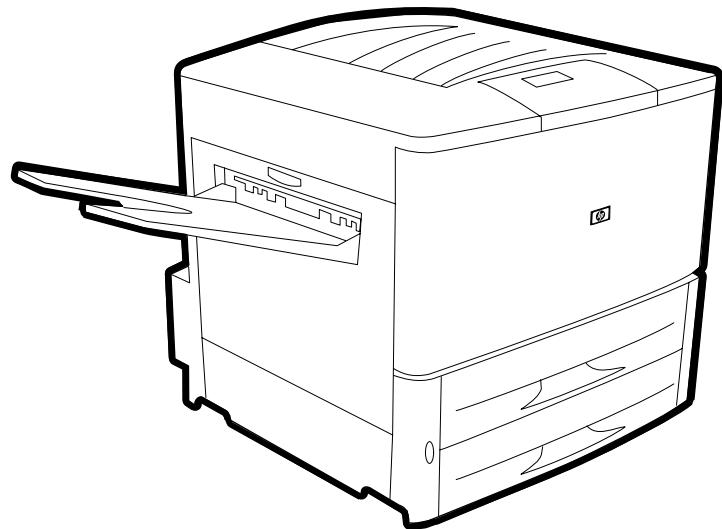


# HP LaserJet 9000, 9000n, and 9000dn printers



## Introduce

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For more information on use, maintenance, and troubleshooting for this product, go to [www.hp.com/cposupport/](http://www.hp.com/cposupport/) and see the manual titled *Use*.

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Third Edition, February 2002

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## HP Customer Care

Thank you for your purchase. In addition to this Introduce guide, information about Hewlett-Packard 9000 Series printers can be obtained in the Use guide at [www.hp.com/cposupport/](http://www.hp.com/cposupport/).

Along with your product, you receive a variety of support services from HP and our support partners. These services are designed to give you the results you need, quickly, and professionally.

### Online services

For 24-hour access to information through your modem, we suggest these services:

#### World Wide Web

Printer drivers, updated HP printer software, plus product and support information may be obtained from the following addresses:

in the U.S.: [www.hp.com](http://www.hp.com)

in Europe: [www.hp.com](http://www.hp.com)

in China: [www.hp.com.cn](http://www.hp.com.cn)

in Japan: [www.jpn.hp.com](http://www.jpn.hp.com)

in Korea: [www.hp.co.kr](http://www.hp.co.kr)

in Taiwan: [www.hp.com.tw](http://www.hp.com.tw)

or the local driver website: [www.dds.com.tw](http://www.dds.com.tw)

#### Firmware updates

Provides the ability to download firmware electronically from the Internet. To download the latest firmware, go to [www.hp.com/go/lj9000\\_firmware](http://www.hp.com/go/lj9000_firmware) and follow the instructions on the screen. To easily send firmware updates to multiple printers, use the HP Web JetAdmin software. (Visit [www.hp.com/go/webjetadmin](http://www.hp.com/go/webjetadmin).)

## **Obtaining software utilities and electronic information**

### **For U.S. and Canada**

**Phone:**

(1) (661) 257-5565

**Fax:**

(1) (661) 257-6995

**Mail:**

HP Distribution  
P.O. Box 907  
Santa Clarita, CA  
91380-9007  
U.S.A.

### **For Asia-Pacific Countries/Regions**

Contact Mentor Media at (65) 740-4477 (Hong Kong SAR, Indonesia, Philippines, Malaysia, or Singapore).  
For Korea, call (82) (2) 3270-0700.

### **For Australia, New Zealand, and India**

For Australia, call (03) 8877-8000.

For New Zealand, call (64) (9) 356-6640.

For India, call (91) (11) 682-6035.

### **For European English**

Call +44 (0) 207 512 52 02.

## **HP direct ordering for accessories or supplies**

For the U.S., call (1) (800) 752-0900. For Canada, call (1) (800) 387-3867.

## **HP Support Assistant compact disc**

This support tool offers a comprehensive online information system designed to provide technical and product information on HP products. To subscribe to this quarterly service in the U.S. or Canada, call (1) (800) 457-1762. In Hong Kong SAR, Indonesia, Malaysia, or Singapore, call Fulfill Plus at (65) 740-4477.

## **HP service information**

To locate HP-Authorized Dealers in the U.S., call (1) (800) 243-9816. For HP-Authorized Dealers in Canada, call (1) (800) 387-3867.

## **HP service agreements**

For the U.S., call (1) (800) 743-8305. For Canada, call (1) (800) 268-1221. For extended service, call (1) (800) 446-0522.

## **Customer support options worldwide**

### **Customer support and product repair assistance for the U.S. and Canada**

- For the U.S., call (1) (208) 323-2551 Monday through Friday from 6 A.M. to 10 P.M. and Saturday 9 A.M. to 4 P.M., Mountain time.
- For Canada, call (1) (905) 206-4663 or (1) (800) 387-3867 Monday through Friday from 8 A.M. to 8 P.M., Mountain time.

Support is free of charge during the warranty period. However, your standard long-distance phone charges still apply. Have your system nearby and your serial number ready when calling.

If you know your printer needs repair, call (1) (800) 243-9816 to locate your nearest HP-Authorized service provider.

## European customer support center language and in-country/region options available

The support centers for most countries/regions are open Monday through Friday 8:30 to 18:00 CET.

HP provides a free telephone support service during the warranty period. By calling a telephone number listed below, you will be connected to a responsive team waiting to help you. If you require support after your warranty has expired, you can receive support for a fee through the same telephone number. The fee is charged on a per-incident basis. When calling HP, have the following information ready: product name and serial number, date of purchase, and description of the problem.

- Austria: 43 (0)810 00 6080
- Belgium
  - Dutch: 32 (0)2 626-8806
  - French: 32 (0)2 626-8806
- Czech Republic: 42 (0)2 6130 7310
- Denmark: +45 39 29 4099
- International English: +44 (0)207 512 52 02
- Finland: 358 (0)203 47 288
- France: 33 (0)1 43 62 34 34
- Germany: 49 (0)180 52 58 143
- Greece: +30 (0)1 619 64 11
- Hungary: +36 (0)1 382-1111
- Ireland: +353 (0)1 662 5525
- Italy: 39 02 264 10350
- Netherlands: 31 (0)20 606 8751
- Norway: 47 22 11 6299
- Poland: +48 22 865 98 00
- Portugal: 351 21 3176333
- Romania: +40 1 315 44 42 (or 01 3154442)
- Russian Federation
  - Moscow: +7 095 797 3520
  - St. Petersburg: +7 812 346 7997
- Spain: +34 902 321 123
- Sweden: +46 (0)8 619 2170
- Switzerland: +41 (0)848 80 11 11
- Turkey: +90 212 221 69 69
- Ukraine: +7 (380-44) 490-3520
- U.K.: +44 (0)207 512 52 02

### Africa and Middle East

- Egypt: +202 7956222
- Israel: +972 (0)9 9524848
- South Africa
  - Inside RSA: 086 000 1030
  - Outside RSA: +27-11 258 9301
- United Arab Emirates, Bahrain, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Yemen: 971 4 883 8454
- International English: +44 (0)207 512 52 02

## Worldwide support centers

Hours of operation vary by country/region.

### Asia-Pacific Countries/Regions

- Australia: (03) 8877 8000
- China: +86 (0)10 6564 5959
- Hong Kong SAR: +85 (2) 2802 4098
- India: +91 11 682 6035
- Indonesia: +62 (21) 350-3408
- Japan: +81 3 3335-8333
- Republic of Korea:  
Seoul: +82 (2) 3270-0700  
Outside Seoul: 080 999-0700
- Malaysia: +60 (3) 295 2566
- New Zealand: +64 (9) 356 6640
- Philippines: +63 (2) 867 3551
- Singapore: +65 272 5300
- Taiwan: +886 (2) 2717 0055
- Thailand: +66 (2) 661 4000
- Vietnam: +84 (0) 8 823 4530

### Latin America

- Argentina: 0810-555-5520
- Brazil  
Greater Sao Paulo: (11) 3747-7799  
Outside Greater Sao Paulo: 0800-157751
- Chile: 800-22-5547
- Guatemala: 800-999-5305
- Mexico  
Mexico City: 52-58-9922  
Outside Mexico City: 01-800-472-6684
- Peru: 0-0800-10111
- Puerto Rico: 1-877-2320-589
- Venezuela  
Caracas: 207 8488  
Outside Caracas: 800 47 777

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# 1 Printer information

## Printer features and benefits

This section lists the major printer features.

### Speed and throughput

- Transmit Once, Raster Image Processing (RIP) Once technology
- Eight-second standby to first page
- 50 pages per minute (ppm) on letter or ISO A4 paper
- Duty cycle up to 300,000 pages per month
- 300 megahertz (MHz) microprocessor

### Resolution

- 600 dots per inch (dpi) with Resolution Enhancement technology (REt)
- FastRes 1200 provides 1200 dpi quality at full speed
- Up to 220 levels of gray

## **Memory**

- 64 megabytes (MB) (9000, 9000n, 9000dn) of random access memory (RAM), expandable to 256 MB using industry standard 100-pin dual in-line memory modules (DIMMs)
- MEt which automatically compresses data to use RAM more efficiently

## **Language and fonts**

- HP Printer Command Language (PCL driver) 6
- HP PCL driver 5e for compatibility
- Printer Job Language
- Printer Management Language
- 80 scalable TrueType typefaces
- PostScript Level 3 emulation standard

## **Consumables management**

- Supplies status page with toner gauge, page count, and information on paper sizes used
- Internet-enabled supplies ordering
- No-shake cartridge
- No-pull tab

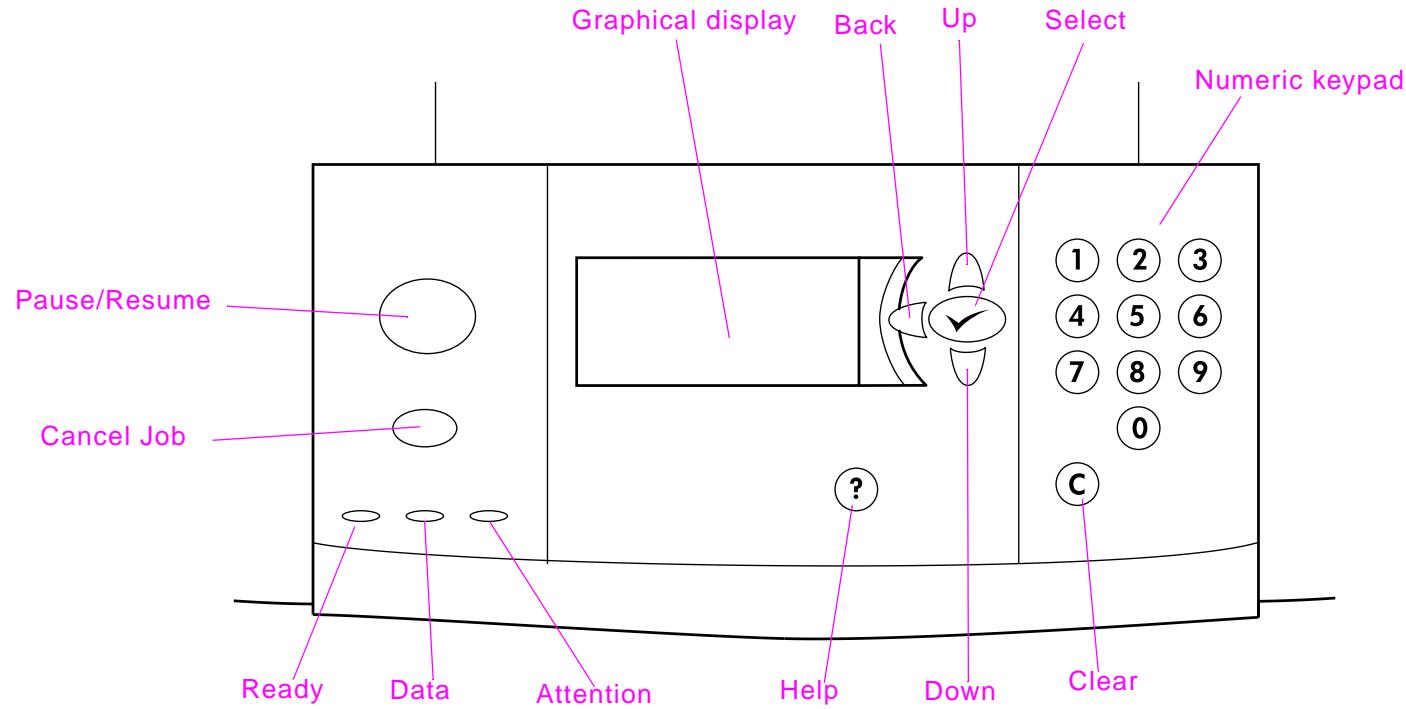
## Parts or accessories

Type of item	Item	Description or use	Order number
<b>Paper handling</b>	Tray 1 (100-sheet multipurpose tray)	Automatically feeds special media such as envelopes and labels.	C8568A
	Tray 4 (2,000-sheet feeder)	An optional tray that fits under the printer for increased input capacity.	C8531A
	Duplex printing accessory (duplexer)	Allows automatic printing on both sides of paper.	C8532A
	3,000-sheet stacker	One 3,000-sheet stacking device.	C8084A
	3,000-sheet stapler/stacker	One 3,000-sheet stacking device provides stapling for as many as 50 sheets of paper per document.	C8085A
<b>Printing supplies</b>	Print cartridge (30,000 images)	Replacement HP maximum capacity, smart print cartridge.	C8543X
	Staple cartridge	Replacement HP 5,000 staples cartridge.	C8091A

Type of item	Item	Description or use	Order number
<b>Memory, fonts, and mass storage</b>	SDRAM DIMMs (100-pin)	Improves the ability of the printer to handle large and stored jobs (maximum 192 MB with HP brand DIMMs).	
	16 MB		C7843A
	32 MB		C7845A
	64 MB		C7846A
	128 MB		C9121A
	Flash DIMM (100-pin)	Permanent storage for fonts and forms.	
	16 MB		C9147AA
	Font DIMM (100-pin)	8 MB Asian ROM. Traditional Chinese Simplified Chinese	
			C4292A
			C4293A
	EIO hard disk	Permanent storage for fonts and forms. Enables RIP ONCE technology of print jobs that are too large to RIP ONCE in RAM.	J6054A (5 GB)
<b>Cable and interface accessories</b>	Enhanced EIO Cards	<ul style="list-style-type: none"> <li>• HP JetDirect 610N Print Server for Token Ring networks (RJ-45, DB-9)</li> <li>• HP JetDirect Connectivity Card for USB, Serial, and LocalTalk</li> <li>• HP JetDirect 610N Print Server for Fast Ethernet (10/100Base-TX) networks (RJ-45 only)</li> </ul>	J4167A J4135A J4169A
<b>Maintenance kit</b>	Printer maintenance kit	Contains replacement fuser, pick roller, transfer roller, and feed and separation rollers.	
	For 110V units		C9152A
	For 220V units		C9153A

## Control panel layout

The control panel includes three light emitting diode (LED) indicator lights, four navigation keys, dedicated help, two job-specific buttons, a numeric key pad, and a graphical display (capable of displaying up to four lines of text).



Key	Function
▼ (BACK ARROW)	Backs up one step from a selection or a 10-key entry.
▲ (UP ARROW)	Navigates to the previous item in the list.
✓ (SELECT)	<ul style="list-style-type: none"><li>Saves the selected value for that item. An asterisk (*) appears next to the selection, indicating that it is the new default. Default settings remain when the printer is switched off or reset (unless you reset all factory defaults from the <b>Resets</b> menu).</li><li>Prints one of the printer information pages from the control panel.</li></ul>
◀ (CLEAR)	Returns a numeric entry to its previous value.
▼ (DOWN ARROW)	Navigates to the next item in the list.
?	Gets help on the message currently displayed. (HELP)
CANCEL JOB	Cancels the print job that the printer is processing. The time it takes to cancel depends on the size of the print job. (Press it only once.)
PAUSE/RESUME	<ul style="list-style-type: none"><li>Returns to the ready or busy state from menus or online help.</li><li>Toggle between <b>PAUSE</b> and <b>RESUME</b>.</li></ul>
NUMERIC KEYPAD	Enters numeric values.

## Using the embedded Web server

The HP LaserJet 9000 Series comes equipped with an embedded Web server. Accessing the embedded Web server from a Web browser on a computer lets you obtain information about the printer, including:

- Control panel messages
- Supplies levels and ordering
- Tray configuration
- Printer control panel menu configurations
- Printer configuration page
- Printer Event Log
- Printer usage (types of print jobs)
- Network configuration and management
- E-mail alerts

You can also use the embedded Web server to perform the print job management functions that would usually be done at the printer control panel. These functions include:

- Changing printer settings
- Changing printer configuration
- Canceling print jobs

### To gain access to the embedded Web server

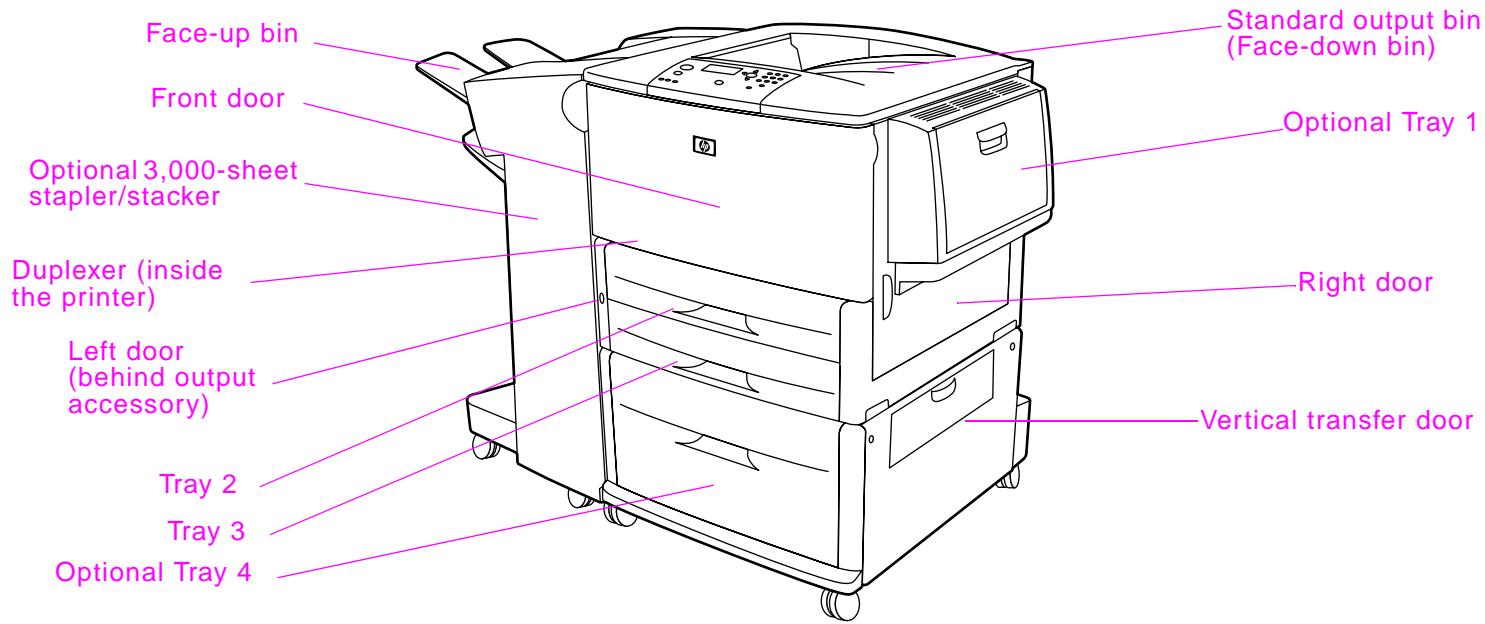
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**Note**

To use the embedded Web server, you must have an IP-based network and a Web browser.

In your Web browser, type the IP address assigned to the printer. For example, if the printer IP address is 192.0.0.192, you would type this address: <http://192.0.0.192>

## External view of printer and accessories



## Understanding printer messages

Printer messages appear on the printer control panel display to relay the normal status of the printer (such as Processing Job), or an error condition (such as Close Front Door) that needs attention. This printer features an online help system that provides instructions for resolving most printer errors. Certain control-panel error messages alternate with instructions on gaining access to the online help system.

### Getting help for a message

Whenever a ? appears in an error message or a message alternates with FOR HELP PRESS THE ? KEY, press the ? key to navigate through a sequence of instructions.

To exit the online help system, press PAUSE/RESUME.

### If a message persists

- If a message persists, press ✓ to continue or press ? for additional help.
- If a message persists after performing all of the recommended actions, contact an HP-authorized service or support provider. For contacts, see “Customer support options worldwide” on page 6.

## Printing information pages

From the printer control panel, you can print these pages, which contain information about the printer configuration:

- Menu map
- Configuration page
- Supplies Status page
- Usage page
- File Directory page
- PCL Driver or PS Driver font list

### To print an information page

- 1 Press .
- 2 Use  or  to scroll to Information and press .
- 3 Use  or  to scroll to the information page you want and press .

---

**Note**

To print a configuration page, press  22 on the numeric keypad.

# 2 Printing tasks

## Loading input trays

This section contains information for loading standard- and custom-size media into optional Tray 1, Tray 2, Tray 3, and optional Tray 4.

---

**CAUTION**

To avoid a jam, never add or remove paper from optional Tray 1 or open Tray 2, Tray 3, or optional Tray 4 while printing from that tray.

---

To avoid damaging the printer, print labels and envelopes only from optional Tray 1. Send labels and envelopes to the face-up bin. Print only one side of labels and envelopes.

## Loading optional Tray 1

Optional Tray 1, which holds up to 100 sheets, is available for the printer. For paper specifications, see “Paper specifications” on page 47.

### To load optional Tray 1

- 1 Open optional Tray 1.
- 2 Load (orient) paper according to size.

---

**CAUTION**

To avoid jams, print sheets of labels one at a time.

---

- 3 Slide the paper width guides to the appropriate size marked on the tray.

---

**Note**

If printing on A-3 size paper, also pull out the tray extension until it stops.

---

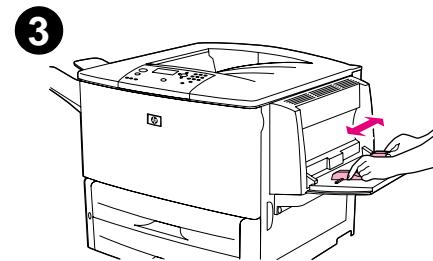
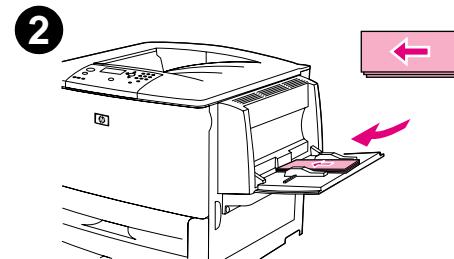
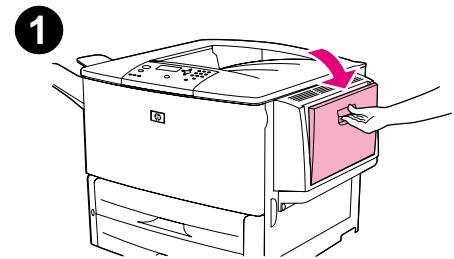
- 4 By default, **Tray 1 Size** is set to **Ane**. If you do not specify a size, any job sent to the printer prints from Tray 1, if print media is loaded in the tray.

---

**Note**

If custom size media is loaded, note the size in millimeters on the left (Y) and front (X) guides and go to “Setting the paper size for a tray” on page 27.

---



## Loading trays 2 and 3

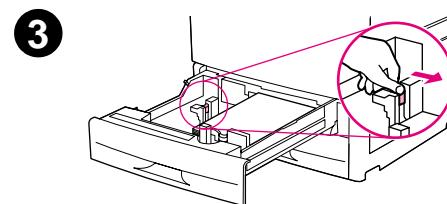
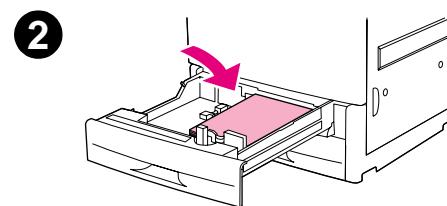
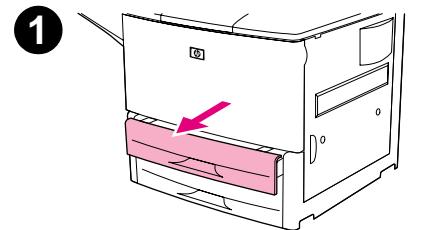
The 500-sheet input trays (trays 2 and 3) come with the printer. For paper specifications, see “Paper specifications” on page 47.

### To load trays 2 and 3

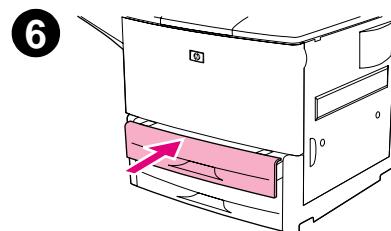
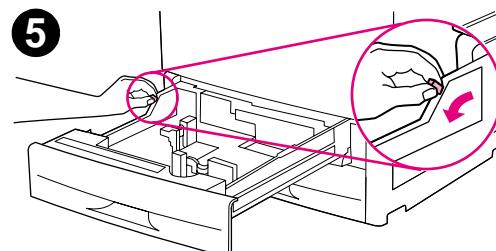
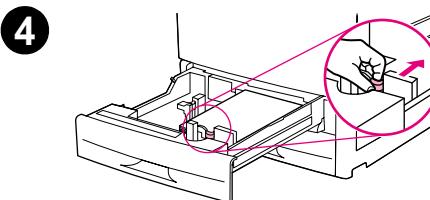
#### CAUTION

To avoid a jam, never add or remove paper from a tray while printing from that tray.

- 1 Open the tray until it stops.
- 2 Load (orient) paper according to size.
- 3 Adjust the left (Y) paper guide by pressing the tab on the guide and sliding the guide to the edge of the stack.



- 4 Adjust the front (X) paper guide by pressing the tab on the guide and sliding the guide to the edge of the stack.
- 5 Set the paper lever to Standard if both guides are set to the same Standard marking, such as letter or A4. Otherwise, set the lever to Custom.
- 6 Close the tray.
- 7 If standard-size media is loaded, the control panel display will show the dimensions. If custom-size media is loaded, note the paper size in millimeters on the left (Y) and front (X) guides and go to "Setting the paper size for a tray" on page 27.



## Loading optional Tray 4

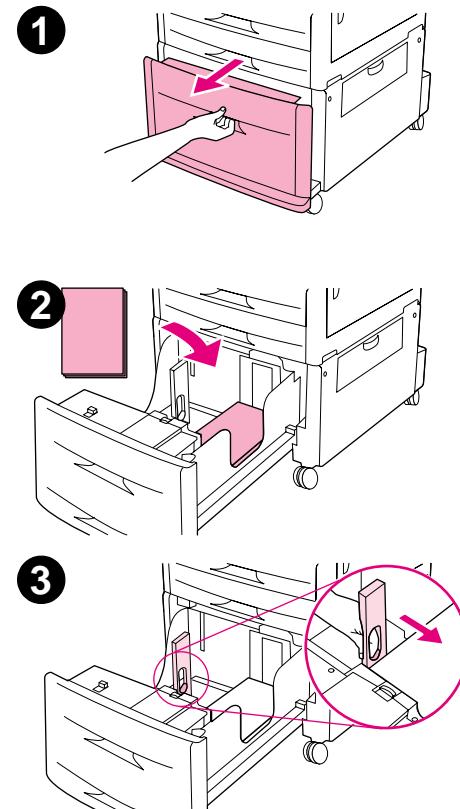
Optional Tray 4, which holds up to 2,000 sheets, is available for the printer. The tray fits under the printer and acts as a base. For paper specifications, see “Paper specifications” on page 47.

### To load optional Tray 4

#### CAUTION

To avoid a jam, never add or remove paper while printing from that tray.

- 1 Open the optional tray until it stops.
- 2 Load (orient) paper according to size. Start with a small sample.
- 3 Adjust the left (Y) paper guide by pressing the tab on the guide and sliding the guide to the edge of the stack.



- 4 Adjust the front (X) paper guide by pressing the tab on the guide and sliding the guide to the edge of the stack.
- 5 Set the paper lever to Standard if both guides are set to the same Standard marking, such as Letter or A4. Otherwise, set the lever to Custom.
- 6 Load additional paper to fill the tray.
- 7 Press down on all four corners of the paper stack to ensure the paper rests flat in the tray, without bending.

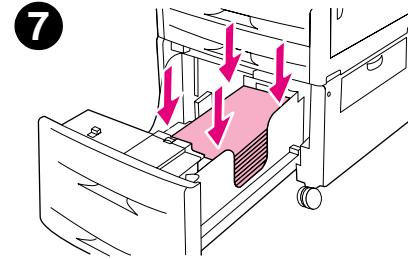
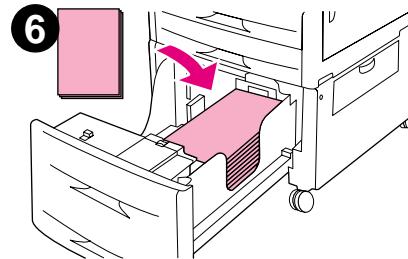
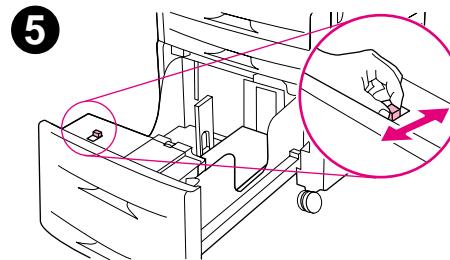
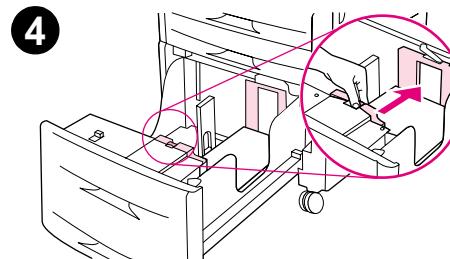
---

**CAUTION**

Never store paper or other items in the area to the left of the guides. Doing so can permanently damage the tray.

---

- 8 Close the tray.
- 9 If custom-size media is loaded, note the measurement in millimeters on each guide and go to "Setting the paper size for a tray" on page 27.



## Setting the paper size for a tray

Use these guidelines to set the paper size for a tray.

- When you load any size print media in optional Tray 1, you must use the control panel to configure the printer to recognize the size loaded.
- When you load standard size paper (such as A4 or letter) in Tray 2, Tray 3, or optional Tray 4, the printer automatically detects the size loaded and displays the size on the control panel. You do not need to set the size manually.
- When you load a custom (non-standard) size in Tray 2, Tray 3, or optional Tray 4, use the control panel to configure the printer to recognize the size loaded.

When standard- or custom-size paper is loaded into optional Tray 1, the printer prints at a slower speed if size is not specified in the control panel. When custom-size paper is loaded in Tray 2, Tray 3, or optional Tray 4, the printer prints at normal speed for that size because it picks up paper based on the size defined in the control panel.

### To set any size for optional Tray 1

- Press **✓**.
- Use **▲** or **▼** to scroll to Paper Handling and press **✓**.
- Use **▲** or **▼** to scroll to Tray 1 Size and press **✓**.
- Use **▲** or **▼** to scroll to the size loaded and press **✓**.
- Press **PAUSE/RESUME** to exit the menus.

### To set a standard size for trays 2, 3, and 4

The printer automatically detects the size loaded, so you do not need to set the size manually.

**To set a custom size for trays 2, 3, and 4**

- 1 Make sure the switch inside the tray you want to configure is in the Custom position.
- 2 Press **✓** to enter Menu.
- 3 Use **▲** or **▼** to scroll to Paper Handling and press **✓**.
- 4 Use **▲** or **▼** to scroll to Tray X Size, where X is the number of the tray you just closed, and press **✓**.
- 5 Use **▲** or **▼** to scroll to Custom and press **✓**.
- 6 Use **▲** or **▼** to select the unit of measure (Millimeters or Inches) and press **✓**. (The default is Millimeters because the marks on the tray guides are in millimeters.)
- 7 Use the numeric keypad or the **▲** or **▼** keys to enter the X (front to back) dimension and press **✓**.
- 8 Use the numeric keypad or the **▲** or **▼** keys to enter the Y (left to right) dimension and press **✓**.
- 9 Press **PAUSE/RESUME** to exit the menus.

## Using the optional stapler

The optional 3,000-sheet stapler/stacker can staple documents consisting of a minimum of two pages, and a maximum of 50 pages (20 lb paper) or equivalent 5.5 mm (.22 inches). The pages must be 64 to 199 g/m<sup>2</sup> (17 to 53 lb) of all sizes supported by the engine.

Keep in mind these additional points:

- The stapler bin can hold up to 3,000 sheets.
- Heavier media may have a stapling limit of less than 50 pages.
- If the job you want stapled consists of only one sheet, or if it consists of more than 50 sheets, the printer will print the job to the bin, however it will not staple.

## Selecting the stapler

You can usually select the stapler through your program or printer driver, although some options may only be available through the printer driver. See “STAPLING DOCUMENTS” on page 35. Where and how you make selections depends on your program or printer driver.

If you cannot select the stapler from the program or printer driver, select the stapler from the printer control panel.

### To select the stapler from the control panel

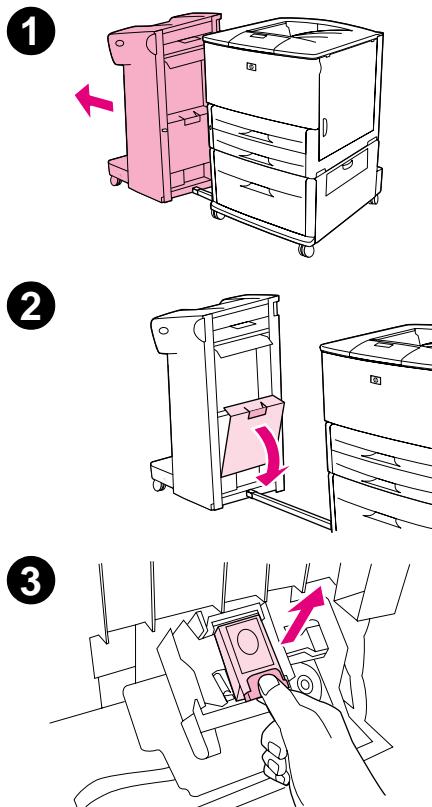
- 1 From the **READY** state, use ▲ or ▼ to scroll to **Configure Device** menu and press ✓.
- 2 Use ▲ or ▼ to scroll to **Printing** and press ✓.
- 3 Use ▲ or ▼ to scroll to **Staple** and press ✓.
- 4 Use ▲ or ▼ to scroll to the output bin or device you want and press ✓. An asterisk (\*) appears next to your selection.

## Loading staples

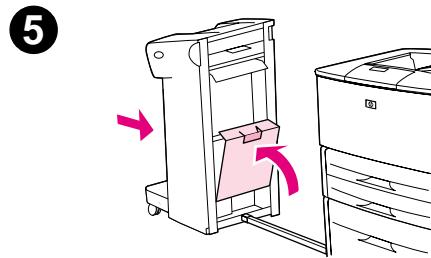
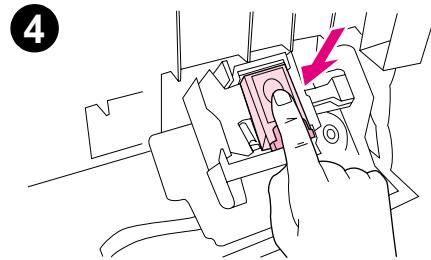
Load staples using this procedure.

### To load staples

- 1 Move the stapler away from the printer.
- 2 Open the stapler unit door.
- 3 On the empty staple cartridge, squeeze the tabs together and pull the empty cartridge out.



- 4 Insert the new staple cartridge so that it snaps into place.
- 5 Close the stapler unit door and attach the stapler/stacker to the printer.



## Printing both sides of paper (duplexing)

The printer can automatically print on both sides of paper when an optional duplex printing accessory (duplexer) is installed and configured. See the documentation included with the duplexer for installation instructions.

---

**CAUTION**

Never try to print on both sides of labels, envelopes, or paper heavier than 199 g/m<sup>2</sup> (53 lb). Damage to the printer or a jam can result.

---

### To print on both sides of paper

- 1 If necessary, configure the printer driver to recognize the duplexer. See the printer software help for instructions.
- 2 Load (orient) paper for duplexing.
- 3 Select the **Print on both sides** option from the program or printer driver. See “PRINTING ON BOTH SIDES” on page 35. If you cannot select this option from one of those locations, set it at the printer control panel. (In the **Configure Device** menu, select the **Printing** menu, select **Duplex**, and select **ON**.)
- 4 Set the **Binding** and **Orientation** options from the **Print** dialog box, if possible. If not, set them from the printer control panel. See “Layout options for printing both sides of paper” on page 33 for more information.

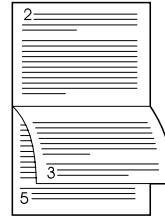
## Layout options for printing both sides of paper

The four print layout options are shown below. Select the binding and orientation options for this printer from the **Print** dialog box, if possible. The terminology in the **Print** dialog box for the binding edge may be different than the terms listed here.

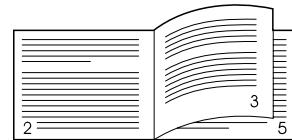
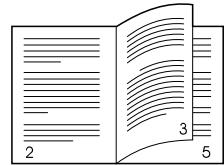
If you cannot set these options from the **Print** dialog box, set them from the control panel. Select the **Configure Device** menu, select the **Printing** menu, select **BINDING** or **ORIENTATION**, and choose the layout option you want.

### Printing left-to-right

#### 2. Long-edge landscape

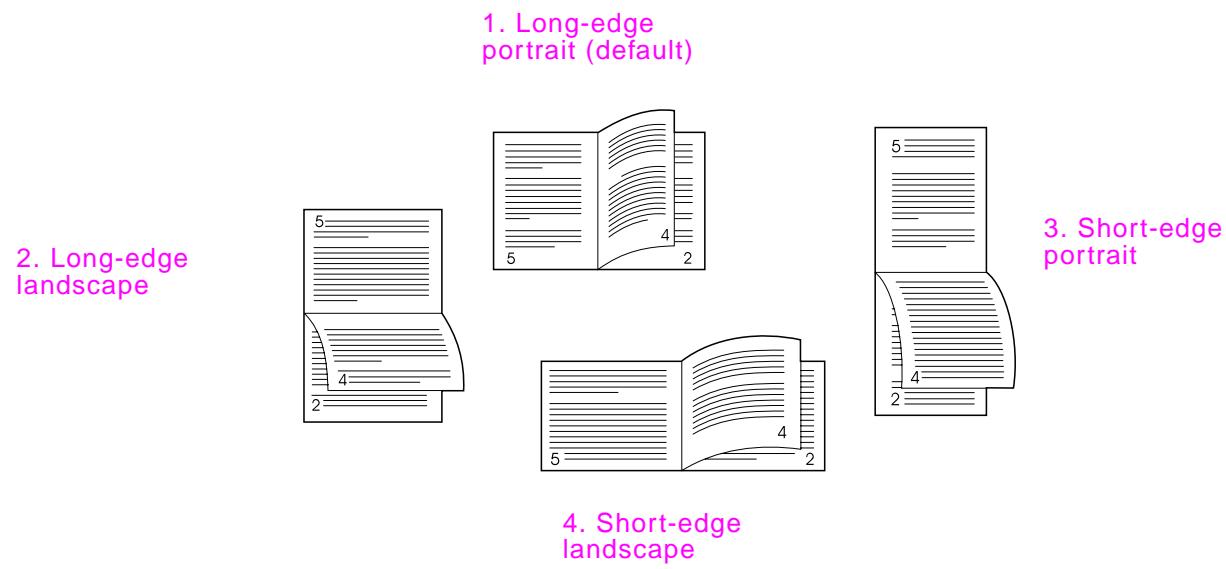


#### 1. Long-edge portrait (default)



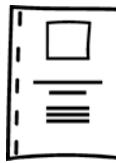
#### 3. Short-edge portrait

#### 4. Short-edge landscape

**Printing right-to-left**

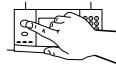
## Printing from the software

This section provides the basic instructions for printing using special features such as duplexing and stapling.

	<b>PRINTING ON BOTH SIDES</b> Click on FILE, PRINT, PROPERTIES. PCL: Click on FINISHING TAB. Select PRINT ON BOTH SIDES. PS: Click on ADVANCED TAB. Select PAPER/OUTPUT, PRINT ON BOTH SIDES.
	<b>PRINTING BOOKLETS</b> Click on FILE, PRINT, PROPERTIES. PCL: Click on FINISHING TAB. Select PRINT ON BOTH SIDES, BOOKLET PRINTING TYPE from the drop-down menu. PS: Not available.
	<b>STAPLING DOCUMENTS</b> Click on FILE, PRINT, PROPERTIES. PCL: Click on FINISHING TAB. Select STAPLE. PS: Click on ADVANCED TAB, DOCUMENT OPTIONS, PRINTER FEATURES, OUTPUT DESTINATIONS, STAPLER.
	<b>PRINTING MULTIPLE PAGES PER SHEET</b> Click on FILE, PRINT, PROPERTIES. PCL: Click on FINISHING TAB. Select Number of PAGES PER SHEET (up to 16). PS: Click on ADVANCED TAB, DOCUMENT OPTIONS, PRINTER FEATURES, PAGES PER SHEET. Click 'CHANGE PAGES PER SHEET' SETTING. Select number per sheet (page orientation).

	<h3>PRINTING WATERMARKS</h3> <p>Click on FILE, PRINT, PROPERTIES.</p> <p>PCL: Click on EFFECTS TAB. Select a predefined Watermark from the dropdown menu or Click EDIT to make changes, delete or create a new Watermark.</p> <p>PS: Click on ADVANCED TAB, DOCUMENT OPTIONS, PRINTER FEATURES, WATERMARK. Click on 'CHANGE WATERMARK SETTINGS' SPECIFY WATERMARK, repeat for Font, Size, Angle, Style and Print Watermark.</p>
	<h3>SELECTING PAPER- SIZE, SOURCE, OR TYPE</h3> <p>Click on FILE, PRINT, PROPERTIES.</p> <p>PCL: Click on PAPER TAB. Select PAPER SIZE, SOURCE OR TYPE from the drop-down menus.</p> <p>PS: Click on ADVANCED TAB. Select PAPER/OUTPUT, SIZE AND SOURCE.</p>
	<h3>PRINTING PRIVATE JOBS</h3> <p>Click on FILE, PRINT, PROPERTIES.</p> <p>PCL: Click on DESTINATION TAB. Click on OPTIONS. Select PRIVATE JOB. Enter Job Name and PIN.</p> <p>PS: Click on ADVANCED TAB, DOCUMENT OPTIONS, PRINTER FEATURES, JOB RETENTION. Click the CHANGE 'JOB RETENTION' SETTING. Select PRIVATE JOB, USER and PIN NUMBER.</p>
	<h3>USING QUICK COPY, PROOF AND HOLD, STORED JOBS</h3> <p>Click on FILE, PRINT, PROPERTIES.</p> <p>PCL: Click on DESTINATION TAB. Click on OPTIONS. Select QUICK COPY, PROOF AND HOLD OR STORED JOB. Enter Job Name. Go to Printer.</p> <p>PS: Click on ADVANCED TAB, DOCUMENT OPTIONS, PRINTER FEATURES, JOB RETENTION. Click in the CHANGE 'JOB RETENTION' SETTING select QUICK COPY or PROOF AND HOLD. Select USER NUMBER.</p>

## RELEASING PRIVATE PRINT JOBS, QUICK COPY, PROOF AND HOLD, AND STORED JOBS AT THE PRINTER



### PRIVATE PRINT JOBS

- 1 Press  $\checkmark$  to enter menus.
- 2 Use  $\blacktriangle$  and  $\blacktriangledown$  to scroll to RETRIEVE JOB and press  $\checkmark$ .
- 3 Use  $\blacktriangle$  and  $\blacktriangledown$  to scroll to the username of the job to print and press  $\checkmark$ .
- 4 Use  $\blacktriangle$  and  $\blacktriangledown$  to scroll to the jobname of the job to print and press  $\checkmark$ .
- 5 Use  $\blacktriangle$  and  $\blacktriangledown$  to scroll to PRINT and press  $\checkmark$ .
- 6 If a lock symbol appears to the right of PRINT, the job is PIN Protected. Using the numeric keypad or  $\blacktriangle$  or  $\blacktriangledown$ , enter the 4-digit PIN entered in the driver. As each number is entered, the number changes to an \*.
- 7 Using the numeric keypad or  $\blacktriangle$  or  $\blacktriangledown$ , enter the number of copies you want to print and press  $\checkmark$ .

# 3 Advanced printing tasks

## Using job retention

There are four, special job-retention features available for this printer. All four are available only when a hard disk is installed. Private jobs and proof and hold jobs are available in RAM.

- **Private jobs.** When you send a private job to the printer, the job does not print until you enter a PIN at the printer.
- **Stored jobs.** You can download a job such as a personnel form, time sheet, or calendar, to the printer and allow other users to print the job at any time. Stored jobs are copied to the optional hard disk and are not deleted if retention space on the printer becomes limited.
- **QuickCopy jobs.** You can print the requested number of copies of a job and then store a copy of the job on the optional hard disk in the printer. Storing the job allows you to print additional copies of the job later.
- **Proof and hold jobs.** This feature provides a quick and easy way to print and proof one copy of a job and then print the additional copies.

---

**Note**

Go to [www.hp.com/cposupport/](http://www.hp.com/cposupport/) and see the manual titled *Use* for more information on these features.

## Setting front-to-back registration

The front-to-back registration feature allows the front and back image to be calibrated. Image placement varies slightly for each input tray. The alignment procedure must be performed for each tray.

### To set the front-to-back value

- 1 Press **✓** to enter the menus.
- 2 Use **▲** and **▼** to scroll to **CONFIGURE DEVICE** and press **✓**.
- 3 Use **▲** and **▼** to scroll to **PRINT QUALITY** and press **✓**.
- 4 Use **▲** and **▼** to scroll to **SET FRONT TO BACK** and press **✓**.
- 5 Use **▲** and **▼** to scroll to **PRINT TEST PAGE** and press **✓**.
- 6 Follow the instructions on the printed page.

## Setting edge-to-edge registration

The edge to edge registration feature allows the ability to print within approximately two millimeters of all edges of the page. An internal-tray calibration page allows the administrator to calibrate each tray.

### To set the edge-to-edge shift value

- 1 Press **✓** to enter the menus.
- 2 Use **▲** and **▼** to scroll to **CONFIGURE DEVICE** and press **✓**.
- 3 Use **▲** and **▼** to scroll to **PRINT QUALITY** and press **✓**.
- 4 Use **▲** and **▼** to scroll to **SET EDGE TO EDGE** and press **✓**.
- 5 Use **▲** and **▼** to scroll to **PRINT TEST PAGE** and press **✓**.
- 6 Follow the instructions on the printed page.

# 4 Printer maintenance

## Print cartridge information

This section contains information about print cartridges.

### Print cartridge authentication

The printer will let you know that a cartridge is not a genuine HP print cartridge when you insert it in the printer. If you insert a used HP cartridge from another HP printer, the printer can take as many as 20 printed pages to receive the message authenticating that the cartridge is a genuine HP part.

If the printer control panel messages states that this is not a genuine HP print cartridge and you believe you purchased an HP cartridge, call the HP fraud hotline at (1) (887) 219-3183 (toll-free in North America).

### Non-HP print cartridges

Hewlett-Packard Company cannot recommend use of non-HP print cartridges, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. Service or repairs required as a result of using a non Hewlett-Packard print cartridge will *not* be covered under the printer warranty.

When you use a non-HP print cartridge, the printer is unable to report on the status of the print cartridge. The CARTRIDGE LOW and CARTRIDGE OUT messages will not be provided.

## Print cartridge life expectancy

When a **Cartridge Out** message appears on the control panel display due to the depletion of toner, the default setting allows the printer to continue printing until you replace the print cartridge, or until the printer receives an "end of drum life" message. When a **Cartridge Out** message appears due to the end of the drum life, the printer stops, and you cannot override the message or continue printing until you replace the drum. The printer stops to prevent potential damage to the printer.

HP recommends that you place an order for a replacement print cartridge when you first receive a **CARTRIDGE LOW** alert. You may order a cartridge via the Internet Enabled Supplies Ordering feature. To do so, click on the printer icon on the bottom right of your screen, click on the icon of the printer you use, and click on the Order Supplies link on the status page. In a network environment, use the embedded Web server to order supplies online.

## Printer maintenance kit

---

**Note**

The Printer Maintenance Kit is a consumable and is not covered under warranty.

To ensure optimum print quality, the printer will prompt you to perform printer maintenance every 350,000 pages. When the **PERFORM PRINTER MAINTENANCE** message appears on the control panel, you will need to purchase a printer maintenance kit and install the new parts. After a new maintenance kit is installed, the control panel displays **NEW MAINTENANCE KIT** and **NO** is highlighted. Use **▲** or **▼** to scroll to **YES** and press **✓**. To verify the maintenance kit is reset to zero, print a configuration page by pressing **22** on the numeric keypad.

For more information on installing the printer maintenance kit, see the instructions that accompany it.

## Cleaning the printer

To maintain print quality, clean the printer thoroughly:

- every time you change the print cartridge.
- whenever print-quality problems occur.

Clean the outside of the printer with a lightly water-dampened cloth. Clean the inside with only a dry, lint-free cloth. Observe all warnings and cautions with the cleaning tasks on the following page.

---

**WARNING!**

Avoid touching the fusing area when cleaning the printer. It can be HOT.

---

**CAUTION**

To avoid permanent damage to the print cartridge, do not use ammonia-based cleaners on or around your printer.

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## To clean the printer

- 1 Before you begin these steps, turn the printer off and disconnect all cables.
- 2 Open the front cover of the printer and remove the print cartridge.

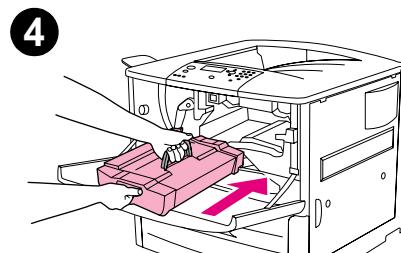
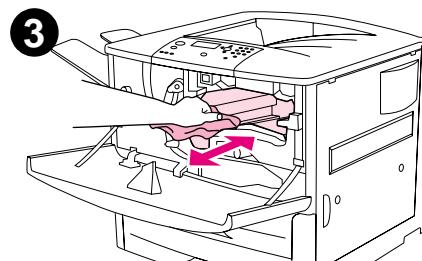
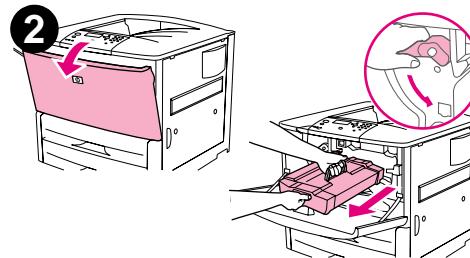
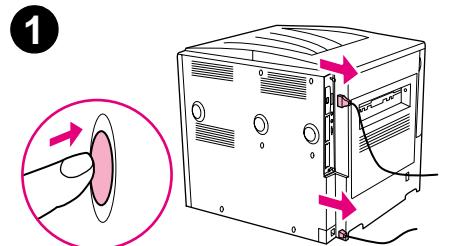
### CAUTION

To prevent damage to the print cartridge, use two hands when removing it from the printer.

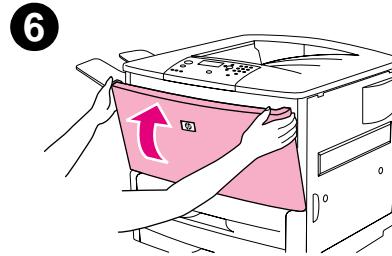
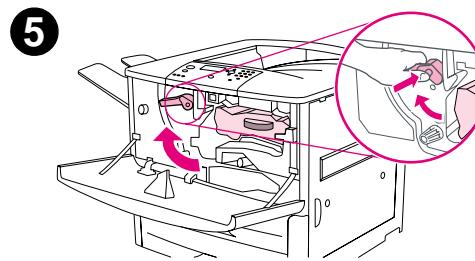
### Note

If toner gets on your clothes, wipe it off with a dry cloth, and wash your clothes in cold water. *Hot water sets toner into fabric.*

- 3 With a dry, lint-free cloth, wipe any residue from the paper path area, the registration roller, and the print cartridge cavity.
- 4 Replace the print cartridge.



- 5 Turn the green lever back to the locked position.
- 6 Close the front cover, reconnect all cables, and turn the printer on.



# A Specifications

## Paper specifications

HP LaserJet printers produce excellent print quality. This printer accepts a variety of media, such as cut-sheet paper (including recycled paper), envelopes, labels, transparencies, and custom-size paper. Properties such as weight, grain, and moisture content are important factors affecting printer performance and output quality.

The printer can use a variety of paper and other print media in accordance with the guidelines in this manual. Paper that does not meet these guidelines may cause the following problems:

- Poor print quality
- Increased jams and multiple-sheet feeds
- Premature wear on the printer, requiring repair

For best results, use only HP brand paper and print media. Hewlett-Packard cannot recommend the use of other brands. Because they are not HP products, HP cannot influence or control their quality.

It is possible for paper to meet all of the guidelines in this manual and still not produce satisfactory results. This might be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which HP has no control.

Before purchasing a large quantity of paper, make sure it meets the requirements specified in this user guide and in the *Guidelines for Paper and Other Print Media* guide. Always test paper before purchasing a large quantity. For more information, see [www.hp.com/go/ljpap](http://www.hp.com/go/ljpap).

---

**CAUTION**

Using paper outside HP specifications may cause problems for the printer, requiring repair. This repair is not covered by the HP warranty or service agreements.

## Supported sizes of paper for input and output

**Note**

For more information on an optional HP output device, see the user guide that came with the product.

Tray or Bin	Capacity	Paper	Weight
Optional Tray 1	Up to 100 sheets	<ul style="list-style-type: none"><li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, JPostD, 8K, 16K</li><li>Custom sizes: Minimum: 98 by 191 mm (3.9 by 7.5 inches) Maximum: 312 by 470 mm (12.28 by 18.46 inches)</li><li>Envelope sizes: Commercial #10, C5, DL, Monarch, B5</li></ul>	64 to 216 g/m <sup>2</sup> (17 to 58 lb bond) Two-sided printing: 64 to 199 g/m <sup>2</sup> (17 to 53 lb bond)
	Up to 10 envelopes	<b>Note</b> Print envelopes and labels only from optional Tray 1.	
Trays 2 and 3	Up to 500 sheets	<ul style="list-style-type: none"><li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, JIS B4, JIS B5, 11 by 17</li><li>Custom sizes: Minimum: 148 by 210 mm (5.8 by 8.2 inches) Maximum: 297 by 432 mm (11.7 by 17 inches)</li><li>Custom types: Transparencies</li></ul>	64 to 199 g/m <sup>2</sup> (17 to 53 lb bond)

Tray or Bin	Capacity	Paper	Weight
Optional Tray 4	Up to 2,000 sheets	<ul style="list-style-type: none"> <li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, 11 by 17, JIS B4, JIS B5</li> <li>Custom sizes: Minimum: 182 by 210 mm (7.17 by 8.27 inches) Maximum: 297 by 432 mm (12.28 by 18.46 inches)</li> </ul>	64 to 199 g/m <sup>2</sup> (17 to 53 lb bond)
Face-down bin	Up to 50 transparencies	<ul style="list-style-type: none"> <li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, JPostD, Monarch, 8K, 16K</li> <li>Custom sizes</li> <li>Custom types: Transparencies</li> </ul>	64 to 199 g/m <sup>2</sup> (17 to 53 lb bond)
Face-up bin	Up to 10 transparencies	<ul style="list-style-type: none"> <li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, JPostD, Monarch, 8K, 16K</li> <li>Custom sizes</li> <li>Custom types: Envelopes, labels</li> </ul>	64 to 216 g/m <sup>2</sup> (17 to 58 lb bond)
Duplex printing accessory		<ul style="list-style-type: none"> <li>Standard sizes: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B4, JIS B5, 8K, 16K</li> <li>Custom sizes</li> <li>Custom types: Duplexing is <i>not</i> supported for envelopes, labels, or transparencies</li> </ul>	64 to 199 g/m <sup>2</sup> (17 to 53 lb bond)

Tray or Bin	Capacity	Paper	Weight
Optional 3,000-sheet stacker	Up to 3,000 sheets of Letter or A4  Up to 1,500 sheets of Ledger or A3	<ul style="list-style-type: none"> <li>Standard sizes for face-down bin: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, 8K, 16K</li> <li>Standard sizes for face-up bin: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, JPostD, Monarch, 8K, 16K</li> <li>Custom sizes</li> <li>Custom types: Envelopes, labels, transparencies, heavy paper</li> </ul>	<ul style="list-style-type: none"> <li>64 to 199 g/m<sup>2</sup> (17 to 53 lb bond) in face-down bin</li> <li>64 to 216 g/m<sup>2</sup> (17 to 58 lb bond) in face-up bin</li> </ul>
Optional 3,000-sheet stapler/stacker	Up to 3,000 sheets stacked (up to 50 sheets stapled)	<ul style="list-style-type: none"> <li>Standard sizes for face-down bin: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, 8K, 16K</li> <li>Standard sizes for face-up bin: Letter, Legal, Executive, ISO A3, ISO A4, ISO A5, 11 by 17, JIS B5, JIS B4, JPostD, Monarch, 8K, 16K</li> <li>Custom sizes</li> <li>Custom types: Envelopes, labels, transparencies, heavy paper</li> </ul>	<ul style="list-style-type: none"> <li>64 to 199 g/m<sup>2</sup> (17 to 53 lb bond) in face-down bin</li> <li>64 to 216 g/m<sup>2</sup> (17 to 58 lb bond) in face-up bin</li> </ul>

## Supported types of paper

The printer allows the selection of the following types of paper and media using the control panel.

- plain
- pre-printed
- letterhead
- transparency (see “Transparencies” on page 54)
- prepunched
- labels (see “Labels” on page 54)
- bond
- recycled
- color
- card stock (see “Card stock and heavy paper” on page 56)
- rough
- user-defined (five types)

## Guidelines for using paper

For best results, use conventional 75 g/m<sup>2</sup> (20 lb) paper. Make sure the paper is of good quality, and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, and curled or bent edges.

If you are unsure what type of paper you are loading (such as bond or recycled), check the label on the package of paper.

Some paper causes print quality problems, jamming, or damage to the printer. Do not use letterhead paper that is printed with low-temperature inks, such as those used in some types of thermography, and do not use raised letterhead. Coated papers and some transparencies can wrap around the fuser roller and possibly cause jams.

The printer uses heat and pressure to fuse toner to the paper. Make sure that any colored paper or preprinted forms use inks that are compatible with the printer fusing temperature (392° F or 200° C for 0.1 second).

## Resolving issues with paper and other print media

Use this section to resolve common problems with paper and other print media.

Symptom	Problem	Solution
Poor print quality or toner adhesion, problems with feeding	Too moist, too rough, too smooth, or embossed; faulty paper lot	Try another kind of paper, between 100 to 250 Sheffield, 4 to 6 percent moisture content.
Dropouts, jamming, curl	Stored improperly	Store paper flat in its moisture-proof wrapping.
Increased gray background shading	Too heavy	<ul style="list-style-type: none"><li>Use lighter paper.</li><li>Use the face-up bin.</li></ul>
Excessive curl Problems with feeding	Too moist, wrong grain direction or short-grain construction	<ul style="list-style-type: none"><li>Use the face-up bin.</li><li>Use long-grain paper.</li></ul>
Jamming, damage to printer	Cutouts or perforations	Use paper free of cutouts or perforations.
Problems with feeding	Ragged edges	Use supported types of paper.
Multi-sheet feeding	Paper sticking together	Remove paper, fan it, and reload paper.

## Labels

To avoid damaging the printer, use only labels recommended for use in monochrome laser printers. Never print on the same sheet of labels more than once.

---

**CAUTION**

Do not print on both sides of labels, transparencies, envelopes, custom paper, or paper heavier than 216 g/m<sup>2</sup> (58 lb bond). Damage to the printer and jams might result.

---

### Label construction

When selecting labels, consider the quality of each component:

- **Adhesives:** The adhesive material should be stable at 200° C (392° F), the maximum fusing temperature of the printer.
- **Arrangement:** Only use full-sheet labels. Labels can peel off sheets with spaces between the labels, causing serious jams.
- **Curl:** Prior to printing, labels must lay flat with no more than 13 mm (0.5 inch) of curl in any direction.
- **Condition:** Do not use labels with wrinkles, bubbles, or other indications of separation.

## Transparencies

---

**CAUTION**

Transparencies used in the printer must be able to withstand 200° C (392° F), the maximum fusing temperature of the printer. To avoid damaging the printer, use only transparencies recommended for use in monochrome laser printers.

Do not print on both sides of labels, transparencies, envelopes, custom paper, or paper heavier than 216 g/m<sup>2</sup> (58 lb bond). Damage to the printer and jamming might result.

If you have problems printing transparencies, use optional Tray 1 and send them to the output face-down bin.

---

## Envelopes

**Note**

To print envelopes, use optional Tray 1 and print them either to the face-down bin or to the face-up bin.

### Envelope construction

Envelope construction is critical. Envelope fold lines can vary considerably, not only between manufacturers, but also within a box from the same manufacturer. Successful printing on envelopes depends upon the quality of the envelopes. When selecting envelopes, consider the following components:

- **Weight:** See “Paper specifications” on page 47 for supported envelope weight.
- **Construction:** Prior to printing, envelopes should lay flat with less than 6 mm (0.25 inches) curl and should not contain air. (Envelopes that trap air may cause problems.)
- **Condition:** Make sure envelopes are not wrinkled, nicked, or otherwise damaged.
- **Sizes in optional Tray 1:** See “Supported sizes of paper for input and output” on page 48 for supported paper sizes.

### Envelopes with adhesive strips or flaps

Envelopes with a peel-off adhesive strip, or with more than one flap that folds over to seal, must use adhesives compatible with the heat and pressure of the printer. The extra flaps and strips might cause wrinkling, creasing, or jams.

### Envelopes with double-side-seams

Double-side-seam construction has vertical seams at both ends of the envelope rather than diagonal seams. This style may be more likely to wrinkle. Be sure the seam extends all the way to the corner of the envelope.

### Envelope storage

Proper storage of envelopes helps contribute to good print quality. Envelopes should be stored flat. If air is trapped in an envelope creating an air bubble, then the envelope may wrinkle during printing.

## Card stock and heavy paper

For optimum printer performance, do not use paper heavier than 216 g/m<sup>2</sup> (58 lb bond) in optional Tray 1 or 199 g/m<sup>2</sup> (53 lb) in other trays. Paper that is too heavy might cause misfeeds, stacking problems, jams, poor toner fusing, poor print quality, or excessive mechanical wear.

### Card stock construction

- **Smoothness:** 135 to 216 g/m<sup>2</sup> (36 to 58 lb bond) card stock should have a smoothness rating of 100 to 180 Sheffield.
- **Construction:** Card stock should lay flat with less than 5 mm (0.2 inches) of curl.
- **Condition:** Make sure card stock is not wrinkled, nicked, or otherwise damaged.
- **Sizes:** See the sizes listed for “Optional Tray1” on page 48.

---

**Note**

Before loading card stock in optional Tray 1, make sure it is regular in shape and not damaged. Also, make sure the cards are not stuck together.

---

## Environmental specifications

### Power consumption

Printer state	Power consumption (average, in watts, base unit)	Power consumption (average, in watts, DN Bundle)
Printing (100-127V units) (220-240V units)	985 Watts 975 Watts	1040 Watts 995 Watts
Standby (100-127V units) (220-240V units)	285 Watts 255 Watts	265 Watts 265 Watts
PowerSave 1 (Fan is on) (100-127V units) (220-240V units)	40 Watts 40 Watts	40 Watts 40 Watts
PowerSave 2 (Fan is off) (100-127V units) (220-240V units)	25 Watts 25 Watts	25 Watts 25 Watts
Off (100-127V units) (220-240V units)	0.0 Watts 0.2 Watts	0.0 Watts 0.2 Watts

## Power requirements

---

### Power requirements (acceptable line voltage)

---

100-127 Volt (+/- 10%)	50-60 Hz (+/- 2 Hz)
------------------------	---------------------

---

220-240 Volt (+/- 10%)	50 Hz (+/- 2 Hz)
------------------------	------------------

---

220 Volt (+/- 10%)	60 Hz (+/- 2 Hz)
--------------------	------------------

---

## Acoustical specifications

---

Acoustics	Operating (Printing) <sup>a</sup>	Idle	Power-Save
Sound power level	7.1 Bel	6.0 Bel	inaudible
Sound pressure level, $L_{pAm}$ (Bystander position)	55 dB	41 dB	inaudible
Sound pressure level, $L_{pAm}$ (Operator position)	59 dB	43 dB	inaudible

---

a. Print speed is 50 ppm

## Circuit capacity

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**Minimum recommended circuit capacity**

---

100-127 Volt	15.0 amps
--------------	-----------

---

220-240 Volt	6.5 amps
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---

## Operating environment

---

**Operating temperature** 50° to 91° F (10 to 32.5° C)

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Relative humidity	10 to 80 percent
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Storage temperature	-40° to +60° F
---------------------	----------------

---

Storage humidity	15 to 90 percent
------------------	------------------

---

Speed, in pages per minute (ppm)	50 ppm
----------------------------------	--------

---

Expandable memory	Up to 256 MB total, using optional accessory memory DIMMs
-------------------	---

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