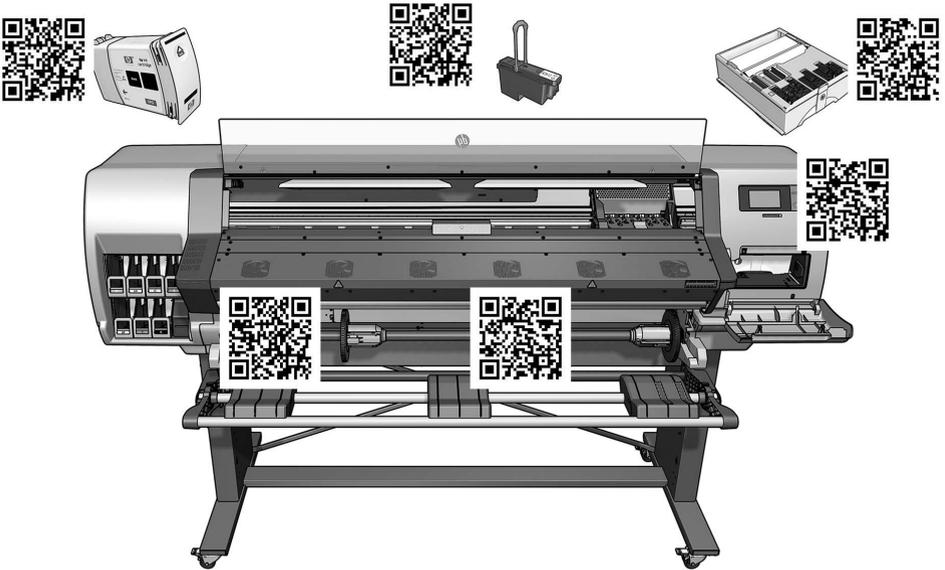




# Latex 110 Printer Series

## Introductory information



USB 2.0 high-speed certified



HP cares about the environment



# Latex 110 Printer Series

## Introductory Information

### What is it?

Your printer is a color inkjet printer designed for printing high-quality images on flexible substrates. Some major features are:

- Sharpest print quality, smooth transitions, and fine details with its 6 colors and 1200 real dpi
- 400 ml ink cartridges
- Hundreds of ready-made substrate presets easily available, including outdoor applications

This introductory document includes:

1. Legal notices
2. Safety guidelines
3. Latex technology
4. Printing
5. Front panel
6. Problem solving
7. Front-panel error codes
8. Power specifications

### Useful information

The user's guide to your printer can be downloaded from:

- <http://www.hp.com/go/latex110/manuals>

Further information is available from:

- <http://www.hp.com/go/latex110/support>

Videos about how to use the printer can be found in:

- <http://www.hp.com/supportvideos>
- <http://www.youtube.com/HPsupportAdvanced>

Join the community, find tools, and talk to experts. Visit the HP Latex Knowledge Center at:

- <http://www.hp.com/communities/HPLatex>

### 1. Legal notices

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You can download the expressly provided HP Limited Warranty and Legal Information applicable to your product from <http://www.hp.com/go/latex110/manuals/>. For some countries/regions a printed HP Limited Warranty is provided in the box. In countries/regions where the warranty is not provided in printed format, you may request a printed copy from <http://www.hp.com/go/orderdocuments>, or write to: HP, MS POD, 11311 Chinden Blvd, Boise, ID 83714, USA.

Please include your product number, warranty period (found on your serial number label), name and postal address.

### 2. General safety guidelines

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 and call your service representative in any of the following cases:

- A power cord or plug is damaged.
- The curing enclosures are damaged.
- The printer has been damaged by an impact.
- There is any mechanical or enclosure damage.
- Liquid has entered the printer.
- There is smoke or an unusual smell coming from the printer.

- The printer has been dropped or the curing module has been damaged.
- The printer is not operating normally.

Turn off the printer in either of the following cases:

- During a thunderstorm
- During a power failure

Take special care with zones marked with warning labels.

### Electrical shock hazard

**WARNING!** The internal circuits of curing zones, vapor removal, print zone heaters and built-in power supplies 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.

To avoid the risk of electric shock:

- The printer must be connected to earthed mains outlets only.
- Do not attempt to dismantle the curing modules.
- Do not remove or open any other closed system covers or plugs.
- Do not insert objects through slots in the printer.

### Heat hazard

The 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 curing zones.
- Let the printer cool down when accessing to internal curing zone and output platen in case of substrate jam.
- Let the printer cool down before performing some maintenance operations.

### Fire hazard

The curing subsystems of the printer operate at high temperatures.

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

- The customer is responsible for meeting the printer's requirements and the Electrical Code requirements according to the local jurisdiction of the country where the equipment is installed. 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 information in the site preparation guide. 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. After cleaning, make sure all components are dry before using the printer again.
- Do not use aerosol products that contain flammable gases inside or around the printer. Do not operate the printer in an explosive atmosphere.
- Do not block or cover the openings in the printer body.
- Do not attempt to dismantle or modify the curing modules.
- Ensure that the operating temperature of the substrate, as recommended by its manufacturer, is not exceeded. If this information is not available, ask the manufacturer. Do not load substrates that cannot be used at an operating temperature above 125°C (257°F).
- Do not load substrates with auto-ignition temperatures below 250°C (482°F). If this information is not available, printing must be supervised at all times. 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/m<sup>2</sup>, 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.
- Do not operate the printer with covers bypassed.

### Light radiation hazard

Light radiation is emitted from the illumination of the print zone. This illumination is in compliance with the requirements of the exempt group of IEC 62471:2006: *Photobiological safety of lamps and lamp systems*. However, you are recommended not to look directly at the LEDs while they are on. Do not modify the module.

### 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

HP recommends that you wear gloves when handling ink system components.

## 3. Latex technology

Latex is an HP patented technology. Your printer's inks use latex to improve quality and versatility. After printing, curing is required to fix the ink.

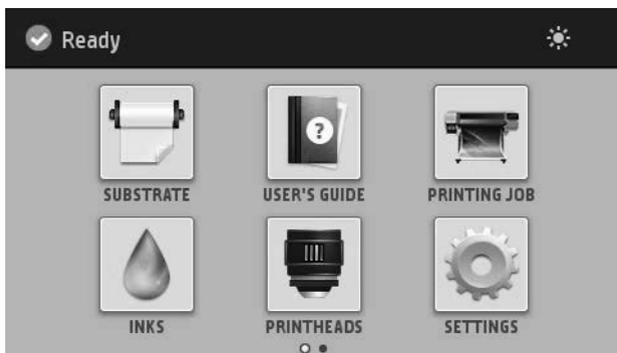
Speed, ink quantity, and curing temperature are correlated.

## 4. Printing

In order to print, you must first configure your printer in your RIP software, then send jobs to your printer from the RIP. You can use the RIP provided with your printer if you do not already have one installed.

## 5. The front panel

The front panel is a touch-sensitive screen with a graphical user interface; it is located on the front right of the printer. It gives you complete control of your printer: from the front panel, you can view information about the printer, change printer settings, perform calibrations and tests, and so on. The front panel also displays alerts (warning and error messages) when necessary.



There is an alternative home screen that you can see by sliding your finger across the screen to the left.



The front panel has a large central area to display dynamic information and icons. On the left and right sides you can see up to four fixed icons at different times. Normally they are not all displayed at the same time.

### Left and right fixed icons

	Return to the home screen.		View help about the current screen.
	Go back to the previous screen without discarding changes.		Cancel the current process.

### Home-screen dynamic icons

These items are displayed only on the home screen.

- At the top left of the screen is a message showing the printer status or the most important current alert. Press this message to see a list of all current alerts, with an icon indicating the severity of each alert. You can press an alert to get help in solving the problem.
- At the top right, press  to turn on or off the print-zone illumination light.

	View substrate status and perform substrate-handling operations.		Open the Substrate Library and access the extensive online library of substrate presets.
	View information about the job that is currently printing.		View ink-cartridge status and perform operations.
	View printhead status and perform operations.		View and change printer settings in general.
	View network and Internet status and change related settings.		View information about the printer.
	Get help.		

If the printer is left idle for some time, it goes into sleep mode and switches off the front-panel display. To change the

time that elapses before sleep mode, press , then **Setup > Front panel options > Sleep mode wait time**. You can set a time between 5 and 240 minutes; the default is 30 minutes.

The printer wakes from sleep mode and switches on the front-panel display whenever there is some external interaction with it.

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## 6. Problem solving

See the troubleshooting sections of the user's guide.

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## 7. Front-panel error codes

Under certain circumstances, a numeric error code appears on the front panel. Follow the advice in the Recommendation column to resolve the error. If the recommendation does not seem to solve the problem, call your service representative.

If an error code appears on the front panel that is not included in this list, turn off the printer and then turn it back on. If the problem persists, call your service representative.

Error code	Recommendation
03.21:01	PSU undervoltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that the input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>
03.22:01	PSU overvoltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>
14.72:01	Zero voltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that the input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>
14.73:01	Very low voltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that the input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>
14.74:01	Low voltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that the input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>
14.75:01	Excessive voltage detected. <ol style="list-style-type: none"><li>1. Turn off the printer and unplug both power cords.</li><li>2. Check that the power cords are not visibly damaged.</li><li>3. Ensure that the input voltage is within specifications (180–264 V AC).</li><li>4. Plug in both power cords and make sure they are fully inserted.</li><li>5. Turn on the printer.</li></ol>

Error code	Recommendation
14.87:10	<p>Curing power regulator overtemperature detected.</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>3. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>4. Turn on the printer.</li> </ol>
16.01:00	<p>The printer is unable to warm up within a preset time limit.</p> <ol style="list-style-type: none"> <li>1. Turn off the printer and unplug both power cords.</li> <li>2. Verify that power cords are not visibly damaged.</li> <li>3. Ensure that input voltage is within specifications (180–264 V AC).</li> <li>4. If the voltage is low, decreasing the curing temperature may help.</li> <li>5. Plug in both power cords and make sure they are fully inserted.</li> <li>6. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>7. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>8. Turn on the printer.</li> </ol>
16.02:00	<p>The printer is unable to cool down within a preset time limit.</p> <ol style="list-style-type: none"> <li>1. Check that all fans are working and unblocked when printing.</li> <li>2. Turn off the printer.</li> <li>3. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>4. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>5. Turn on the printer.</li> </ol>
16.03:00	<p>Excessive heat in the printer.</p> <ol style="list-style-type: none"> <li>1. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>2. Reduce the curing temperature and/or increase the number of passes.</li> <li>3. Check that all fans are unblocked.</li> </ol>
16.04:00	<p>Insufficient heat in the printer. Check that the ambient temperature is within printer specifications (15–35°C).</p>
16.11:10	<p>Curing temperature sensor measurement out of range (temperature sensor 1 failed or not connected).</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>3. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>4. Turn on the printer.</li> </ol>
16.12:10	<p>Curing temperature sensor measurement out of range (temperature sensor 2 failed or not connected).</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>3. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>4. Turn on the printer.</li> </ol>
16.13:10	<p>Curing temperature sensor measurement out of range (temperature sensor 3 failed or not connected).</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>3. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>4. Turn on the printer.</li> </ol>

<b>Error code</b>	<b>Recommendation</b>
16.14:10	<p>Curing temperature sensor measurement out of range (temperature sensor 4 failed or not connected).</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Check that the ambient temperature is within printer specifications (15–35°C).</li> <li>3. Check that the electronic enclosures at the rear of the printer are properly ventilated.</li> <li>4. Turn on the printer.</li> </ol>
16.84:03, 16.85:03	<p>Air curtain resistor out of range. Check that the air curtain fans (at the front of the curing module) are working and unblocked.</p>
21:13	<p>Unable to move the maintenance cartridge along its whole path.</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. While the printer is off, remove the printhead maintenance cartridge manually.</li> <li>3. Make sure that the printhead maintenance cartridge path is clear. Remove any visible obstacles (paper, plastic parts, and so on) restricting the movement.</li> <li>4. Reinstall the printhead maintenance cartridge.</li> <li>5. Turn on the printer.</li> <li>6. If the error persists, replace the printhead cleaning cartridge.</li> </ol>
21.2:10	<p>Printhead cleaning cartridge error.</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Remove and reinsert the printhead cleaning cartridge.</li> <li>3. Turn on the printer.</li> <li>4. If the error persists, replace the printhead cleaning cartridge.</li> </ol>
21.5:03	<p>The part that advances the printhead maintenance cartridge web wipe is blocked.</p> <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Manually remove and insert the printhead maintenance cartridge.</li> <li>3. Turn on the printer.</li> <li>4. If the error persists, replace the printhead cleaning cartridge.</li> </ol>
25.n:10 (where n = the ink cartridge number)	<p>A possible error in the ink cartridge pressure sensor has been detected. The ink level reported may not be accurate. Call your service representative if feasible.</p>
27.1:00	<p>Several blocked nozzles have been detected in the optimizer printhead. If print quality is not acceptable, clean or replace the printhead.</p>
27.n:01 (where n = the printhead slot number)	<p>A large number of blocked nozzles have been detected in one or more printheads. Calibration may have failed due to low printhead performance. Clean all the printheads and check their status.</p>
29:00	<p>The printhead cleaning cartridge (part number CZ681A ) is almost full. It will need to be replaced soon.</p>
29:01	<p>The printhead cleaning cartridge is not inserted correctly.</p> <ol style="list-style-type: none"> <li>1. Open the printhead cleaning cartridge door on the right of the printer.</li> <li>2. Make sure that the printhead cleaning cartridge is correctly seated, then close the door.</li> <li>3. If the error persists, replace the printhead cleaning cartridge.</li> </ol>
29.1:01	<p>Unable to track the printhead cleaning cartridge status. Check, visually, that the maintenance cartridge has a correct status pattern on it.</p>
29.2:00	<p>Unable to advance the printhead cleaning roll. Replace the printhead cleaning cartridge.</p>

Error code	Recommendation
32:01	The take-up reel is disconnected. If you want to use the take-up reel, turn off the printer and ensure that all take-up reel cables are connected (sensor cables, printer cable). If you do not want to use it, you may need to unload the substrate manually from the take-up reel. Remember to cut the substrate first.
32:01.1, 32:01.2	This error occurs when the tension bar stays in one of its sensor trigger positions for more than 8 seconds. The most likely causes of this error are as follows: <ul style="list-style-type: none"> <li>• The winding-direction switch on the take-up reel motor is activated, but substrate has not been taped to the take-up reel yet.</li> <li>• The wrong take-up reel winding direction has been selected.</li> <li>• Something is blocking the movement of the tension bar.</li> <li>• The substrate is not following the correct path between the tension bar and the diverter.</li> </ul>
32:02	This error occurs during printer initialization, to warn you that the take-up reel has been disconnected while the printer was turned off. It also occurs if you try to enable the take-up reel, but it is not connected to the printer. Connect the take-up reel to the printer and press OK to continue.
41:03	Electrical current limit in paper motor. <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Open the window and check for any visible obstacles restricting the advance of the substrate. If there is a wrinkled mass of substrate inside the substrate path, lift the substrate pinch lever and clear the obstruction. Carefully remove as much as possible of the jammed substrate from the top of the printer. Cut the substrate if necessary. <b>Caution:</b> Try to avoid pulling the substrate out from the input path, because this reverses the normal direction of movement, and could damage printer parts.</li> <li>3. Turn on the printer.</li> </ol>
42:03	Scan-axis motor electrical current limit. <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Open the window, observing all safety procedures, and check for any visible obstacles restricting the movement of the carriage. If there is a wrinkled mass of substrate inside the substrate path, lift the pinchwheels (using the substrate lever) and clear the obstruction.</li> <li>3. Turn on the printer.</li> </ol>
63:04	An input/output problem has occurred in the network card. <ol style="list-style-type: none"> <li>1. Make sure that the network cable is correctly connected to the network card.</li> <li>2. Check that your printer firmware is up to date.</li> </ol>
63:05	The job is reaching the printer too slowly. The printer cancels the job if there are long pauses of more than 20 s. <ol style="list-style-type: none"> <li>1. Make sure that a 1 Gigabit Ethernet card is correctly installed in the computer with the RIP.</li> <li>2. Check the RIP for any error messages. Check that the computer with the RIP is working correctly and has the minimum specification required by the RIP. Check that the hard disk is neither full nor excessively fragmented.</li> <li>3. Check whether the option <b>RIP while printing</b> is enabled. This option can cause slow printing if the computer is not sufficiently powerful.</li> <li>4. Try reducing the resolution of the job or increasing the number of passes.</li> <li>5. Check that all the components of your LAN are operating at Gigabit speed.</li> </ol>
68:03	There has been a loss of permanent data, such as configuration or accounting data. This can happen after a firmware update with a data structure not compatible with the older version.

<b>Error code</b>	<b>Recommendation</b>
74:01	An error occurred when uploading the firmware update file. <ol style="list-style-type: none"> <li>1. Turn off the printer by using the Power key on the front panel and the power switch at the rear of the printer. Disconnect the power cord, then reconnect the power cord and turn on the printer.</li> <li>2. Try again to upload the firmware update file to the printer.</li> </ol>
78:08	Borderless printing is not possible.
78.1:04	The printer has no substrate preset for this substrate. Follow the firmware update procedure to update the printer with the latest substrate presets.
78.2:01	The back tension is lost. This could be due to a loose roll core or an imminent end of roll. If these are not the causes, try unloading and reloading the substrate.
78.3:08	Printing with the ink collector is not available in this print mode.
79:03, 79:04, 79.2:04	Generic firmware error. Update the printer's firmware.
81:01, 81.1:01, 81:03	It was impossible to stop the servo correctly before setting the encoder position. <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Open the window, observing all safety procedures, and check for any visible obstacles restricting the movement of the drive roller. If there is a wrinkled mass of substrate inside the substrate path, lift the pinchwheels (using the substrate lever) and clear the obstruction.</li> <li>3. Turn on the printer.</li> </ol>
86:01, 86.2:01	There is a problem in the carriage assembly. <ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Open the window, observing all safety procedures, and check for any visible obstacles restricting the movement of the carriage. If there is a wrinkled mass of substrate inside the substrate path, lift the pinchwheels (using the substrate lever) and clear the obstruction.</li> <li>3. Turn on the printer.</li> </ol>
87:01	The scan-axis encoder strip is detecting errors in the carriage position. Clean the encoder strip by following the appropriate process in the front panel menu.
89:11, 89.1:10, 89.2:10	Some printzone LEDs may be failing or disconnected. The printer will continue operating normally, with only this functionality affected.
94:01	Color cannot be calibrated on this substrate. White substrate measurement is out of range.
94:02	Inconsistent colors found. <ol style="list-style-type: none"> <li>1. Check that the substrate-type selection in the front panel corresponds to an actual substrate loaded.</li> <li>2. Retry calibration.</li> </ol>
94:08	Color calibration failed. Try again. See more details about the color calibration functionality in the user's guide.
98:03	One or more printheads are malfunctioning. Use the printhead status plot to find out which printheads are malfunctioning, and replace them.

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## 8. Power specifications

Specification	HP Latex 110
Approximate AC voltage	200–240 V $\pm$ 10%
Frequency	50/60 Hz
Printer power	200 W
Printer maximum current	3 A
Curing power	2.0 kW
Curing maximum current	13 A

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