel does not correspond to the substrate that you have loaded, take one of the following actions:
 - Reload the roll into the printer and select the correct substrate family. See [Unload a roll from the printer on page 33](#) and [Load a roll into the printer \(automatically\) on page 27](#).
 - At the printer's front panel, select the  icon, then select **View loaded substrate > Change loaded substrate**.

 **NOTE:** Substrate advance calibration is not performed when the substrate family is changed from the front panel.

 **CAUTION:** Removing the substrate from the printer manually without using the front panel could damage the printer. Do this only when necessary to clear a substrate jam.

Supported substrate families

Substrate family	Description
Self-adhesive	Printable PVC films with adhesive on one side and a detachable liner. There are two main vinyl types classified by manufacturing process and application purpose: calendered (for flat surfaces) and cast (for complex 3D curves). The film may have different finishes: white, finished, transparent, reflective or perforated. Perforated substrates may need manual rather than automatic printhead alignment. Examples: HP Air Release Adhesive Gloss Cast Vinyl, Avery MPI3000 (calendered), Avery MPI1005 (cast), 3M IJ-380 (cast)
Banner	Usually a polyester mesh (which provides mechanical resistance) coated with PVC. There are also recyclable versions to cover the same applications (green banners). Banners have a wide range of grammage and can be grouped into frontlit, backlit and block-out categories. Examples: HP Durable Frontlit Scrim Banner, Ultraflex Normandy Pro, Verseidag banners
Textile	Printable textile substrates are usually made of polyester or cotton yarns. Some open or light textile substrate types come with a removable liner to prevent the ink from passing through the substrate. Textile materials that are very stiff (such as canvases) should preferably be loaded as "Low-temp." substrate. These substrates may need manual rather than automatic printhead alignment. Stretchable and/or flimsy textiles may require the use of take up reel and/or edge holders.
Film	Usually a polyester film, although there are other materials such as PVC or PC. Generally these substrates are used for backlit applications. Select this family setting for substrates that resist temperatures over 95°C (200°F), otherwise load them preferably as "Low-temp." substrate. These substrates may need manual rather than automatic printhead alignment. Example: Intelicoat SBL-7 Polyester Backlit Film
Synthetic paper	Substrates manufactured using synthetic resins, mainly extruded from polypropylene (PP). They have characteristics similar to those of plastic film, but their appearance and properties are similar to regular paper made from wood pulp. Examples: Yupo FEB 250, Ilford Omnijet Dry Glossy Portable Display Film
Paper-aqueous	Light paper-based (cellulose) substrates with a coating compatible with water-based inks, or offset paper. These substrates are not compatible with solvent inks. Weight is usually around 100 g/m ² . Example: HP Heavyweight Coated Paper 
Paper-solvent	Paper-based (cellulose) substrates with a top-coating compatible with solvent inks. Weight is usually between 120 and 200 g/m ² . Examples: HP Blue Back Billboard Paper, Intelicoat GPIOF140, blue back substrates

Substrate family	Description
Low-temp. (including HP Photorealistic)	Substrates sensitive to high temperatures (PP, HDPE, PET thin films), and paper-based (cellulose) substrates with top-coating that have a high stiffness and grammage (200 g/m ² or higher). Example: HP Photorealistic Poster Paper
Mesh	An open and resistant polyester mesh coated with PVC and mainly used for building wrap applications. Some of these substrates have a removable liner to prevent the ink from passing through the substrate. These substrates may need manual rather than automatic printhead alignment. Example: Ultraflex Stripmesh

⚙️ Must be used with the 2 inch spindle (see [Accessories on page 83](#))

The Latex Media Finder is a tool that allows you to search for substrates (HP and third-party) that have been tested and shown to be compatible with your printer. The tool allows searching by manufacturer brand, substrate type, application or geographical availability. It can be found at <http://www.hp.com/go/latexmediafinder/>.

Supported HP substrates

Substrate	2 inch	Re cycle	Take Back	Color Pro	FSC®	PEFC	Oeko
Banners							
HP HDPE Reinforced Banner			♻️				
HP Double-sided HDPE Reinforced Banner			♻️				
HP Durable Frontlit Scrim Banner							
HP Everyday Matte Polypropylene	⚙️		♻️				
HP Durable Semi-gloss Display Film	⚙️						
Self-adhesive materials							
HP Air Release Adhesive Gloss Cast Vinyl							
HP One-view Perforated Adhesive Window Vinyl							
HP Permanent Gloss Adhesive Vinyl							
HP Permanent Matte Adhesive Vinyl							
HP Everyday Adhesive Matte Polypropylene	⚙️						
Films							
HP Backlit Polyester Film			♻️				
Fabrics							
HP Heavy Textile Banner			♻️				•
HP Light Textile Display Banner			♻️				•
Papers							
HP PVC-free Wall Paper (Greenguard, AgBB)							

Substrate	2 inch	Re cycle	Take Back	Color Pro	FSC®	PEFC	Oeko
HP White Satin Poster Paper		♻️					
HP Photo-realistic Poster Paper		♻️					
HP Blue Back Billboard Paper							
HP Coated Paper	⚙️	♻️				•	
HP Universal Coated Paper	⚙️	♻️			•		
HP Universal Heavyweight Coated Paper	⚙️	♻️			•		
HP Heavyweight Coated Paper	⚙️	♻️				•	
HP Universal Bond Paper	⚙️	♻️		•	•		
HP Super Heavyweight Plus Matte Paper	⚙️	♻️					
Specialty materials							
HP DuPont Tyvek Banner			♻️				
HP Satin Canvas							
HP Collector Satin Canvas							

Key



Must be used with the 2 inch spindle (see [Accessories on page 83](#))



Recycle: Substrates that can be recycled through commonly available recycling programs.



TakeBack: HP offers the HP Large-format Media TakeBack program in North America and Europe through which most HP recyclable substrates can be returned, availability varies. For details, visit <http://www.hp.com/recycle/>. Aside from this program, recycling opportunities for these products are currently only available in limited areas. Customers should consult local recycling resources for recycling these products.



Papers bearing the ColorPRO logo are manufactured to meet a strict set of quality specifications, with performance criteria such as black optical density, color gamut line edge acuity and color-to-color bleed. The performance and quality of ColorPRO papers are verified by an independent testing agency.



The mark of responsible forestry

FSC®-certified papers carry the Forest Stewardship Council® (FSC) Mixed Sources label, signifying that these substrates support the development of responsible forest management worldwide. The wood comes from FSC®-certified well-managed forests, company-controlled sources and/or recycled material.



The Program for the Endorsement of Forest Certification label demonstrates that certified HP papers come from forests that are managed sustainably.



Unprinted HP Heavy Textile Banner, HP Light Textile Display Banner and HP Wrinkle-free Flag with Liner are Oeko-Tex-certified according to Oeko-Tex Standard 100, which is a globally uniform testing and certification system for textile raw materials, intermediate and end products at all stages of production. Tested for emissions of chemicals such as pesticides, allergy-inducing dyestuffs or tin-organic compounds.

Greenguard

HP PVC-free Wall Paper printed using HP Latex Inks is listed in the GREENGUARD product list of low-emitting products and is tested to the GREENGUARD Children & Schools standard. The print is neither GREENGUARD nor GREENGUARD Children & Schools Certified. The GREENGUARD Environmental Institute is an American National Standards Institute (ANSI) authorized standards developer that establishes acceptable indoor air standards for indoor products, environments, and buildings. See <http://www.greenguard.org/>.

AgBB

The Committee for Health-related Evaluation of Building Products, AgBB, establishes the fundamentals for a uniform and reproducible health-related evaluation of building products in Germany, including criteria for testing and an evaluation scheme for health-related evaluation of volatile organic compound (VOC) emissions from building products used for application indoors.

Porous substrates

Substrates of limited porosity may be used with this printer, but very porous substrates could damage the printer.

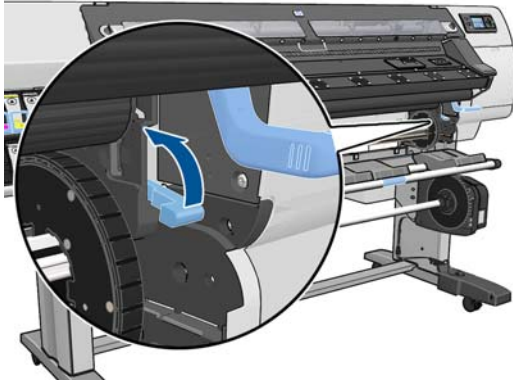
To check the porosity of your substrate, see the *Maintenance and troubleshooting guide*.

If you use a substrate that is too porous, or fail to clean the platen as recommended, you could experience a decrease in print quality that would require a service repair not covered by your warranty.

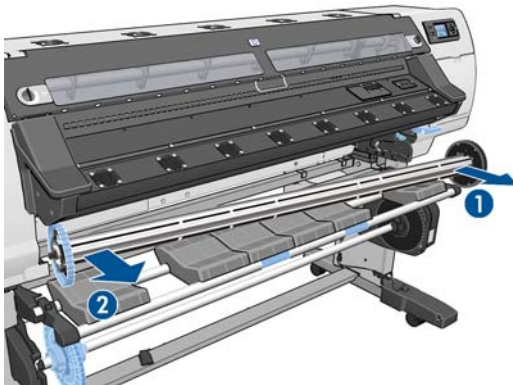
Load a roll onto the spindle

1. Make sure that the printer wheels are locked (the brake lever is pressed down) to prevent the printer from moving.

2. Lift the spindle lock lever to disengage the spindle.



3. Remove the first end of the spindle from the right side of the printer, then move the spindle to the right in order to extract the other end. Do not insert your fingers into the spindle supports during the removal process.



The spindle has a stop at each end to keep the roll in position. Remove the blue stop at the left end to mount a new roll (the stop at the other end can also be removed, if you wish). The stop slides along the spindle to hold rolls of different widths.

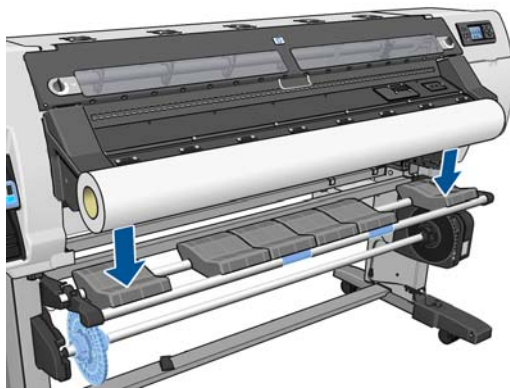
4. Slide the lever-lock on the blue stop to the unlocked position.



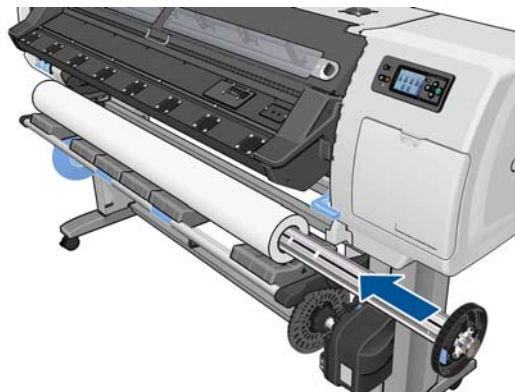
5. Remove the stop from the left end of the spindle.



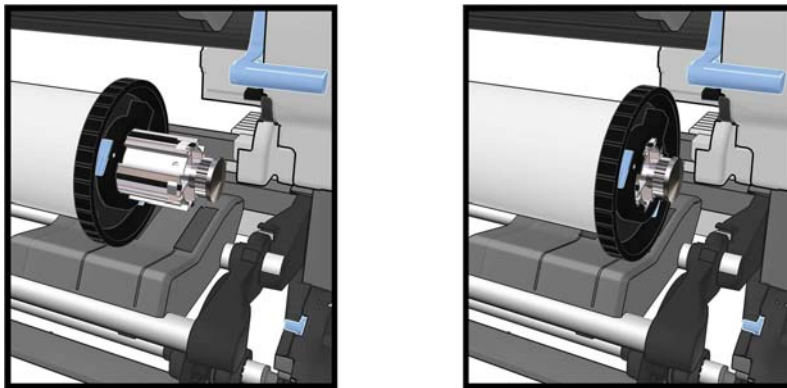
6. Rest the roll of substrate that you want to load on the loading table. If the roll is long and heavy, you may need two people to handle it.



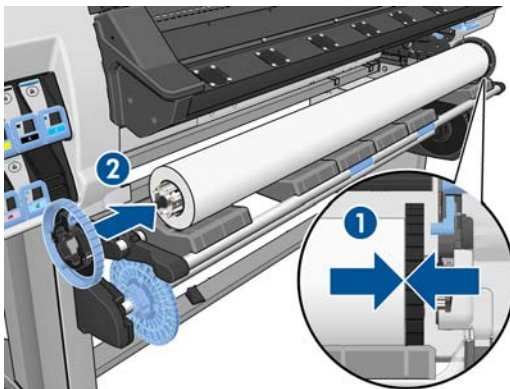
7. Slide the spindle into the roll.



8. The right stop of the spindle has two positions: one for rolls of the printer's maximum width, and another for narrower rolls. Remember to use the second position for narrower rolls, which improves the drying process and allows higher printing speeds.



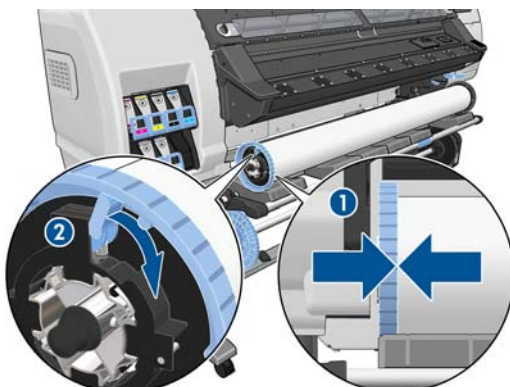
9. Put the blue stop on to the upper end of the spindle, and push it towards the end of the roll.



TIP: If the cardboard core of the substrate is longer than the substrate, you can load the substrate without inserting the blue stop, but care should be taken when unloading the substrate, as the loading/unloading table is designed to be used with the blue stop in place.

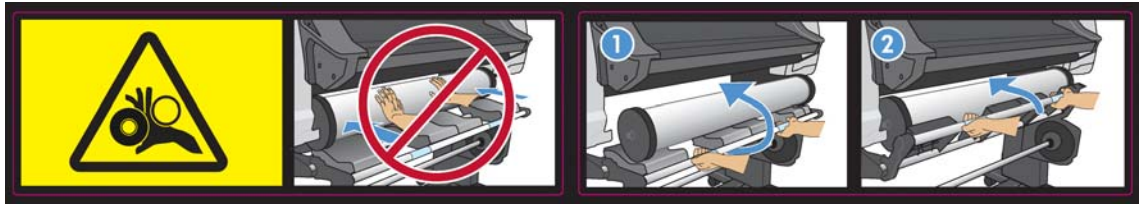
TIP: When loading a roll that is 1549 mm (61 in) wide, you may find it easier to load without stops (remove both stops).

10. Slide the lever-lock to the locked position.



11. Lift the loading table to ease the spindle into the printer.


CAUTION: To avoid trapping your fingers, do not push the roll with your hands.



If you regularly use different substrates, you can change rolls more quickly if you pre-load rolls of different substrates on different spindles. Extra spindles are available for purchase.

Load a roll into the printer (automatically)

To start this procedure, you need to have a roll loaded on the spindle. See [Load a roll onto the spindle on page 23](#).

The normal minimum substrate width is 23 inches (584 mm). To load substrates down to a minimum width of 10 inches (254 mm), go to the front panel and select the  icon, then select **Substrate handling options > Enable narrow substrate**. With this option, print quality is not guaranteed.

TIP: To load a roll of textile material, see [The loading accessory on page 50](#).

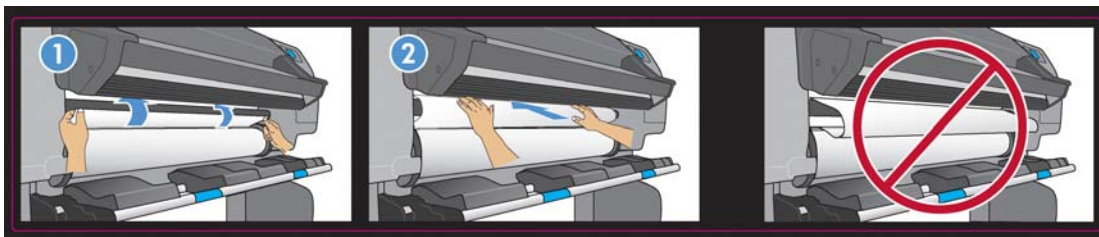
TIP: When loading very thin or very thick substrates, or substrates with a tendency to curl, you should follow the manual loading procedure to reduce the risk of substrate jams and printhead crashes; see [Load a roll into the printer \(manually\) on page 30](#).

1. At the printer's front panel, select the  icon, then select **Substrate load > Load roll**.

Substrate load

- ▶ Load roll
- ▶ Manual load
- ▶ Load with accessory
- ▶ Learn how to load spindle

- Carefully insert the leading edge of the substrate above the black-ribbed roller, making sure the substrate remains taut during the process. Avoid rewinding the substrate manually, unless the printer asks you to do so.



⚠ WARNING! Take care not to touch the rubber wheels on the platen while loading substrate. These wheels can rotate and trap skin, hair or clothing.

⚠ WARNING! Take care not to push your fingers inside the printer's substrate path.

The printer beeps when it detects and accepts the leading edge of the substrate.

- The front panel may prompt you to remove the edge holders from the platen, if the printer believes they are present (it may be wrong: it has no sensor to detect them).
- Select the type of substrate you are loading.

Select substrate type

<input type="checkbox"/> Self-Adhesive	▲
<input type="checkbox"/> Banner	
<input type="checkbox"/> Textile	
<input type="checkbox"/> Film	
<input type="checkbox"/> Synthetic Paper	
<input checked="" type="checkbox"/> Paper-Aqueous	
<input type="checkbox"/> Paper-Solvent	▼

📝 NOTE: You should select the name of the particular substrate that you are using in your RIP software, not in the front panel.



📝 NOTE: The RIP substrate setting will overwrite the front panel setting.

- If the roll of substrate you are loading is new, select the length in the front panel. If the substrate has been used before, and the tracking feature was used, select the substrate remaining. For information on the substrate length tracking feature see [Substrate length tracking on page 57](#)

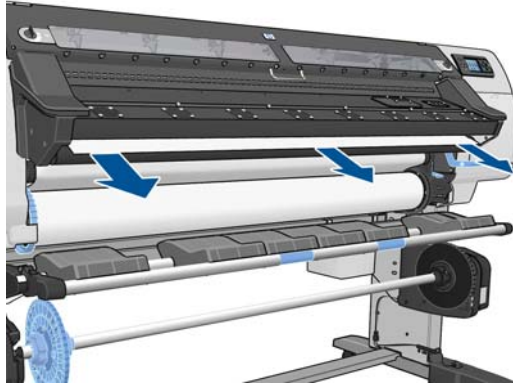
Select roll length


<input type="checkbox"/> Unknown; no length track.	▲
<input type="checkbox"/> Custom length	
<input type="checkbox"/> Last known length	
<input type="checkbox"/> 175 m (574 feet)	
<input type="checkbox"/> 91.4 m (300 feet)	
<input type="checkbox"/> 61 m (200 feet)	
<input type="checkbox"/> 45.7 m (150 feet)	▼

- The printer checks the substrate in various ways and may ask you to correct problems with skew or tension.

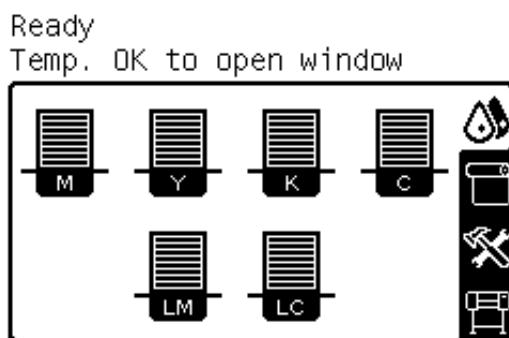
 **NOTE:** You can specify the maximum permitted amount of skew at the front panel: select the  icon, then select **Substrate handling options > Max skew setting**.

- Wait until the substrate emerges from the printer, as shown below.

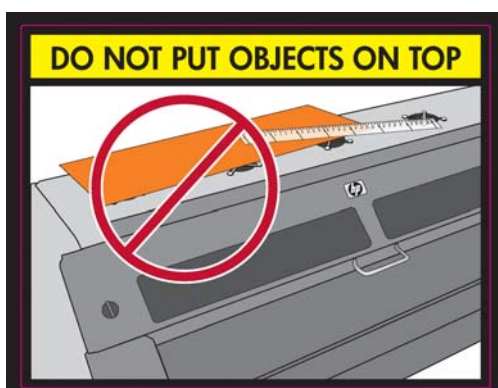


 **NOTE:** If you have an unexpected problem at any stage of the substrate loading process, see the *Maintenance and troubleshooting guide*.

- If you are loading transparent substrate without opaque borders, you are asked to enter the width of the substrate and the distance of the right edge from the printer's side plate (as indicated by the ruler on the front of the curing module).
- If you have chosen double-sided printing, the front panel may ask a question about it at this point.
- The printer calibrates the substrate advance.
- The printer indicates that it is ready for printing.



Take care not to cover the top fans.



For instructions on how to use the take-up reel see [The take-up reel on page 34](#).


Load a roll into the printer (manually)


The manual loading process should be used in the following cases:


- The substrate is unusually thin or unusually thick.
- The substrate has ragged edges.
- The substrate tends to curl at the edges.
- The printing side of the substrate faces outwards.

In other cases, the automatic loading process is recommended: see [Load a roll into the printer \(automatically\) on page 27](#).


To start this procedure, you need to have a roll loaded on the spindle. See [Load a roll onto the spindle on page 23](#).


The normal minimum substrate width is 23 inches (584 mm). To load substrates down to a minimum width of 10 inches (254 mm), go to the front panel and select the  icon, then select **Substrate handling options** > **Enable narrow substrate**. With this option, print quality is not guaranteed.


 **TIP:** To load a roll of textile material see [The loading accessory on page 50](#).

1. At the printer's front panel, select the  icon, then select **Substrate load** > **Manual load**.

Substrate load

 Load roll

 Manual load

 Load with accessory

▶ Learn how to load spindle

This step is optional: you can alternatively begin at step 2.

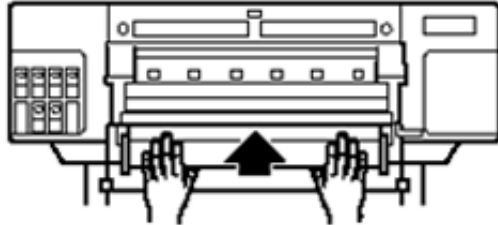
The front panel may prompt you to remove the edge holders from the platen, if the printer believes they are present (it may be wrong: it has no sensor to detect them).

2. Lift the substrate-adjustment lever as far up as it will go.



- Carefully insert the leading edge of the substrate above the black-ribbed roller, making sure the substrate remains taut during the process. Avoid rewinding the substrate manually, unless the printer asks you to do so. The front panel displays the following.

Feed substrate through the roller



- Continue to feed the substrate until it reaches the printing platen. Open the window to help pull the substrate through.

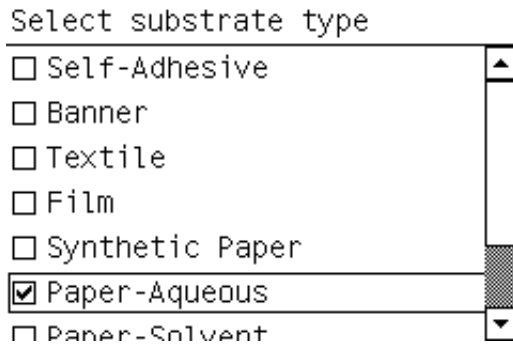
⚠ WARNING! Do not touch the printer's drying enclosure. Even after you have opened the window latch, which disconnects the power to the drying and curing modules, the internal surfaces could be hot.


💡 TIP: If the substrate you are using tends to curl, keep feeding the substrate until the edge is out of the printer. You are also recommended to use the take-up reel, or to disable the cutter from the front panel if not using the take-up reel.



- Pull down the substrate-adjustment lever as far as it will go.



6. Select the type of substrate you are loading.





 **NOTE:** You should select the name of the particular substrate that you are using in your RIP software, not in the front panel.

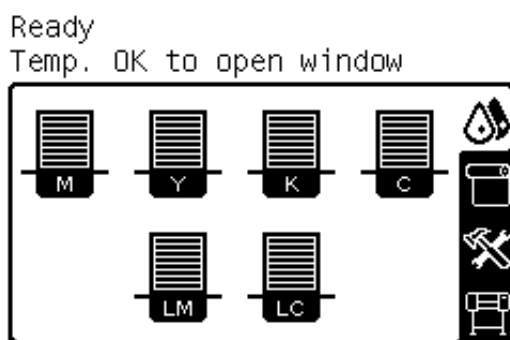
 **TIP:** When loading very thin substrates, always select the substrate type as **Banner** to minimize the vacuum pressure applied while loading; when loading very thick substrates, always select the substrate type as **HP Photorealistic** to maximize the vacuum pressure. After loading and before printing, go to the front panel and change to the correct type for the substrate you are loading: select the  icon, then select **View loaded substrate > Change loaded substrate**.

TIP: When manually loading textile substrates that you intend to use with the take-up reel, before selecting the substrate type it is a good idea to press the [Move substrate](#) key on the front panel and use the front panel to advance the substrate beyond the point where it may jam in the printer. This avoids the possibility of a substrate jam at this stage and also some other substrate issues; and it enables you to skip the normal check for skew.

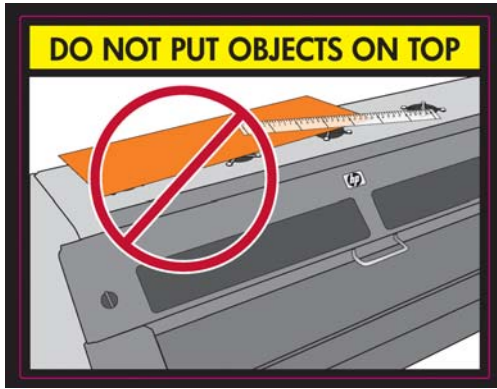
7. The printer checks the substrate in various ways and may ask you to correct problems with skew or tension.

 **NOTE:** You can specify the maximum permitted amount of skew at the front panel: select the  icon, then select **Substrate handling options > Max skew setting**.

8. If you are loading transparent substrate without opaque borders, you are asked to enter the width of the substrate and the distance of the right edge from the printer's side plate (as indicated by the ruler on the front of the curing module).
9. If you have chosen double-sided printing, the front panel may ask a question about it at this point.
10. The printer calibrates the substrate advance.
11. The printer indicates that it is ready for printing.



Take care not to cover the top fans.



Load a cut sheet into the printer

The printer is designed to be used with rolls of substrate. It is possible to load cut sheets into the printer, but print quality cannot be guaranteed, and you may have some difficulty in avoiding skew.

- The sheet should be at least 1067 mm (42 in) long.
- Load the sheet by following the normal roll loading process (automatic or manual, depending on the substrate).
- During the loading process, the printer tries to detect the winding direction of the roll by turning the spindle in both directions. When the substrate is not attached to the spindle, the following message appears.


```
Substrate load  
Media feeding direction not  
detected. Wrap substrate into  
roll to retry.
```

```
 Retry  
 Skip check- would affect IQ  
 Quit
```

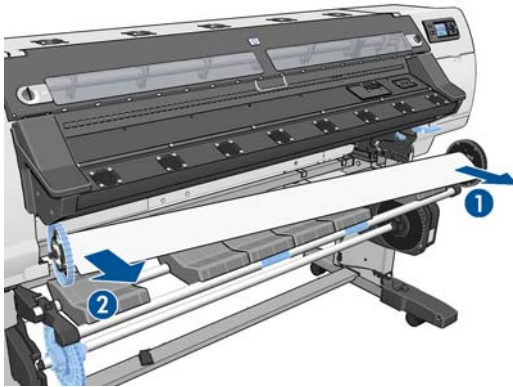
To continue loading, select **Skip check – would affect IQ**.

- A cut sheet is likely to be loaded with excessive skew, and the printer may not be able to correct it automatically. If the skew as measured by the printer exceeds 3 mm/m, you are recommended to stop loading and try again. However, if the skew is tolerable, you can consider skipping the automatic skew correction. To do so, when prompted, choose **Continue with current skew**.


Unload a roll from the printer

1. If you used the take-up reel during printing, unload the printed roll from the take-up reel. See [Unload a roll from the take-up reel on page 47](#).
2. On the printer's front panel, select the  icon, then select **Substrate unload > Unload roll**.
3. Press the **OK** button on the front panel as many times as needed to rewind the substrate.
4. Lift the spindle lock lever.

5. Remove the roll from the printer, pulling out the right end on the right side of the printer first. Do not insert your fingers into the spindle supports during the removal process.



The take-up reel

The take-up reel must be enabled and operated from the front panel. When the take-up reel is enabled, the “Take-up reel enabled” message appears on the **Substrate** tab on the front panel. If the take-up reel is not enabled and you would like to enable it, select the  icon, then select **Take-up reel > Enable take-up reel**.

The loop-shapers

When in use, the take-up reel requires a dangling loop of substrate weighed down by a loop shaper. There are two different loop-shapers provided with the printer, to be used with different substrate types.

- The heavy loop-shaper is used with banner, textile and mesh substrates. It is attached to supports on either side of the substrate. The spindle stops should not be used with this loop-shaper.




- The light loop-shaper is used with all other substrates. It lies in the substrate loop, supported only by the substrate, unattached at either end. It should be the same width as the substrate; therefore, it is supplied in sections of different widths that can be fitted together. The spindle stops should be used with this loop-shaper.



There are two slightly different procedures for loading a roll onto the take-up reel, depending on which substrate type and therefore which loop-shaper is used: see [See Load a roll onto the take-up reel \(banner/textile/mesh substrates\) on page 35](#) and [Load a roll onto the take-up reel \(other substrates\) on page 41](#).

Load a roll onto the take-up reel (banner/textile/mesh substrates)

1. On the printer's front panel, select the  icon, then select **Take-up reel > Enable take-up reel**.
2. The front panel offers you the choice of loading the take-up reel immediately, or during printing.

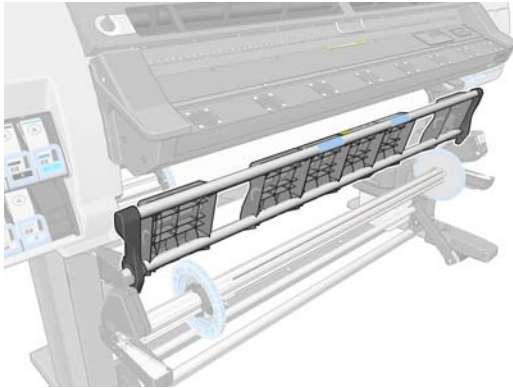
Load take-up reel now
 Load it during printing
 Do not load take-up reel

If you decide to load the take-up reel during printing, familiarize yourself with the procedural steps. Loading the take-up reel during printing requires you to complete the procedure while the printer is feeding and printing substrate. Loading the take-up reel during printing saves approximately 1 m (3 ft) of substrate.

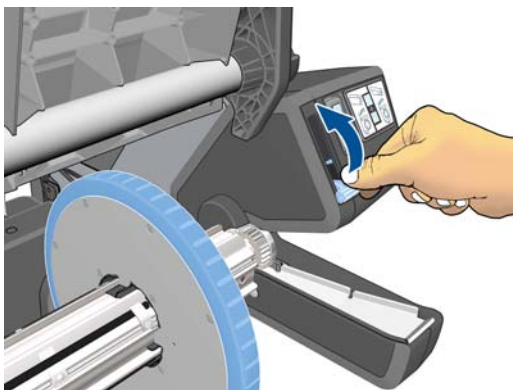
 **TIP:** If you have already loaded the take-up reel, but the printer fails to recognize that it is loaded, you can save some time by selecting **Load it during printing**.

The following steps assume that you have decided to load immediately. If you decide to load later, during printing, you must complete the same operations without guidance from the front panel.

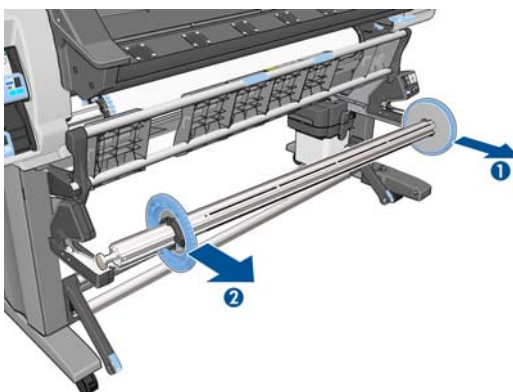
3. For easier access to the take-up reel spindle, lift the loading table into its upright position.




4. Unlock the take-up reel spindle by pushing the spindle lever to its uppermost position.

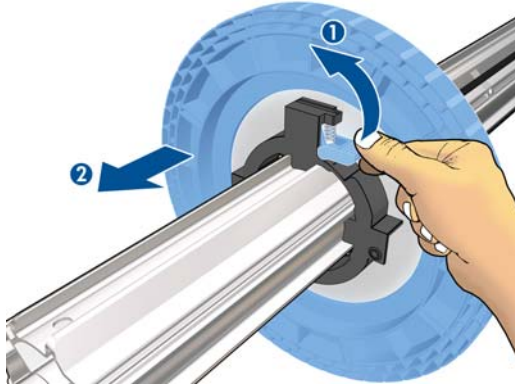


5. Remove the take-up reel spindle.

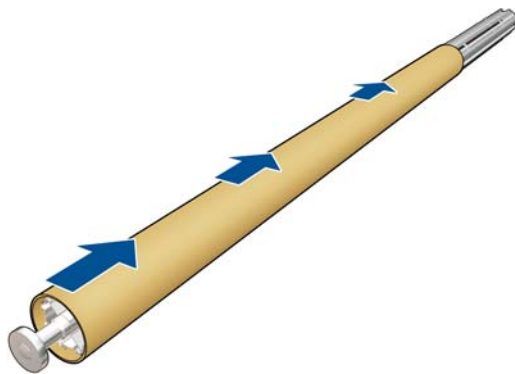


 **NOTE:** The take-up reel spindle is longer than the input spindle: the two are not interchangeable.

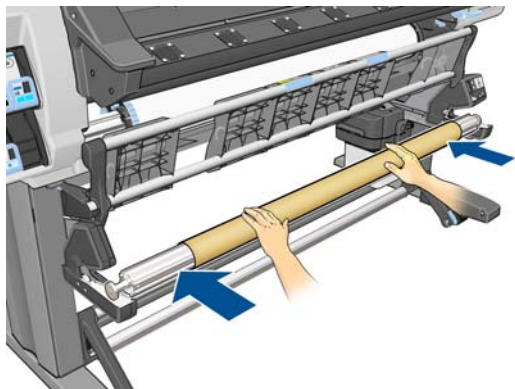
6. Lift the lever in each case to remove both of the stops from the spindle; they will not be used.



7. Load the core onto the take-up reel spindle. The core should be at least as wide as the substrate.



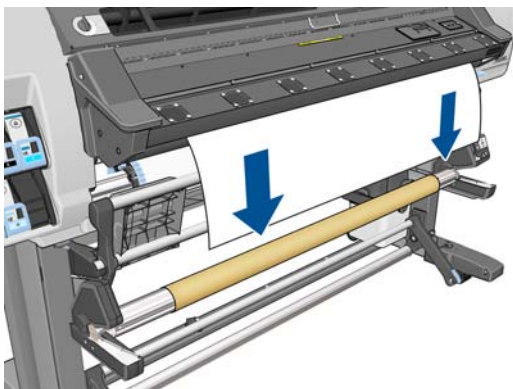
8. Load the take-up reel spindle into the printer by pushing firmly on both ends of the spindle.




Handle the substrate

9. Press the OK button on the front panel.

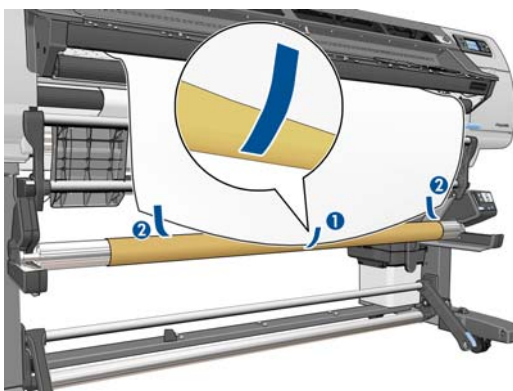
Advance the substrate using the arrows on the front panel. Make sure that the substrate passes in front of the loading table, as shown.



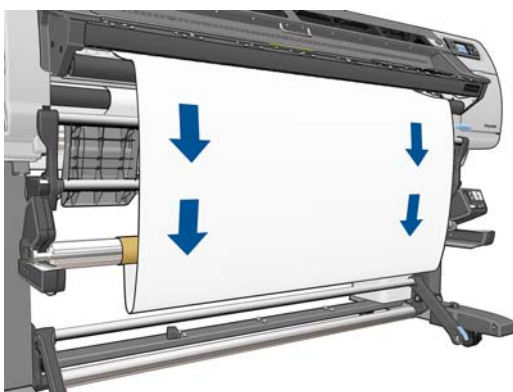
10. Pull down the center of the substrate's leading edge to straighten the substrate. Do *not* attempt to pull more substrate out of the printer.

 **NOTE:** If you are loading the take-up reel **during** printing you do not need to pull the substrate taut. Tape the substrate to the spindle core when an adequate length of substrate has fed from the printer after printing begins.

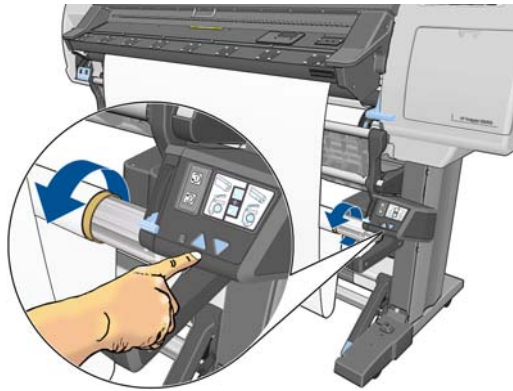
11. Adjust the position of the core on the take-up reel spindle so that it is aligned with the substrate.
12. Tape the leading edge of the substrate to the core in the center, then at each side. Make sure that the substrate is straight.



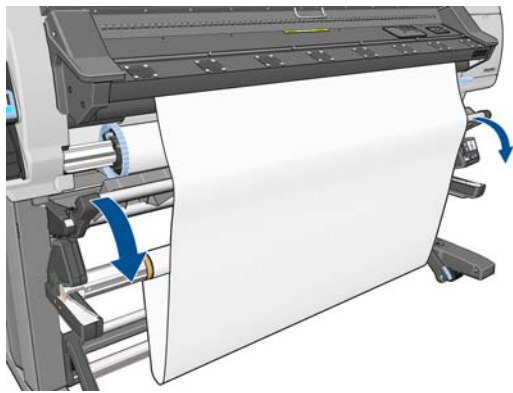
13. Press the OK button on the front panel. The printer advances the substrate.



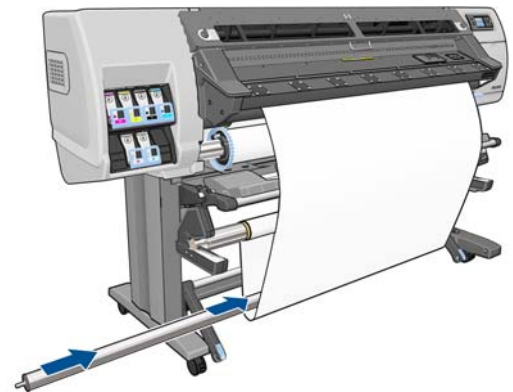
- 14.** Press the blue arrow on the take-up reel motor to rotate the spindle one full turn. This will help to support the weight of the loop-shaper.



- 15.** Gently lower the loading table, to avoid wrinkles and improve winding.

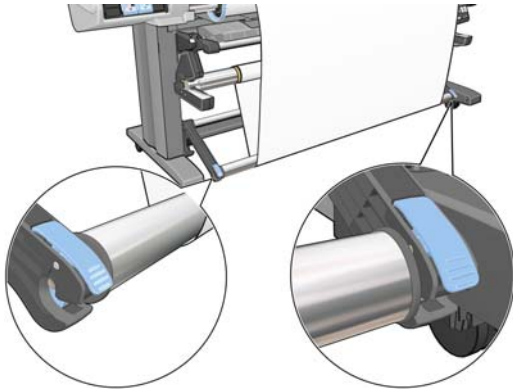


- 16.** Carefully insert the heavy loop-shaper. This is essential: the take-up reel will not function correctly without it.



Handle the substrate

17. Fit the loop-shaper into the supports at either side.

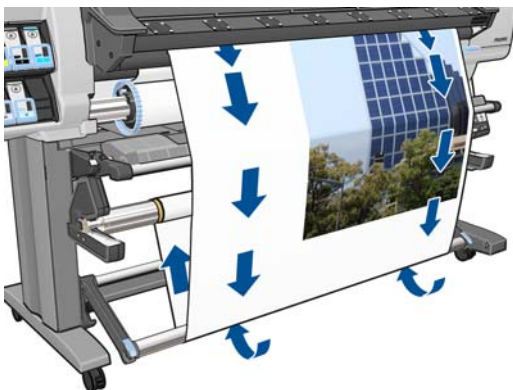



18. Use the wind-direction switch on the take-up reel motor to select the winding direction. Setting **1** winds the substrate so that the printed image faces in. Setting **2** winds the substrate so that the printed image faces out.



The front panel shows you the correct setting based on the winding-direction decision you made earlier.


19. Press the **OK** button on the front panel. The **Take-up reel has been successfully installed** message appears.
20. The following image shows how the printer looks when it is operating. As substrate is fed from the printer, it drops down in a loop and then up into the take-up reel spindle.



 **NOTE:** While the take-up reel is operating, make sure that the take-up reel sensors are not blocked.

 **NOTE:** The cutter is disabled when the take-up reel is in use.

Load a roll onto the take-up reel (other substrates)

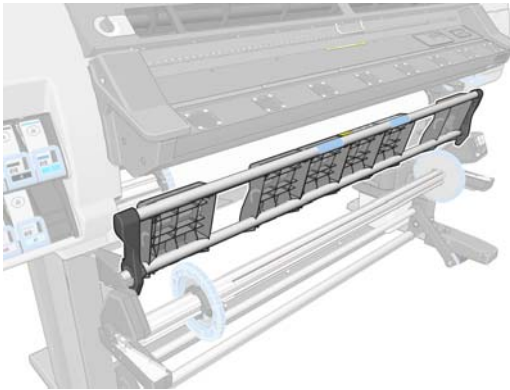
1. On the printer's front panel, select the  icon, then select **Take-up reel > Enable take-up reel**.
2. The front panel offers you the choice of loading the take-up reel immediately, or during printing.

- Load take-up reel now
- Load it during printing
- Do not load take-up reel

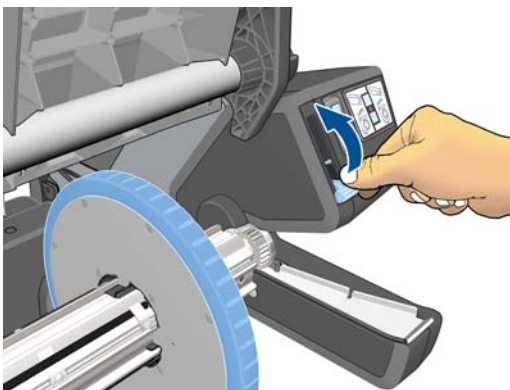
If you decide to load the take-up reel during printing, familiarize yourself with the procedural steps. Loading the take-up reel during printing requires you to complete the procedure while the printer is feeding and printing substrate. Loading the take-up reel during printing saves approximately 1 m (3 ft) of substrate.

The following steps assume that you have decided to load immediately. If you decide to load later, during printing, you must complete the same operations without guidance from the front panel.

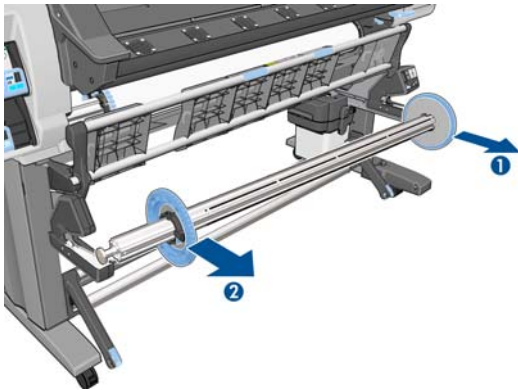
3. Make sure that the loading table is in its upright position.




4. Unlock the take-up reel spindle by pushing the spindle lever to its uppermost position.

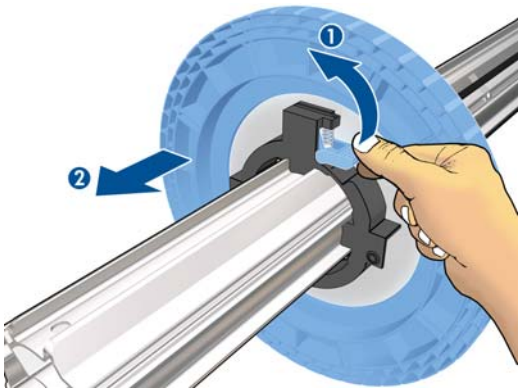


5. Remove the right-hand end of the take-up reel spindle, then the left.

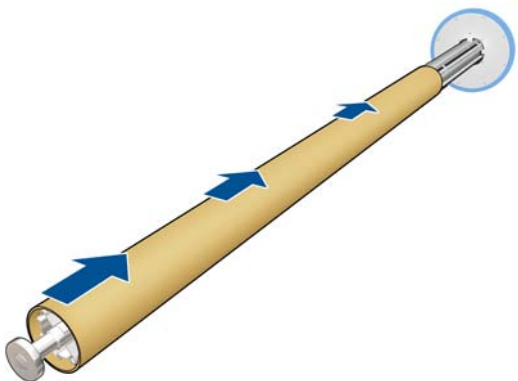


 **NOTE:** The take-up reel spindle is longer than the input spindle: the two are not interchangeable.

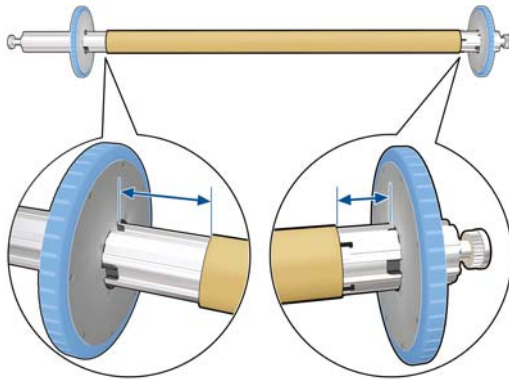
6. Lift the lever to remove one of the stops from the spindle.



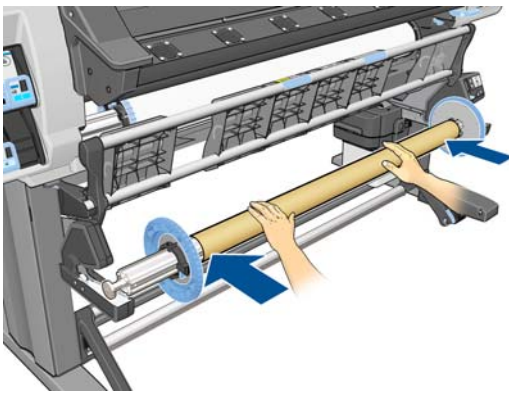
7. Load the core onto the take-up reel spindle. The width of the core should be the same as the width of the substrate, so that the stops at each end can be correctly placed up against the substrate.



8. Ensure that both stops are placed on the spindle, but leave some space between the core and the stops at each end.

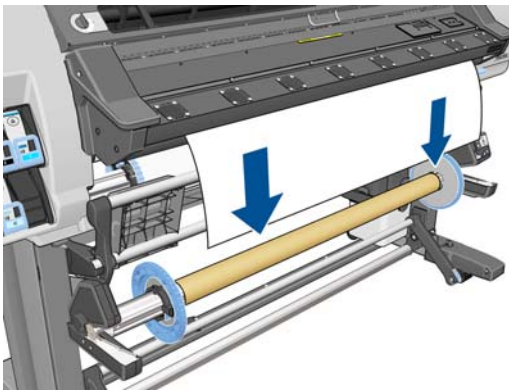


9. Load the take-up reel spindle into the printer by pushing firmly on both ends of the spindle.




10. Press the OK button on the front panel.

Advance the substrate using the arrows on the front panel. Make sure that the substrate passes in front of the loading table, as shown.

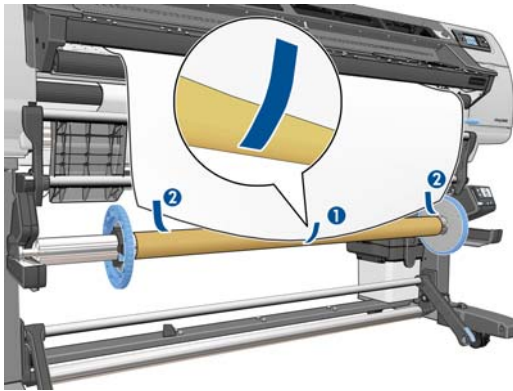


11. Pull down the center of the substrate's leading edge to straighten the substrate. Do *not* attempt to pull more substrate out of the printer.

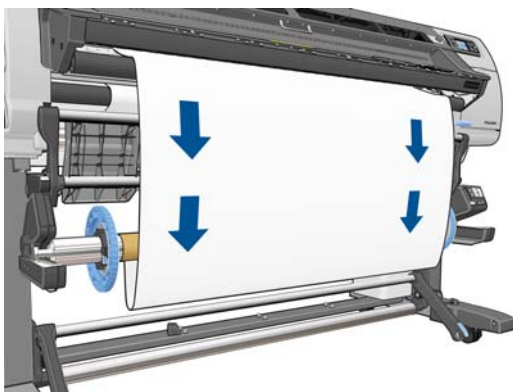
 **NOTE:** If you are loading the take-up reel **during** printing you do not need to pull the substrate taut. Tape the substrate to the spindle core when an adequate length of substrate has fed from the printer after printing begins.

12. Adjust the position of the core on the take-up reel spindle so that it is aligned with the substrate.

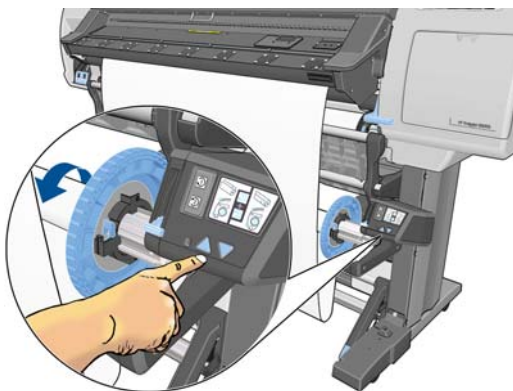
- 13.** Tape the leading edge of the substrate to the core in the center, then at each side. Make sure that the substrate is straight.



- 14.** Press the **OK** button on the front panel. The printer advances the substrate.

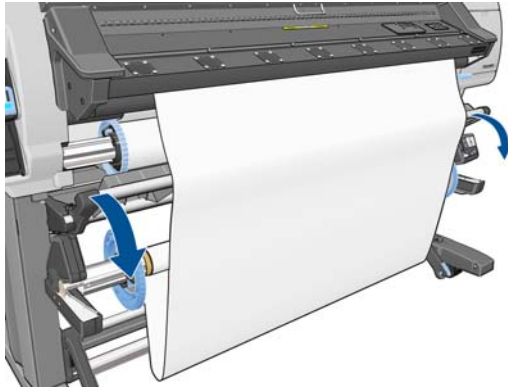


- 15.** Press the blue arrow on the take-up reel motor to rotate the spindle one full turn. This will help to support the weight of the loop-shaper.



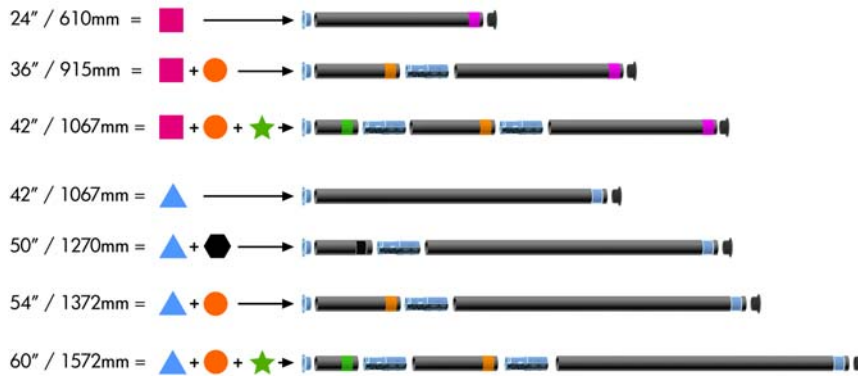
Handle the substrate

16. Gently lower the loading table, to avoid wrinkles and improve winding.



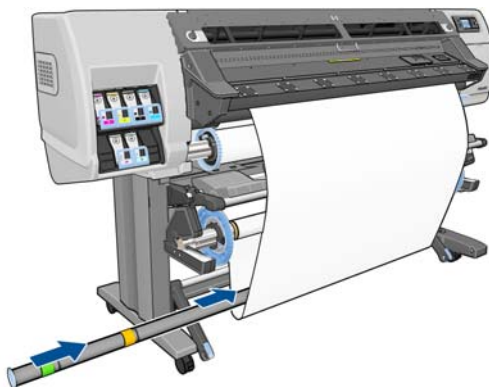
17. Assemble a light loop-shaper by matching the shape-coded and color-coded lengths of plastic tubing. The loop-shaper must be the same width as the substrate that you are using. Make sure that both end caps are firmly fitted on the ends of the loop-shaper.

NOTE: The front-panel display shows the required length of the loop-shaper based on the width of the roll that you have loaded into the printer.

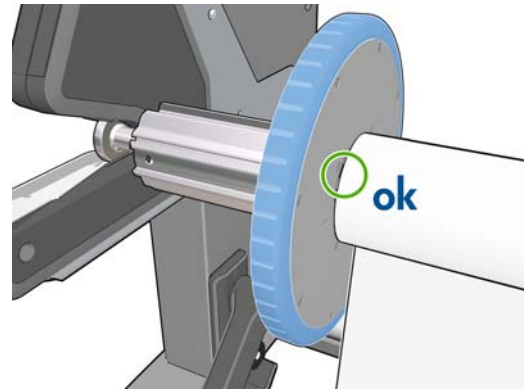
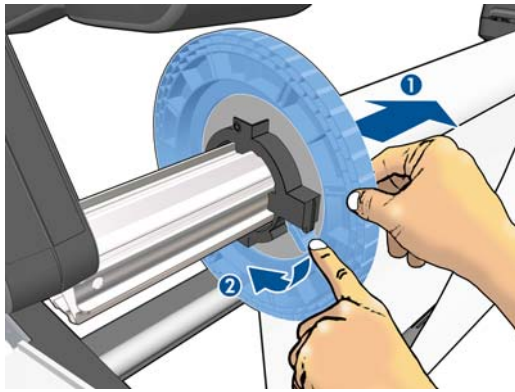


18. Carefully insert the light loop-shaper. This is essential: the take-up reel will not function correctly without it.

The loop-shaper must have end caps. Make sure that the end caps extend over the edges of the substrate.



19. Move the stops towards the center until they are pressing up against the core on both sides, then lock them.

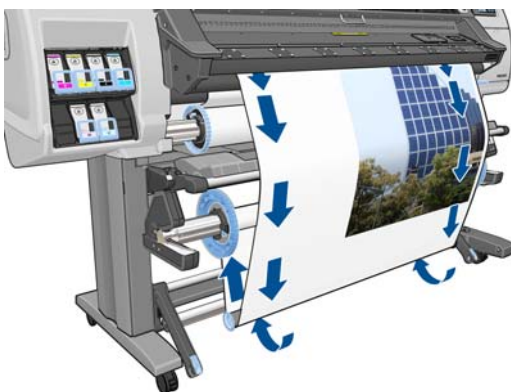



- 20.** Use the wind-direction switch on the take-up reel motor to select the winding direction. Setting **1** winds the substrate so that the printed image faces in. Setting **2** winds the substrate so that the printed image faces out.



The front panel shows you the correct setting based on the winding-direction decision you made earlier.


- 21.** Press the **OK** button on the front panel. The **Take-up reel has been successfully installed** message appears.
- 22.** The following image shows how the printer looks when it is operating. As substrate is fed from the printer, it drops down in a loop and then up into the take-up reel spindle.



 **NOTE:** While the take-up reel is operating, make sure that the take-up reel sensors are not blocked.

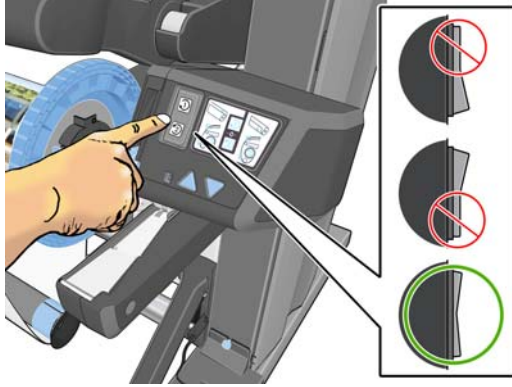
 **NOTE:** The cutter is disabled when the take-up reel is in use.

Unload a roll from the take-up reel

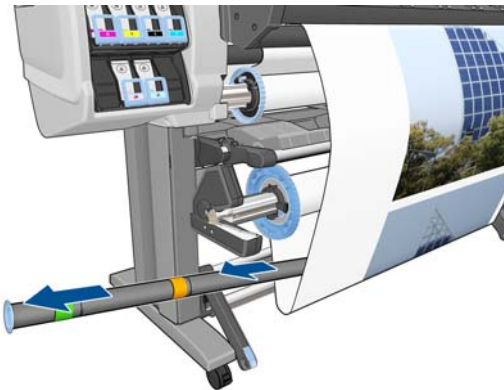
1. On the printer's front panel, select the  icon, then select **Take-up reel > Disable take-up reel**.

The printer advances the substrate to allow for cutting.

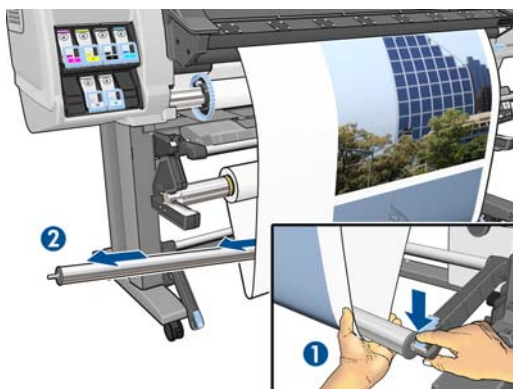
2. Switch the wind-direction switch to the off position. The switch is in the off position when it is centered (in other words, when the switch is neither in position 1 nor position 2).



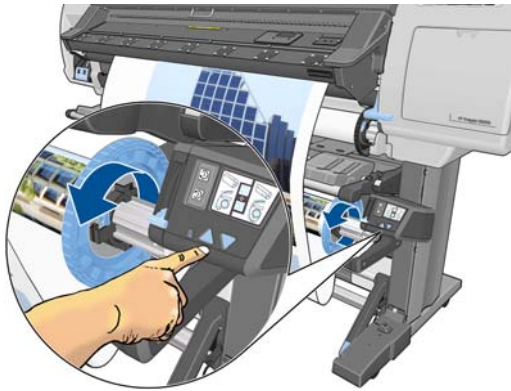
3. Remove the loop-shaper. If you omit this step, it will fall to the floor with the substrate when the substrate is cut.



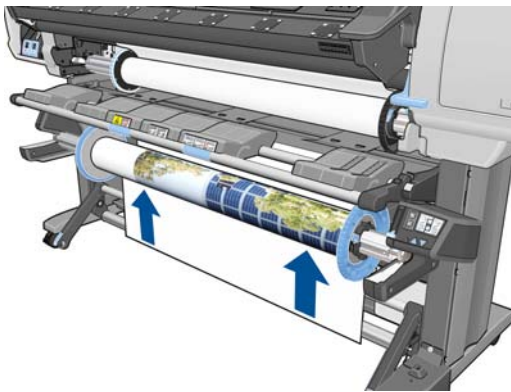
To remove the heavy loop-shaper, first lift the support, then press the lever.



4. Use the winding button on the take-up reel motor to wind the excess substrate around the take-up reel spindle.



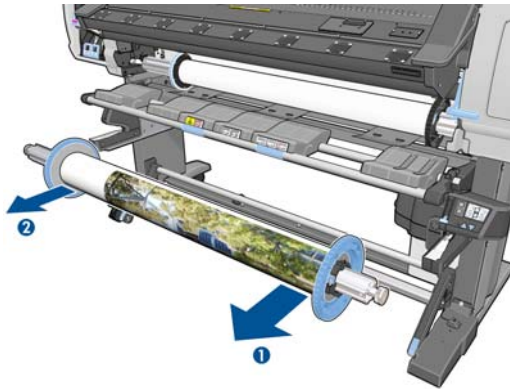
5. Press the **OK** button on the front panel. The printer asks you to cut the substrate manually.
6. Use the winding button on the take-up reel motor to wind the remainder of the substrate around the take-up reel spindle.



7. Press the **OK** button on the front panel.
The amount of printed substrate that is on the take-up reel spindle appears on the front panel.
8. Unlock the take-up reel spindle by pushing the spindle lever to its uppermost position.



9. Remove the roll from the printer, pulling out the end on the right side of the printer first. Do not insert your fingers into the spindle supports during the removal process.



10. To remove the roll from the printer after you have unloaded the take-up reel, see [Unload a roll from the printer on page 33](#).

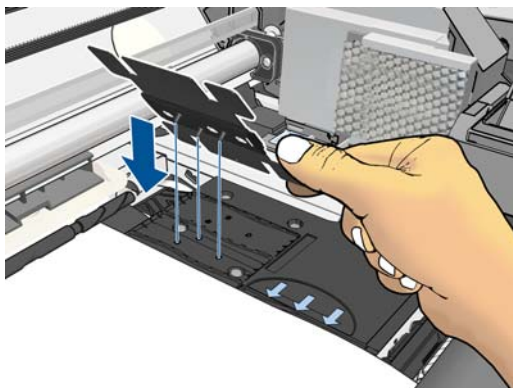
The edge holders

The edge holders are designed to prevent the edges of the substrate from rising while printing is in progress. They are recommended for textile and double-sided printing (even if the front panel does not suggest them), and are not normally necessary in other situations. When not in use, they can be stored in their case at the rear of the printer.

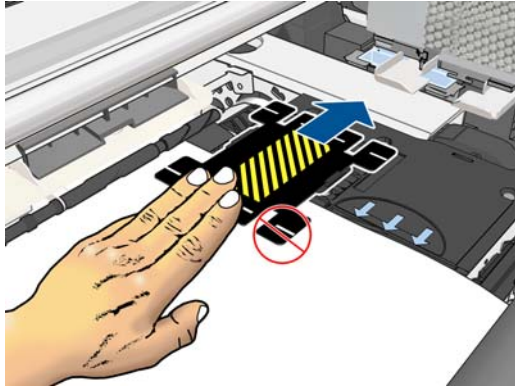
If you choose to use them, you should place them on the platen when prompted by the front panel (this prompt appears when using the loading accessory). Open the window, place the edge holders, then close the window.

⚠ WARNING! Do not touch the printer's drying enclosure. Even after you have opened the window latch, which disconnects the power to the drying and curing modules, the internal surfaces could be hot.

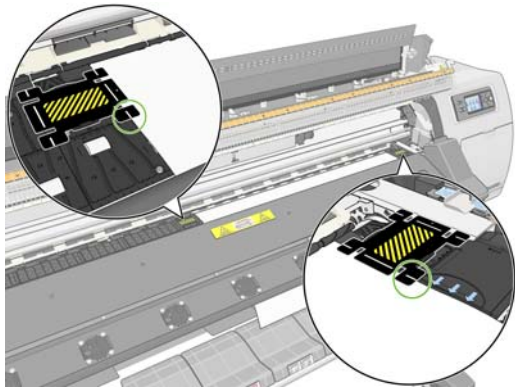
The edge holders should be placed on the platen so that they slightly overlap the left and right edges of the substrate. The edge holders fit into holes in the platen, and they are magnetic, which helps them to stay in place.




Slide the edge holder to the left or right with your fingers so that you can see the edge of the substrate in the two square holes in the side of the edge holder.




The following picture shows an edge holder correctly placed.



 **NOTE:** When you use the edge holders, your prints should have a minimum margin of 10 mm.

The loading accessory

The loading accessory is designed to help in loading flimsy substrates. It is recommended when loading such substrates, but not obligatory.

 **NOTE:** The edge holders can be used whether or not you decide not to use the loading accessory.

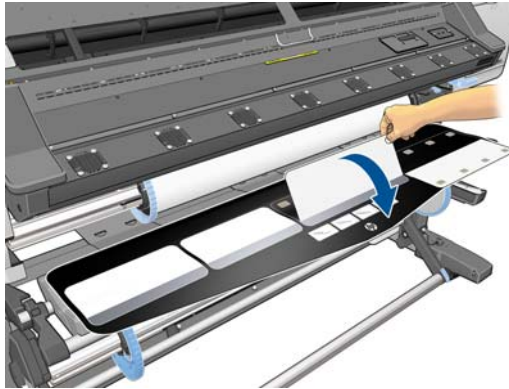
1. Select **Load with accessory** from the Substrate Load menu on the front panel.

Substrate load

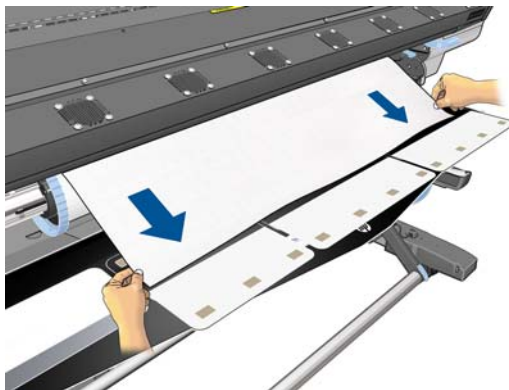
- ▶ Load roll
- ▶ Manual load
- ▶ **Load with accessory**
- ▶ Learn how to load spindle

 **NOTE:** If you select **Load with accessory**, a message is displayed asking whether you want to use the edge holders.

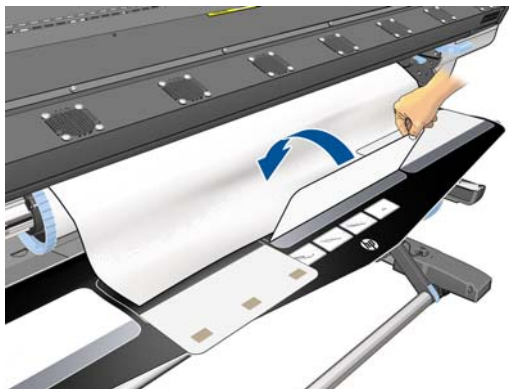
2. Lay the textile loading accessory on the loading table and flip forward enough of the white flaps to cover the width of the substrate.



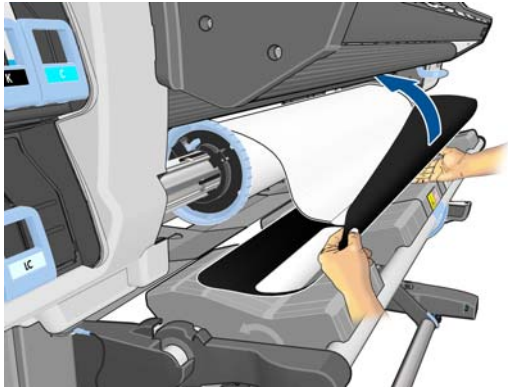
3. Pull some of the textile substrate from the roll and put the leading edge on the loading accessory.



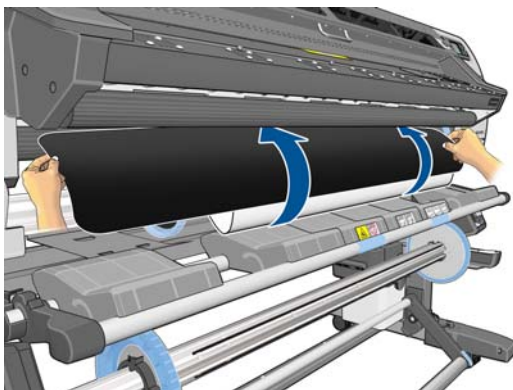
4. Flip the white flaps back to cover the leading edge of the substrate. The black patches are magnetic and grip the substrate.



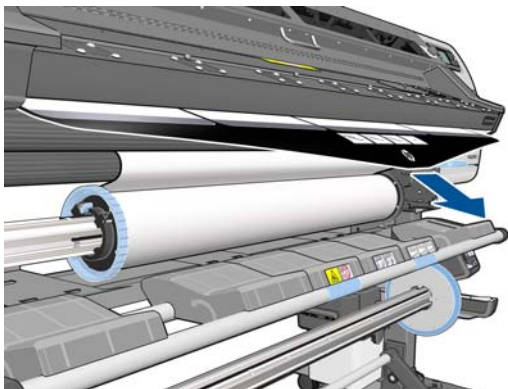
5. Lift the loading accessory and the leading edge of the substrate together.



6. Load the substrate manually, see [Load a roll into the printer \(manually\) on page 30](#).



7. The loading accessory passes through the printer's substrate path with the substrate.






8. The front panel asks whether you want to use the edge holders. See [The edge holders on page 49](#).

9. Select the type of substrate you are loading.

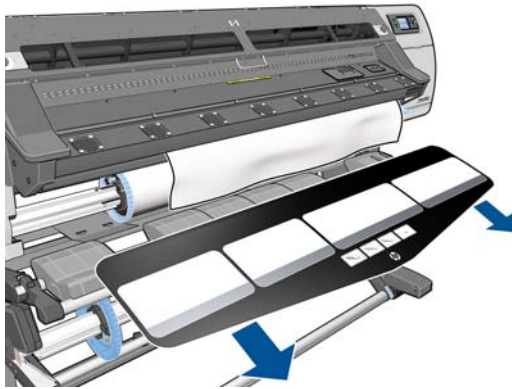
Select substrate type

<input type="checkbox"/> Self-Adhesive	▲ ▼
<input type="checkbox"/> Banner	
<input type="checkbox"/> Textile	
<input type="checkbox"/> Film	
<input type="checkbox"/> Synthetic Paper	
<input checked="" type="checkbox"/> Paper-Aqueous	
<input type="checkbox"/> Paper-Solvent	



 **NOTE:** You should select the name of the particular substrate that you are using in your RIP software, not in the front panel.

 **TIP:** When loading very thin substrates, always select the substrate type as **Banner** to minimize the vacuum pressure applied while loading; when loading very thick substrates, always select the substrate type as **HP Photorealistic** to maximize the vacuum pressure. After loading and before printing, go to the front panel and change to the correct type for the substrate you are loading: select the  icon, then select **View loaded substrate > Change loaded substrate**.

10. After passing through the printer, the loading accessory can be removed by hand.



11. The printer checks the substrate in various ways and may ask you to correct problems with skew or tension.

 **NOTE:** You can specify the maximum permitted amount of skew at the front panel: select the  icon, then select **Substrate handling options > Max skew setting**.

12. If you are loading transparent substrate without opaque borders, you are asked to enter the width of the substrate and the distance of the right edge from the printer's side plate (as indicated by the ruler on the front of the curing module).
13. If you have chosen double-sided printing, the front panel may ask a question about it at this point.
14. The printer calibrates the substrate advance.


15. The front panel recommends using the Take-Up Reel (TUR). You can choose to load the TUR now, or later during printing; or you can choose not to use it at all. See [The take-up reel on page 34](#).

<input type="checkbox"/> Load take-up reel now
<input type="checkbox"/> Load it during printing
<input type="checkbox"/> Do not load take-up reel

16. Complete the loading process as usual and adjust the skew if necessary.

Double-sided printing


The printer can be used to print on both sides of the substrate, in the following way.

 **NOTE:** The print should be at least 28 cm (11 in) wide, otherwise the printer will not be able to find the reference line when printing the second side.


Outline

1. Tell the printer that you intend to print on both sides.
2. The printer prints the content that you want to appear on the first side. After each job, the printer prints a black reference line that is used to align the matching job on the second side.
3. Cut and unload the substrate.
4. Reload the cut substrate upside down and starting at the end. The reference line marking the end of the first side should be face down and near the leading edge.
5. The printer finds the reference line, and uses it to start printing the second side in the right place.

Double-sided printing can be selected in your RIP software or at the printer's front panel. The RIP setting takes precedence: if double-sided printing is explicitly turned on or off in the RIP software, the front panel setting is ignored.

 **NOTE:** If you try to move the substrate while printing on either side, the front panel asks for confirmation, because any such movement prevents correct alignment between the two sides.

Double-sided printing in detail


1. Load the substrate in the normal way for the substrate you are using.
2. On the printer's front panel, select the  icon, then select **Double-sided printing > Side A**. Check that the front panel shows the printer status as **Ready for side A**.

Alternatively, select double-sided printing in your RIP software.


 **NOTE:** The automatic cutter and the extra bottom margin are both disabled during double-sided printing.


3. Send one or more jobs to be printed on the first side. Before printing the first job, the printer may advance the substrate by about 0.5 m (20 in) so that the second side can be completely cured.


After each job, the printer prints a black reference line that is used to align the matching job on the second side.


 **NOTE:** The chance of visible misalignment between the two sides increases with the length of the job. For this reason, in double-sided printing you are recommended not to print any single job that is longer than 3 m (10 ft).


4. After printing, advance the substrate a little using the [Move substrate](#) key.
 - If you plan to attach the substrate to the take-up reel before printing the second side, advance the substrate enough to achieve this.
 - If you plan to attach the substrate to the take-up reel while printing the second side, advance the substrate about 10 cm (4 in).

 **NOTE:** You are recommended to use the take-up reel to wind side A automatically, to avoid the "telescopic effect" that leads to deformation of the substrate edges and printhead crashes while printing side B.

5. Cut the substrate, either manually or by going to the front panel and selecting the  icon, then **Form feed and cut**. Before cutting, ensure that the total length of the cut substrate is more than 2 m (6 ft 7 in), otherwise you may be unable to load it successfully.

 **NOTE:** The **Form feed and cut** command will not work if the substrate cannot be cut by the cutter.

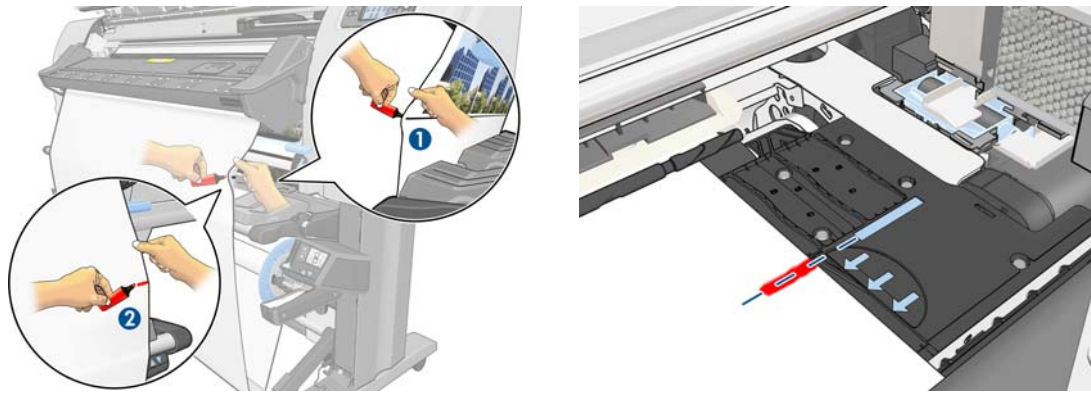
6. Select the  icon, then select **Substrate unload**.
7. Reload the substrate with the first (printed) side facing up as it enters the printer, and with the reference line near the leading edge. Reload if necessary until the printer finds less than 1 mm/m skew.



 **TIP:** Although it is not strictly necessary, you may find it quicker to use the manual loading procedure as an initial approximation, and then allow the printer to find the reference line more accurately. See [Load a roll into the printer \(manually\) on page 30](#). If you use only the automatic loading procedure, the printer may take some time to find the reference line.

TIP: You are recommended to use the edge holders when printing the second side, which means using the manual loading procedure.


TIP: If you have deliberately not attached the substrate to a spindle, and the front panel reports that the substrate may be detached from the core, or that the feeding direction is not detected, you can ignore the message and continue.

8. The front panel asks, **Would you like to load substrate for printing as side B?** Select **Yes**.
9. The printer searches for the reference line on the substrate. If it fails to find it, the front panel asks you to move the substrate using the [Up](#) and [Down](#) keys until the reference line is aligned with the permanent line on the platen. You may find it useful to mark where the reference line is on the other side of the substrate.




 **NOTE:** If you know that the automatic search for the reference line is not working (perhaps because the substrate-advance sensor is dirty), you can turn it off: select the  icon, then select **Substrate handling options > Auto line detection > Off**.

10. Send one or more jobs to be printed on the second side. If you send more than one job, they should be sent in reverse order, because printing starts at the end of the second side and works back towards the beginning.

 **NOTE:** The jobs printed on the second side should probably be rotated 180 degrees, and may need to be slightly reduced in size to compensate for the contraction of the substrate after passing once through the printer. See also the *Maintenance and troubleshooting guide*.

View information about the substrate

On the printer's front panel, select the  icon, then select **View loaded substrate > View substrate details**.

The following information appears on the front panel:

- The roll status
- The substrate family that you have selected
- The width of the substrate in millimeters (estimated by the printer)

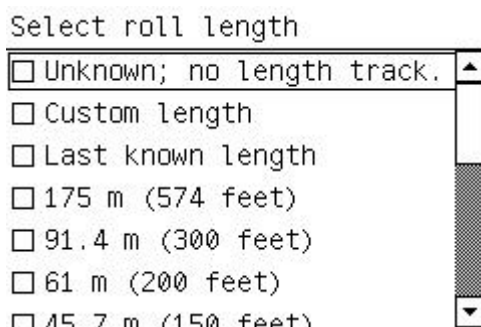
If no substrate is loaded, the message **Out of substrate** appears.

The same information appears on the Embedded Web Server's Supplies page.

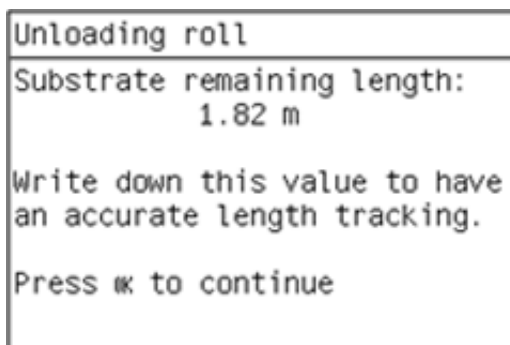
Substrate length tracking

The substrate length tracking feature enables you to keep track of how much substrate you have used and how much is remaining on the roll.

1. When the roll is first loaded onto the printer you have the option to enter the length of substrate on the roll. The amount of substrate that is subsequently used is then tracked.

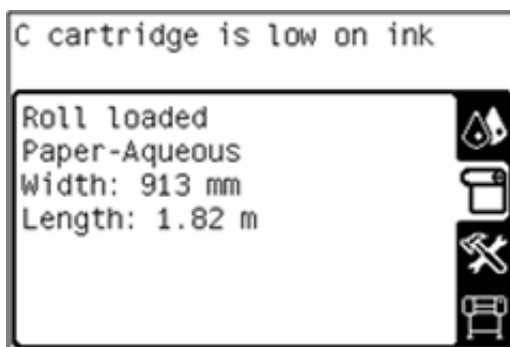


2. When the substrate is being unloaded, the front panel will display the amount remaining so that you can note it for future reference.




3. Next time the substrate is loaded, you can enter the remaining length, and the printer will again track the substrate as it is used. If the substrate was never actually unloaded, for example if there was a substrate jam and the substrate was unloaded and the printer was turned off and on, if you select **Last known length** the printer will apply the values from when the jam occurred (if the tracking feature was enabled).

The remaining length of substrate is always displayed in the Substrate area of the front panel. This information may also be displayed in your RIP.



Enable/disable the length tracking feature

1. The length tracking feature can be disabled or enabled from the front panel. Select the  icon, then **Substrate handling options** > **Substrate length tracking**.
2. Select **On** or **Off**.

Store the substrate

The following are tips for storing substrate:

- Always keep unused rolls wrapped in the plastic wrap to prevent discoloration and dust accumulation. Rewrap partially used rolls if they are not being used.
- Do not stack rolls.
- Allow all substrates to adapt to room conditions out of the packaging for 24 hours before printing.
- Handle film and glossy substrates by the edges or wear cotton gloves. Skin oils can be transferred to the substrate, leaving fingerprint marks.
- Keep the substrate tightly wound on the roll throughout the loading and unloading procedures. If the roll starts to unwind, it can become difficult to handle.

5 Substrate settings

Download media presets

Each supported substrate has its own characteristics. The printer changes the way it prints on each different substrate. The RIP requires a description of the requirements of each substrate. This description is called the “media preset”.

The media preset contains the ICC color profile, which describes the color characteristics of the substrate. It also contains information about other characteristics (RIP and printer settings) and requirements of the substrate that are not directly related to color. Media presets for your printer are installed in the RIP.

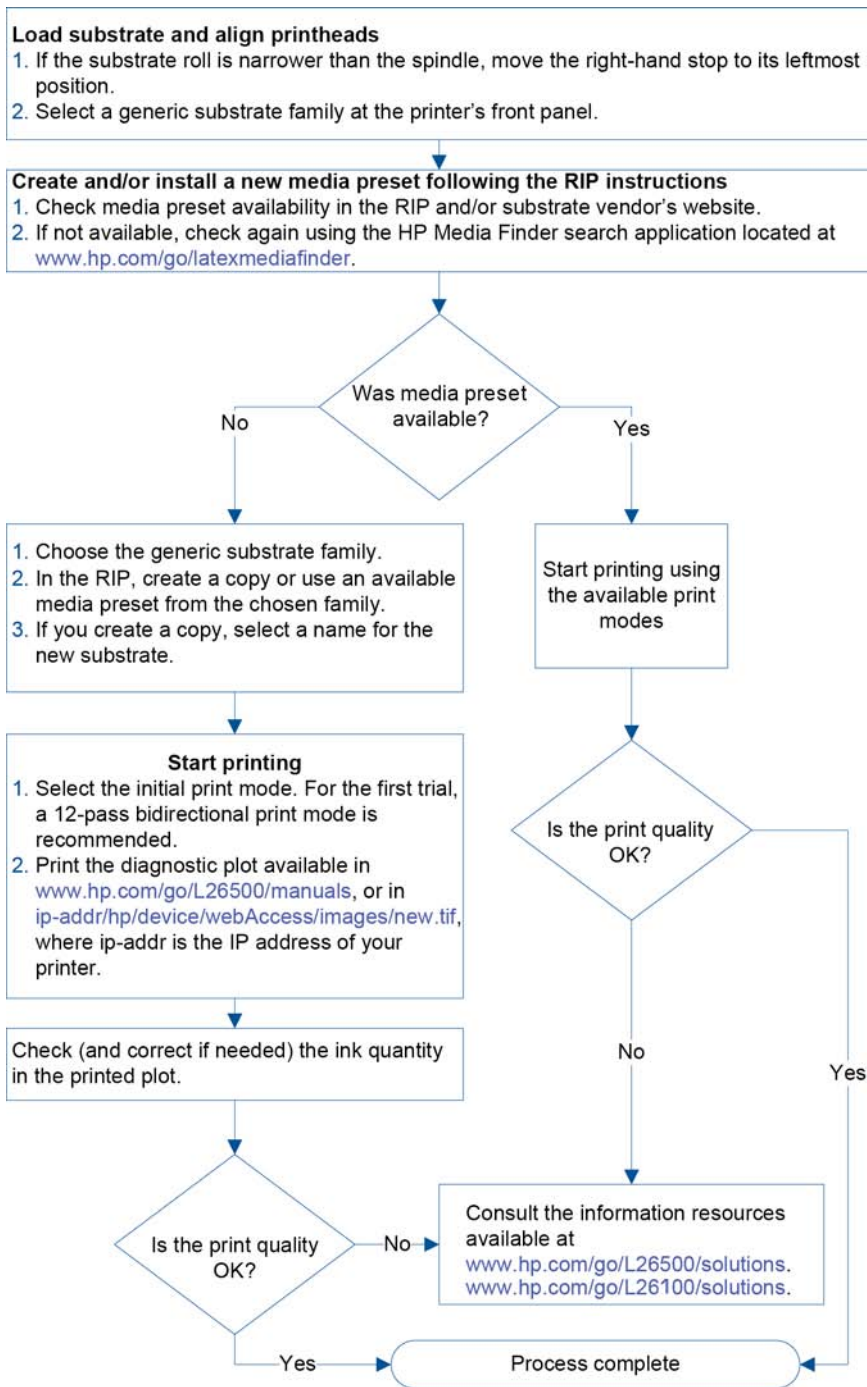
The RIP contains media presets for only the most commonly used substrates. If you buy a substrate for which your RIP has no preset, you can obtain a preset for a new substrate in the following ways:

- Try to download the media preset from the substrate manufacturer's Web site.
- If it is not there, try to download it from the RIP company's Web site.
- If it is not there, check availability using the HP Media Finder search application located at <http://www.hp.com/go/latexmediafinder/>
- If you cannot find it anywhere, create a new media preset in the RIP. See [Add a new substrate on page 59](#).
- Further information can be found at <http://www.hp.com/go/L26500/solutions/>
<http://www.hp.com/go/L26100/solutions/>

Add a new substrate

This section is provided in case you decide to make your own media preset. Normally there is no need to do this if you can find ready-made presets for all the substrates that you use.

Summary



Select printer settings and color profile

The correct printer settings for your substrate may be available from your RIP vendor or substrate vendor. If not, you can start by copying printer settings from a similar substrate of the same family. See [Supported substrate families on page 20](#).

If you cannot find a similar substrate for some reason, here are some recommended default settings for each substrate family.

Substrate family	Drying temp.	Curing temp.	Heating airflow	Auto-tracking (OMAS)	Cutter	Substrat e-advance compensation	Input tension	Vacuum
Self-adhesive	55	110	30	Yes	Yes	0	15	25
Banner	50	110	45	Yes	No	0	15	5
Textile	55	100	45	Yes	No	0	15	20
Film	55	95	30	Yes	Yes	0	15	25
Synthetic paper	50	80	30	Yes	Yes	0	15	40
Paper-aqueous	45	70	30	Yes	Yes	0	15	20
Paper-solvent	50	90	30	Yes	Yes	0	15	25
Low-temperature substrate	50	80	30	Yes	Yes	0	15	40
Mesh	50	95	30	Yes	Yes	0	15	30

The various settings mentioned above are described below.

Setting	Description	If too low	If too high
Passes	The number of passes specifies how many times the printheads will print over the same area of the substrate.	The amount of ink fired per time unit is larger and ink has less time to dry on the substrate. This may create coalescence and banding. The boundaries between passes may be more visible. However, printing speed is relatively high.	Colors are vivid, print quality is high. However, printing speed is relatively low. A lower curing temperature is needed, otherwise the substrate may be deformed.
Drying temp.	The heat applied in the printing zone removes water and fixes the image to the substrate.	Print-quality defects such as banding, bleeding and coalescence may occur.	Thermal marks may be seen on the substrate; they may appear as vertical bands in some colors. The substrate may wrinkle on the platen, causing vertical banding, ink smears or substrate jams.
Curing temp.	Curing is needed to coalesce the latex, creating a polymeric film which acts as a protective layer, while at the same time removing the remaining co-solvents from the print. Curing is vital to ensure the durability of the printed images.	The print may emerge not fully polymerized, so that the ink smears when rubbed. The print may appear wet, after printing or later. You may need to increase the number of passes to achieve adequate curing.	The substrate may wrinkle under the curing module, causing defects such as blisters or liner detachment. The substrate wrinkles may also cause vertical banding or ink smears at the beginning of the following plot.
Heating airflow	Airflow helps to remove the evaporated water from the print zone and thus allows more efficient drying.	In general, use the substrate family default value.	

Setting	Description	If too low	If too high
Substrate advance compensation	Your printer was calibrated at the factory to ensure that it advances the substrate accurately when using supported substrates in normal environmental conditions. However, you may find it useful to adjust the substrate advance when printing in an unusual but stable temperature or humidity level, or if the substrate-advance sensor is not working.	You may see horizontal banding or grain.	You may see horizontal banding or grain.
Input tension	Tension is applied to the substrate from the input spindle. It needs to be constant over the full width of the substrate, thus substrate load is a critical operation.	The substrate skews and may become increasingly wrinkled in the printing zone. Also, substrate advance may be irregular, resulting in horizontal banding.	The substrate may be permanently deformed or damaged. Substrate advance problems may appear in extreme cases.
Vacuum	The vacuum applied to the substrate at the printing zone helps to hold the substrate down on the print platen, keeping the distance to the printheads constant.	The substrate may lift up off the platen and touch the printheads. This can smear the printed image, cause vertical banding, cause a substrate jam or even damage the printheads.	For sticky substrates, friction could be too high and substrate advance irregular, resulting in horizontal banding or irregular grainy patches.
Bidirectional	Specifies whether printheads print in both directions, when moving from left to right and from right to left.	If Bidirectional is selected, the amount of ink fired per unit of time is larger, and therefore print quality defects such as coalescence and banding may occur, especially at the sides of the plot. However, printing speed is high.	If Bidirectional is unchecked then the printing is unidirectional and the speed is relatively low. TIP: You are recommended to keep Bidirectional selected in all cases, increasing the number of passes if necessary to avoid coalescence and banding.
High ink level	The maximum quantity of ink will be laid on the substrate (the High ink level option available only when the number of passes is 10 or more). The ink quantity may be reduced by the RIP color profile.	If not selected, colors may look washed-out.	If selected, there can be excess of ink and some problems related to poor drying and curing. TIP: Select High ink level for backlit and some textile applications, or if you want high color saturation.




Setting	Description	If too low	If too high
Cutter	The printer's built-in cutter can cut the substrate automatically between each print.	<p>Disable the cutter in the following cases:</p> <ul style="list-style-type: none"> You want to increase the speed of printing. You want to use the take-up reel. You want to cut the substrate manually. The leading edge of the substrate tends to curl and cause substrate jams. <p>In some cases, the cutter is automatically disabled.</p>	
Auto tracking (OMAS)	The substrate-advance sensor (also known as the Optical Media Advance Sensor, OMAS) is located under the print platen; it can track the substrate advance automatically.	<p>Disable the sensor in the following cases:</p> <ul style="list-style-type: none"> The substrate allows ink to pass through to the platen. Clean the sensor after using this substrate. You are instructed to do so by the front panel, because the sensor is dirty or unable to track this particular substrate. 	


Load the substrate and print the diagnostic plot

- Load the substrate in the normal way, paying particular attention to the following points.
 - The stop at the right-hand end of the spindle has two possible positions on the spindle. Always use the leftmost position if possible. Use the rightmost position only if the substrate roll requires the full width of the spindle.
 - Turn off the substrate-advance sensor (OMAS) in the RIP if the substrate is transparent or dark, or if the printer recommends you to do so.
 - Align the printheads.
- Open the HP diagnostic chart in the RIP. The chart is stored in your printer, at **<http://ip-addr/hp/device/webAccess/images/new.tif>**, where *ip-addr* is the IP address of your printer. You can also find it at <http://www.hp.com/go/L26500/manuals/> or <http://www.hp.com/go/L26100/manuals/>
- Select a suitable number of passes for the substrate family. See [Select the number of passes on page 66](#).
- Print the plot.

Change settings while printing

You can use the front panel to change the following settings while printing.

- To change temperature and vacuum settings while printing: select the  icon, then **Image quality maintenance > Adjust printing params**, and choose the setting that you want to adjust. You can use the arrow keys to adjust the curing temperature, the drying temperature or the vacuum pressure. The changes that you make take effect immediately, but they are not saved: the next job will use the settings in the media profile as usual.
- To change substrate advance calibration while printing (in case of banding): select the  icon, then **Image quality maintenance > Substrate advance calib > Adjust substrate advance**. You can use the arrow keys to adjust the substrate advance. The changes that you make take effect immediately, but they are not saved for the next job. See also the *Maintenance and troubleshooting guide*.
- To enable or disable extra printhead cleaning while printing: select the  icon, then **Image quality maintenance > Enable extra PH cleaning** or **Disable extra PH cleaning**. In this case, the change of setting is saved for subsequent jobs.

 **NOTE:** Extra printhead cleaning shortens the life of the printhead cleaning cartridge.

Advanced settings

Here are some more advanced settings, which you are not recommended to change, unless you have problems that you cannot resolve any other way.

The drying and curing temperatures used by the printer are determined by adding the offset to the base temperature. The base temperatures shown in the table are the default values for each substrate family, but may be changed by the printer depending on the printer settings in use. You cannot change the base temperatures yourself, but you can change the offsets. The base warm-up drying temperature is determined by the RIP.

Your RIP may have an option to return all settings to their default values.

Substrate family	Warm-up drying temperature offset	Warm-up curing temperature	Warm-up curing temperature offset	Cool-down drying temperature	Cool-down drying temperature offset	Cool-down curing temperature	Cool-down curing temperature offset	Minimum drying power
Self-adhesive	10	95	0	80	0	95	0	0.7
Banner	10	95	0	80	0	90	0	0.7
Textile	5	85	0	80	0	90	0	0.7
Film	5	85	0	80	0	100	0	0.7
Synthetic paper	5	80	0	75	0	85	0	0
Paper-aqueous	5	60	0	75	0	85	0	0
Paper-solvent	10	75	0	75	0	90	0	0.7

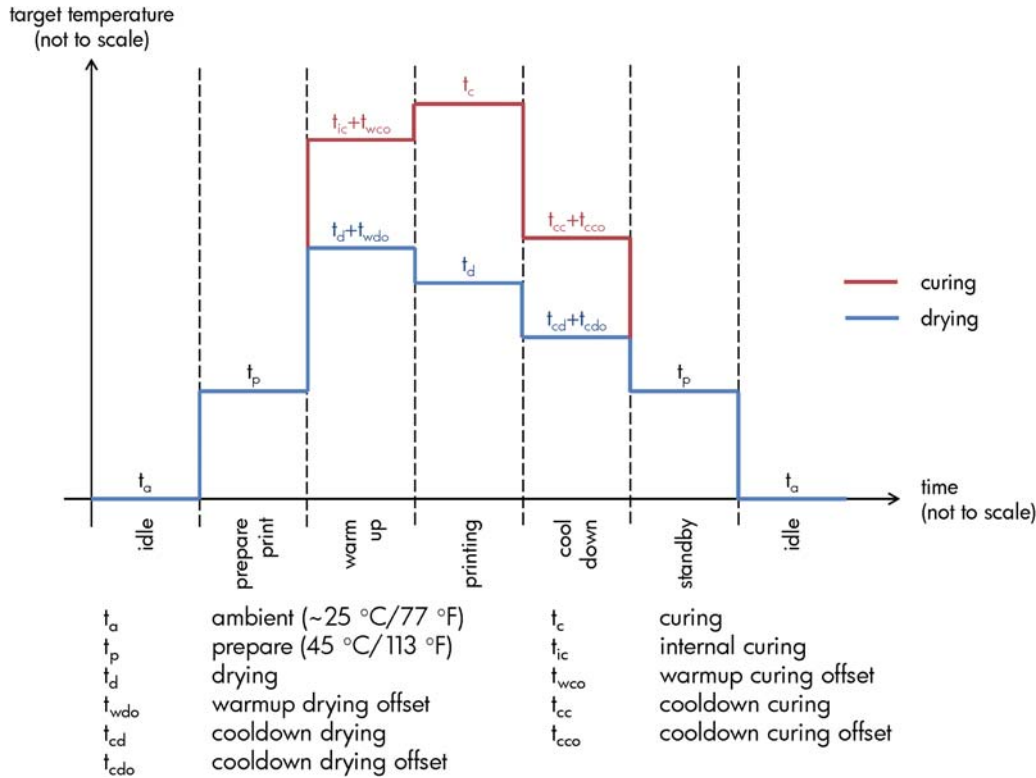
Substrate family	Warm-up drying temperature offset	Warm-up curing temperature	Warm-up curing temperature offset	Cool-down drying temperature	Cool-down drying temperature offset	Cool-down curing temperature	Cool-down curing temperature offset	Minimum drying power
Low-temp.	10	80	0	75	0	85	0	0
Mesh	10	85	0	80	0	85	0	0.7

The various settings mentioned above are described below.

Setting	Description	If too low	If too high
Warm-up drying temperature	The base temperature that the substrate in the print zone must reach before printing starts.	This setting is determined by the RIP. You cannot change it.	
Warm-up drying temperature offset	This offset is added to the base warm-up drying temperature, and the total is displayed in the front panel while the printer is preparing to print.	Bleeding or coalescence may appear in the first 200-300 mm of the print.	A longer time to start printing is required. Vertical banding or ink smears may occur.
Warm-up curing temperature	The base temperature that the substrate in the curing zone must reach before printing starts.	This setting is determined by the printer. You cannot change it.	
Warm-up curing temperature offset	This offset is added to the base warm-up curing temperature, and the total is displayed in the front panel while the printer is preparing to print.	The beginning of the print is not fully dry, or looks oily.	Substrate degradation (blisters, adhesive detachment) at the beginning of the print.
Cool-down drying temperature	The base temperature at which the substrate can be under the drying module without being damaged. At the end of a job, the substrate is not stopped until this temperature is reached.	This setting is determined by the printer. You cannot change it.	
Cool-down drying temperature offset	This offset is added to the base cool-down drying temperature.	A long time is needed to finish the print.	The substrate at the beginning of the next print may be damaged, because it has stopped moving under too high a temperature. This case is uncommon.
Cool-down curing temperature	The base temperature at which the substrate can be under the curing module without being damaged. At the end of a job, the substrate is not stopped until this temperature is reached.	This setting is determined by the printer. You cannot change it.	
Cool-down curing temperature offset	This offset is added to the base cool-down curing temperature.	A long time is needed to finish the print.	The end of the print may be damaged if the cutter is disabled.
Minimum drying power	The minimum power applied in the drying module while printing, so the substrate does not cool too much in lightly inked areas.	A heavily inked area that comes after a lightly inked area will have bleeding or coalescence defects.	The substrate is damaged in blank or lightly inked areas of the print, especially with a high number of passes.

Temperature profile

Many of the main and advanced substrate settings are related to temperature control, since this is a critical area for correct printing results with latex inks on a wide variety of substrates. The diagram below graphically represents the evolution of drying and curing temperatures during the various printing phases.



NOTE: Target temperatures and time are not to scale. For the specific values used for a given substrate type (family), consult the main and advanced settings tables above.

NOTE: t_p time can be modified through the printer's front panel.

Select the number of passes

Increasing the number of passes will tend to improve the print quality but reduce the speed of printing.

Passes	Uni/bidir	Self adhesive	Banner	Textile	Film	Synthetic paper	Paper aqueous	Paper solvent	Low temp.	Mesh
4	Bidir	No	No	No	No	No	No	No	No	No
6	Bidir	Maybe	Start here	No	No	No	Start here	Maybe	Maybe	No
8	Bidir	Start here	Yes	No	No	No	Yes	Start here	Start here	Start here
10	Bidir	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
12	Bidir	Yes	Yes	Start here	Maybe	Maybe	Yes	Yes	Yes	Yes
16	Bidir	Yes	Yes	Yes	Start here	Start here	Yes	Yes	Yes	Yes

Passes	Uni/ bidir	Self adhesive	Banner	Textile	Film	Synthetic paper	Paper aqueous	Paper solvent	Low temp.	Mesh
18*	Bidir	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20 to 32	Bidir	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* Unlike other printmodes, the 18-pass printmode has 1200 dpi x 1200 dpi input data resolution at 1 bpp (1 bit per pixel). Therefore, to generate a 18-pass media preset you should start either from an existing 18-pass preset or from scratch. In the same way, do not clone an 18-pass media preset to generate a preset with a print mode other than 18-pass.

Key

- **Bidir:** bidirectional
- **No:** not recommended
- **Maybe:** may be worth trying for extra speed
- **Start here, Yes:** recommended

 **NOTE:** More specific settings for many substrates from different vendors are available in the HP Media Finder at <http://www.hp.com/go/latexmediafinder/>.

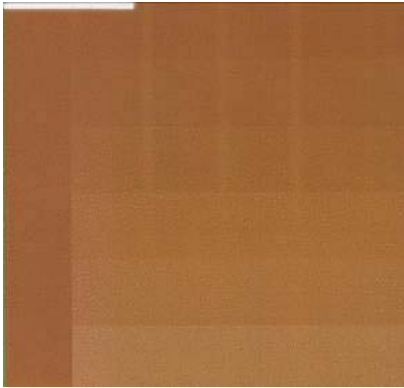
Check the quantity of ink on the substrate

Check that the ink quantities in your media preset are adequate. Look at the color patches in the HP diagnostic chart and check that the patches have the correct amount of ink using the guidelines below:

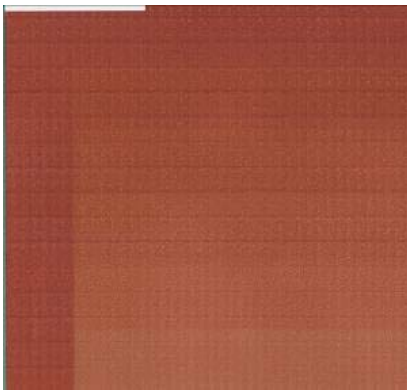
1. **Too much ink:** There are several possible symptoms of this problem.
 - The last two or three scales of the chart look the same.



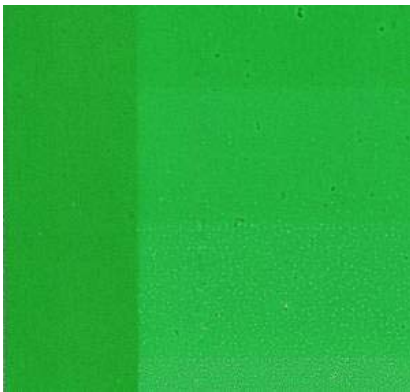
- Vertical bands.



- Horizontal bands.



- Coalescence, grain (can be caused by an excess of light ink).



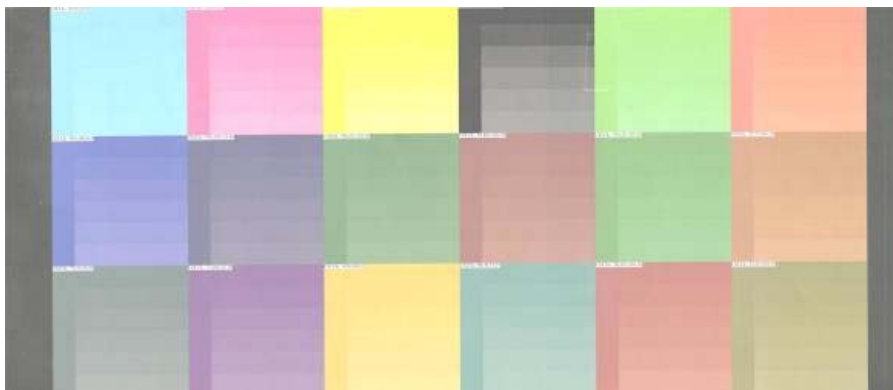
Try reducing the amount of ink in your RIP software, then reprint the chart and check again.

You may have chosen a media preset that uses more ink than your substrate allows. Consult your RIP documentation to make sure you're applying the right media preset, and to find out how to lower the total ink limits of the media preset. For a quick solution, you could change to a different media preset that uses less ink: for example, paper-aqueous presets use less ink than self-adhesive presets.

2. **Correct amount of ink:** The top level of each patch shows a smooth gradient, there are no visible defects and increasing amounts of ink result in increasing color density.




3. **Too little ink:** The whole chart looks washed out.



Try increasing the amount of ink in your RIP software, then reprint the chart and check again.

You may have chosen a media preset that uses less ink than your substrate allows. Consult your RIP documentation to make sure you're applying the right media preset, and to find out how to increase the total ink limits of the media preset. For a quick solution, you could change to a different media preset that uses more ink: for example, self-adhesive presets use more ink than paper-aqueous presets.


 **NOTE:** Backlit and some textile substrates usually need to be used with the "High Ink Limit" option enabled in the RIP.

Faster printing

The obvious way to increase speed is to reduce the number of print passes, although this will tend to reduce print quality. Bear in mind the following considerations.

- With fewer than 10 passes, you may see an increase in grain.
- With fewer than 8 passes, the printer is more sensitive to substrate advance problems.
- With fewer than 8 passes, you may need to reduce the ink quantity to improve print quality.
- If you want to use the high ink level option, you must use at least 10 passes.
- As you reduce the number of passes, the best curing temperature may be more difficult to find, and may be more sensitive to the ambient temperature and humidity.

Here are some other suggestions for increasing the speed of printing.

- Concatenating prints saves time, because one can be sent while another is being printed.
- Disable the cutter: select the  icon, then select **Substrate handling options > Enable cutter > Off**. With most substrates, this saves some time at the end of the printing process.
- Increase the cool-down curing temperatures. This also saves some time at the end of the printing process, but may cause slight substrate deformation, depending on the substrate.

See also the *Maintenance and troubleshooting guide*.

Color calibration

The purpose of color calibration is to produce consistent colors with the specific printheads, inks and substrate that you are using, and in your particular environmental conditions. After color calibration, you can expect to get identical prints from your printer on different occasions.

Color calibration can be launched from your RIP software; see your RIP documentation for details.

In outline, the process consists of the following steps.

1. A calibration test chart is printed.
2. The HP Embedded Spectrophotometer (or, if you prefer, a different spectrophotometer) scans and measures the test chart.
3. The RIP uses the measurements to calculate the necessary correction factors for consistent color printing on that substrate.

Color calibration with the Embedded Spectrophotometer is not recommended for the following substrate types. It may be possible to calibrate some of these substrates by using an external color measurement device.

- Non-opaque substrates such as clear film, backlit substrates, and some textiles.
- Substrates with an uneven surface, such as perforated vinyl or punched-window substrates.
- Substrates that suffer deformation from drying and curing, such as paper-based substrates.
- Very elastic substrates, such as some textiles without liner.

Substrates suitable for color calibration include even-surfaced adhesive vinyls (neither punched nor perforated), PVC banners and some opaque, stiff textiles.

Some textiles require the take-up reel for successful printing. However, the take-up reel may fail to cope with the backward movement of the substrate between the printing and scanning phases of color calibration. To avoid this problem, proceed as follows.

1. Ensure that the take-up reel is enabled.
2. Advance the substrate until the loop-shaper reaches its lowest position.
3. Manually rewind the take-up reel, using the buttons on the take-up reel motor, to collect the substrate and raise the loop-shaper until it almost touches the take-up reel spindle.
4. Set the take-up reel's wind direction to neutral.
5. Launch color calibration from the RIP.
6. When the color calibration has finished, you can re-enable the take-up reel.

Color profiles

Color calibration provides consistent colors, but consistent colors are not necessarily accurate. For instance, if your printer prints all colors as black, its colors may be consistent but they are not accurate.

In order to print accurate colors, it is necessary to convert the color values in your files to the color values that will produce the correct colors from your printer, your inks and your substrate. A color profile is a description of a printer, ink and substrate combination that contains all the information needed for these color conversions.

These color conversions are performed by your Raster Image Processor (RIP), not by the printer. For further information on the use of color profiles, see the documentation for your application software and for your RIP.

In addition to the color profiles used for printing, you may wish to calibrate and profile your monitor (display device), so that the colors you see on the screen relate more closely to those that you see on your prints.

Color reproduction tricks

Latex inks are a new technology, and there are some important guidelines when doing color separations (such as when creating or modifying a new media preset within your RIP) that will help to optimize the printer output in terms of color gamut, ink usage and print quality. These are as follows:

- To achieve the best dark colors in vinyl gloss and other substrates, use as much black and as little composite (CMY) as possible when creating the ICC profile.
- Light inks should be avoided as much as possible in high-density colors such as secondaries and tertiaries (dark red, blue, green, ...).
- Light inks should be restricted to the lowest-density colors, starting the use of dark inks as early as possible. Typically, a color of more than 50% density should not contain any light inks.
- Light inks should be used at no more than 50% of maximum quantity. An excessive amount of light inks can create gloss artifacts in vinyl gloss substrates.

Please refer to your RIP documentation for details of how to create or modify media presets.

Presets for HP-branded substrates have been created following the above recommendations in order to optimize black and dark colors. You can find the HP media preset for your substrate family at <http://www.hp.com/go/latexmediafinder/>.

6 Retrieving usage information

- [Get accounting information](#)
- [Check usage statistics](#)
- [Check usage statistics for a job](#)
- [Request accounting data by E-mail](#)


Get accounting information


There are various different ways of getting accounting information from your product.

- View product usage statistics for the whole lifetime of the product, see [Check usage statistics on page 74](#).
- Request accounting data by E-mail. The product sends data in XML at regular intervals to a specified E-mail address; the data may be interpreted and summarized by a third-party application, or displayed as an Excel spreadsheet. See [Request accounting data by E-mail on page 74](#).
- Use a third-party application to request product status, product usage or job accounting data from the product through the Internet. The product provides data in XML to the application whenever requested. HP provides a Software Development Kit to facilitate the development of such applications.

Check usage statistics


There are two ways of checking your product's usage statistics.

 **NOTE:** The accuracy of the usage statistics is not guaranteed.

- From the Embedded Web Server, go to the **Main** tab and select **History > Usage**.
- From the front panel, select the  icon, then **Internal prints > User information prints > Print usage report**.

Check usage statistics for a job

You can use the Embedded Web Server to check usage statistics for a particular job: go to the **Main** tab and select **History > Accounting**.

 **NOTE:** The accuracy of the usage statistics is not guaranteed.

Request accounting data by E-mail

1. Obtain the IP address of the outgoing mail server (SMTP) from your IT department; this is required in order to send e-mail messages.
2. Ensure that the outgoing e-mail server is configured to enable relaying of e-mail messages that the product will send.
3. Open your Web browser and connect to the product's Embedded Web Server.
4. Select the **Setup** tab.
5. From the Configuration menu in the left-hand column, select **Date & Time**.
6. Ensure that the product's date and time have been set correctly.
7. From the Configuration menu, select **E-mail server**.
8. Enter the IP address of the outgoing mail server (SMTP).

9. Specify an e-mail address for the product. The latter does not need to be a valid e-mail address, because the product will not receive messages; but it should have the form of an e-mail address. It serves to identify the product when it sends e-mail messages.
10. From the Configuration menu, select **Printer settings**.
11. In the Accounting section, if you set **Require account ID** to **On**, then every time someone sends a print job to the product, he or she must provide an account ID: for example, an ID corresponding to his or her department or to a specific project or client. If someone sends a job without providing an account ID, the product will hold the unidentified job in the queue without printing it until an account ID is provided.

If you set **Require account ID** to **Off**, then the product will print all jobs whether or not they have an account ID.
12. Set **Send accounting files** to Enabled.
13. Set **Send accounting files to** to the e-mail address (or addresses) to which you want the accounting information sent. This may be an address that you have created specifically to receive automatically generated messages from the product.
14. Set **Send accounting files every** to the frequency with which you want the information sent, choosing a specific number of days or prints.
15. You may want to set **Exclude personal information from accounting e-mail** to **On**, so that the accounting messages will not contain personal information. If this option is **Off**, information such as user name, job name, and account ID will be included.

When you have completed the above steps, the product will send accounting data by E-mail with the frequency that you specified. The data are provided in XML and can easily be interpreted by a third-party program. The data provided on each print job include when the job was submitted, when the job was printed, the printing time, the type of image, the number of pages, the number of copies, the paper type and size, the amount of each color of ink used and various other attributes of the job. Accounting data are also provided on scan and copy jobs.

You can download an Excel template from HP's Web site (<http://www.hp.com/go/designjet/accounting/>) that will enable you to display the XML data more readably in the form of a spreadsheet.

Analysis of the accounting data will enable you to bill customers precisely and flexibly for the use of your product. You can, for instance:

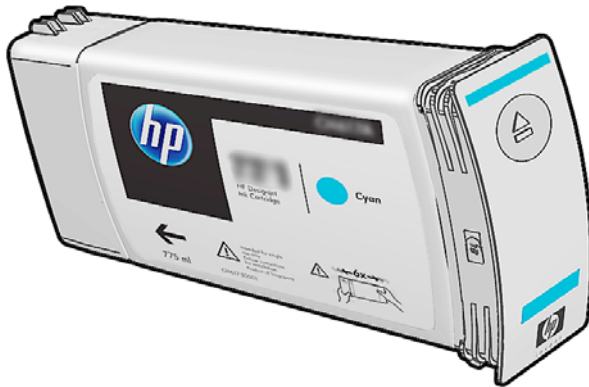
- Bill each customer for the total amount of ink and paper used by that customer over a particular period.
- Bill each customer separately per job.
- Bill each customer separately for each project, broken down by job.

7 The ink system

Ink system components

Ink cartridges

The printer's six ink cartridges provide magenta, light magenta, black, yellow, light cyan and cyan ink to the printheads. Each cartridge has a capacity of 775 ml.

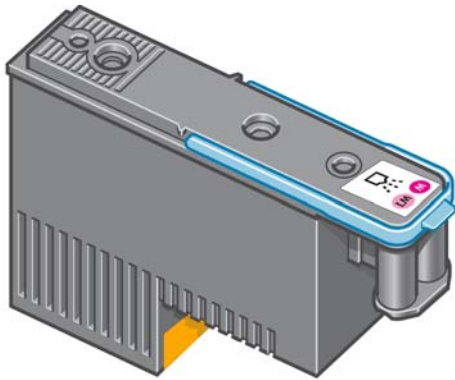


Ink cartridges require no maintenance or cleaning, but must be shaken before installation. High-quality printing results continue even when the ink levels are getting low.

CAUTION: Avoid touching pins, leads, and circuitry when handling ink cartridges because these elements are sensitive to electrostatic discharge. Such devices are called ESD-sensitive devices. See [Glossary on page 87](#). Electrostatic discharges are one of the main hazards to electronics products. This type of damage can reduce the life expectancy of the device.

Printheads

The printheads deposit ink on the substrate. Each printhead is connected to two ink cartridges. For example, the printhead shown below draws ink from the light magenta and magenta cartridges.



The printheads are extremely durable and do **not** need to be replaced every time an ink cartridge is replaced. They provide excellent results even when the ink cartridges contain a low level of ink.

To maintain optimum print quality, the printheads are automatically tested at regular intervals, and automatically serviced when necessary. This takes a little time and can occasionally delay printing.

When a printhead eventually needs to be replaced, the front panel will display a message.

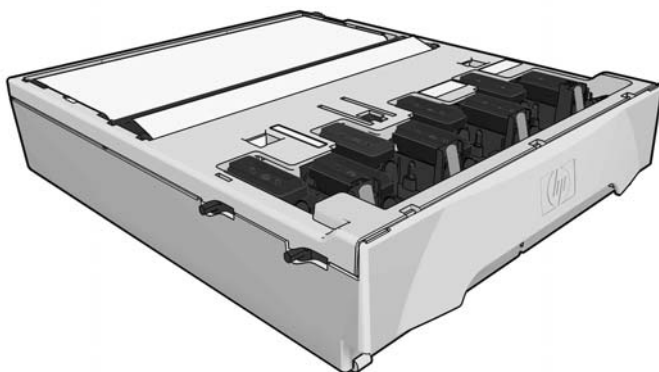
CAUTION: Avoid touching pins, leads, and circuitry when handling printheads because these elements are sensitive to electrostatic discharge. Such devices are called ESD-sensitive devices. See [Glossary on page 87](#). Electrostatic discharges are one of the main hazards to electronics products. This type of damage can reduce the life expectancy of the device.

Printhead cleaning kit

The printhead cleaning kit contains the printhead cleaning cartridge, the ink funnel and the ink filter.

Printhead cleaning cartridge

The printhead cleaning cartridge cleans and maintains the printheads, and seals the printheads when they are not in use to prevent them from drying out.



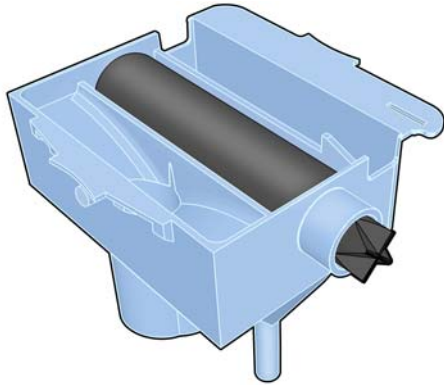
The cartridge contains a roll of cloth, which is used to clean the printheads. You are notified when 92% of the roll has been used, after which the cartridge should continue to function for at least another 140 m² (1500 ft²) of printed area. A new roll lasts for at least 1850 m² (20000 ft²) of printed area.

The printer will refuse to start a print job if it detects the end of the cleaning roll. You should then replace the printhead cleaning cartridge with a new one.

Ink funnel

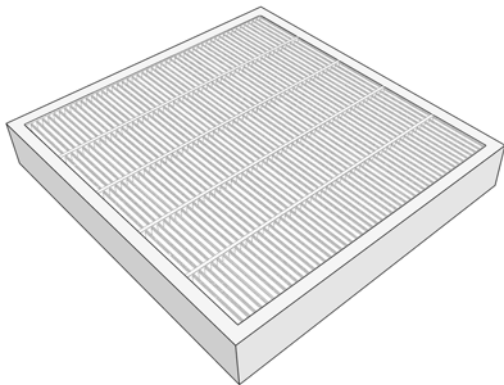
The ink funnel collects waste ink produced during printhead servicing. It is important that this funnel is installed, as it prevents significant deposits of ink over various other printer parts.

From the ink funnel, the waste ink passes through the ink tube assembly into the printhead cleaning container.



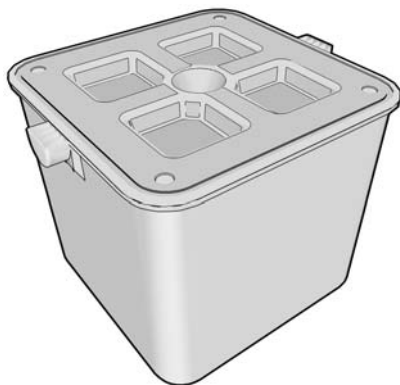
Ink filter

The ink filter filters tiny droplets of waste ink before they pass into the printhead cleaning container.



Printhead cleaning container

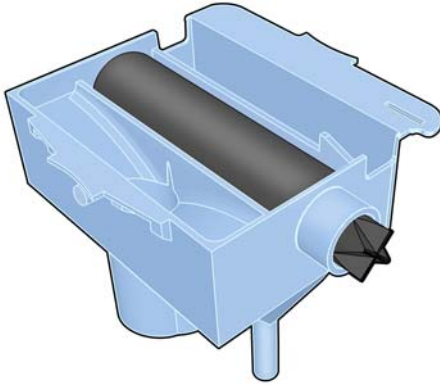
The printhead cleaning container stores waste ink collected by the ink funnel.



The ink maintenance kit

The ink maintenance kit contains the following components.

- The ink funnel, which collects tiny droplets of waste ink produced during printhead servicing.

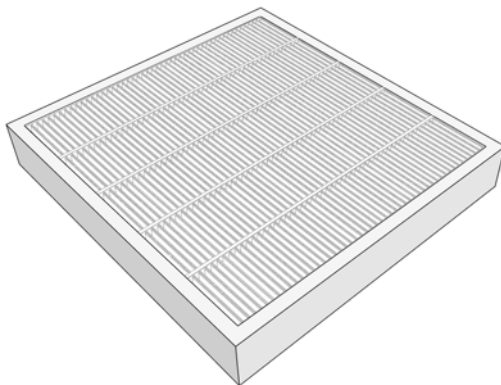


- The ink tube assembly, which passes tiny droplets of waste ink collected by the ink funnel to the printhead cleaning container



If the printer asks you to replace the ink tube assembly, you should replace the ink funnel and the ink filter at the same time.

- The ink filter, which filters tiny droplets of waste ink before they pass into the printhead cleaning container.



These components are designed to keep the printer's waste ink from damaging the printer and dirtying the environment.

In order to keep the printer and its surroundings clean, you must ensure that these components are correctly installed and maintained. In particular, these steps are essential:

1. Connect the ink tube assembly.
2. Insert the ink funnel.
3. Insert the ink filter and close the filter box.
4. Install the printhead cleaning container.

If the printer continues operating while these components are incorrectly installed or incorrectly connected, HP will not be responsible for any resulting damage or cleaning expenses.

The printer displays a message on the front panel if it detects any problem with these components.

Order ink supplies

You can order the following ink supplies for your printer.

Table 7-1 Ink cartridges

Cartridge	Capacity (ml)	Part number
HP 792 Black Latex Designjet Ink Cartridge	775	CN705A
HP 792 Cyan Latex Designjet Ink Cartridge	775	CN706A
HP 792 Magenta Latex Designjet Ink Cartridge	775	CN707A
HP 792 Yellow Latex Designjet Ink Cartridge	775	CN708A
HP 792 Light Cyan Latex Designjet Ink Cartridge	775	CN709A
HP 792 Light Magenta Latex Designjet Ink Cartridge	775	CN710A

Table 7-2 Printheads

Printhead	Part number
HP 792 Yellow and Black Designjet Printhead	CN702A
HP 792 Cyan and Light Cyan Designjet Printhead	CN703A
HP 792 Light Magenta and Magenta Designjet Printhead	CN704A

Table 7-3 Waste management system

Kit	Part number
HP 792 Designjet Printhead Cleaning Kit	CR278A
HP 792 Designjet Ink Maintenance Kit	CR279A
HP 789/792 Designjet Printhead Cleaning Container	CH622A

8 Print options

Printer states

The printer may be in any one of the following states; some of them require waiting.

- **Ready (cold):** The printer is powered on but has not printed yet, and the heaters are not turned on.
- **Preparing to print:** The printer is warming up the heaters and preparing the printheads to print. This takes 1 to 8 min.
- **Ready for substrate**
- **Ready for side A/B**
- **Printing**
- **Printing side A/B**
- **Curing:** This takes 1.5 to 5 min.
- **Finishing:** The printer is cooling down and preparing for stand-by. This takes 0.5 to 5 min.

If jobs of the same print mode as the already-printed file are sent while the printer is **Curing** (if the cutter is not enabled) or **Finishing**, the printer goes to **Preparing to print**.

To save time between prints, concatenate jobs with the same print mode (same number of passes) and turn the cutter off to skip the **Curing** and **Finishing** states. You can also use nesting to print several jobs in the same workflow.


Even if the cutter is on or successive jobs use different print modes, it is better to print them all together without delays to minimize the time spent in **Preparing to print**.


Change margins

The printer margins determine the area between the edges of your image and the edges of the substrate.

The margins for a particular print job are selected in the RIP software; if the job exceeds the substrate width, it will be clipped.

The front panel offers additional settings for the bottom margin: see [Table 10-4 Margins on page 85](#). These settings apply only to single prints when the cutter is not in use. The bottom margin is not applied between several prints sent at the same time, nor during double-sided printing.

To set the bottom margin at the front panel, select the  icon, then **Substrate handling options > Extra bottom margin**.

 **NOTE:** The extra bottom margin set in the front panel is applied in addition to the bottom margin selected in the RIP.

Request the printer's internal prints

The internal prints provide various kinds of information about your printer. Request these prints from the front panel, without using a computer.

Before requesting any internal print, make sure that substrate is loaded and that the **Ready** message appears on the front-panel display.

To print an internal print, select the  icon, **Internal prints**, then select the type of internal print that you want.


The following internal prints are available:

- Menu map: Shows details of all the front-panel menus.
- Configuration: Shows all the current front-panel settings.
- Usage report: Shows estimates of the total number of prints, number of prints by substrate family, number of prints by print-quality option, and total amount of ink used per color. The accuracy of these estimates is not guaranteed.
- Service information: Provides information that service engineers require.

9 Accessories

Order accessories

The following accessories can be ordered for your printer.

 **TIP:** Spare spindles ease the process of switching between different substrates.

Name	Product number
HP Designjet Soft Media Loading Accessory	CR765A
HP Designjet L26500 61 × 2-inch Spindle	CV063A
HP Designjet L26500 61 × 3-inch Spindle	CV135A
HP Designjet L26500 User Maintenance Kit	CQ201A
HP Designjet L26500/28500 Edge Holders	B8K59A
HP Designjet L26500/28500 Platen Cover	B2W90A
HP Designjet L26100 61-in Take-up Reel	C9F31A

10 Printer specifications

Functional specifications

Table 10-1 HP No. 792 ink supplies

Printheads	Yellow/black, cyan/light cyan and light magenta/magenta
Ink cartridges	Yellow, black, magenta, light magenta, cyan and light cyan. All cartridges contain 775 ml of ink.
Printhead cleaning kit	Non-color-specific
Ink tube assembly	Non-color-specific
Ink filter	Non-color-specific

Table 10-2 Substrate sizes

	Minimum	Maximum
Width	584 mm (23 in) Narrow substrate: 254 mm (10 in)	1549 mm (61 in)
Length	1.5 m (59 in)	Roll with maximum external diameter of 180 mm (7.1 in)

Table 10-3 Print resolutions

Ink level	Number of passes	Halftone resolutions (dpi)	Print resolutions (dpi)
100%	4–28 (except 18)	300, 600	1200×1200
	18	1200	1200×1200
200%	10–28 (except 18)	300, 600	1200×1200
	18	1200	1200×1200

The table above shows the resolutions supported by the printer. See your RIP documentation to find the resolutions supported by your RIP.

Table 10-4 Margins

Side margins	5 mm (0.2 in)
Top margin (leading edge)	5 mm (0.2 in)
Bottom margin (trailing edge)	5 mm (0.2 in) (none)
	100 mm (3.9 in) (small)
	150 mm (5.9 in) (normal)
	200 mm (7.9 in) (extra)
	300 mm (11.8 in) (extra)
	400 mm (15.7 in) (extra)
	500 mm (19.7 in) (extra)

Physical specifications

Table 10-5 Printer physical specifications


Weight (including stand)	L26500 - 202kg / L26100 - 180kg
Width	2465 mm
Depth	690 mm
Height	1370 mm

Memory specifications

Table 10-6 Memory specifications

Memory (DRAM)	512 MB
Hard disk	160 GB

Power specifications

 **NOTE:** An electrician is required for the setup and configuration of the building electrical system used to power the printer and also for printer installation. Make sure that your electrician is appropriately certified according to local regulations and supplied with all the information regarding the electrical configuration.

Your printer requires that the following electrical components be supplied and installed by the customer, according to the National Electrotechnical Code (NEC).

Table 10-7 Single phase line specifications

	Outside Japan	Japan only
Number of power cords	2	2


Table 10-7 Single phase line specifications (continued)


	Outside Japan	Japan only
Input voltage	220-240 V~ (-10%+6%)	200V (-10%+10%)
Input frequency	50 / 60 Hz	50 / 60 Hz
Power consumption	4.8 kW (overall consumption for both power cords)	4.8 kW (overall consumption for both power cords)
Maximum load current (per power cord)	15 A	15 A

Environmental specifications

Table 10-8 Printer environmental specifications

Relative humidity range for best print quality	20–80%, depending on substrate type
Temperature range for best print quality	18 to 25°C (64 to 77°F), depending on substrate type
Temperature range for printing	15 to 30°C (59 to 86°F)
Temperature range when not in operation	-25 to +55°C (-13 to +131°F)
Temperature gradient	no more than 10°C/h (18°F/h)
Maximum altitude when printing	3000 m (10000 ft)

 **NOTE:** The printer must be kept indoors.

 **NOTE:** If the printer or ink cartridges are moved from a cold location to a warm and humid location, water from the atmosphere can condensate on the printer parts and cartridges and can result in ink leaks and printer errors. In this case, HP recommends that you wait at least 3 hours before turning on the printer or installing the ink cartridges, to allow the condensate to evaporate.

Acoustic specifications

Table 10-9 Printer acoustic specifications

Idle sound power	≤ 5.1 B (A)
Operating sound power	≤ 7.5 B (A)
Idle sound pressure	≤ 39 dB (A)
Operating sound pressure	≤ 56 dB (A)

Glossary

Airflow

Air is blown through the printing zone to speed up the drying process.

Back tension

The backwards tension applied to the substrate by the input spindle, which must be constant across the width of the substrate. Too much or too little tension may cause substrate deformation and print quality defects.

Bidirectional

Bidirectional printing means that the printheads print while moving in both directions. This increases the speed of printing.

Bleeding

A print-quality defect that occurs when the ink spreads on the substrate across areas of different colors.

Coalescence

A print-quality defect that occurs when the ink spreads on the substrate within an area of the same color.

Cockle

A substrate condition in which it is not lying perfectly flat, but rises and falls slightly in shallow waves.

Color accuracy

The ability to print colors that match the original image as closely as possible, given the fact that all devices have a limited color gamut and might not be able to match certain colors precisely.

Color consistency

The ability to print the same colors in a particular print job, from print to print and from printer to printer.

Curing

The substrate is heated in the curing zone to coalesce the latex, creating a polymeric film which acts as a protective layer, while at the same time removing the remaining co-solvents from the print. Curing is vital to ensure the durability of the printed images. Too high or too low a curing temperature may cause print quality defects.

Cutter

A printer component that slides back and forth across the platen to cut the substrate.

Drying

The substrate is heated in the printing zone to dry the ink and fix the image to the substrate. Too high or too low a drying temperature may cause print quality defects.

Edge holder

A metal piece designed to prevent the edge of the substrate from rising while printing is in progress.

Firmware

Software that controls your printer's functionality and is stored semi-permanently in the printer (it can be updated).

Gamut

The range of colors and density values reproducible on an output device, such as a printer or monitor.

HDPE

High Density Polyethylene.

I/O

Input/Output: this term describes the passing of data between one device and another.

ICC

The International Color Consortium, a group of companies that have agreed on a common standard for color profiles.

Ink density

The relative amount of ink that is deposited on the substrate per unit of area.

IP address

A unique identifier that identifies a particular node on a TCP/IP network. It consists of four integers separated by dots.

LED

Light-Emitting Diode: a semiconductor device that emits light when electrically stimulated.

Loading accessory

A flexible plastic accessory that fits over the leading edge of the substrate while it is being loaded into the printer. Some substrates are difficult to load without this accessory.

Loop-shaper

A cylindrical weight inserted into the loop of substrate required by the take-up reel. A light and a heavy loop-shaper are provided, to suit different substrate types.

Minimum drying power

The minimum heat applied in the printing zone so that the substrate does not cool too much in lightly-inked areas. Low minimum power may cause print quality defects; high minimum power may damage the substrate, especially with a high number of passes and in blank or lightly-inked areas.

Nozzle

One of many tiny holes in a printhead through which ink is deposited onto the substrate.

OMAS

The Optical Media Advance Sensor, otherwise known as the substrate-advance sensor. The sensor located in the print platen that tracks the substrate movement and increases its accuracy.

Passes

The number of print passes specifies how many times the printheads will print on the same area of substrate. A higher number of passes tends to improve print quality and printhead health, but reduces the speed of printing.

PC

Polycarbonate.

PE

Polyethylene.

PET

Polyethylene Terephthalate (polyester).

PLA

Polylactic Acid.

Platen

The flat surface within the printer over which the substrate passes while it is being printed on.

PP

Polypropylene.

Printhead

A removable printer component that takes ink of one or more colors from the corresponding ink cartridge(s) and deposits it on the substrate, through a cluster of nozzles.

PVC

Polyvinyl Chloride.

Spindle

A rod that supports a roll of substrate while it is being used for printing.

Substrate

A thin, flat material designed to be printed on, made of paper or other materials.

Substrate advance compensation

A slight adjustment to the amount of substrate advance between print passes, to compensate for the characteristics of different substrate types. The printer normally performs this adjustment automatically, but may need to be recalibrated for substrates not supported by HP, or for an unusual ambient temperature or humidity. Incorrect substrate advance compensation may cause banding with fewer than 8 passes, or graininess with 8 passes or more.

Substrate-advance sensor

The sensor located in the print platen that tracks the substrate movement and increases its accuracy. Otherwise known as OMAS (Optical Media Advance Sensor).

Unidirectional

Unidirectional printing means that the printheads print only while moving in one direction. The speed of printing is lower than in bidirectional. In general, print bidirectional and increasing the number of passes is a better way of improving print quality.

Vacuum pressure

The substrate is held flat against the platen by vacuum suction. Too much or too little suction may cause print quality defects. Too little suction may also cause a substrate jam or damage the printheads.

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