

Product: 1999 HP LaserJet 4000 and 4050 Series Printer Service Repair Workshop Manual
Full Download: <https://www.repairmanual.com/downloads/1999-hp-laserjet-4000-and-4050-series-printer-service-repair-workshop-manual/>



HP LaserJet 4000 and 4050 Series Printers Service Manual

Product: 1999 HP LaserJet 4000 and 4050 Series Printer Service Repair Workshop Manual
Full Download: <https://www.arepairmanual.com/downloads/1999-hp-laserjet-4000-and-4050-series-printer-service-repair-workshop-manual/>

Sample of manual. Download All 394 pages at:
<https://www.arepairmanual.com/downloads/1999-hp-laserjet-4000-and-4050-series-printer-service-repair-workshop-manual/>

HP LaserJet 4000 and 4050 Series Printers

Service Manual _____

**© Copyright Hewlett-Packard
Company 1999**

All Rights Reserved.

Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

Publication number
C4251-91003

First edition, April 1999

Warranty

The information contained in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with respect to this information. HEWLETT-PACKARD SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Hewlett-Packard shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in connection with the furnishing or use of this information.

Trademark Credits

PostScript™ is a trademark of Adobe Systems Incorporated which may be registered in certain jurisdictions.

CompuServe™ is a U.S. trademark of CompuServe, Inc.

Windows® is a U.S. registered trademarks of Microsoft Corporation.

TrueType™ is a U.S. trademark of Apple Computer, Inc.

ENERGY STAR® is a U.S. registered service mark of the U.S. EPA.

Contents

1 Printer Description

Overview	1-1
Printer Features	1-2
Identification	1-8
Model and Serial Numbers	1-8
Site Requirements	1-9
Space Requirements	1-10
Environmental Requirements	1-11
Paper Specifications	1-12
Supported Types of Paper	1-15
Guidelines for Using Paper	1-16
Labels	1-19
Transparencies	1-19
Envelopes	1-20
Card Stock and Heavy Paper	1-23
Safety Information	1-24
Laser Safety Statement	1-24
Canadian DOC Regulations	1-24
FCC Regulations	1-25
Laser Statement for Finland	1-26
Toner Safety	1-27
Environmental Product Stewardship	1-28

2 Service Approach

Overview	2-1
Service Approach	2-2
Parts and Supplies	2-3
Ordering Information	2-3
Helpful Documentation	2-4
Phone Numbers for Ordering	2-6
Exchange Program	2-6
Consumables	2-6
World Wide Web	2-6
HP Service Parts Information Compact Disc	2-6
HP Support Assistant Compact Disc	2-7
HP FIRST	2-7
Toner Cartridge Information	2-9
Warranty Statement	2-10

3 Printer Operation

Overview	3-1
Using the Control Panel	3-2
Control Panel Layout	3-2
Control Panel Lights	3-2
Control Panel Keys	3-3
Settings and Defaults	3-4
Control Panel Menus	3-5
Quick Copy Jobs Menu	3-6
Private/Stored Jobs Menu	3-7
Information Menu	3-8
Paper Handling Menu	3-9
Print Quality Menu	3-12
Printing Menu	3-15
Configuration Menu	3-20
I/O Menu	3-26
EIO Menu (Networked Printers)	3-29
Resets Menu	3-31
Service Mode	3-32
Service Menu	3-33
Setting the Page Count, Maintenance Count, and Serial Number	3-33
Cold Reset Paper	3-36
Diagnostics	3-36
Clear Event Log	3-36
Testing the Printer	3-37
Resetting the Printer	3-38
System Configuration	3-39
MS-DOS System Configuration	3-39
Parallel DOS Commands	3-39
Serial MS-DOS Commands	3-40
Printer I/O Configuration	3-41
Parallel Menu	3-41
Serial Configuration	3-41

4 Printer Maintenance

Overview	4-1
Cleaning the Printer and Accessories	4-2
Cleaning Spilled Toner	4-4
Preventative Maintenance	4-5
Reset Maintenance Count	4-5
Expected Life of Components	4-6

5 Functional Information

Overview	5-1
Power Supply System	5-2
AC/DC Power Distribution	5-2
Overcurrent Overvoltage Protection	5-3
High-voltage Power Distribution	5-4
Toner Cartridge Detection	5-5
Engine Controller System	5-6
Engine Controller Board Inputs and Outputs	5-8
Laser and Scanner Drive	5-12
Paper Motion Monitoring and Control	5-12
Solenoids, Sensors, Clutches, and Switches	5-12
Engine Test Print	5-12
Motors	5-13
Formatter System	5-15
PowerSave	5-15
Resolution Enhancement technology (REt)	5-16
EconoMode	5-16
Input/Output	5-17
CPU	5-18
Printer Memory	5-18
Random Access Memory (RAM)	5-19
DIMM Slots	5-19
Page Protect	5-20
PJM Overview	5-20
PML	5-21
Control Panel	5-21
Image Formation System	5-22
Toner Cartridge	5-24
Photosensitive Drum	5-25
Writing the Image	5-28
Developing the Image	5-29
Transferring the Image	5-30
Image Fusing/Variable Fusing Temperature	5-31
Paper Feed System	5-33
Clutches and Sensors	5-35
Printing from Tray 1	5-36
Printing from Tray 2	5-38
Printing from the Optional 500-sheet	
Universal Tray	5-41
Envelope Feeder	5-44
Duplexer	5-46
Paper Jam	5-48
Basic Sequence of Operation	5-49

6 Removing and Replacing Parts

Overview	6-1
Removal and Replacement Strategy	6-2
Tools	6-3
Removing Covers	6-6
Rear Right Side Cover	6-6
Top Cover	6-7
Left Side Cover	6-12
Front Right Side Cover	6-13
Rear Cover/Rear Output Bin	6-14
Tray 1	6-15
Removing Assemblies	6-18
Fuser	6-18
Formatter Cage Assembly	6-20
Output Assembly	6-21
Laser Scanner	6-23
Fan	6-24
Main Motor	6-25
Transfer Roller	6-26
Tray 1 Pickup Roller	6-27
Tray 1 Pickup Assembly	6-29
Right Side Toner Cartridge Guide	6-33
Registration Assembly	6-34
Paper Feed Assembly	6-36
Formatter Pan	6-39
Gear Train	6-40
Delivery Drive Assembly	6-41
Separating the Engine Module from the Paper Feed Module	6-42
Engine Controller Board	6-44
Paper Feed Rollers	6-48
Separation Rollers	6-49
Paper Feed Module Plate	6-50
Paper Feed Module Gear Train Assembly	6-51
Paper Feed Module Side Rails	6-52
Lower Paper Feed Module Plate (HP LaserJet 4000 T/4000 TN and 4050 T/4050 TN)	6-53
PCA Cover (HP LaserJet 4000 T/4000 TN and 4050 T/4050 TN)	6-54
PCA Cover (HP LaserJet 4000/4000 N and 4050/4050 N)	6-55
PCA Controller	6-56

7 Troubleshooting

Overview	7-1
Troubleshooting Process	7-2
Troubleshooting Flowchart	7-4
Troubleshooting Flowchart (Continued)	7-5
Troubleshooting the Printing System	7-6
Preliminary Operating Checks	7-6
Power On	7-7
Engine Test	7-11
Display	7-12
Event Log	7-13
Printer Messages	7-17
General Paper Path Troubleshooting	7-45
Information Pages	7-48
Image Quality	7-54
Image System Troubleshooting	7-74
Interface Troubleshooting	7-77
AUTOEXEC.BAT Standard Configurations	7-81
Reference Diagrams	7-84
Locations of Components	7-84
Paper Path	7-90
Engine Controller Board	7-93
Paper Size Detection Switches	7-94
Motors	7-96
Connectors	7-97
PCAs	7-100
Sensors and Thermistor	7-102
Solenoids and Clutch	7-105
Switches	7-108
Timing	7-110

8 Parts and Diagrams

Overview	8-1
How To Use the Parts Lists and Diagrams	8-2
Accessories and Supplies	8-4
Common Screws and Replacement Cables	8-6
Illustrations and Parts Lists	8-8
Alphabetical Parts List	8-58
Numerical Parts List	8-67

1 Printer Description

Overview

This chapter discusses the following:

- Printer Features
- Identification
- Site Requirements
- Paper Specifications
- Safety Information

Printer Features

Table 1-1. Printer Features for the HP LaserJet 4000 Series Printer

Speed	17 pages per minute (ppm) 100 MHz RISC microprocessor First page out = 15 sec.
Resolution	300 dpi with PCL5e/HP's PostScript™ Level 2 emulation (PS) 600 dpi with PCL5e/PS HP FastRes 1200 (PCL6 only) HP ProRes 1200 at half engine speed (PCL6, PS)
Typefaces	110 Scalable TrueType™ (80 built-in, 30 via HP FontSmart, all PS and PCL accessible)
Memory Options	HP LaserJet 4000/4000 T: 4 MB RAM standard HP LaserJet 4000 N/4000 TN: 8 MB RAM standard Optional Memory: 4, 8, 16, and 32 MB EDO DIMMs 4, 8, 16, 32, and 64 MB SDRAM DIMM
Mass Storage Options	2 and 4 MB Flash DIMMs Greater than 1 GB hard disk
Interface	Bidirectional IEEE 1284 compliant parallel interface RS-232 9-pin serial Paper Handling Connector (PHC) 10Base-T and 10Base-2 (HP LaserJet 4000 N/4000 TN) LocalTalk
Optional Networking	10Base-T and 10Base-2 10/100Base-TX Token Ring LocalTalk
Expansion Slots	3 100-pin DIMM slots 2 Enhanced I/O (EIO) slots

Table 1-1. Printer Features for the HP LaserJet 4000 Series Printer (continued)

Paper Trays**100-sheet Tray 1**

- Size: 3 by 5 in to legal (76 by 127 mm to 216 by 356 mm)

500-sheet Tray 2 (HP LaserJet 4000/ 4000 N)

- Size: letter, legal, A4

250-sheet Trays 2 and 3 (HP LaserJet 4000 T/ 4000 TN)

- Size: letter, A4, executive, legal, B5 (ISO), B5 (JIS), A5

Optional Universal 500-sheet Tray

- Supports standard and custom sizes from 5.8 by 8.2 in (149 by 210 mm) to 8.5 by 14 in (216 by 356 mm).

Paper Path

Straight through from Tray 1 to Rear Output Bin
or to Top Output Bin

Output Capacity

250-sheet Top Output Bin
50-sheet Rear Output Bin

Paper Handling Options

Duplexer, Envelope Feeder, Optional 500-sheet Universal Tray
Assembly

Table 1-2. Printer Features for the HP LaserJet 4050 Series Printer

Speed	17 pages per minute (ppm) 133 MHz RISC microprocessor First page out = 15 sec. "RIP ONCE" capability with 16 MB or hard disk option
Resolution	300 dpi with PCL5e/HP's PostScript™ Level 2 emulation (PS) 600 dpi with PCL5e/PS HP FastRes 1200 (PCL6, PS) HP ProRes 1200 at engine speed (17 ppm) (PCL6, PS)
Typefaces	110 Scalable TrueType™ (80 built-in, 30 via HP FontSmart, all PS and PCL accessible) Euro symbol
Memory Options	HP LaserJet 4050/4050 T: 8 MB RAM standard HP LaserJet 4050 N/4050 TN: 16MB RAM standard Optional Memory: 4, 8, 16, MB EDO DIMMs 4, 8, 16, 32, 64 MB SDRAM DIMM
Mass Storage Options	2 and 4 MB Flash DIMMs Greater than 1 GB hard disk
Expansion Slots	3 100-pin DIMM slots 2 enhanced I/O (EIO) slots
Interface	Bidirectional IEEE 1284-compliant parallel 10/100Base-TX (HP LaserJet 4050 N/4050 TN) HP Fast InfraRed Receiver (FIR) RS232 9-pin serial Paper Handling Connector (PHC)
Optional Networking	10Base-T and 10Base-2 10/100Base-TX Token Ring LocalTalk

Table 1-2. Printer Features for the HP LaserJet 4050 Series Printer (continued)

Paper Trays**100-sheet Tray 1**

- Size: 3 by 5 to legal (76 by 127 mm to 216 by 356 mm)

500-sheet Tray 2 (HP LaserJet 4050/ 4050 N)

- Size: letter, legal, A4

250-sheet Trays 2 and 3 (HP LaserJet 4050 T/ 4050 TN)

- Size: letter, A4, executive, legal, B5 (ISO), B5 (JIS), A5

Optional 500-sheet Universal Tray

- Supports standard and custom sizes from 5.8 by 8.2 in (149 by 210 mm) to 8.5 by 14 in (216 by 356 mm).

Paper Path

Straight through from Tray 1 to Rear Output Bin
or to Top Output Bin

Output Capacity

250-sheet Top Output Bin
50-sheet Rear Output Bin

Paper Handling Options

Duplexer, Envelope Feeder, Optional 500-sheet Universal Tray
Assembly

Table 1-3. Comparison of HP LaserJet 4000 Series Printers

	HP LaserJet 4000	HP LaserJet 4000 T	HP LaserJet 4000 N	HP LaserJet 4000 TN
Ethernet 10-T/ 10-2 LocalTalk	optional	optional	standard	standard
Max. # Input Bins	3	4	3	4
Standard RAM	4 MB internal	4 MB internal	8 MB internal	8 MB internal
250-Sheet Tray	not available	2 standard	not available	2 standard
500-Sheet Tray	standard	not available	standard	not available
500-Sheet Universal Tray	optional	optional	optional	optional
> 1 GB EIO Drive	optional	optional	optional	optional
Envelope Feeder	optional	optional	optional	optional
Duplexer	optional	optional	optional	optional

Table 1-4. Comparison of HP LaserJet 4050 Series Printers

	HP LaserJet 4050	HP LaserJet 4050 T	HP LaserJet 4050 N	HP LaserJet 4050 TN
Ethernet 10-T/ 10-2 LocalTalk	optional	optional	optional	optional
10/100 Base TX	optional	optional	standard	standard
Max. # Input Bins	3	4	3	4
Standard RAM	8 MB internal	8 MB internal	16 MB internal	16 MB internal
250-Sheet Tray	not available	2 standard	not available	2 standard
500-Sheet Tray	standard	not available	standard	not available
500-Sheet Universal Tray	optional	optional	optional	optional
> 1 GB EIO Drive	optional	optional	optional	optional
Envelope Feeder	optional	optional	optional	optional
Duplexer	optional	optional	optional	optional
HP Fast InfraRed Receiver (FIR)	optional	optional	standard	standard

Identification

Model and Serial Numbers

The model number and printer serial number are listed on an identification label located under the top cover on the right side of the printer.

The model number is alphanumeric, such as C4253A for the HP LaserJet 4050 N printer.

The serial number contains information about the Country of Origin, the Revision Level, the Production Code, and Production Number of the printer. An example of a serial number is USBB123456.

The top label also contains power rating and regulatory information as shown in Figure 1-1.



Figure 1-1 Sample Label

Site Requirements

The following environmental specifications must be maintained to ensure the proper operation of the printer. Consider the following points before installing the printer:

- Install in a well-ventilated, dust-free area.
- Install on a hard, flat and continuous surface, with all four printer feet level. Do not install on carpet or other soft surfaces.
- Ensure adequate power is supplied. Printer power requirements are listed in Table 1-5. (Uninterruptable power supplies (UPSs) are not recommended.)
- Install where temperature and humidity is stable, away from water sources, humidifiers, air conditioners, refrigerators, or other major appliances.
- Install away from direct sunlight, open flames, or ammonia fumes. If the printer is placed near a window, make sure the window has a curtain or blind to block any direct sunlight.
- Install with enough space around the printer for proper access and ventilation.
- Install away from the direct flow of exhaust from air ventilation systems.

Table 1-5. Electrical Specifications for the HP LaserJet 4000 and 4050 Series Printers

Volts	Frequency	Amperes	Watts (typical)
100-127 VAC \pm 10%	50/60 Hz \pm 3 Hz	8 A	printing = 330 W standby = 22 W PowerSave On = 20 W (EPA ENERGY STAR [®])
220-240 VAC \pm 10%	50/60 Hz \pm 3 Hz	4 A	printing = 330 W standby = 22 W PowerSave On = 20 W (EPA ENERGY STAR [®])

Space Requirements

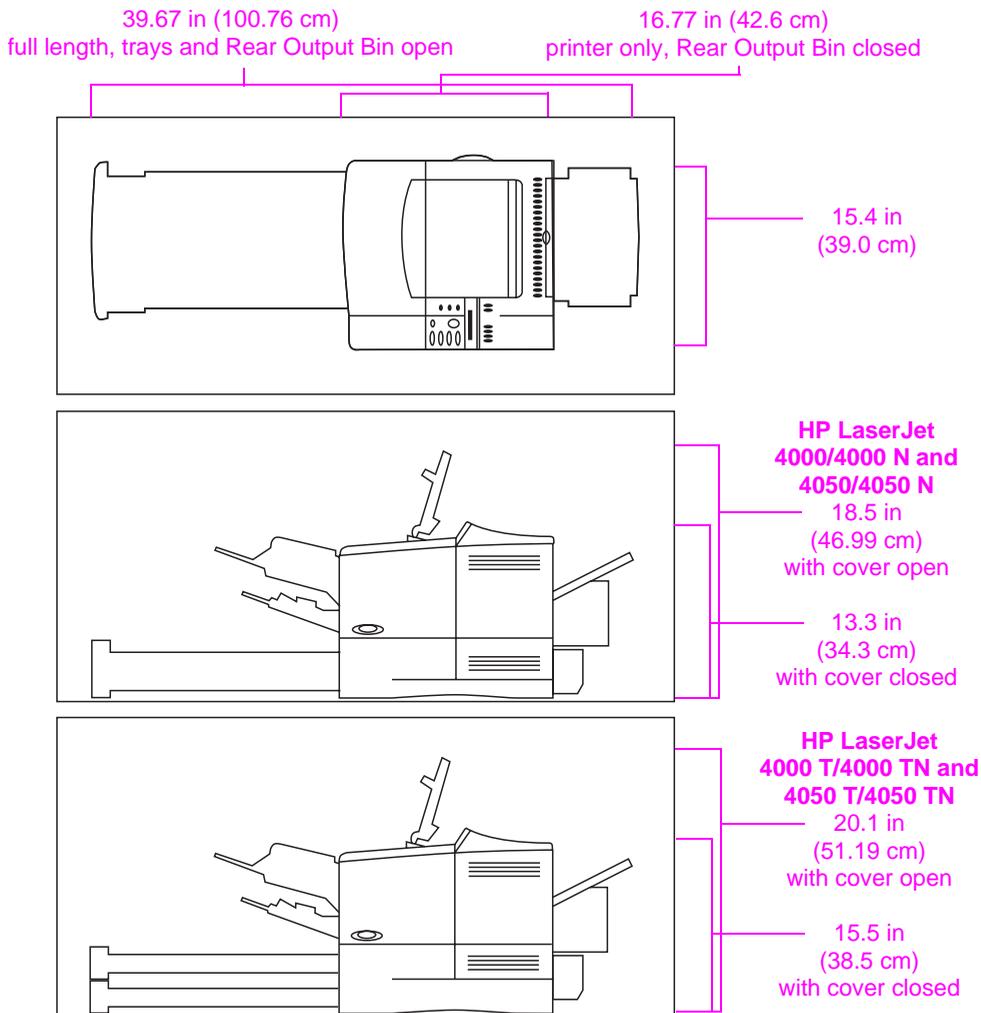


Figure 1-2 Printer Dimensions

Printer Weight (without Toner Cartridge)

- HP LaserJet 4000/4000 N and 4050/4050 N printers:
39.27 lb (17.85 kg)
- HP LaserJet 4000 T/4000 TN and 4050 T/4050 TN printers:
45.66 lb (20.71 kg)

Environmental Requirements

Table 1-6. Printer and Toner Cartridge Environmental Conditions

Item	Operating	Storage
Temperature	50-91° F (10-32° C)	32 to 95° F (0 to 35°C)
Relative Humidity	20-80% RH (with no condensation)	10% to 95% RH

Table 1-7. Acoustic Emissions (Per ISO 9296)

Printer State	Sound Power
Printing, 17 pages per minute (ppm)	$L_{wad} = 6.6$ bels (A)
Printing, 8 ppm	$L_{wad} = 6.2$ bels (A)
PowerSave	$L_{wad} = 0$ bels (A)

Paper Specifications

The following tables show paper specifications for the HP LaserJet 4000 and 4050 series printer.

Table 1-8. Paper Specifications, Tray 1

Supported Paper	Dimensions*	Weight	Capacity**
Minimum Size (custom)	3 by 5 in*** (76 by 127 mm)	16 to 53 lb (60 to 199 g/m ²)	100 sheets of 20 lb (75 g/m ²) paper
Maximum Size	8.5 by 14 in (216 by 356 mm)		
Transparencies	Same as minimum and maximum paper sizes listed above.	Thickness: 0.0039 in to 0.0045 in (0.099 to 0.114 mm)	75 transparencies
Labels		Thickness: 0.005 in to 0.007 in (0.127 mm to 0.178 mm)	50 labels
Envelopes		20 to 28 lb (75 to 105 g/m ²)	10 envelopes

* The printer supports a wide range of paper sizes. Check the printer software for supported sizes. To print custom-size paper see the user's guide.

** Capacity may vary depending on paper weight and thickness, and environmental conditions.

*** Custom media must be fed short edge first (portrait).

**Table 1-9. Paper Specifications, Tray 2
(HP LaserJet 4000/4000 N and 4050/4050 N)**

Supported Paper	Dimensions*	Weight	Capacity**
Letter	8.5 by 11 in (216 by 279 mm)	16 to 28 lb (60 to 105 g/m ²)	500 sheets of 20 lb (75 g/m ²) paper 50-100 transparencies
A4	8.3 by 11.7 in (210 by 297 mm)		
Legal	8.5 by 14 in (216 by 356 mm)		

* The printer supports a wide range of paper sizes. Check the printer software for supported sizes.

** Capacity may vary depending on paper weight and thickness, and environmental conditions.

**Table 1-10. Paper Specifications, Trays 2 and 3
(HP LaserJet 4000 T/4000 TN and 4050 T/4050 TN)**

Supported Paper	Dimensions*	Weight	Capacity**
Letter	8.5 by 11 in (216 by 279 mm)	16 to 28 lb (60 to 105 g/m ²)	250 sheets of 20 lb (75 g/m ²) paper 50-100 transparencies
A4	8.3 by 11.7 in (210 by 297 mm)		
Executive	7.3 by 10.5 in (191 by 267 mm)		
Legal	8.5 by 14 in (216 by 356 mm)		
B5 (ISO) (custom***)	6.9 by 9.9 in (176 by 250 mm)		
B5 (JIS)	7.2 by 10 in (182 by 257 mm)		
A5 (custom***)	5.8 by 8.2 in (148 by 210 mm)		

* The printer supports a wide range of paper sizes. Check the printer software for supported sizes.

** Capacity may vary depending on paper weight and thickness, and environmental conditions.

*** To print custom-size paper see the user's guide.

Table 1-11. Paper Specifications, Optional 500-Sheet Universal Tray

Supported Paper	Dimensions*	Weight	Capacity**
Letter	8.5 by 11 in (216 by 279 mm)	16 to 28 lb (60 to 105 g/m ²)	500 sheets of 20 lb (75 g/m ²) paper 50-100 transparencies
A4	8.3 by 11.7 in (210 by 297 mm)		
Executive	7.3 by 10.5 in (191 by 267 mm)		
Executive JIS (custom ***)	8.5 by 13 in (216 by 330 mm)		
16K (custom ***)	7.75 by 10.75 in (197 by 273 mm)		
Legal	8.5 by 14 in (216 by 356 mm)		
B5 (ISO) (custom***)	6.9 by 9.9 in (176 by 250 mm)		
B5 (JIS)	7.2 by 10 in (182 by 257 mm)		
A5 (custom***)	5.8 by 8.2 in (148 by 210 mm)		
Custom***	5.8 by 8.2 in to 8.5 by 14 in (149 by 210 mm to 216 by 356 mm)		

* The printer supports a wide range of paper sizes. Check the printer software for supported sizes.

** Capacity may vary depending on paper weight and thickness, and environmental conditions.

*** To print custom-size paper see the user's guide.

Table 1-12. Paper Specifications, Optional Envelope Feeder

Supported Paper	Dimensions*	Weight	Capacity**
Minimum Size	3.5 by 6.3 in (90 by 160 mm)	20 to 28 lb (75 to 105 g/m ²)	75 envelopes
Maximum Size	7 by 10 in (178 by 254 mm)		

* The printer supports a wide range of paper sizes. Check the printer software for supported sizes.

** Capacity may vary depending on paper weight and thickness, and environmental conditions.

Table 1-13. Paper Specifications, Optional Duplex Printing Accessory (Duplexer)

	Dimensions	Weight	Capacity
Letter	8.5 by 11 in (216 by 279 mm)	16 to 28 lb (60 to 105 g/m ²)	not applicable
A4	8.3 by 11.7 in (210 by 297 mm)		
Executive	7.3 by 10.5 in (191 by 267 mm)		
Legal	8.5 by 14 in (216 by 356 mm)		
B5 (JIS)	7.2 by 10 in (182 by 257 mm)		

Supported Types of Paper

The printer supports the following types of paper:

- plain
- letterhead
- prepunched
- bond
- color
- rough
- preprinted
- transparency
- labels
- recycled
- card stock
- user-defined (5 types)

Guidelines for Using Paper

For best results, use conventional 20 lb (75 g/m²) 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.

Table 1-14. Guidelines for Using Paper

Symptom	Problem with Paper	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 100-250 Sheffield, 4-6% moisture content.
Dropouts, jamming, curl.	Stored improperly.	Store paper flat in its moisture-proof wrapping.
Increased gray background shading.	Too heavy.	Use lighter paper. Open the Rear Output Bin.
Excessive curl. Problems with feeding.	Too moist, wrong grain direction or short-grain construction.	Open the Rear Output Bin. Use long-grain paper.
Jamming, damage to printer.	Cutouts or perforations.	Do not use paper with cutouts or perforations.
Problems with feeding.	Ragged edges.	Use quality paper.

Note

Do not use letterhead paper that is printed with low-temperature inks, such as those used in some types of thermography.

Do not use raised letterhead.

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's temperature (400° F or 205° C).

Avoid using paper that has already been used in a printer or copier. Do not print on both sides of envelopes, transparencies, or labels.

Paper Weight Equivalence Table

Use this table to determine approximate equivalent points in weight specifications other than U.S. bond weight. For example, to determine the equivalent of 20 lb U.S. bond weight paper in U.S. cover weight, locate the bond weight (in the third row, first column) and scan across the row to the cover weight (in the third column). The equivalent is 28 lb.

Shaded areas indicate a standard weight for that grade.

Table 1-15. Paper Weight Equivalence

Bond wt. (17x22)	Text/book wt. (25x38)	Cover wt. (20x26)	Bristol wt. (22.5x 28.5)	Index wt. (25.5x 30.5)	Tag wt. (24x36)	Metric wt.	Bond wt. (17x22)	Text/book wt. (25x38)	Cover wt. (20x26)
16#	41#	22#	27#	33#	37#	60 g/m ²	16#	41#	22#
17#	43#	24#	29#	35#	39#	64 g/m ²	17#	43#	24#
20#	50# *	28#	34#	42#	46#	75 g/m ²	20#	50# *	28#
21#	54#	30#	36#	44#	49#	80 g/m ²	21#	54#	30#
24#	60# *	33#	41#	50#	55#	90 g/m ²	24#	60# *	33#
27#	68#	37#	45#	55#	61#	100 g/m ²	27#	68#	37#
28#	70# *	39#	49#	58#	65#	105 g/m ²	28#	70# *	39#
29#	74#	41#	50#	61#	68#	110 g/m ²	29#	74#	41#
32#	80#*	44#	55#	67#	74#	120 g/m ²	32#	80# *	44#
36#	90#	50#	62#	75#	83#	135 g/m ²	36#	90#	50#
39#	100#	55#	67#	82#	91#	148 g/m ²	39#	100#	55#
40#	101#	55#	68#	83#	92#	150 g/m ²	40#	101#	55#
43#	110#	60#	74#	90#	100#	163 g/m ²	43#	110#	60#
45#	115#	63#	77#	94#	104#	170 g/m ²	45#	115#	63#
47#	119#	65#	80#	97#	108#	176 g/m ²	47#	119#	65#
51#	128#	70#	86#	105#	117#	190 g/m ²	51#	128#	70#

* U.S. postcard measurements are approximate. Use for reference only.

Labels

CAUTION

To avoid damaging the printer, use only labels recommended for use in laser printers.

If you have problems printing labels, use Tray 1 and open the Rear Output Bin.

Never print on the same sheet of labels more than once.

Label Construction

When selecting labels, consider the quality of each component:

- **Adhesives:** The adhesive material should be stable at 400° F (205° C), the printer's maximum temperature.
- **Arrangement:** Only use labels with no exposed backing between them. Labels can peel off of sheets that have spaces between the labels, causing serious jams.
- **Curl:** Prior to printing, labels must lie flat with no more than 0.5 in (13 mm) of curl in any direction.
- **Condition:** Do not use labels with wrinkles, bubbles, or other indications of separation.

Transparencies

Transparencies used in the printer must be able to withstand 400° F (205° C), the printer's maximum temperature. For best results, close the Rear Output Bin to print transparencies to the Top Output Bin.

CAUTION

To avoid damaging the printer, use only transparencies recommended for use in laser printers.

If you have problems printing transparencies, use Tray 1.

Envelopes

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:** The weight of the envelope paper should not exceed 28 lb (105 g/m²), or jamming may result.
- **Construction:** Prior to printing, envelopes should lie flat with less than 0.25 in (6 mm) 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 Tray 1:** From 3 by 5 in (76 by 127 mm) to 8.5 by 14 in (216 by 356 mm).
- **Sizes in the optional envelope feeder:** From 3.5 by 6.3 in (90 by 160 mm) to 7 by 10 in (178 by 254 mm).

If you do not have an optional envelope feeder, always print envelopes from Tray 1. If envelopes wrinkle, try opening the Rear Output Bin.

Sample of manual. Download All 394 pages at:

<https://www.arepairmanual.com/downloads/1999-hp-laserjet-4000-and-4050-series-printer-se>