Xerox DocuPrint 100/115/135/155/180 EPS

Installation Planning Guide

701P21121
Version 3.7
July 2003

Xerox Corporation
Global Knowledge and Language Services
701 South Aviation Boulevard ESM1-058
El Segundo, CA 90245

Printed in the United States of America.

Publication number: 701P21121

Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

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Safety

Laser safety

WARNING

Adjustments, use of controls, or performance of procedures other than those specified herein may result in hazardous light exposure.

The Xerox DocuPrint printers are certified to comply with the performance standards of the U.S. Department of Health, Education, and Welfare for Class 1 laser products. Class 1 laser products do not emit hazardous radiation. The DocuPrint printers do not emit hazardous radiation because the laser beam is completely enclosed during all modes of customer operation.

The laser danger labels on the system are for Xerox service representatives and are on or near panels or shields that must be removed with a tool.

DO NOT REMOVE LABELED PANELS OR PANELS NEAR LABELS. ONLY XEROX SERVICE REPRESENTATIVES HAVE ACCESS TO THESE PANELS.

Ozone information: U. S. only

This product produces ozone during normal operation. The amount of ozone produced depends on copy volume. Ozone is heavier than air. The environmental parameters specified in the Xerox installation instructions ensure that concentration levels are within safe limits. If you need additional information concerning ozone, call 1-800-828-6571 to request the Xerox publication 600P83222, *OZONE*.

Operation safety: U. S.

Your Xerox equipment and supplies have been designed and tested to meet strict safety requirements. They have been approved by safety agencies, and they comply with environmental standards. Please observe the following precautions to ensure your continued safety.

WARNING

Improper connection of the equipment grounding conductor may result in risk of electrical shock.

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.
- Never use a ground adapter plug to connect equipment to an electrical outlet that lacks a ground connection terminal.
- Always place equipment on a solid support surface with adequate strength for its weight.
- Always use materials and supplies specifically designed for your Xerox equipment. Use of unsuitable materials may result in poor performance and may create a hazardous situation.
- Never move either the printer or the controller without first contacting Xerox for approval.
- Never attempt any maintenance that is not specifically described in this documentation.
- Never remove any covers or guards that are fastened with screws. There are no operator-serviceable areas within these covers.
- Never override electrical or mechanical interlocks.

- Never use supplies or cleaning materials for other than their intended purposes. Keep all materials out of the reach of children.
- Never operate the equipment if you notice unusual noises or odors. Disconnect the power cord from the electrical outlet and call service to correct the problem.

If you need any additional safety information concerning the equipment or materials Xerox supplies, call Xerox Product Safety at the following toll-free number in the United States:

1-800-828-6571

For customers outside the United States, contact your local Xerox representative or operating company.

Operation safety: Europe

This Xerox product and supplies are manufactured, tested and certified to strict safety regulations, electromagnetic regulations and established environmental standards.

Any unauthorised alteration, which may include the addition of new functions or connection of external devices, may impact the product certification.

Please contact your Xerox representative for more information.

Warning markings

All warning instructions marked on or supplied with the product should be followed.

This WARNING alerts users to areas of the product where there is the possibility of personal damage.

This WARNING alerts users to areas of the product where there are heated surfaces, which should not be touched.

Electrical supply

This product shall be operated from the type of electrical supply indicated on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult your local power company for advice.

WARNING

This product must be connected to a protective earth circuit. This product is supplied with a plug that has a protective earth pin. This plug will fit only into an earthed electrical outlet. This is a safety feature. Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

To disconnect all electrical power to the product, the disconnect device is the power cord. Remove the plug from the electrical outlet.

Ventilation

Slots and opening in the enclosure of the product are provided for ventilation. Do not block or cover the ventilation vents, as this could result in the product overheating.

This product should not be placed in a built-in installation unless proper ventilation is provided, please contact your Xerox representative for advice.

Never push objects of any kind into the ventilation vents of the product.

Operator accessible areas

This product has been designed to restrict operator access to safe areas only. Operator access to hazardous areas is restricted with covers or guards, which would require a tool to remove. Never remove these covers or guards.

Maintenance

Any operator product maintenance procedures will be described in the user documentation supplied with the product. Do not carry out any maintenance on the product, which is not described in the customer documentation.

Before cleaning your product

Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product, the use of other materials may result in poor performance and may create a hazardous situation. Do not use aerosol cleaners, they may be flammable under certain circumstances.

CE mark: Europe only

January 1, 1995: Council Directive 73/23/EEC, amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

March 9, 1999: Council Directive 99/5/EC, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your Xerox representative.

In order to allow this equipment to operate in proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation for the ISM equipment may have to be limited or special mitigation measures taken.

This is a Class A product. In a domestic environment this product may cause radio frequency interference, in which case the user may be required to take adequate measures.

Shielded interface cables must be used with this product to maintain compliance with Council Directive 89/36/EEC.

Radio and telecommunications equipment directive (Europe only)

Certification to 1999/5/EC Radio Equipment and Telecommunications Terminal Equipment Directive:

This Xerox product has been self-certified by Xerox for pan-European single terminal connection to the analog public switched telephone network (PSTN) in accordance with Directive 1999/5/EC.

The product has been designed to work with the national PSTNs and compatible PBXs of the following countries:

Austria	Germany	Luxembourg	Sweden
Belgium	Greece	Netherlands	Switzerland
Denmark	Iceland	Norway	United Kingdom
Finland	Ireland	Portugal	
France	Italy	Spain	

In the event of problems, contact your local Xerox representative in the first instance.

This product has been tested to, and is compliant with, TBR21, a specification for terminal equipment for use on analog switched telephone networks in the European Economic area.

The product may be configured to be compatible with other country networks. Please contact your Xerox representative if your product needs to be reconnected to a network in another country. This product has no user-adjustable settings.

NOTE: Although this product can use either loop disconnect (pulse) or DTMF (tone) signaling, it should be set to use DTMF signaling. DTMF signaling provides reliable and faster call setup.

Modification or connection to external control software, or to external control apparatus not authorized by Xerox, invalidates its certification.

For further information

For more information on Environment, Health and Safety in relation to this Xerox product and supplies, please contact the following customer help lines:

Europe:+44 1707 353434

USA:1 800 8286571

Canada:1 800 8286571

Introduction

This document helps you prepare for delivery and installation of your new Xerox DocuPrint printing system.

About this guide

This guide is intended for the person responsible for coordinating the installation of the Xerox DocuPrint 100/115/135/155/180 Enterprise Printing System at your site. It lists the tasks you must complete before installation can begin, as well as your responsibilities during the installation. This guide is a companion to the *Getting Ready for Installation* manual.

NOTE: All information in this guide, unless otherwise stated, pertains to the Xerox DocuPrint 100/115/135/155/180 EPS printers.

The *Installation Planning Guide* is one of several manuals that are available for your new printing system. You receive it in advance of hardware delivery to help you prepare your site for the delivery and installation of the system. A set of user manuals will be delivered with the system.

Before using this guide, become familiar with its contents and conventions.

Contents

This guide contains the following:

- Chapter 1, “Product overview,” provides an overview of the Xerox DocuPrint 100/115/135/155/180 Enterprise Printing System.
- Chapter 2, “Controller components and options,” describes controller hardware, software, and options.
- Chapter 3, “Printer components and options,” describes printer components, configurations, and options.

- Chapter 4, “Preparing for installation,” provides a checklist of tasks that must be accomplished before the installation. It also explains connectivity requirements for submitting documents from the host or client to the printing system.
- Chapter 5, “Controller requirements and specifications,” describes power, environmental, and space requirements for the controller.
- Chapter 6, “Printer requirements and specifications,” describes power, environmental, and space requirements for the printer. Space planning guidelines and diagrams are provided to help you set up the work area.
- Chapter 7, “System connections,” provides cable requirements for the printing system.
- Chapter 8, “Installation,” describes the activities that occur during installation. It also describes ongoing maintenance activities.
- Appendix A, “Supplies,” describes how to select, store, and use supplies for the printing system. It also provides a list of consumable supplies you can order.
- Appendix B, “Xerox support services,” explains how to utilize available Xerox support services.
- Appendix C, “Related publications,” lists other Xerox documents that are part of this publication set.

A glossary and index are provided at the end of this document.

Conventions

This guide uses the following conventions:

- **Initial capital and angle brackets:** Within procedures, the names of keys are shown with an initial capital and within angle brackets (for example, press <Enter>).
- **Angle brackets:** Variable information, or the position of a specified argument in the command syntax, appears in angle brackets (for example, List Fonts <pattern>).
- **Fixed pitch font:** Within procedures, text and numbers that you enter are shown in a bold, fixed pitch (“computer”) font (for example, enter **`privilege operator`**).

  Messages that appear on the controller screen are shown in the medium weight fixed pitch font (for example, `Online Gateway disabled`).

- **The word “enter” within procedures:** The two-step process of keying in data and pressing <Enter> (for example, enter **y**).
- **Italics:** Document and library names are shown in italics (for example, the *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*).

  Variable elements in a command or directory path are also shown in italics (for example, var/spool/XRXnps/ *filename*).
- **Vertical bars:** Alternatives to specified arguments are separated by vertical bars (for example, Set Time <Time | Remote Host Name | IP Address>).

NOTE: Notes are hints that help you perform a task or understand the text.

CAUTION

Cautions alert you to an action that could damage hardware or software.

WARNING

Warnings alert you to conditions that may affect the safety of people.

Notice

This publication may contain descriptions of concepts and features not currently available for your Xerox printing system. Consult your Xerox sales representative or your operating system software program description for additional information.

1. Product overview

This chapter provides an overview of the features and functions of the Xerox DocuPrint 100/115/135/155/180 Enterprise Printing System (EPS).

System overview

The Xerox DocuPrint 100/115/135/155/180 EPS prints high quality, high resolution monochrome documents in simplex (one-sided) or duplex (two-sided) at high production speeds from LCDS, PostScript, PCL, IPDS, and other data streams.

The printer supports:

- Duplex printing
- Offline printing of data from 9-track and 18/36-track tape drives
- Media handling of multiple weights, sizes, and types
- Optional modules for enhanced finishing and output to third party devices
- Optional high capacity feeder stacker modules, which provide additional feeder trays and output bins
- High resolution printing of supported data streams (shown in the following table)

Table 1-1. Data stream resolution

Data stream	Input resolution	Print resolution: DP155 and DP180	Print resolution: DP100, DP115, and DP135
LCDS	300 by 300 dpi	600 x 2400 dpi	600 by 600 dpi
PostScript and PCL	300 by 300 dpi or 600 by 600 dpi	600 x 2400 dpi	600 by 600 dpi
IPDS*	240 by 240 dpi* or 300 by 300 dpi or 600 by 600 dpi**	600 x 2400 dpi	600 by 600 dpi

*Requires additional equipment to enable.
**600 by 600 dpi input resolution supported for full page IOCA only

System components

The following figure shows the configurations supported for the Xerox DocuPrint 100/115/135/155/180 EPS.

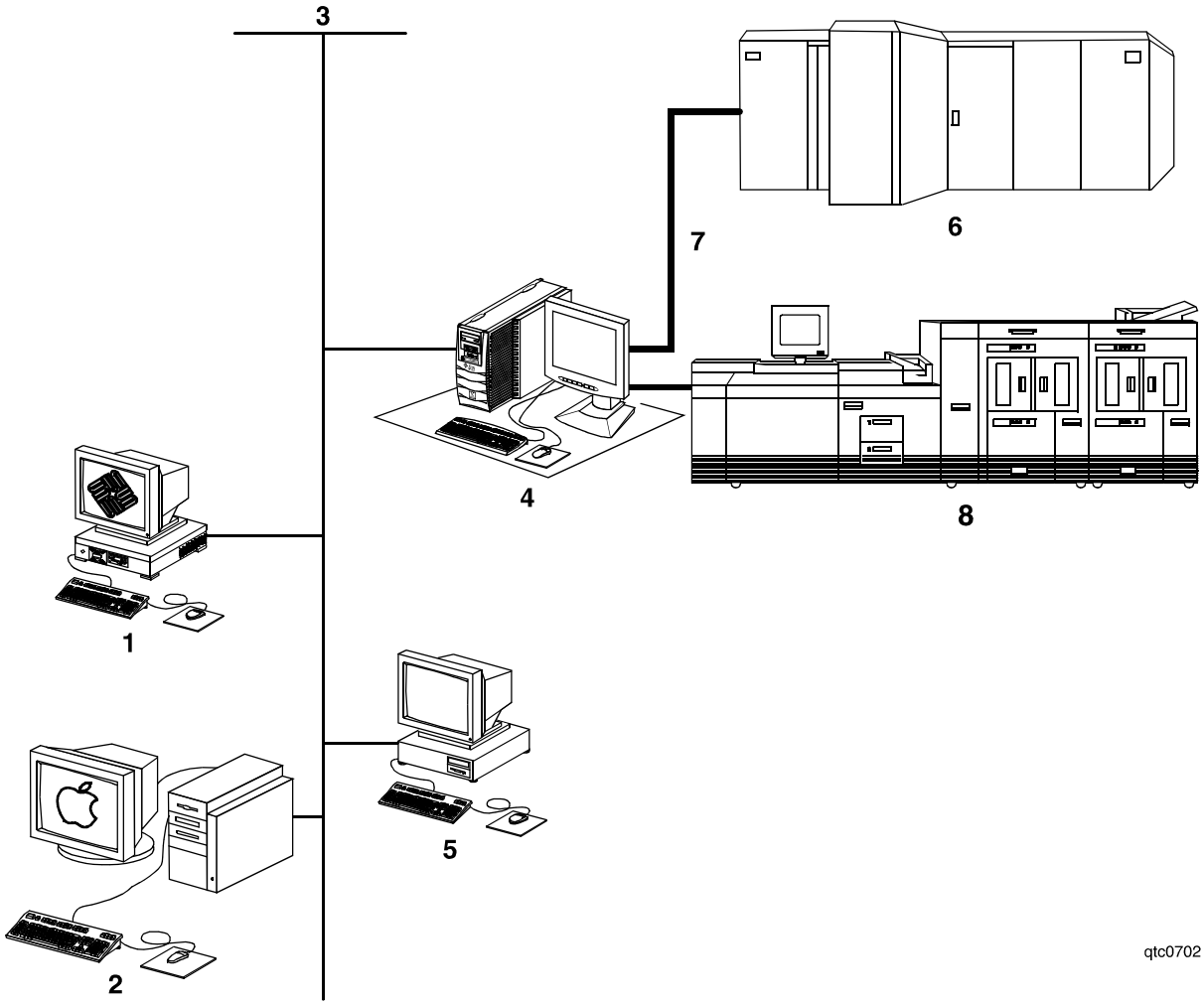


Figure 1-1. Configurations supported for the Xerox DocuPrint 100/115/135/155/180 EPS

1. Sun UNIX client workstation
2. Apple Macintosh client workstation
3. Network connection
4. Controller
5. PC client workstation
6. Mainframe host computer
7. Bus and tag cables (channel connection)
8. Print engine

The following sections briefly describe the functionality of each system component.

DocuPrint 100/ 115/135/155/180 EPS

The DocuPrint 100/115/135/155/180 EPS includes the controller, printer, printer interface, and all appropriate software. “DocuPrint printer” or “printer” refers to the base printer engine (IOT) only, without the controller and interface.

Customer-supplied client workstation

A host mainframe computer or network-connected PC, Apple Macintosh, or Sun UNIX client workstation submits print jobs to the printing system. The print job may be in any of the following data formats:

- PostScript levels 2 and 3
- HP PCL5c, PCL5e, and PCL6: Hewlett-Packard Print Control Language
- LCDS: Line Conditioned Data Stream
- IPDS: Intelligent Printer Data Stream
- ASCII: American Standard Code for Information Interchange
- PDF: Portable Document Format
- TIFF: Tagged Image File Format
- VIPP: Variable Data Intelligent PostScript Print Ware

NOTE: Enablement of IPDS data format may require additional equipment. Contact your local Xerox representative for more information.

Customer-supplied network and channel connection

The customer needs to supply one or more of the following communication connections:

- Ethernet local area network (LAN) running TCP/IP, AppleTalk, or Novell NetWare network protocol software.
- Online (channel-attached): Bus and tag cables supporting the IBM 3211/4245 interface.
- Token ring LAN running TCP/IP, Novell 3.x, or AppleTalk network protocol software.

NOTE: Enablement of channel-attached and Token Ring communication connection requires additional equipment. Contact your local Xerox representative for more information.

Xerox-supplied controller

The controller (monitor, processor, DVD drive, keyboard, mouse, diskette drive, and cartridge tape drive) accepts the print job from the host mainframe computer or network-connected client workstation, converts the files into page images, and sends the page images to the print engine. External 9-track and 18/36-track tape drives can be used for resource loading and for offline printing.

Xerox-supplied printer

The printer (also known as the image output terminal [IOT] or print engine) accepts page image data from the controller and prints the document according to the print options specified by the user. The printer also handles paper stacking, collating, and optional finishing.

NOTE: It is the responsibility of the customer to supply, install, and maintain hardware and software on any PC, Sun workstation, or Macintosh workstation that is used to generate documents for printing on the DocuPrint 100/115/135/155/180 EPS. You are also responsible for obtaining, installing, and maintaining the required Ethernet local area network, transceivers, bus and tag cables, and any other connecting cables.

The Xerox DocuPrint 100/115/135/155/180 EPS prints LCDS data from a mainframe host computer, emulating an IBM 4245 or 3211 line printer. The printing system can receive data over a channel through bus and tag cables and through the Socket Gateway or lpr using TCP/IP protocol.

Table 1-2. Throughput speed

Printing system	Maximum throughput speed	Maximum throughput speed with 7 by 10 inch/ 178 by 254 mm paper
DP100 EPS	100 ppm	100 ppm
DP115 EPS	115 ppm	115 ppm
DP135 EPS	135 ppm	154 ppm
DP155 EPS	155 ppm	155 ppm
DP180 EPS	180 ppm	206 ppm

NOTE: Maximum throughput speed with 7 by 10 inch / 178 by 254 mm paper requires the 7 by 10 inch enablement kit.

Xerox is responsible for the physical installation and service of the printer and controller hardware and software components. You have the general responsibility for the site of ensuring that the correct personnel, supplies, and network hardware and software are available. Refer to the “Preparing for installation” chapter for a detailed description of the shared responsibilities of the customer and of Xerox.

Client workstations and system software

To submit print jobs to the printing system, the customer needs to provide the proper client hardware as well as operating system and network software.

Supported hardware and operating systems

The Xerox DocuPrint 100/115/135/155/180 EPS supports the following types of networked client workstations and operating systems:

- Sun Workstation running Solaris 2.3 or higher
- PC running MS-DOS 5.0 or higher, using Ethernet with TCP/IP or Novell NetWare 3.11 or higher, Windows 95/98, Windows NT 4.0, Windows Millennium, Windows 2000, or Windows XP
- PC running MS-DOS 5.0 or higher, with one or more of the following TCP/IP packages:
  - PC/TCP Network Software by FTP Software, Inc.
  - Pathway Access by Wollongong Group, Inc.
  - PC-NFS by Sun Select
- Apple Macintosh running 8.6 through 9.x, or 10.1 or higher in Classic mode, using AppleTalk through Ethernet
- Any system that supports RFC-1179 lpr/lpd

The printing system software may be compatible with workstation models and software versions other than those listed above.

Client networking software

Xerox client software, a third-party TCP/IP lpr networking software, Novell, or Apple/Macintosh Printer Access Protocol (PAP) networking software must be installed on your client workstations or downloaded from the controller. This software provides an interface with the controller, which allows you to submit print jobs and check job status.

NOTE: The printing options that are available to a client user vary according to the networking software loaded on the client workstation.

Additional information on submitting jobs from a client workstation is specified in other documents that are part of this publication set.

MICR printing features

The DocuPrint 100/115/135/155/180 MX systems produce a Magnetic Ink Character Recognition (MICR) line on negotiable and turnaround documents such as checks and bills. The MICR printing system prints documents using magnetic ink and special fonts to create machine readable information that allows for quick document processing.

In general, MICR is used to print accounting and routing information on blank checks and other negotiable documents. The magnetic encoding capabilities can be used for any printed output.

The following illustrates a check printed with a MICR line in U.S. format. The entire MICR line, which consists of numbers and characters (called symbols), is printed using magnetic ink.

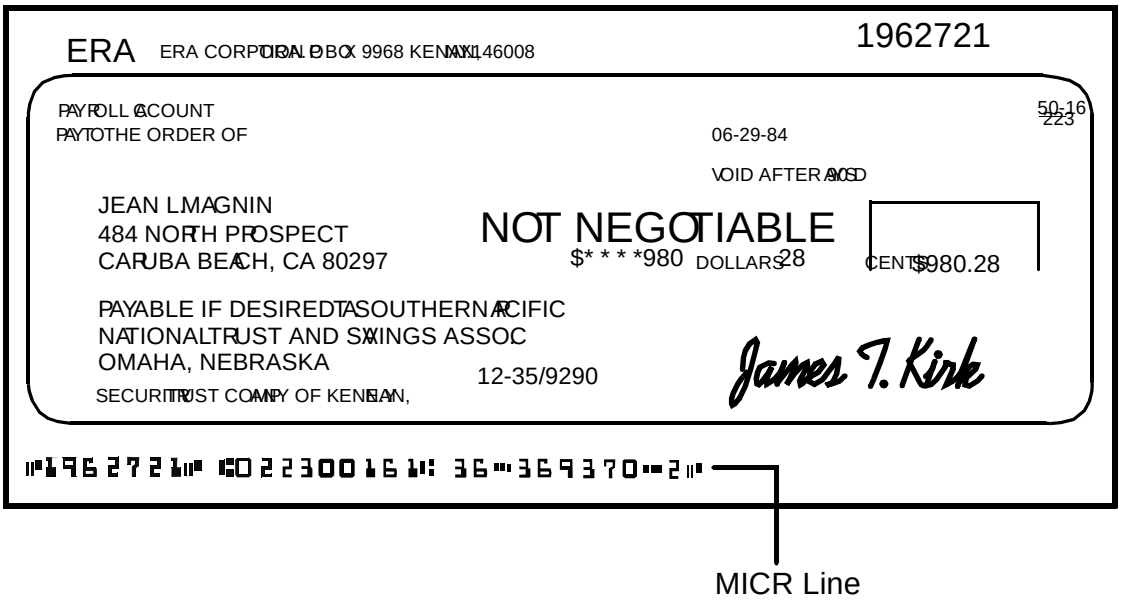


Figure 1-2. Example of a check printed with MICR line (U. S.)

The DocuPrint 100/115/135/155/180 MX systems meet ABA standards and ANSI and ISO specifications for automatic check handling. They print the variable data and the MICR line at the same time. This single-pass printing capability reduces processing time and costs.

MICR fonts

Xerox provides a set of 300 and 600 dpi E13B and CMC7 MICR fonts for use with your DocuPrint 100/115/135/155/180 MX system. To receive the high print quality guaranteed by Xerox, you must use these MICR fonts.

CMC7 fonts have been adopted in various countries outside of the U.S., and are the official standard in France. Like the E13B font, they are magnetically readable, but with a different character design and recognition criteria. (Currently, CMC7 is available only through Xerox Europe.)

IPS/NPS MICR fonts

The MICR fonts for DocuPrint IPS and NPS include the following.

E13B fonts:

- E13B
- E13B Landscape
- E13B Test
- E13B Test Landscape.

CMC7 fonts:

- CMC7
- CMC7 Landscape
- CMC7 Test
- CMC7 Test Landscape

The “Test” fonts are non-readable MICR hollow bitmap (or outline) fonts, provided for testing MICR applications and printing non-negotiable documents.

LCDS MICR fonts

The MICR fonts that are used for printing an LCDS data stream include the following.

E13B4 fonts:

- E13B4 Portrait
- E13B4 Landscape
- E13B4 Inverse Portrait
- E13B4J

CMC7 fonts:

- CMC74 Portrait
- CMC74 Landscape
- CMC74 Inverse Portrait
- CMC74J

Unsupported features

The DocuPrint 100/115/135/155/180 EPS does not support the security and audit feature or bar code reading. In addition, although the Line Thickening selection and the Virtual Printer Imaging parameters are available when you use MICR, using these features when printing MICR documents is not recommended, as they corrupt the MICR line.

In general, all print quality adjustments and enhancement settings should be set at the nominal settings when printing MICR output.

Host connectivity options

The Xerox DocuPrint 100/115/135/155/180 EPS can receive data in the following ways:

- Over a channel through a bus and tag cable connection
- Through a network interface, using Novell, TCP/IP, or AppleTalk protocols

Your system may have one or both of these configurations.

Remote diagnostics

Remote diagnostics is a unique suite of tools that allows Xerox personnel to serve customers more effectively, and is intended to automate and expedite the range of service-related support functions.

The remote diagnostics capability is a no charge feature. To take advantage of this feature, the customer needs to:

- Request remote diagnostic enablement through Xerox Service
- Provide an analog phone line
- Provide a standard power outlet for a modem

For those customers unable to dedicate a phone line to the modem, phone sharing devices are available for purchase.

Contact your local Xerox representative for more information.

2. Controller components and options

This chapter describes the components and options available for the Xerox DocuPrint 100/115/135/155/180 EPS controller.

Controller overview

The controller receives data from a mainframe host or a workstation client, processes the data, and sends it to the printer. The controller also provides the printer with print data and commands, and receives status information from the printer.

The controller consists of a high performance Sun workstation processor running Solaris software. Also resident on the controller is the DocuSP software, which manages all printing, diagnostic, and administrative functions on the printing system.

The DocuSP software includes a full color graphical user interface (GUI). Using the GUI, you set up and configure the system, set up and implement system options, and manage print jobs.

Accessing DocuSP remotely (Remote Workflow)

Remote Workflow, a remote graphical user interface, is available for installation from a CD. The remote GUI allows you to manage your DocuSP-based printers from a single PC or Sun workstation. You may set your preferences from the remote client to disable or enable some or all connections.

Remote Workflow allows you to configure the printers that you want to manage, and provides real time status of the printers. You may switch between the printers that you are managing, but you can display only one printer GUI at a time.

The Remote Workflow GUI looks and functions the same as the local DocuSP GUI on the controller.

Controller components

The controller consists of a specially-configured Sun workstation and uses proprietary Xerox hardware, firmware, and software. Your controller has one of two possible configurations, described in the following sections.

NOTE: Controller hardware configurations are subject to change, to keep up with technology advances.

Sun Blade workstation

The controller is based on either the Sun Blade 1000/2000 or the Sun Blade 2500, workstations with high-performance architecture for complex processing tasks.

Sun Blade 1000/ 2000 configuration

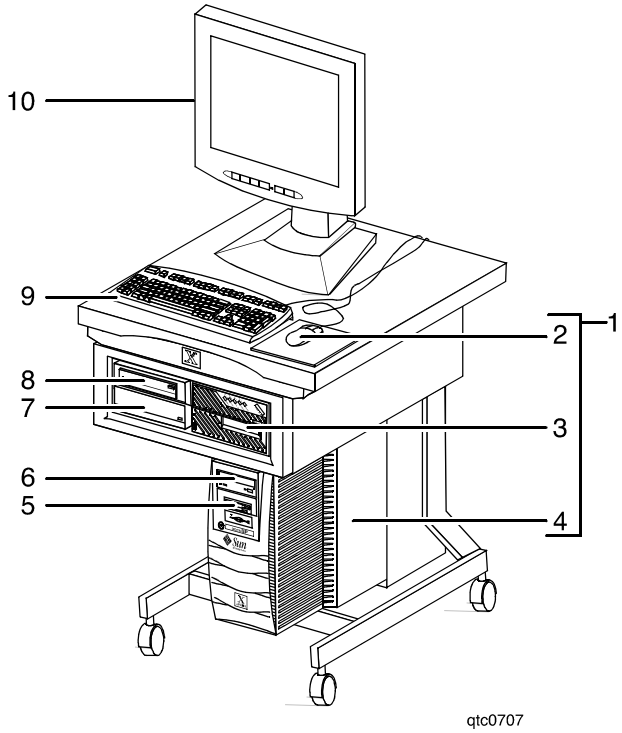


Figure 2-1. Sun Blade 1000/2000 controller

1. Controller stand
2. Mouse
3. 18/36-track cartridge tape drive (optional)
4. Processor

5. Diskette drive
6. DVD-ROM drive
7. Quarter-inch cartridge (QIC) tape drive
8. External fixed disk drive (optional)
9. Keyboard
10. Display monitor

The Sun Blade 1000/2000 contains the following hardware components:

- Processor (system unit) containing the following:
  - One or two UltraSPARC III high-speed central processing unit (CPU) modules
    - DP 100, 115, and 135: 1 CPU
    - DP 155 and 180: 2 CPUs

    NOTE: In XE, all printers use a dual CPU configuration.
  - 1 or 2 GB of memory (one or two 1-GB Dual In-line Memory Modules, or DIMMs)
    - DP 100, 115, and 135: 1 GB
    - DP 155 and 180: 1 or 2 GB

    NOTE: In XE, all printers use a 2 GB memory configuration.
  - Hard disk drive
    - Sun Blade 1000: 36 GB
    - Sun Blade 2000: 73 GB
  - High-density, read-only DVD-ROM drive
  - Diskette drive: uses 3.5 inch, 1.44 MB, double-sided, high-density diskettes
  - Ethernet
  - Two Printer Controller Interface (PCI) boards to interface with the printer
  - PGx64 video graphics board
- Universal Serial Bus (USB) keyboard and three-button mouse
- 17-inch flat panel monitor

Sun Blade 2500 configuration

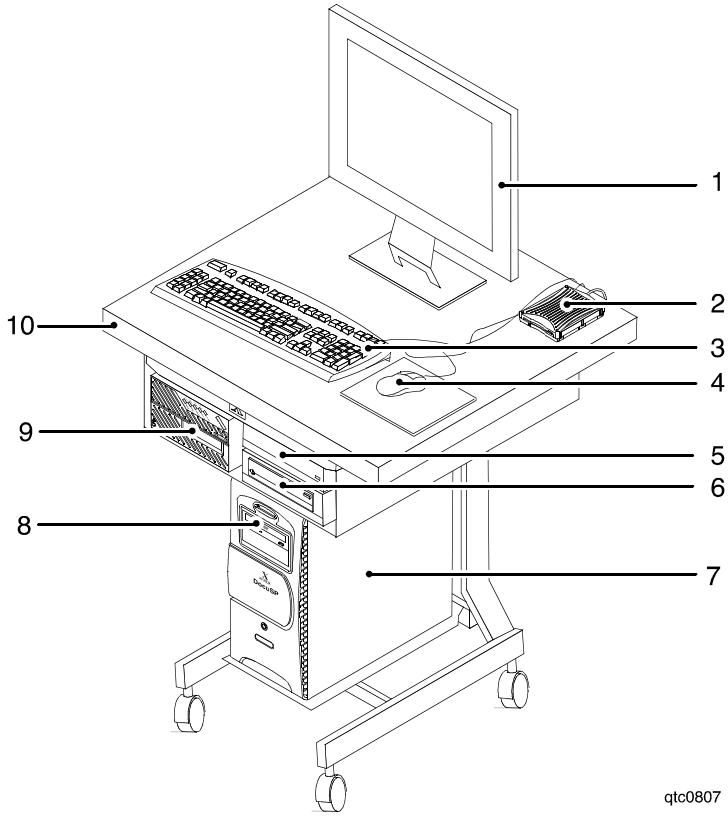


Figure 2-2. Sun Blade 2500 controller

1. Display monitor
2. External diskette drive
3. Keyboard
4. Mouse
5. External fixed disk drive (optional)
6. Quarter-inch cartridge (QIC) tape drive
7. Processor
8. DVD-ROM drive
9. 18/36-track cartridge tape drive (optional)
10. Controller stand

The Sun Blade 2500 contains the following hardware components:

- Processor (system unit) containing the following:
  - One UltraSPARC IIIi high-speed processing unit (CPU) module
  - 1 or 2 GB of memory (one or two 1-GB Dual In-line Memory Modules, or DIMMs)
    - DP 100, 115, and 135: 1GB
    - DP 155 and 180: 2 GB

    NOTE: In Xerox Europe, all printers use a 2 GB memory configuration.
  - 36 GB hard disk drive
  - High-density, read-only DVD-ROM drive
  - Ethernet
  - One or two Printer Controller Interface (PCI) boards to interface with the printer
    - DP 100, 115, and 135: 1 board
    - DP 155 and 180: 2 boards
  - XVR-100 video graphics board
- Universal Serial Bus (USB) keyboard and three-button mouse
- 17-inch flat panel monitor
- Diskette drive (external)

Processor

The central processing unit contains the memory, internal disk drive, a graphics board, a DVD-ROM drive, a diskette drive, power receptacle and outlet, connectors and ports.

- **Memory:** Two 1 GB Dual In-line Memory Modules, or DIMMs, are provided as a standard feature of the processor.
- **Hard disk drive:** A 36 or 73 GB primary disk drive is provided as a standard feature of the processor. The operating system, the NPS/IPS application, and any queued print jobs are stored on the internal disk. This disk cannot be used to store other applications or data except as directed by your service representative.

- **DVD-ROM drive:** The DVD-ROM drive is a high density, read-only, optical laser storage device used for loading the NPS/IPS operating system and other files. The CD-ROM drive is located in the processor above the diskette drive.

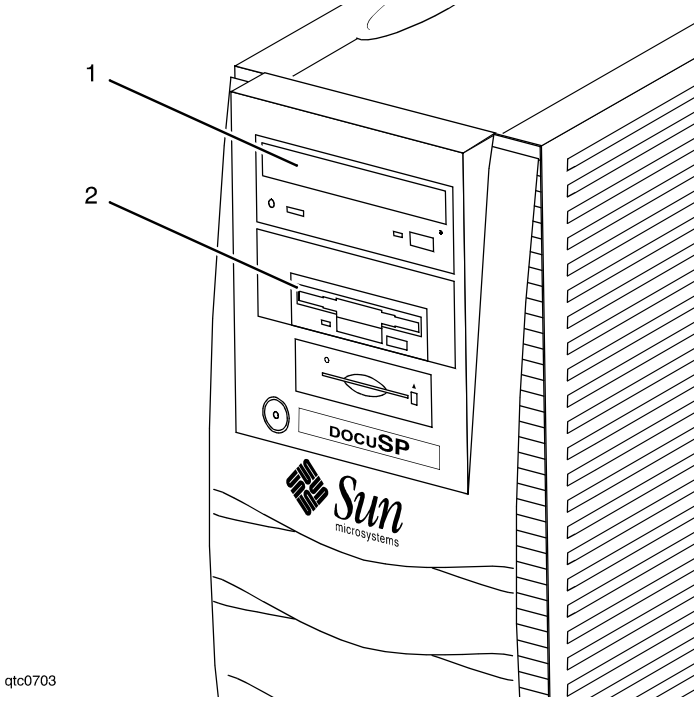


Figure 2-3. Drive locations on the Sun Blade 1000/2000 processor

1. DVD-ROM drive
2. Diskette drive

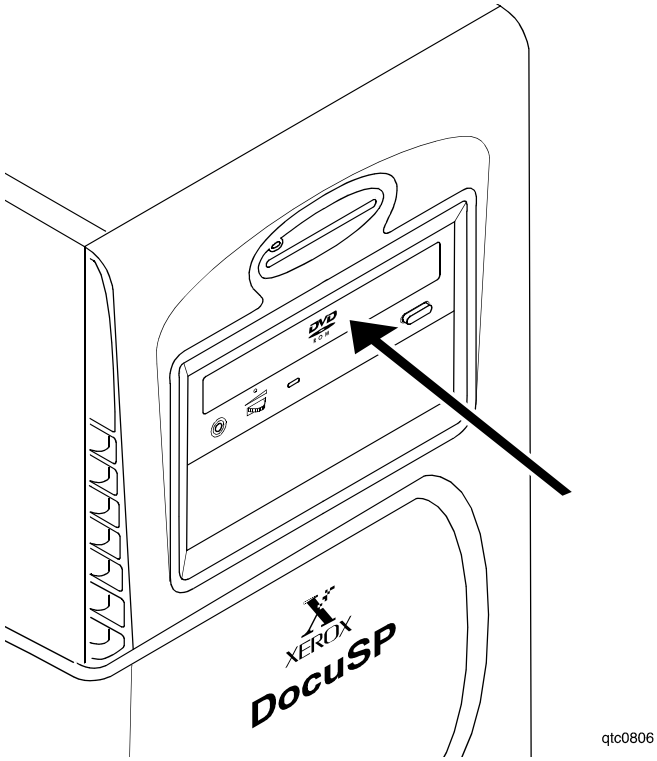


Figure 2-4. DVD-ROM drive location on Sun Blade 2500 processor

- **Back panel:** The back panel of the processor has a power receptacle and outlet, connectors, connector openings, and ports. The following figure shows the back panel of the controller.

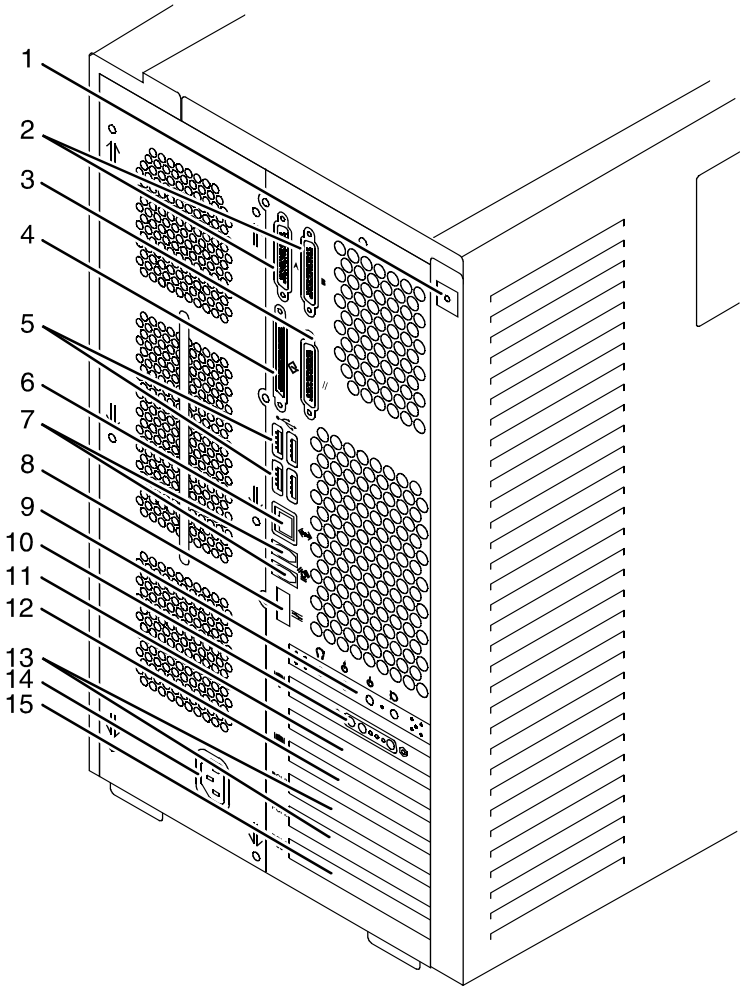


Figure 2-5. Back panel of the Sun Blade 1000/2000 controller

1. Access panel lock block
2. Serial connectors A and B, DB-25
3. Parallel connector
4. SCSI connector
5. Universal serial bus (USB) connectors (for keyboard and for mouse)
6. Twisted-pair Ethernet (TPE) connector
7. IEEE 1394 connectors
8. Fibre Channel-Arbitrated Loop (FC-AL) connector
9. Audio module headphones, line-in, line-out, and microphone connectors

10. Graphics card / video connector (frame buffer 0)
11. PCI card slot 4
12. Graphics card / video connector (frame buffer not used)
13. PCI card slots 3 and 2
14. Power connector
15. PCI card slot 1

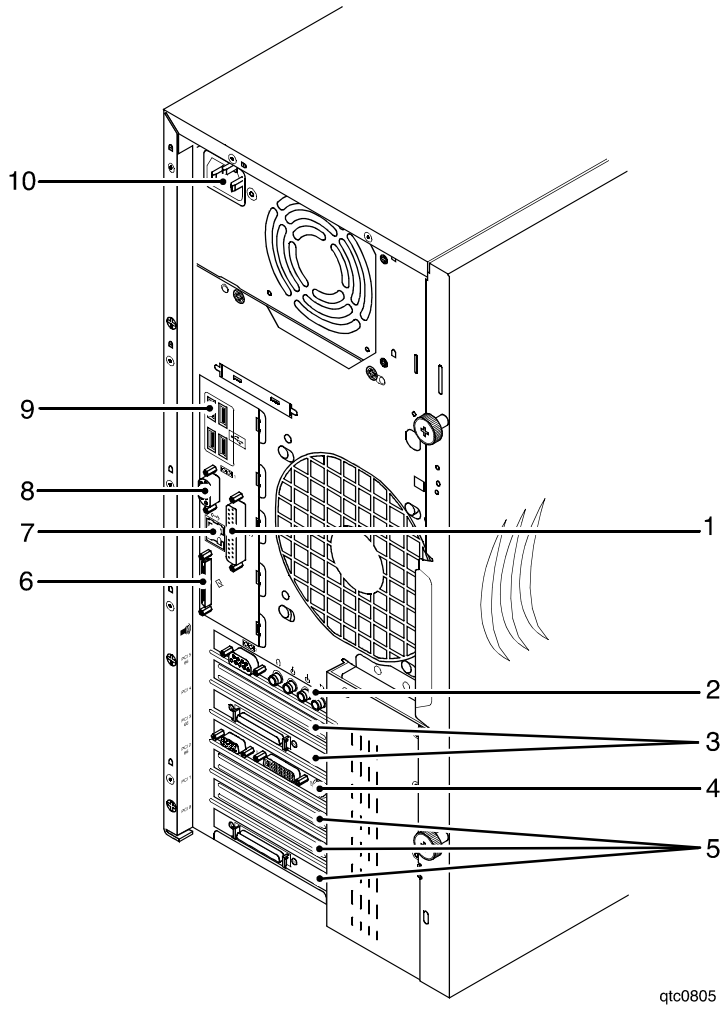


Figure 2-6. Back panel of Sun Blade 2500

1. Parallel connector
2. Audio module headphones, line-in, line-out, and microphone connectors
3. PCI card slots 4 and 5
4. Graphics accelerator
5. PCI card slots 0, 1, and 2

6. External UltraSCSI connector
7. Twisted-pair Ethernet
8. Serial connector
9. USB connectors (The diskette drive may be plugged into any one of these.)
10. Power connector

Keyboard

The keyboard consists of alphanumeric keys similar to a typewriter, symbols and special character keys, an extended character set, and function keys. The keyboard is one of your main methods of communicating with the printer. You can use the keyboard to make selections, and to enter commands that control functions such as requesting sample prints, or shutting down the system.

Mouse

The mouse is another main method of communicating with the printer.

Display monitor

The 17-inch LCD monitor allows you to interact with the printer and to monitor its interaction with the various components. During a print job, printer error messages may display to notify you of any unexpected conditions.

Diskette drive

The external diskette drive plugs into the back panel of the processor. Diskettes inserted into a diskette drive are used to install fonts and to load files to, and back up files from, the internal disk drive. The diskette drive uses industry standard 3.5 inch, 1.44 MB, double-sided, high-density diskettes.

Optional processor components

The controller may be configured with any of the following optional components:

- Connectivity board to enable Token Ring
- Channel interface board for channel connection to a host for online LCDS printing
- One SCSI board to connect to an external tape drive

- Graphics board:
  - PGx64 (Sun Blade 1000/2000)
  - XVR-100 (Sun Blade 2500)
  - Creator-3D series 3 graphics board

    NOTE: The PGX64 graphics board is provided as a standard feature of the processor. If more than one connectivity option is installed, the PGx64 board is replaced by the Creator3D graphics board.

Controller interface options

Your printing system may be configured for either the online interface, the offline interface, or both.

Online interface

The online (channel-attached) interface receives input directly from any environment that supports the IBM 3211 and 4245 host systems.

Tape drive option

The 36-track cartridge tape drive is an option. Your printing system supports the following tape drives for offline printing and importing and exporting of resources:

- 9-track open reel tapes
- 36-track cartridge tapes

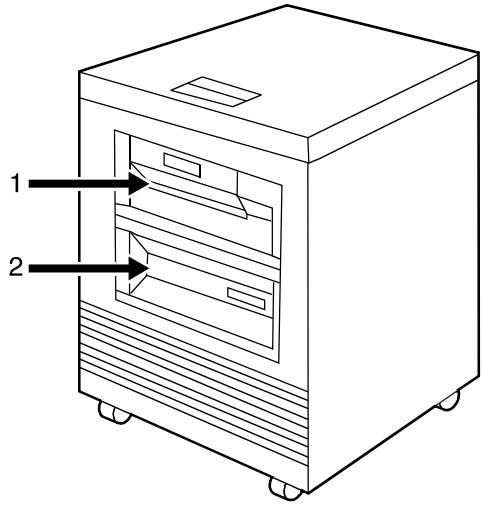


Figure 2-7. Peripheral cabinet with tape drives

1. 9-track open reel tape drive
2. 18/36-track cartridge tape drive

If you have other Xerox printing systems, you may already have a peripheral cabinet that houses a 9-track open reel and an 18/36-track cartridge tape drive. The DocuPrint 100/115/135/155/180 EPS supports existing peripheral cabinets, but the peripheral cabinet option is not available with new systems.

The following 18-track tape drives are not supported:

- STK 4220 MOD 1 tape drive (3480)
- STK 4220 MOD 2 tape drive (3490)

3. Printer components and options

The printer processes the page images received from the controller and produces the printed output. This chapter describes the components and options available for the Xerox DocuPrint 100/115/135/155/180 EPS printer.

Printer components

The standard printer components are the printer control console, the sample tray, the purge tray, the two processor feeder trays, and the feeder/stacker module or modules.

The base configuration for the printer includes an inverter feeder/stacker and one additional feeder/stacker module.

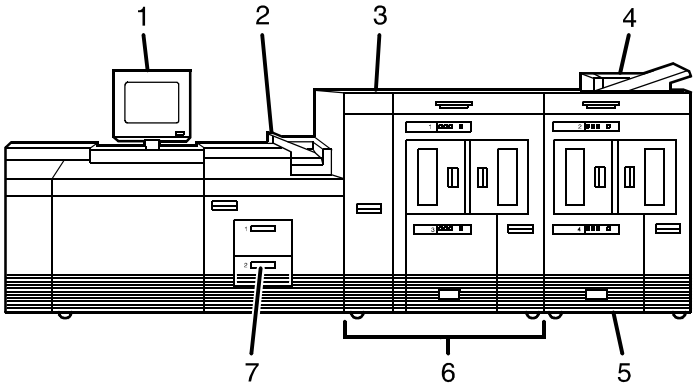


Figure 3-1. Printer base components

1. Printer control console
2. Sample tray
3. Attention light
4. Purge tray
5. Feeder/stacker module
6. Inverter feeder/stacker module
7. Processor feeder trays

The printer provides control buttons and displays for basic printer functions and status information. The printer control console displays messages and graphics that assist you with jam clearance and printer maintenance. Labels are located throughout the printer to assist you with a variety of tasks such as clearing a paper jam.

Refer to the *Xerox DocuPrint 100/115/135/155/180 Enterprise Printing System Operator Guide* for detailed description of the features and operation of the printer components.

Printer control console

The printer control console is the color monitor located on top of the printer. It displays messages and graphics that alert you to paper jams and other fault and status conditions (such as low dry ink). It also contains buttons that allow you to control certain functions of the printer (for example, continuing an interrupted job) without returning to the controller.

The printer control console has the following features:

- **Local controls and displays** for jam clearance, loading paper, unloading output, and diagnostics and service (used by the service representative). Two types of messages are displayed on the printer control console: fault messages, which relate to printer malfunctions; and information messages, which relate to printer conditions such as low dry ink.
- **Touch-sensitive areas** that allow you to select options by touching the console screen. A tone sounds when you touch one of these areas.
- **Attention alarm tone** consisting of three beeps, repeated for ten seconds. The alarm sounds for any event that stops the printer and requires operator attention. The alarm may be disabled by the operator.

  The tone stops after three cycles, or when the fault condition is cleared or clearing has started (for example, doors or covers specified in the clearance instructions are opened). You can stop the tone by pressing one of the printer control console buttons or by selecting a function through the touch screen.

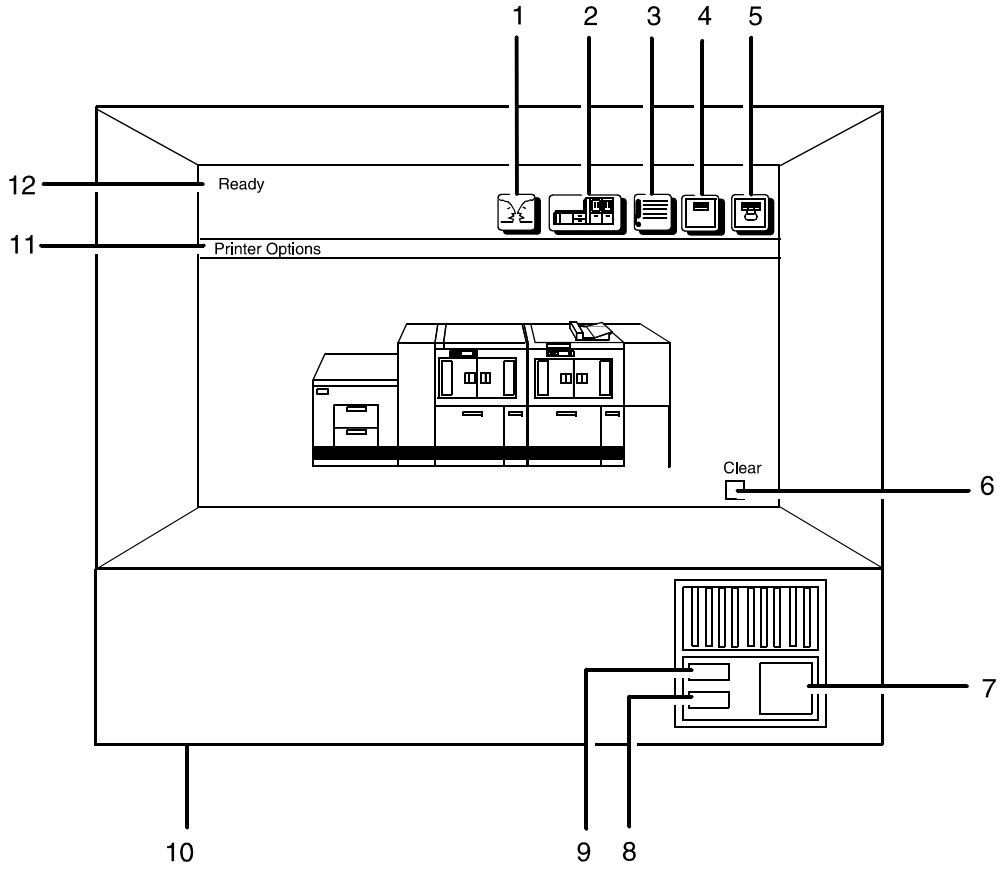


Figure 3-2. Printer control console

1. Language icon
2. Printer icon
3. Fault List icon
4. Tools icon
5. Guarded Tools icon
6. Clear button
7. Continue button
8. Stop button
9. Sample button
10. Brightness control thumbwheel
11. Icon area
12. Message area

Refer to the customer documentation for a detailed description of the features and operation of the printer control console components.

Printer configurations

The Xerox DocuPrint 100/115/135/155/180 EPS is available in several different configurations, which allow you to customize the printing system for increased efficiency and for specialized applications.

- Inverter feeder/stacker + 1 feeder/stacker
- Inverter feeder/stacker + 2 feeder/stackers
- Inverter feeder/stacker + 3 feeder/stackers

These configurations are illustrated below.

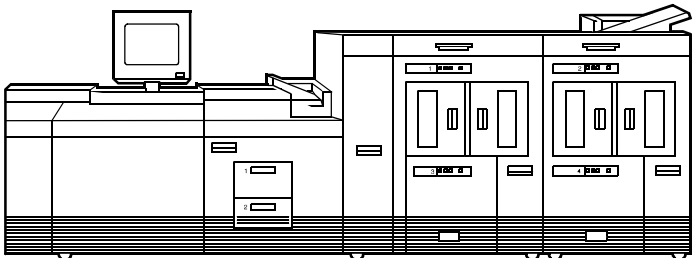


Figure 3-3. Printer with inverter feeder/stacker and one feeder/stacker

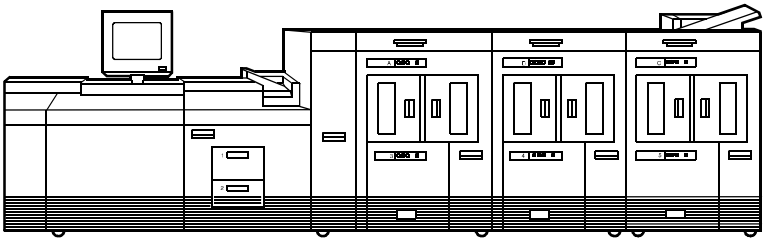


Figure 3-4. Printer with inverter feeder/stacker and two feeder/stackers

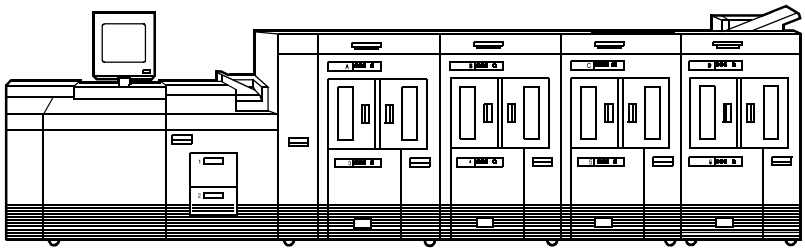


Figure 3-5. Printer with inverter feeder/stacker and three feeder/stackers

Bypass transport option

The bypass transport option provides an interface between the DocuPrint 100/115/135/155/180 EPS and your finishing accessories. However, finishing devices require separate power sources that are independent of the printing system.

The bypass transport option enables third party finishing devices to interface directly with the printing system. The bypass transport allows you to customize your printer for increased efficiency and specialized applications involving finishing.

NOTE: A bypass transport must be installed for the printing system to support a third party finishing device.

Function of the bypass transport

Connected to the last feeder/stacker module, the bypass transport moves paper from the stacker to a third party finisher such as a stitcher, booklet maker, tape binder, and so on. By making selections on the user interface windows, you can program the printer to send output to the bypass transport, which directs the output to the finishing equipment.

Paper stocks supported on bypass transport

The bypass transport accepts all paper stocks on which the printer can print, and it accommodates simplex and duplex printing.

Bypass transport printer configurations

The following printer configurations may have the bypass transport, illustrated below:

- Printer with inverter feeder/stacker and 1 feeder/stacker
- Printer with inverter feeder/stacker and 2 feeder/stackers

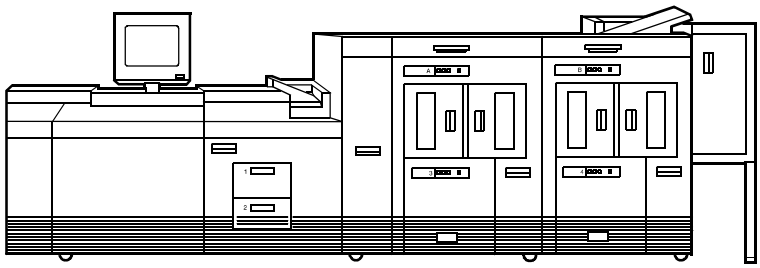


Figure 3-6. Printer with inverter feeder/stacker, one feeder/stacker, and bypass transport

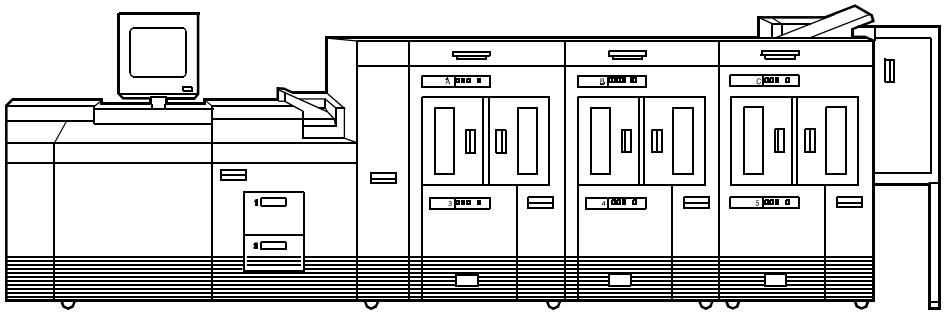


Figure 3-7. Printer with inverter feeder/stacker, two feeder/stackers, and bypass transport

Roll feeder support (DP155 and DP180 EPS only)

The roll feeder option may be installed in the inverter feeder/stacker module, replacing the feeder tray. This option does not require DFA or input enablement software, or any additional hardware.

The maximum number of feeder/stacker modules supported for this configuration is four, including the inverter module with the roll feeder. With the two processor feeder trays, this makes a total of six input trays possible.

4. Preparing for installation

This chapter assists you in preparing for the installation of your Xerox DocuPrint 100/115/135/155/180 EPS. Use this chapter in conjunction with the *Getting Ready for Installation* manual.

Preparing for installation is a responsibility shared by personnel at your site and Xerox. Your Xerox representatives are available to discuss installation issues and to assist you in completing the site installation tasks.

Before installation, you must select and prepare an appropriate location for the printing system and order supplies. This chapter helps you accomplish these tasks by providing the following information:

- A summary of your responsibilities and those of your Xerox service representative
- A checklist of installation planning activities.

For information on controller power and space requirements, refer to the “Controller specifications and requirements” chapter of this guide. For facts about printer power and space requirements, refer to the “Printer specifications and requirements” chapter of this guide.

Responsibilities

This section describes your site responsibilities and the responsibilities of your service representatives. Some joint responsibilities are included.

Xerox responsibilities

This section lists the responsibilities of the service representatives and systems analysts before, during, and after installation:

- **Site selection**
  - Assist in site selection
  - Inspect and approve the site
- **Installation**
  - Schedule the delivery of the hardware
  - Monitor installation activities
  - Assist you in ordering any supplies required
  - Install the printing system
  - Install LCDS system resource files, if applicable
- **Training**
  - Provide initial operator training
  - Provide information and assistance in registering for Xerox Customer Education classes or obtaining tutorials
- **Service**
  - Review preventive maintenance schedules and service call procedures
  - Provide ongoing maintenance
  - Assist in resolving hardware and software problems
  - Obtain software licenses as appropriate

Customer responsibilities

Your responsibilities before, during, and after installation of the DocuPrint printing system are to schedule and monitor your installation activities. Refer to the installation planning checklist in this chapter for a complete list of responsibilities.

Refer to the “Xerox support services” appendix for information on services designed to support you before, during, and after your installation.

NOTE: Operating system software is not the same for all printing systems. Therefore, make sure that your system specialists are familiar with the operating system software that is specific to your DocuPrint system. If your system specialists are familiar with one operating systems and you are converting to, or adding another, they should be familiar with the differences.

Site personnel

Identify the person (or persons) at your site who will be the primary interface with Xerox.

After the installation of the printing system, there are a few ongoing tasks that must be performed. These tasks may include all or some of the following:

- Meter reading and reporting
- Overseeing routine maintenance
- Placing service calls for hardware problems
- Ordering additional documentation, software, or fonts
- Arranging additional operator training
- Maintaining an adequate inventory of consumable supplies.

It is your responsibility to designate a person (or persons) to perform these tasks.

Operator and systems training

Select personnel for operator and systems training and set up a training schedule.

Site preparation

Select and prepare the site for system installation (including proper power, air conditioning, and work space). If connecting to other equipment, obtain the necessary interfaces, cables, transceivers, phone lines, and so forth.

Network installation

Install the necessary network components required to connect client workstations to the printing system. Refer to the *Getting Ready for Installation* manual for details.

Channel-attached printing

Obtain and install *fully* populated bus and tag cables required to connect the host to the printing system. Refer to the *Getting Ready for Installation* manual for details.

Client workstations

Make sure all client workstations that will be submitting print jobs have the proper hardware, operating system, and networking software required by the printing system as client platforms.

Applications Work with your Xerox systems analyst to determine requirements for initial applications.

Installation planning checklist

To aid you in planning for printer installation, the following checklist contains the tasks that you and your service representative must complete before installation. (A copy of this checklist also is provided in *Getting Ready for Installation*.) If you have questions about any of these activities, contact your sales or service representative.

Use the time frames in this checklist as guidelines. It is best to consult your suppliers to determine the required lead times.

Table 4-1. Installation planning checklist

Week	Activity	Responsibility	Date completed
-4	• Select location for the printing system. • Order additional sets of documentation, as necessary. • Register for Xerox Customer Education classes and order tutorials, as necessary. • Schedule printer delivery.	Customer Customer Customer and Xerox Xerox	_____ _____ _____ _____
-3	• Schedule hardware delivery. • Prepare site: – Ensure proper electrical outlets are installed. – Install network to system location, if applicable. – Install channel to system location, if applicable. Cables must be fully populated. – Ensure proper operating environment.	Customer and Xerox Customer	_____ _____ _____ _____ _____
-2	• Inspect and approve site. • Order consumable supplies. Minimum supplies needed for installation: – Paper (2 cartons) – Developer (1 carton) – Fuser agent (2 boxes) – Dry ink (1 carton) After installation, you will need to establish a procedure for ordering supplies according to your ongoing production requirements.	Xerox Customer and Xerox	_____ _____
-1	• Schedule operator training.	Customer and Xerox	_____

Table 4-1. Installation planning checklist (Continued)

Week	Activity	Responsibility	Date completed
Install	• Ensure supplies are available.	Customer	_____
	• Ensure system administrators are available during software installation.	Customer	_____
	• Provide applicable completed worksheets from the *Getting Ready for Installation* document. If the NPS/IPS Extension option is being installed, provide applicable information as directed in the *96/4635/180 NPS/IPS Installation Planning Guide*.	Customer	_____
	• Install printing system hardware and software.	Xerox	_____
	• Have operators available for training.	Customer	_____
	• Check documentation and software kits for completeness.	Customer	_____
	• Have test jobs ready to run.	Customer	_____
	• Provide stocks needed for default input configuration.	Customer	_____
	• Obtain and enable software license.	Customer	_____
Post-install	• Become familiar with support services available.	Customer	_____
	• Establish supplies maintenance procedure.	Customer	_____
	• Provide ongoing system maintenance.	Customer and Xerox	_____
	• Adjust the printer alignment and magnification.	Xerox	_____
	• Order additional documentation, as necessary.	Customer	_____

Connectivity requirements

An Ethernet local area network (LAN) running Transmission Control Protocol/Internet Protocol (TCP/IP), AppleTalk, or Novell NetWare software is the network communication system used to transport documents from the client workstation to the printing system.

Ethernet specifications

The Ethernet connection to the controller processor must be compatible with the Institute of Electrical and Electronics Engineers (IEEE) 802.3 standard.

The Ethernet interface on the controller processor is a 10 Mb/sec twisted pair standard (10BaseT and 100BaseT). Attachment Unit Interface (AUI) Coax Ethernet is enabled with an adapter cable.

Work with your system administrator to assess what type of network you have and what modifications need to be made to supply an Ethernet connector to the controller processor.

Token Ring specifications

Users of network client workstations may send print jobs to the printer using TCP/IP, Novell 3.x, or Apple Talk network protocol.

The Token Ring connection to the controller processor must be compatible with the Institute of Electrical and Electronics Engineers (IEEE) 802.3 standard.

The controller processor has a 4 MB or 16 MB Token Ring Auto interface (16 MB is preferred).

Channel-attached specifications

For an online configuration with an IBM host system, the following cables must be available:

- Bus and tag cables (bus in, bus out, tag in, tag out)
- Terminators (as necessary, due to location on channel).

For your convenience, you may be able to order the bus and tag cables through Xerox on a purchase-only basis. Contact your Xerox sales representative for availability, current pricing, and order information.

5. Controller requirements and specifications

This chapter provides power and space requirements for the controller. It also provides controller environmental specifications.

For facts about printer power and space requirements, refer to the “Printer specifications and requirements” chapter of this guide.

Power requirements

Your controller has important power requirements that must be accommodated. These requirements are summarized in the table below.

For details on printer power requirements, refer to the “Printer specifications and requirements” chapter of this guide.

Table 5-1. Controller electrical requirements

Sun Blade 1000 controller	Voltage	Amp service	KVA rating	NEMA
60 HZ	100 to 240 VAC	15 amp	0.4 KVA	5-15R
50 HZ	100 to 240 VAC	15 amp	0.4 KVA	N/A

Agency certification: UL 1950, IEC 950, CSA 22.2 #950-1950, FCC (Class A), and EN 55022: 1998 (Class A), and EN 61000-3-2: 1995 + A1-1998 + AZ 1998, EN6100-3-3: 1995 and EN 55024: 1998.

Outlet configurations

This section discusses specifications for system outlets and the required wall outlet configurations for the USA / Canada and internationally.

NOTE: All power outlets must be dedicated to this equipment. When determining the electrical connections for printing system, make sure that:

- *Each power cord has a separate circuit.*
- *The printer power cord configurations match your receptacle.*
- *Your electrical outlets are within the required specifications.*

50 Hz systems: Ensure that power connections are per local codes/regulations.

The following figure shows American, Canadian, and European wall outlets in which to plug the controller.

NOTE: The optional 9 track and 18/36 track tape drives each require an outlet identical to the one that is shown for the controller.

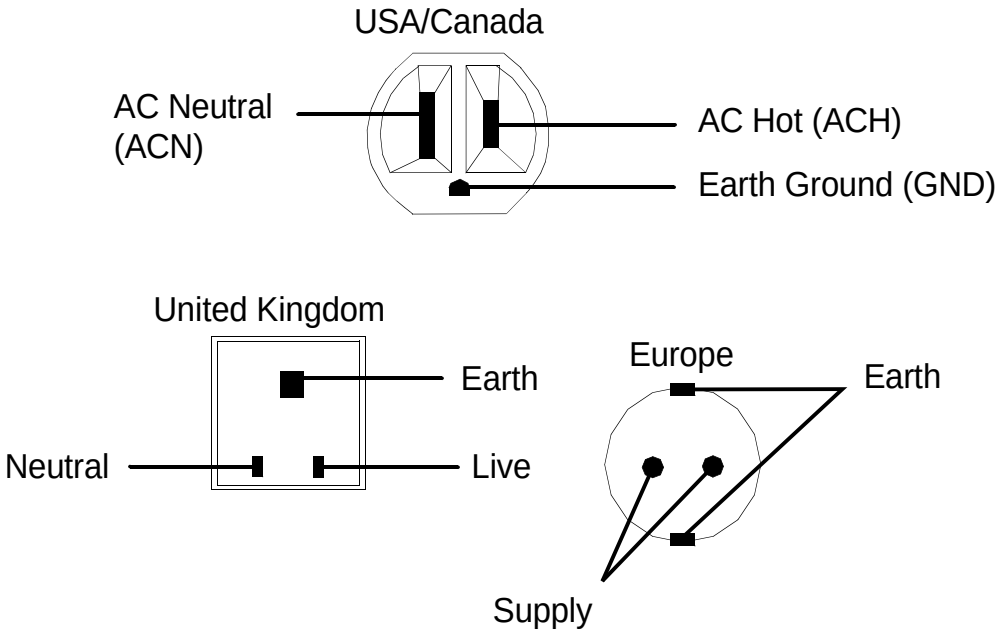


Figure 5-1. Multinational wall outlet configurations

The required wall outlet voltages for USA / Canada, United Kingdom, and the rest of Europe are as follows:

- **USA / Canada:** The voltage at the wall outlet is 100 to 120 VAC between AC hot and neutral, and between AC hot and GND. The voltage is less than three VAC between GND and neutral.
- **United Kingdom:** The voltage at the wall receptacle is 200 to 240 VAC between live and neutral, and between live and earth. The voltage is less than three VAC between earth and neutral.
- **Europe:** The voltage at the wall receptacle is 200 to 240 VAC between supply pins. The voltage between one supply pin and earth is 200 to 240 VAC. The voltage between the other supply pin and earth is less than 3 VAC.

Refer to the controller electrical requirements table earlier in this chapter for a description of the power specifications for the controller.

WARNING

To reduce the risk of electrical shock, do not plug components into any other type of power system. Contact your facilities manager or a qualified electrician if you are not sure what type of power is supplied to your work area.

Environmental specifications

The controller is a sturdy piece of equipment; however, like any piece of electronic equipment, it must be treated properly. Avoid extremes in temperature and other environmental hazards. Place the controller in a relatively dust-free area that is well-ventilated to avoid overheating.

In general, if your working environment is comfortable for you, it is suitable for your controller. The following sections define the acceptable environmental ranges for the two controller models with which your system may be configured.

Sun Blade 1000/2000 environmental requirements

- **Temperature**: 32 to 104 degrees F / 0 to 40 degrees C
- **Humidity**: 5 to 80% (relative non-condensing)
- **Altitude**: 0 to 10,000 feet (0 to 3,050 m) above sea level
- **Heat dissipation:** 1,100 BTU per hour (processor and monitor)

For recommended environmental ranges for the printer work area, refer to the “Printer specifications and requirements” chapter of this guide.

Sun Blade 2500 environmental requirements

- **Temperature**:
  - Without tape drive: 32 to 104 degrees F/0 to 40 degrees C
  - With tape drive: 41 to 95 degrees F/5 to 35 degrees C
- **Humidity**: 10 to 93% (relative non-condensing)
- **Altitude**: 0 to 9842.5 feet / 0 to 3,000 m above sea level
- **Heat dissipation:** 1,570 BTU per hour (processor and monitor)

For recommended environmental ranges for the printer work area, refer to the “Printer specifications and requirements” chapter of this guide.

Space requirements

This section provides recommendations for placement of controller hardware components.

For printer component space requirements, refer to the “Printer specifications and requirements” chapter of this guide. Contact your service representative if you have questions not specifically addressed in this guide.

Controller placement

WARNING

The controller must be positioned within the line-of-sight of the printer for safety purposes while servicing the equipment.

The controller components are placed in the accompanying controller stand. You should consider the following factors when deciding where to place the controller and stand:

- There should be at least 36 inches / 15.2 cm of clearance on all sides of the controller stand.
- Adequate work space and service clearance around the equipment
- Proximity to electrical and network connectors
- Security of the work area. You may need to place the system in an area where you can restrict access to it.

Guidelines for controller placement

To ensure consistent performance and avoid any damage to equipment, follow these rules for placing the components of the controller.

Do:

- Use the controller stand that comes with your printing system equipment.
- Allow at least 6 inches / 152 mm of unobstructed space at the front and rear of the processor, so the fan and vents are not blocked.

  The following illustration shows fan and vent locations on the front and back of the processor.

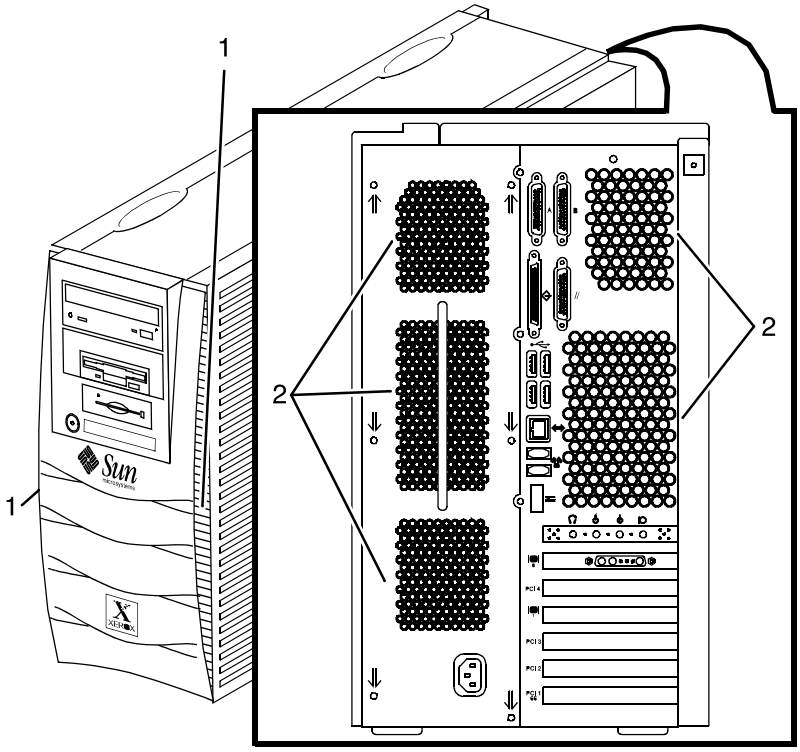


Figure 5-2. Sun Blade 1000/2000 fan and vent locations to keep clear

1. Vents in front of processor
2. Vents in back of processor

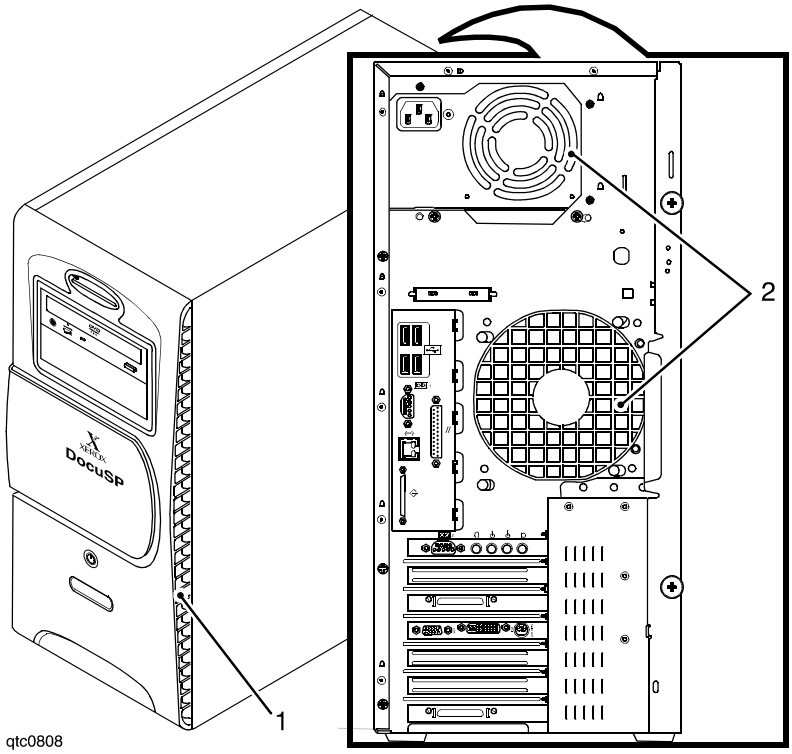


Figure 5-3. Sun Blade 2500 fan and vent locations to keep clear

1. Vents in front of processor
2. Vents in back of processor

Do not:

- Place the monitor and processor on a desk or table top.
- Do not place the monitor on top of the processor.
- Do not allow any piece of equipment to blow warm air into the air intake vents of the processor.
- Do not place the processor on its side, or in any other position but the upright, vertical position achieved by using the controller stand.
- Do not place the processor or monitor on top of the printer.

Controller hardware specifications and requirements summary

The following tables summarize the specifications and electrical requirements of your controller hardware components.

For a summary of printer hardware specifications and requirements, refer to the “Printer specifications and requirements” chapter of this guide. Contact your local Xerox representative if you have questions not specifically addressed in this guide.

Table 5-2. Sun Blade 1000/2000 specifications

Device	Dimensions (depth, width, height)	Weight	Heat dissipation	Power requirements	Cable lengths
Stand	d=35.5 in / 90.2 cm w=30 in / 76.2 cm h=38.25 in / 97.2 cm *NOTE: Add 3 in / 7.62 cm to stand’s depth with channel interface board and channel cable connector box.*	195 lbs / 88.6 kg	---	---	---
Processor	d=25 in / 63.5 cm w=10 in / 25.4 cm h=17.75 in / 45.1 cm	70 lbs / 31.8 kg	1,100 BTU per hour	**60 Hz:** 100 to 240 VAC, 15 amp, 0.4 KVA, 5-15 NEMA **50 Hz:** 100 to 240 VAC, 15 amp, 0.4 KVA	Power: 8 ft. / 2.4 m Interface to printer: 20 ft. / 6.1 m usable length
Monitor	d=10 in / 25.4 cm w=17.5 in / 44.5 cm h=18.5 in / 47 cm	18 lbs / 8.2 kg	408 BTU per hour	100-120 ~ VAC, 1 phase, 50-60 Hz, 3.0 amp, 0.4 KVA 200-240 ~ VAC, 1 phase, 50-60 Hz, 2.0 amp, 0.4 KVA	Video cable to processor: 46 in / 1.17 m
Quarter-inch cartridge tape drive	W=7.5 in / 19 cm H=2.7 in / 7 cm D=13 in / 33 cm	8.4 lbs / 3.8 kg	---	100-240 VAC, 47-63 Hz, max. 850 ma - 1.45 amp	SCSI cable to processor or additional SCSI device: 2.62 ft / 0.8 m
18/36 track cartridge tape drive (optional)	W= 8.54 in / 21.7 cm H= 5.39 in / 13.7 cm D= 21.9 in / 55.6 cm	31 lbs / 13.4 kg	---	88-264 VAC, 48-62 Hz, max. 35 amp	SCSI cable to processor or additional SCSI device: 16.4 ft / 5 m, 32.8 ft / 10 m, and 65.6 ft / 20 m

Table 5-2. Sun Blade 1000/2000 specifications (Continued)

Device	Dimensions (depth, width, height)	Weight	Heat dissipation	Power requirements	Cable lengths
External hard disk drive	W=7.5 in / 19 cm H=2.7 in / 7 cm D=13 in / 33 cm	8.4 lbs / 3.8 kg	---	100-240 VAC, 47-63 Hz, max. 850 ma - 1.45 amp	SCSI cable to processor or additional SCSI device: 28 in / 71 cm
Keyboard	d=7.5 in / 19.1 cm w=20 in / 50.8 cm	2 lbs / 1 kg	---	---	72 in / 1.8 m
Mouse	d=3 in / 8 cm w=4 in / 10 cm h=2 in / 5 cm	0.3 lbs / 0.14 kg	---	---	25 in / 63 cm
Peripheral cabinet (existing systems only; not an option on new systems)	---	---	---	108/240 VAC (1-phase), or 208/220 VAC (line 1 to line 2) 15 amp	---

Table 5-3. Sun Blade 2500 specifications

Device	Dimensions (depth, width, height)	Weight	Heat dissipation	Power requirements	Cable lengths
Stand	d=35.5 in / 90.2 cm w=30 in / 76.2 cm h=38.25 in / 97.2 cm *NOTE: Add 3 in / 7.62 cm to stand's depth with channel interface board and channel cable connector box.*	195 lbs / 88.6 kg	---	---	---
Processor	d=19.3 in / 49 cm w=8.3 in / 21 cm h=19 in / 48.3 cm	49.6 lbs / 22.5 kg	1,570 BTU per hour	**60 Hz:** 100 to 240 VAC, 15 amp, 0.4 KVA, 5-15 NEMA **50 Hz:** 100 to 240 VAC, 15 amp, 0.4 KVA	**Power:** 8 ft. / 2.4 m **Interface to printer:** 20 ft. / 6.1 m usable length
Monitor	d=10 in / 25.4 cm w=17.5 in / 44.5 cm h=18.5 in / 47 cm	18 lbs / 8.2 kg	408 BTU per hour	100-120 ~ VAC, 1 phase, 50-60 Hz, 3.0 amp, 0.4 KVA 200-240 ~ VAC, 1 phase, 50-60 Hz, 2.0 amp, 0.4 KVA	Video cable to processor: 70 in / 1.8 m
Quarter-inch cartridge tape drive	W=7.5 in / 19 cm H=2.7 in / 7 cm D=13 in / 33 cm	8.4 lbs / 3.8 kg	---	100-240 VAC, 47-63 Hz, max. 850 ma - 1.45 amp	SCSI cable to processor or additional SCSI device: 2.62 ft / 0.8 m
18/36 track cartridge tape drive (optional)	W= 8.54 in / 21.7 cm H= 5.39 in / 13.7 cm D= 21.9 in / 55.6 cm	31 lbs / 13.4 kg	---	88-264 VAC, 48-62 Hz, max. 35 amp	SCSI cable to processor or additional SCSI device: 16.4 ft / 5 m, 32.8 ft / 10 m, and 65.6 ft / 20 m
External hard disk drive	W=7.5 in / 19 cm H=2.7 in / 7 cm D=13 in / 33 cm	8.4 lbs / 3.8 kg	---	100-240 VAC, 47-63 Hz, max. 850 ma - 1.45 amp	SCSI cable to processor or additional SCSI device: 28 in / 71 cm

Table 5-3. Sun Blade 2500 specifications (Continued)

Device	Dimensions (depth, width, height)	Weight	Heat dissipation	Power requirements	Cable lengths
External diskette drive	w=408 in. / 10.4 cm h=.93 in. / 2.4 cm d=5.93 in. / 15.1 cm	.68 lbs / .31 kg	---	---	USB cable to processor: 11.8 in / 30 cm Additional extension cable provided: 6 ft / 1.5 m
Keyboard	d=7 in / 17.8 cm w=20 in / 50.8 cm	2 lbs / 1 kg	---	---	89 in / 2.26 m
Mouse	d=3 in / 8 cm w=4 in / 10 cm h=2 in / 5 cm	0.3 lbs / 0.14 kg	---	---	25 in / 63 cm
Peripheral cabinet (existing systems only; not an option on new systems)	---	---	---	108/240 VAC (1-phase), or 208/220 VAC (line 1 to line 2) 15 amp	---

6. Printer requirements and specifications

This chapter provides power and space requirements for the DocuPrint 100/115/135/155/180 EPS printer. It also provides printer environmental specifications.

For information about controller power and space requirements, refer to the “Controller specifications and requirements” chapter of this guide.

Power requirements

Your printer has important power requirements that must be accommodated. These requirements are summarized in the table below.

For further details on power requirements, refer to the voltage charts and wiring diagrams that follow.

For details on controller power requirements, refer to the “Controller specifications and requirements” chapter of this guide.

Table 6-1. Printer electrical requirements

Component	Voltage	Amp. service	KVA rating (operating mode)	Additional Requirements
Printer 60 Hz (U.S. and Canada)	120/240 VAC or 120/208 VAC (Cord 1) 120/240 VAC or 120/208 VAC (Cord 2 for DP 155 and DP180 only)	50 amp (Cord 1) 30 amp (Cord 2 for DP 155 and DP180 only)	**Operating:** 7.3 + .75 per middle module stacker	14-50R (Cord 1) 14-30R (Cord 2 for DP 155 and DP180 only)
Printer 50 Hz - WYE (Star)	380, 400, 415 VAC (3 phase, 5 wire)	30 amp	Consult local service representative	

Agency certification: UL 478 and 1950, IEC 950, CE Mark, CSA 22.2 #220-1986, FCC (Class A), and VDE 0871 (Class A).

Outlet configurations

This section discusses specifications for printer outlets and the required wall outlet configurations for the USA / Canada and internationally.

NOTE: All power outlets must be dedicated to this equipment. When determining the electrical connections for your printer, make sure that:

- *Each power cord has a separate circuit*
- *The printer power cord configurations match your receptacle*
- *Your electrical outlets are within the required specifications*

50 Hz systems: Ensure that power connections are per local codes/regulations.

60 Hz printer outlet voltages

The following table shows the voltages for the outlets on your printer. All power outlets must have a dedicated circuit for each system equipment piece. Make sure each power cord has a separate circuit.

Table 6-2. Printer (60 Hz) voltage requirements at power outlet

Service outlet configuration	Measurement of wiring	Nominal	Range
4 Wire	Line 1 to neutral	120 V RMS	107-127 V RMS
4 Wire	Line 2 to neutral	120 V RMS	107-127 V RMS
4 Wire	Neutral to ground	0	0-10 V RMS
4 Wire	Line 1 to line 2	208 V RMS	182-220 V RMS
4 Wire	Line 1 to line 2	240 V RMS	210-254 V RMS

Printer power outlet and cord voltage configurations–60 Hz

The following figures shows the 60 Hz power outlet configuration for 50 amp NEMA 14-50R and 30 amp NEMA 14-30R. Voltage to ground is shown for troubleshooting purposes.

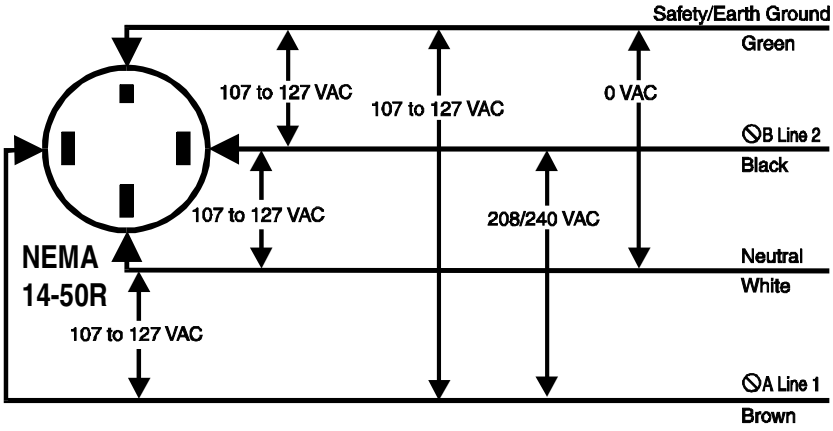


Figure 6-1. 60 Hz power configuration–50 amp

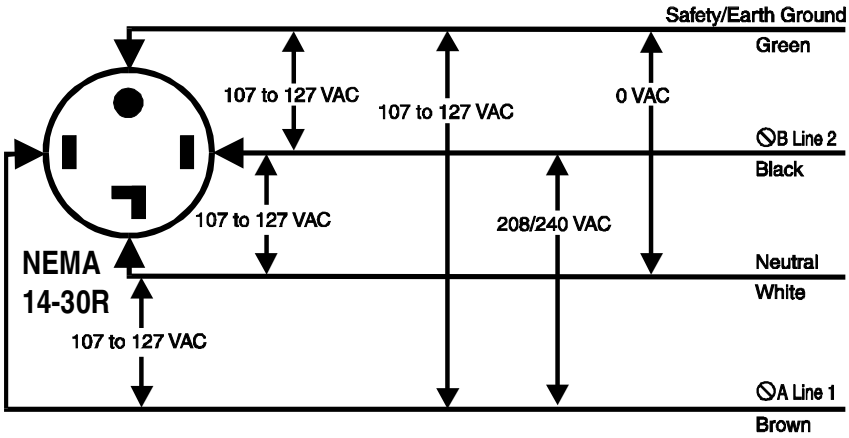


Figure 6-2. 60 Hz power configuration–30 amp

50 Hz printer outlet voltages

All power outlets must have a dedicated circuit for each system equipment piece. Make sure each power cord has a separate circuit.

NOTE: Consult with your service representative to ensure that the installation conforms to your local electrical requirements.

WYE (or Star) configurations–50 Hz

For the 50 Hz WYE configuration, measure the WYE or Star connection voltages at the power source.

Table 6-3. Printer (50 Hz) WYE (Star) 415 voltage

Service outlet configuration	Measurement of wiring	Nominal	Range
5 Wire 415 V	Line 1 to line 2	415 V RMS	374-457 V RMS
5 Wire 415 V	Line 2 to line 3	415 V RMS	374-457 V RMS
5 Wire 415 V	Line 1 to Line 3	415 V RMS	374-457 V RMS
5 Wire 415 V	Line 1 to neutral	240 V RMS	216-264 V RMS
5 Wire 415 V	Line 2 to neutral	240 V RMS	216-264 V RMS
5 Wire 415 V	Line 3 to neutral	240 V RMS	216-264 V RMS

The following lists the 50 Hz WYE/Star printer outlet information for 380 and 400 volts.

Table 6-4. Printer (50 Hz) WYE (Star) 380 and 400 voltage

Service outlet configuration	Measurement of wiring	Nominal	Range
5 Wire 380 V	Line 1 to line 2	380 V RMS	342-419 V RMS
5 Wire 380 V	Line 2 to line 3	380 V RMS	342-419 V RMS
5 Wire 380 V	Line 1 to Line 3	380 V RMS	342-419 V RMS
5 Wire 380 V	Line 1 to neutral	220 V RMS	198-242 V RMS
5 Wire 380 V	Line 2 to neutral	220 V RMS	198-242 V RMS
5 Wire 380 V	Line 3 to neutral	220 V RMS	198-242 V RMS
5 Wire 400 V	Line 1 to line 2	400 V RMS	358-438 V RMS
5 Wire 400 V	Line 2 to line 3	400 V RMS	358-438 V RMS
5 Wire 400 V	Line 1 to Line 3	400 V RMS	358-438 V RMS
5 Wire 400 V	Line 1 to neutral	230 V RMS	207-253 V RMS
5 Wire 400 V	Line 2 to neutral	230 V RMS	207-253 V RMS
5 Wire 400 V	Line 3 to neutral	230 V RMS	207-253 V RMS

Printer power outlet/cord voltage configurations–50 Hz

For 50 Hz systems outlet/power cord configurations, consult your local service representative to determine the type of plug and receptacle to use.

Environmental specifications

When you select a location for your printer, avoid environments with extreme variations in temperature and other hazards, such as excessive dust or humidity. Recommended environmental ranges for the work area are as follows:

Table 6-5. Printer environmental specifications

Condition	Range	
Operating temperature	Recommended: Minimum: Maximum:	68° F to 76° F / 20° C to 24° C 50° F / 10° C 85° F / 29° C
Humidity	Recommended: Minimum: Maximum:	45% ±10% 30% 65%
Altitude:	Normal: Maximum:	Up to 6,000 feet / 1,830 m above sea level 9,000 feet / 2,743 m above sea level
Heat dissipation: DP 155 and 180 (2-stacker system) DP 100, 115, and 135 (2-stacker system)	 Operating: Standby: Energy Saver: Operating: Standby: Energy Saver:	 32,770 BTU/hour 4,454 BTU/hour 2,700 BTU/hour 28,140 BTU/hour 4,454 BTU/hour 2,700 BTU/hour
Audible noise	**Operating:** Continuous: Impulse: **Standby:** Continuous: Impulse:	82 dB(A) 82 dB(A) 52 dB(A) N/A

Space requirements

You should consider the following factors when deciding where to place the printer hardware components:

- Adequate work space and service clearance around the equipment
- Proximity to electrical and network connectors
- Security of the work area. You may need to place the system in an area where you can restrict access to it. This may be important if your personnel need to print confidential documents or if you are concerned with unauthorized usage.

Dimensions and weights of the printer components are listed in this section, along with diagrams, to help you visualize the sizes and total space requirements.

NOTE: There must be a 78 inch / 198 cm vertical clearance throughout the entire area. In addition, your printer must be installed in a fixed location with a minimum clearance space of 36 inches / 91.4 cm around all sides of each piece of equipment for access by service personnel. In addition, there must be 50 inches / 126.9 cm clearance space in front of the printer.

For information on clearance space and other space planning considerations, refer to the “Space planning guidelines” section of this chapter. Contact your service representative if you have questions not specifically addressed in this guide.

Printer configurations available

The following configurations are available for the printer:

- Printer + inverter feeder/stacker + 1 feeder/stacker
- Printer + inverter feeder/stacker + 2 feeder/stackers
- Printer + inverter feeder/stacker + 3 feeder/stackers.

Measurements and a top-view diagram for each of these configurations is provided on the following pages.

Printer configuration diagrams

The following diagrams show space requirements for three printer configurations.

Printer with inverter feeder/ stacker and one feeder/stacker

The dimensions of the printer with the inverter feeder/stacker and feeder/stacker are as follows:

- Width: 151.25 inches / 384.2 cm
- Depth: 38.8 inches / 98.6 cm
- Height: 59.6 inches / 151.3 cm
- Weight: 2,588 pounds / 1174.9 kg
- Total space requirement: 223.25 by 114 inches / 567 by 290.3 cm

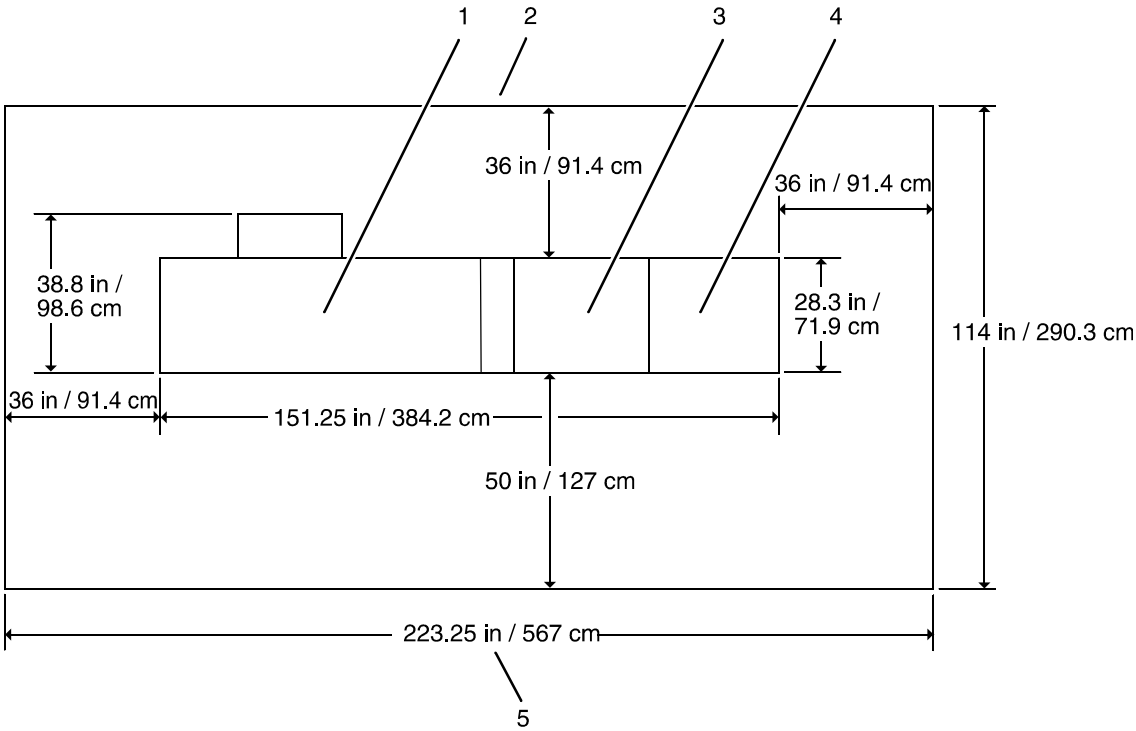


Figure 6-3. Printer with inverter feeder/stacker and one feeder/stacker (top view)

1. Printer
2. Back of printer area
3. Inverter feeder/stacker
4. Feeder/stacker
5. Front of printer area

Printer with inverter feeder/ stacker and two feeder/ stackers

The dimensions of the printer with the inverter feeder/stacker, and two feeder/stackers are as follows:

- Width: 183.50 inches / 466.1 cm
- Depth: 38.8 inches / 98.6 cm
- Height: 59.6 inches / 151.3 cm
- Weight: 3,109 pounds / 1,411.9 kg
- Total space requirement: 114 by 256.50 inches / 290.3 by 648.9 cm

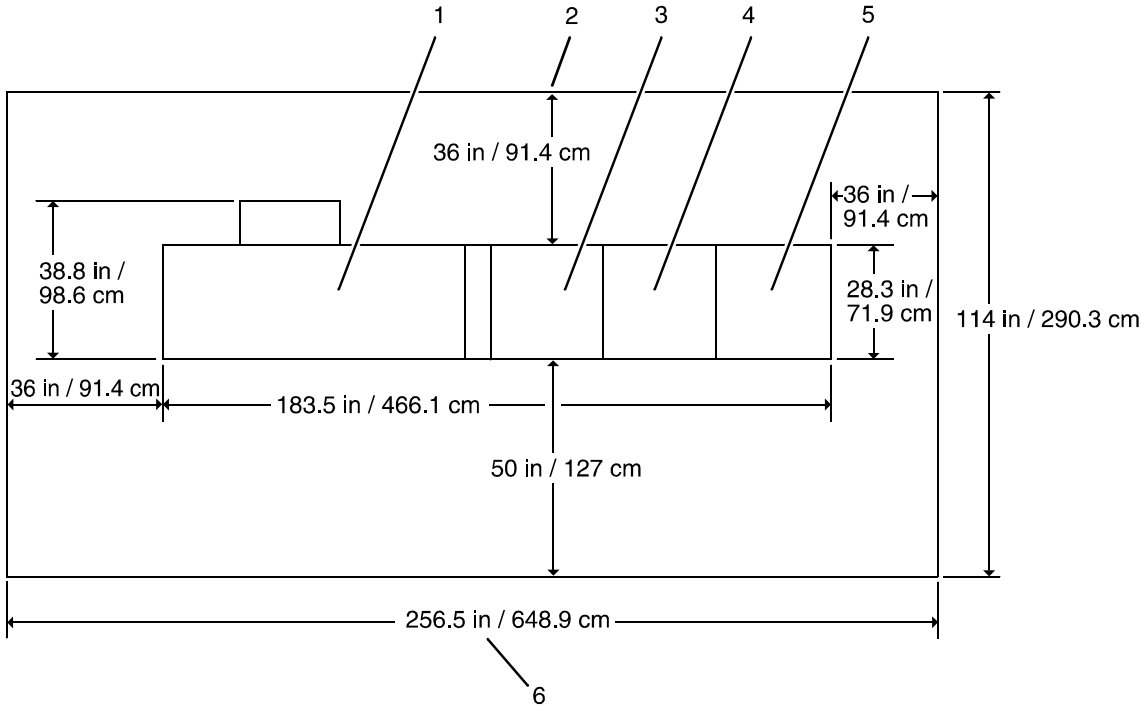


Figure 6-4. Printer with inverter feeder/stacker and two feeder/stackers (top view)

1. Printer
2. Back of printer area
3. Inverter feeder/stacker
4. Feeder/stacker
5. Feeder/stacker
6. Front of printer area

Printer with inverter feeder/ stacker and three feeder/ stackers

The dimensions of the printer with the inverter feeder/stacker and three feeder/stackers are as follows:

- Width: 215.75 inches / 548 cm
- Depth: 38.8 inches / 98.6 cm
- Height: 59.6 inches / 151.3 cm
- Weight: 3,630 pounds / 1,648.9 kg
- Total space requirement: 114 by 287.75 inches / 290.3 by 730.8 mm

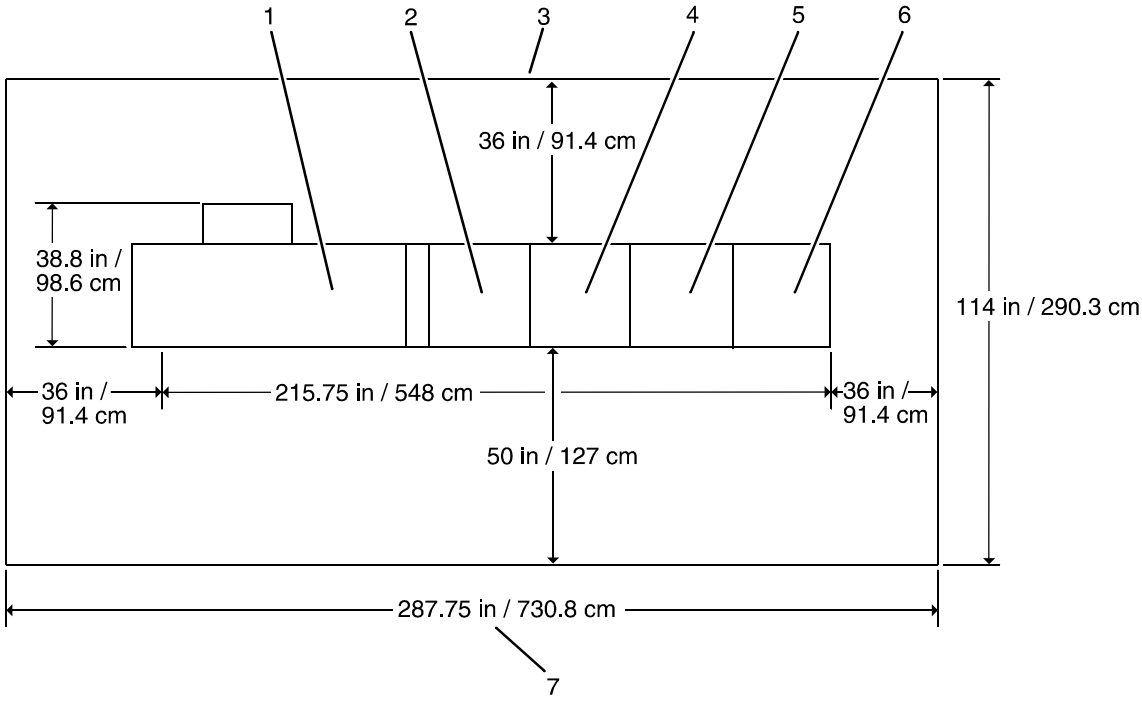


Figure 6-5. Printer with inverter feeder/stacker and three feeder/stackers (top view)

1. Back of printer area
2. Printer
3. Inverter feeder/stacker
4. Feeder/stacker
5. Feeder/stacker
6. Feeder/stacker
7. Front of printer area

Bypass transport specifications

The bypass transport option enables you to add a third-party finishing device. The bypass transport is installed by your service representative and remains permanently in place. You should not attempt to remove or reinstall it. The following is

supported by the bypass transport:

- **Paper size and weight:** You can use all of the paper sizes and weights supported by the printer in the bypass transport.
- **Sheet exit orientation:** 1 to N (the same order in which sheets are fed from the printer), delivered face down.
- **Maximum throughput speed:** The bypass transport for the printer supports throughput speeds of up to 180 ppm (pages per minute). This rate is based on stocks up to 9 by 14.33 / 229 by 364 mm in length.
- **Sheet exit height:** 34 inches / 86 cm above the floor.

Bypass transport dimensions

The following pages contain diagrams showing dimensions, service access, and the paper path for the bypass transport.

Dimensions The following figure shows the dimensions of the bypass transport in millimeters and inches from the right end view.

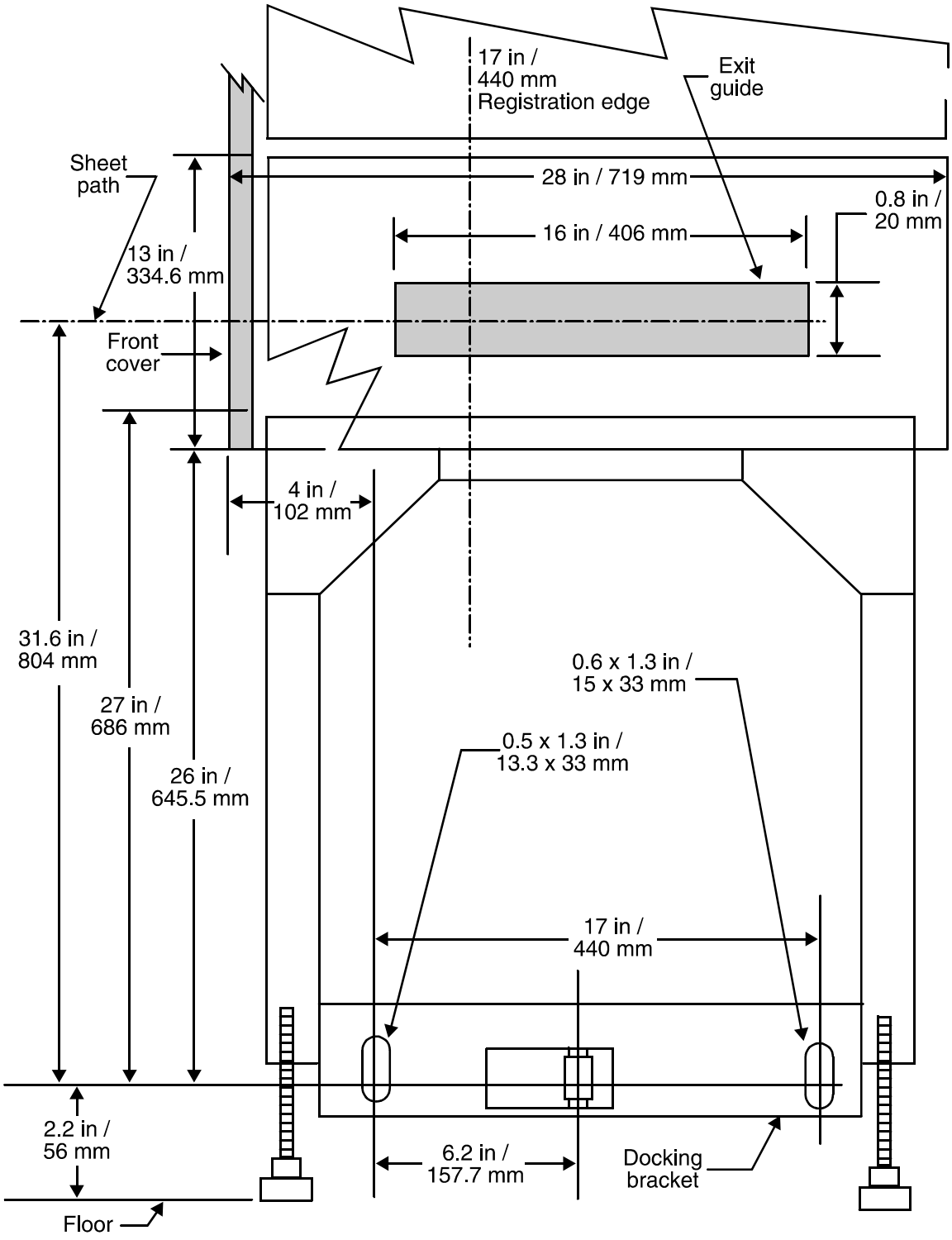


Figure 6-6. Bypass transport dimensions

Service access The following figure provides space planning information and service access requirements for the bypass transport.

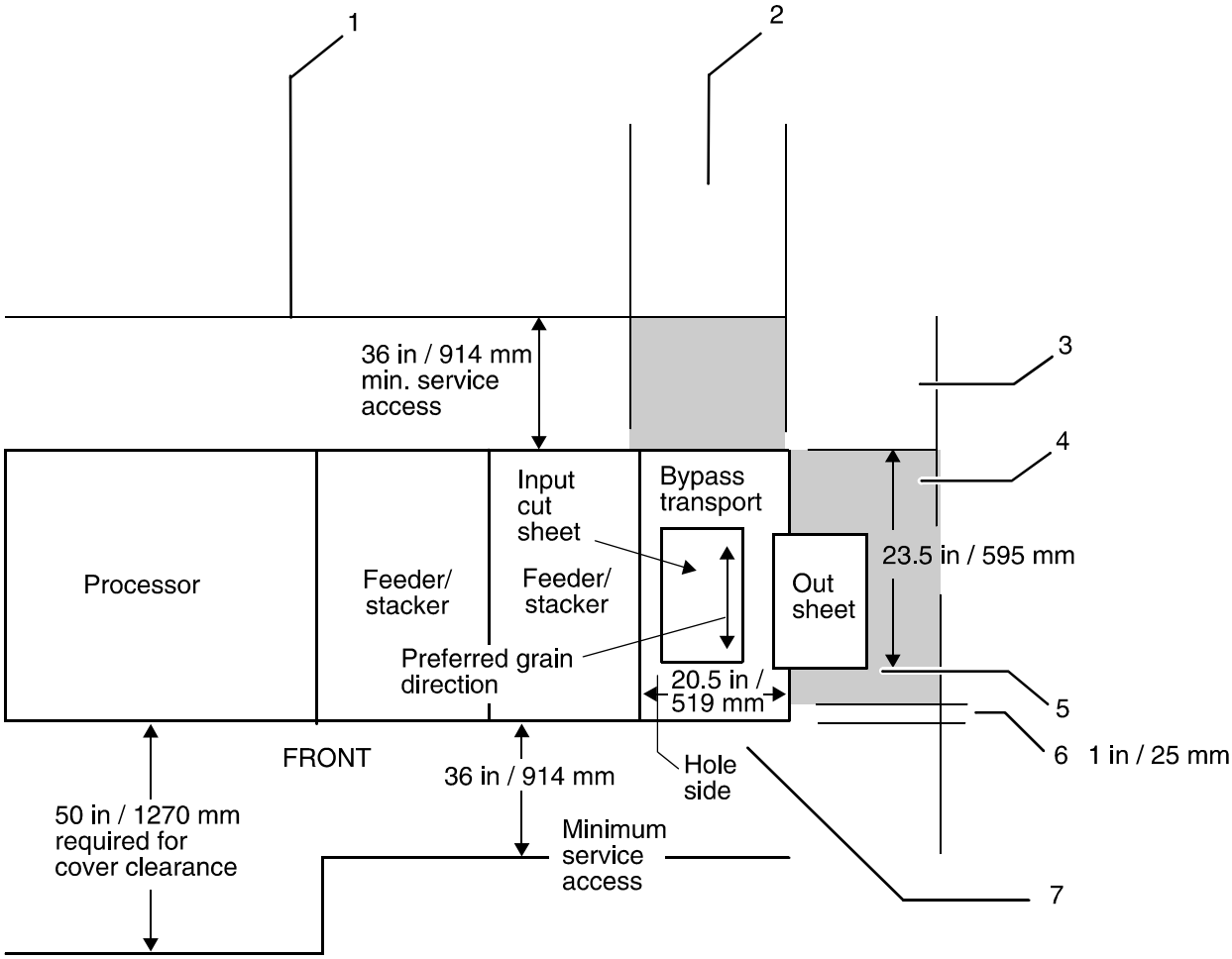


Figure 6-7. Bypass transport space planning diagram (top view)

1. Recommended third-party feeder hardware attaches at rear of printer
2. Expected third-party input paper feed path
3. Neutral area, to remain unoccupied
4. Shaded areas at rear and right side of the bypass transport require third-party input/output devices to be undockable from the feeder/stacker or the bypass transport
5. Register edge of the output sheet
6. Third-party hardware must not extend more than 1 inch / 25 mm beyond bypass transport front cover line for correct front door access

7. Bypass transport / input enablement jam clearance space is required

Bypass transport paper path

The following figure shows the paper path through the bypass transport from a front view.

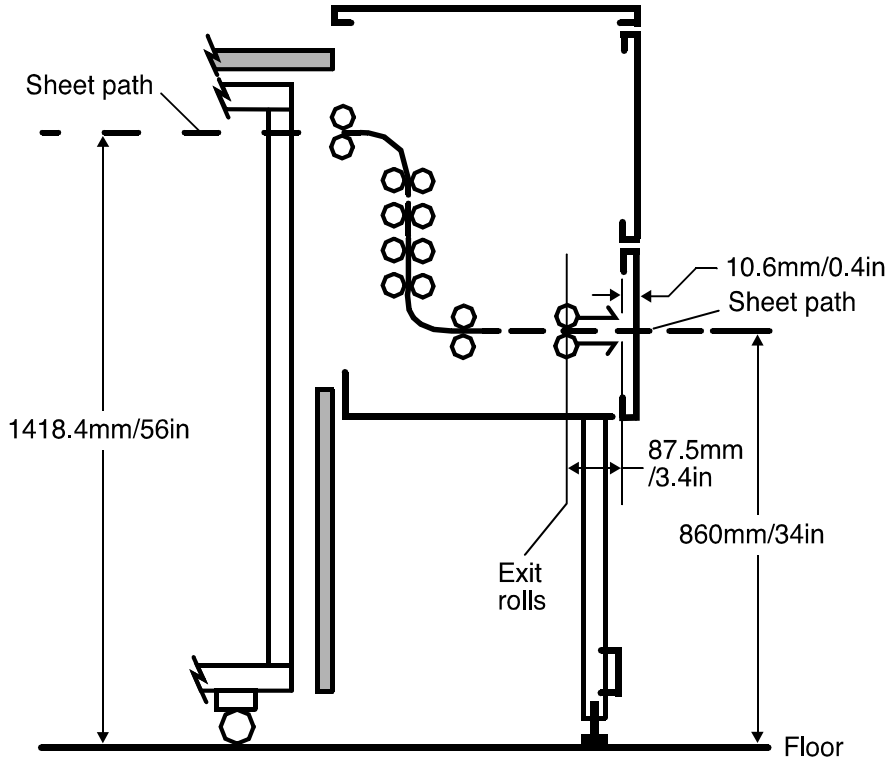


Figure 6-8. Bypass transport paper path

Configuration diagrams with bypass transport

The following diagrams show the dimensions and space requirements of the printer with a bypass transport. These diagrams represent top views of the components, surrounded by the minimum access space requirements on all sides.

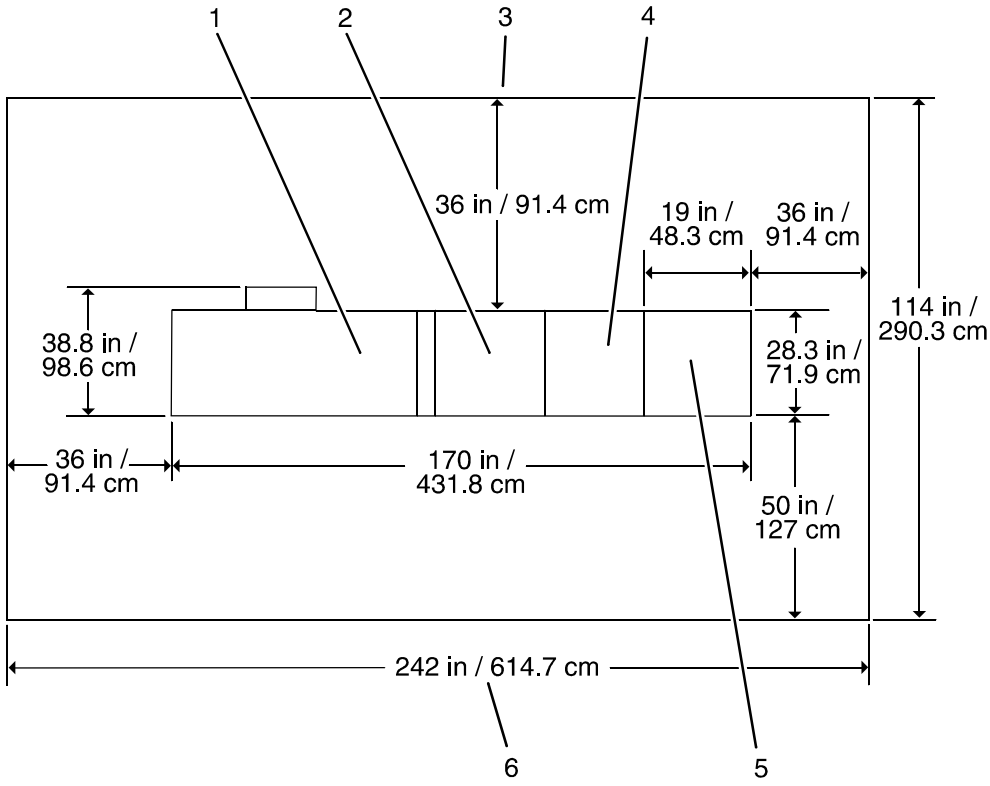


Figure 6-9. Printer—inverter feeder/stacker and one feeder/stacker with bypass transport

1. Printer
2. Inverter feeder/stacker
3. Back of printer area
4. Feeder/stacker
5. Bypass transport
6. Front of printer area

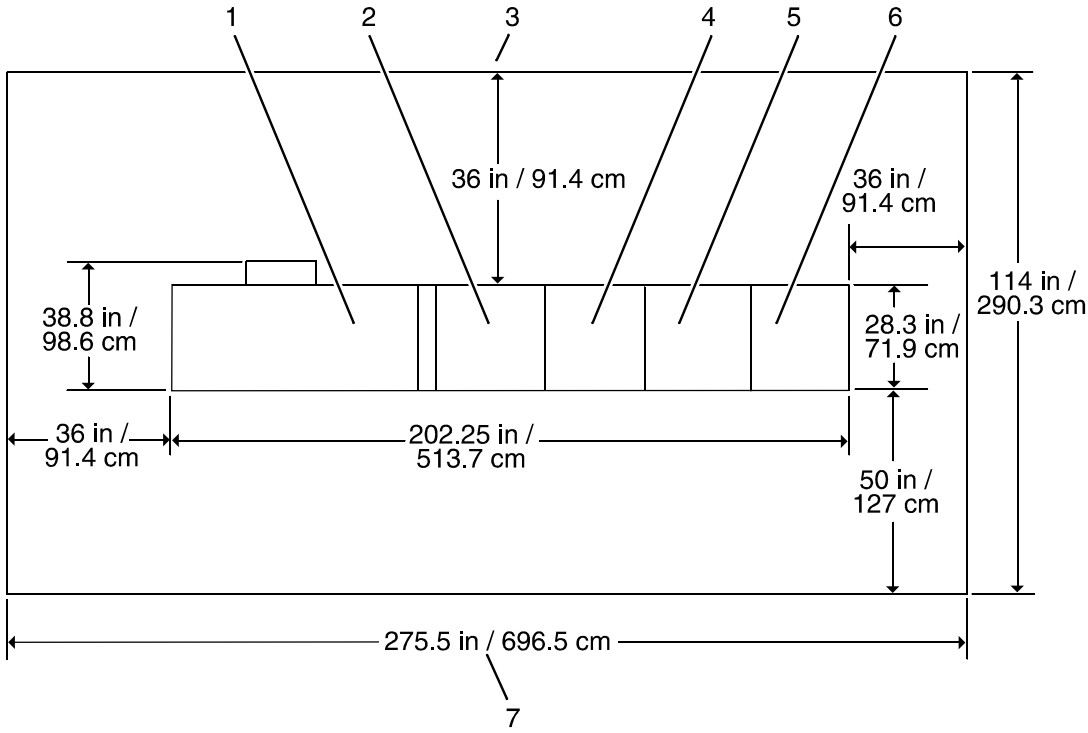


Figure 6-10. Printer—inverter feeder/stacker and two feeder/stackers with bypass transport

1. Printer
2. Inverter feeder/stacker
3. Back of printer area
4. Feeder/stacker
5. Feeder/stacker
6. Bypass transport
7. Front of printer area

Space planning guidelines

When determining your space requirements and planning for shared space between your printers, it is important to consider all of the components you plan to install.

To ensure all of the space requirements are met, it is important to work with your Xerox representative.

Before installation, you must consider the following:

- Clearance space requirements where you intend to install the printer
- Recommended cable lengths and locations (refer to the “System connections” chapter of this guide for more information)
- Delivery access requirements
- Floor leveling

Clearance space requirements

The printer must be installed in a fixed location that provides the following clearance space:

- 36 inches / 91.4 cm on all sides of each component
- 78 inches / 198 cm of vertical clearance throughout the entire area
- 24 inches / 61 cm of exclusive operator area in front of each component

NOTE: There must be a total of 50 inches / 126.9 cm of clearance space in front of the printer.

Shared space between components

It is best to provide the full amount of clearance space around the hardware components. Your environment may require you to use shared space between components such as between the printer and the controller or between the printer and another Xerox printing system. You can share the 36-inch / 91.4 cm clearance space around each component, as long as you follow these rules:

- Space may be shared only with other Xerox equipment.
- Components may share the 36-inch / 91.4 cm general service clearance areas, but they may not share the 24-inch / 61 cm operator area in front of each component.
- There must be 78 inches / 198 cm of vertical clearance throughout the entire area.

NOTE: Finishers that are attached to your bypass transport may occupy shared space with Xerox equipment. However, they must be removable to allow servicing of the printer feeders and stackers. Consult with your Xerox representative to ensure all the requirements are met.

Shared space configuration diagrams

The following figures illustrate three possible configurations of shared space.

Back-to-back shared space

The figure below illustrates the two printers placed in a back-to-back position. This allows the printers to share the entire 36 inches /
91.4 cm of general service space.

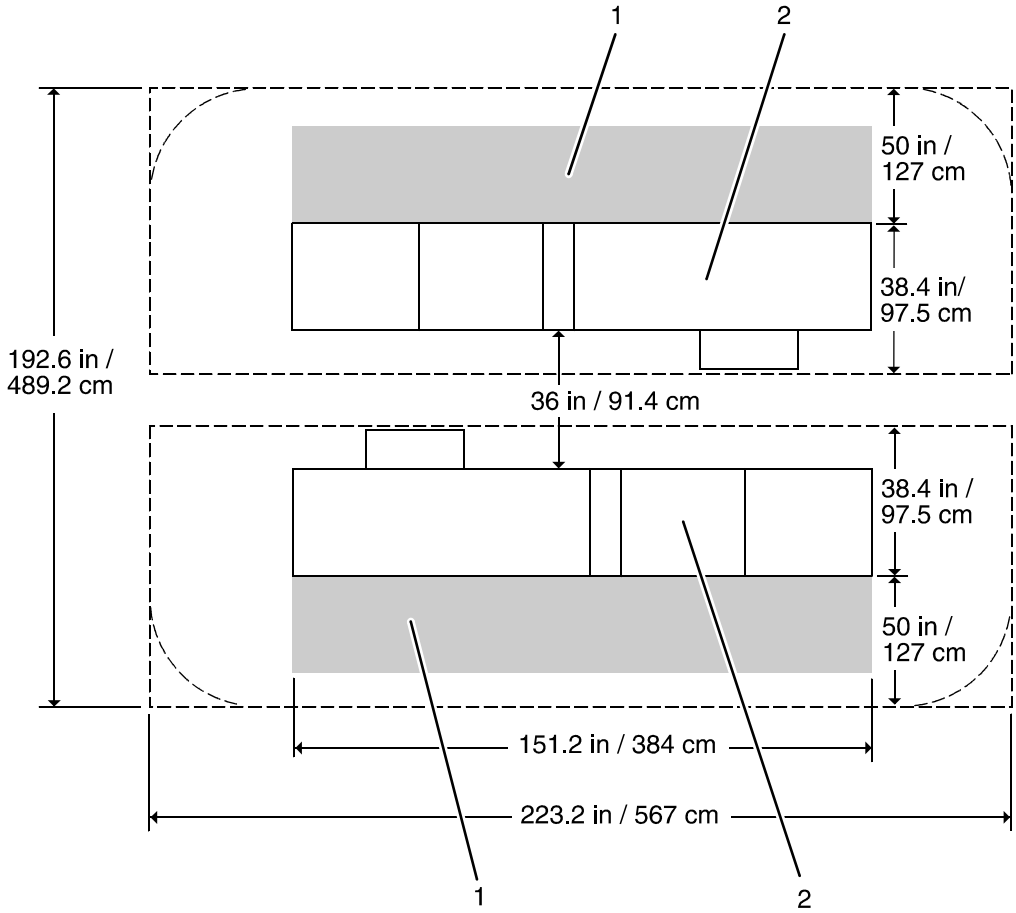


Figure 6-11. Back-to-back shared service area space

1. Operator area
2. Printer

Face-to-face shared space

The following figure shows the two printers facing each other. The printers share 26 inches / 30.5 cm of the general service space, but not the exclusive operator area in front of each printer. Therefore, the printers should be separated by 24 inches / 61 cm, plus 24 inches / 61 cm, plus 26 inches / 30.5 cm. This allows for the entire operator space for each printer, plus the shared general service area of
26 inches / 30.5 cm.

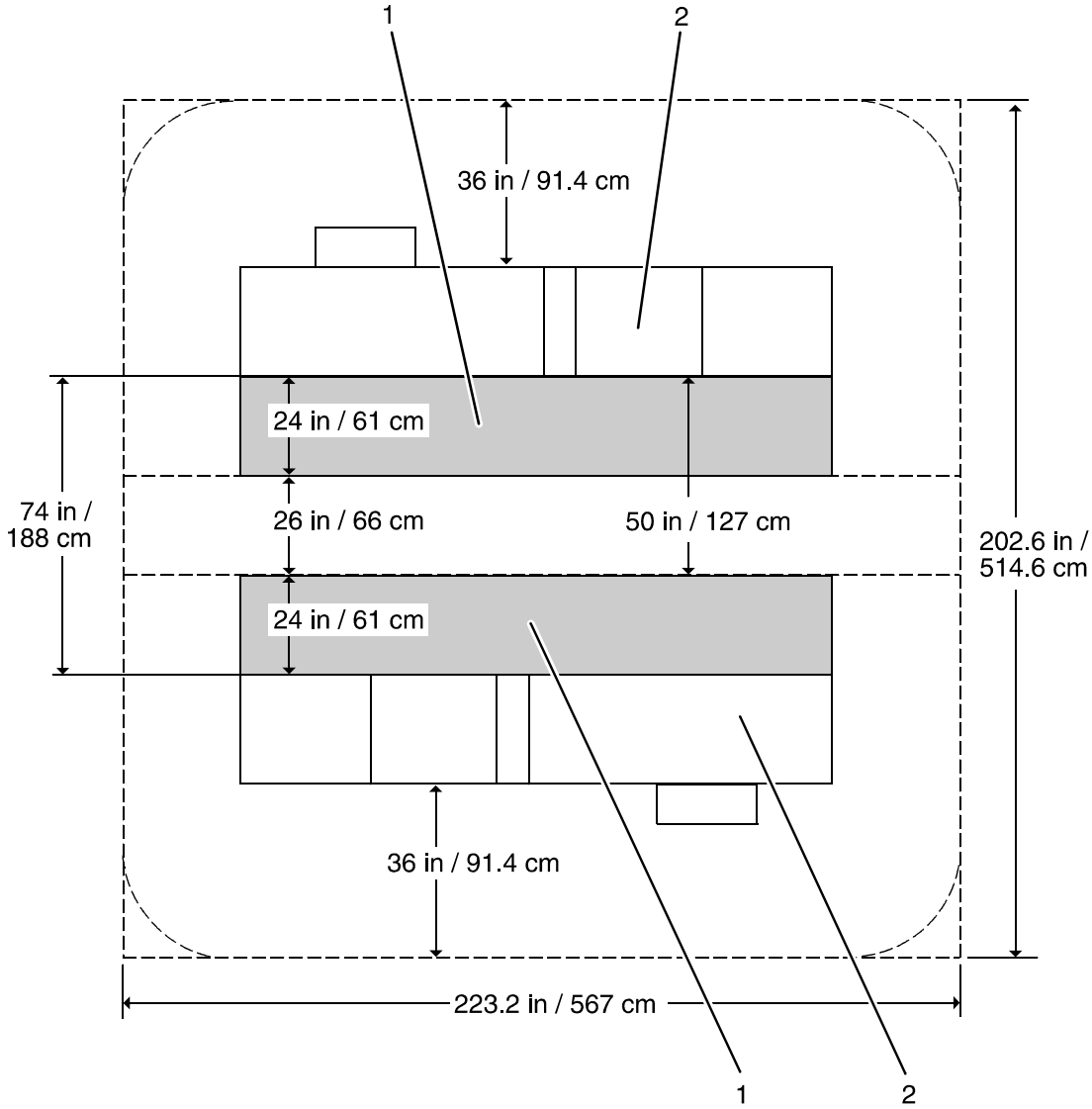


Figure 6-12. Face-to-face shared service area space

1. Operator area
2. Printer

Face-to-back shared space

The following figure shows the two printers arranged with one facing the back of the other. Between them is 60 inches / 152.4 cm of space. This allows for 24 inches / 61 cm of operator space in front of the printer facing toward the other, plus 36 inches / 91.4 cm of service space behind the printer facing away from the other.

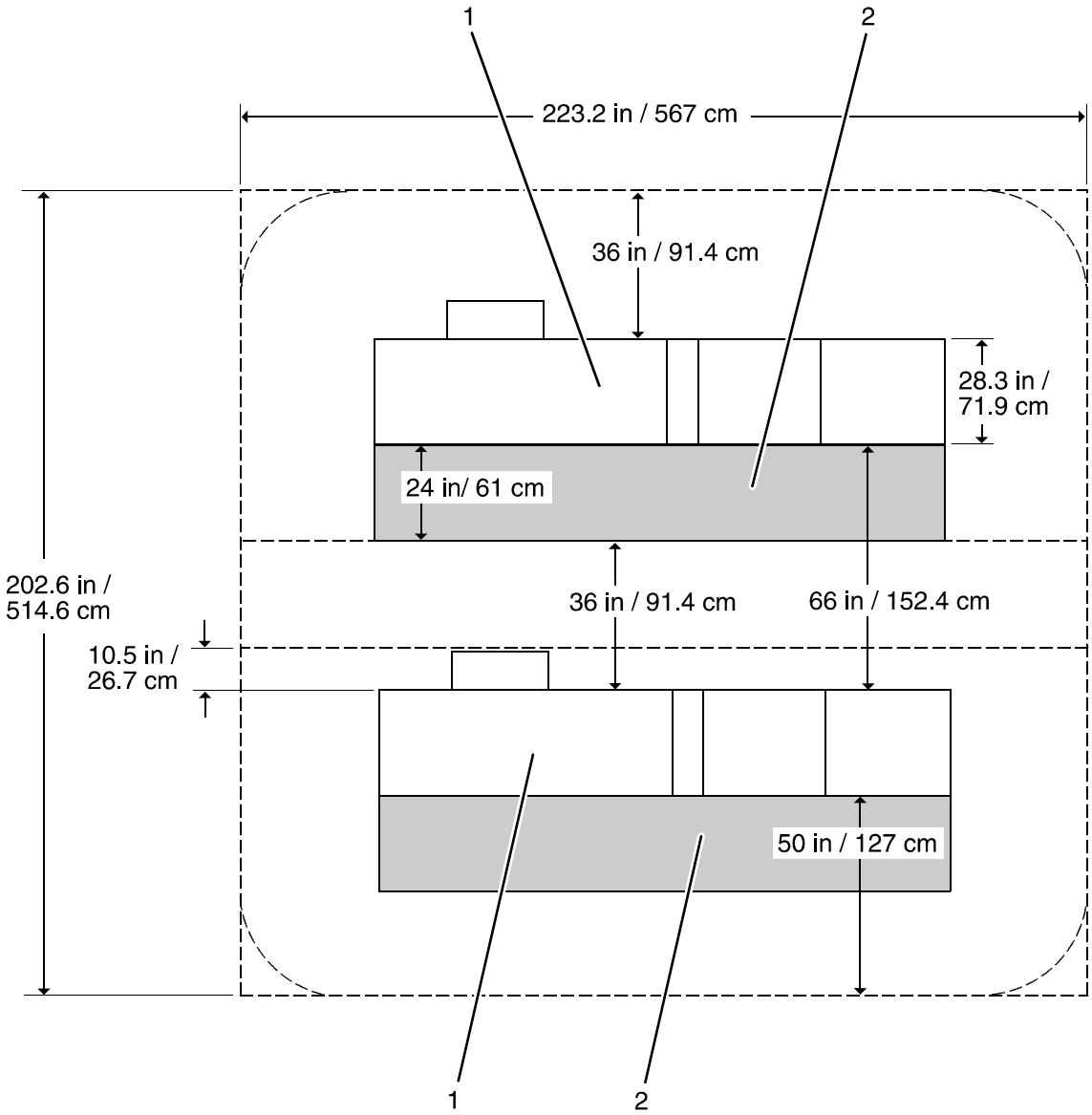


Figure 6-13. Face-to-back shared space

1. Operator area
2. Printer

Floor leveling

For proper operation, the printer must be perfectly level. On floors less than two degrees out of level, installation personnel use a leveling kit to level the machine.

NOTE: The printer will not function properly on floors more than two degrees out of level.

If the floor is more than two degrees out of level, find another location for the printer.

For your reference, two degrees represents a height discrepancy of approximately 3.8 inches / 9.6 cm measured at the casters with the printer tilting from left to right, or approximately 0.7 inches / 1.8 cm with the printer tilting from back to front.

If you move the printer after its initial installation, it is your responsibility to make sure that the printer can be leveled properly. If you do not have the leveling kit (the printer in its initial location did not require it), and you need one to level the printer in a new location, contact your Xerox site representative to obtain one.

Delivery access requirements

It is easy to overlook the path required to move the equipment from the truck to the operation site. To determine access, ask the following questions:

- Does the equipment need to go up or down a stairwell? How wide is the stairwell?
- Do you have an elevator, if the equipment is to be located above or below the first floor?
- Is the elevator large enough for the equipment?
- How wide are the hallways and doorways?
- Do you have a loading dock or a specific door to which the equipment should be delivered?

You need to review these issues before or during the site inspection conducted by your service representative.

The equipment dimensions are specified earlier in this chapter, so it is easy to determine whether your hallways and doorways are wide enough to permit access.

Turning radius

You must also consider the width of the passageway when the equipment must negotiate a corner, whether into a room, an elevator, or another passageway.

There are L-shaped turns and T-shaped turns. The diagrams and the tables that follow show the minimum space required to maneuver through the turns.

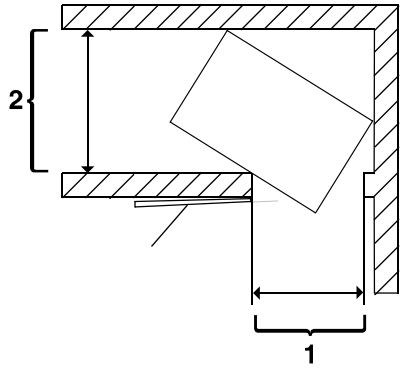


Figure 6-14. L-shaped turn

- Passage A
- Passage B

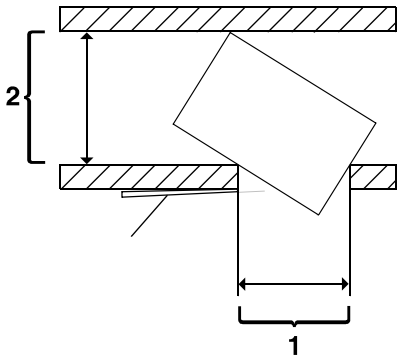


Figure 6-15. T-shaped turn

- Passage A
- Passage B

Using the turning radius tables

To use the tables:

1. Measure the minimum width of the passage or doorway you need to use. This is Passage A.
2. Find that number (or the next higher number) in the turning radius table and read across to the corresponding minimum value for Passage B, depending on the type of turn the equipment must negotiate.

Turning radius for printer with separated components

The printing system is delivered with the printer, inverter feeder/stacker, and each feeder/stacker as separate modules. If necessary, the printer can be separated into two pieces for ease in moving. The larger of the two parts contains the xerographic system; the smaller of the parts (the paper handling module, or PHM) contains paper trays 1 and 2. Do not confuse these two parts of the printer with the inverter and feeder/stacker modules, which have their own turning requirements.

The following table lists the turning requirements for the printer without the PHM (separated).

Table 6-6. Turning radius for printer (separated)

Passage or doorway A width	Minimum passage B width
29 inches / 73.7 cm	74.5 inches / 189.2 cm
30 inches / 76.2 cm	64.5 inches / 163.8 cm
31 inches / 78.7 cm	62 inches / 157.5 cm
32 inches / 81.3 cm	59.5 inches / 151.1 cm
34 inches / 86.4 cm	56 inches / 142.2 cm
36 inches / 91.4 cm	53 inches / 134.6 cm
38 inches / 96.5 cm	50 inches / 127 cm
40 inches / 101.6 cm	48 inches / 121.9 cm
42 inches / 106.7 cm	45.5 inches / 115.6 cm

The following table lists the turning requirements for the printer if it is upended for easier moving or stair-climbing. This table reflects requirements for the printer separated from the PHM.

Table 6-7.Turning radius for printer (separated and upended on dolly)

Passage or doorway A width	Minimum passage B width
30 inches / 76.2 cm	49 inches / 124.5 cm
31 inches / 78.7 cm	43 inches / 109.2 cm
32 inches / 81.3 cm	41 inches / 104.1 cm
34 inches / 86.4 cm	37.5 inches / 95.3 cm
36 inches / 91.4 cm	35 inches / 88.9 cm
38 inches / 96.5 cm	33.5 inches / 85.1 cm
40 inches / 101.6 cm	32 inches / 81.3 cm
42 inches / 106.7 cm	31 inches / 78.7 cm

Turning radius for unseparated printer components

The following table lists the turning requirements for the printer when attached to the paper handling module (not separated).

Table 6-8. Turning radius for printer (not separated)

Passage or doorway A width	Minimum passage B width
29 inches / 73.7 cm	83 inches / 210.8 cm
30 inches / 76.2 cm	76 inches / 193 cm
31 inches / 78.7 cm	73 inches / 185.4 cm
32 inches / 81.3 cm	70.5 inches / 179.1 cm
34 inches / 86.4 cm	66.5 inches / 169 cm
36 inches / 91.4 cm	63.5 inches / 161.3 cm
38 inches / 96.5 cm	61.5 inches / 156.2 cm
40 inches / 101.6 cm	58 inches / 147.3 cm
42 inches / 106.7 cm	55 inches / 139.7 cm

Turning radii for feeder/stacker modules

The following table lists the turning requirements for the inverter feeder/stacker module.

Table 6-9. Turning radius for inverter feeder/stacker module

Passage or doorway A width	Minimum passage B width
29 inches / 73.7 cm	43 inches / 109.2 cm
30 inches / 76.2 cm	41 inches / 104.1 cm
31 inches / 78.7 cm	40 inches / 101.6 cm
32 inches / 81.3 cm	38 inches / 96.5 cm
33 inches / 83.8 cm	37 inches / 94 cm
34 inches / 86.4 cm	36 inches / 91.4 cm
35 inches / 88.9 cm	35 inches / 88.9 cm
36 inches / 91.4 cm	34 inches / 86.4 cm
37 inches / 94 cm	33 inches / 83.8 cm
38 inches / 96.5 cm	32 inches / 81.3 cm
39 inches / 99.1 cm	31 inches / 78.7 cm
40 inches / 101.6 cm	31 inches / 78.7 cm
41 inches / 104.1 cm	30 inches / 76.2 cm
42 inches / 106.7 cm	29 inches / 73.7 cm
43 inches / 109.2 cm	29 inches / 73.7 cm

NOTE: These figures are based on inverter/feeder/stacker dimensions of 28 inches / 711 mm by 42 inches / 1,067 mm.

The following table lists the turning requirements for the feeder/stacker module.

Table 6-10. Turning radius for feeder/stacker module

Passage or doorway A width	Minimum passage B width
29 inches / 73.7 cm	33 inches / 83.8 cm
30 inches / 76.2 cm	32 inches / 81.3 cm
31 inches / 78.7 cm	31 inches / 78.7 cm
32 inches / 81.3 cm	30 inches / 76.2 cm
33 inches / 83.8 cm	29 inches / 73.7 cm

NOTE: These turning figures are based on inverter/feeder/ stacker dimensions of 28 inches / 71.1 cm by 32.25 inches / 81.9 cm.

Printer hardware specifications and requirements summary

The following table summarizes the specifications and electrical requirements of your printer hardware components.

Table 6-11. Printer specifications and power requirements

Device	Dimensions (width, depth, height)	Total Weight	Heat dissipation	Power requirements
Printer with inverter feeder/stacker and one feeder/stacker	W=151.2 in / 384 cm H=59.6 in / 151.3 cm D=38.8 in / 98.6 cm Total space required (+ access): 223.25 in W by 114 in D / 567 cm W by 290.3 cm D	2,588 lbs/ 1,174.9 kg.	**DP 100, 115, and 135:** **Operating:** 28,140 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr **DP 155 and 180:** **Operating:** 32,770 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr	**60 Hz:** **DP 100, 115, and 135:** 120/240 VAC or 120/208 VAC; 50 amp service; NEMA L14-50R; KVA 7.3 (operating) **DP 155 and 180:** 120/208 VAC (182 V to 220 V), KVA 7.3 (operating) **Cord 1:** 50 amp, NEMA 14-50R **Cord 2:** 30 amp, NEMA 14-30R **50 Hz:** Consult your local service representative.

Table 6-11. Printer specifications and power requirements (Continued)

Device	Dimensions (width, depth, height)	Total Weight	Heat dissipation	Power requirements
Printer with inverter feeder/stacker and two feeder/ stackers	W=183.5 in / 466.1 cm H=59.6. in / 151.3 cm D=38.8 in / 98.6 cm Total space required (+ access): 256.5 in W by 114 in D / 648.9 cm W by 290.3 cm D	3,109 lbs / 1,411.9 kg	**DP 135:** **Operating:** 28,140 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr **DP 155 and 180:** **Operating:** 32,770 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr	**60 Hz:** **DP 135:** 120/240 VAC or 120/208 VAC; 50 amp service; NEMA 14-50R, KVA 8.1(operating) **DP 155 and 180:** 120/208 VAC (182 V to 220 V), KVA 8.1(operating) **Cord 1:** 50 amp, NEMA 14-50R **Cord 2:** 30 amp, NEMA 14-30R **50 Hz:** Consult your local service representative
Printer with inverter feeder/stacker and three feeder/ stackers	W=216 in / 730.8 cm H=59.6 in / 151.3 cm D=38.8 in / 98.6 cm Total space required (+ access): 288 in W by 114 in D / 730.8 cm W by 290.3 cm D	3,630 lbs / 1,648.9 kg	**DP 135:** **Operating:** 28,140 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr **DP 155 and 180:** **Operating:** 32,770 BTU per hr **Standby:** 4,454 BTU per hr **Energy Saver:** 2,700 BTU per hr	**60 Hz:** **DP 135:** 120/240 VAC or 120/208 VAC; 50 amp service; NEMA 14-50R, KVA 8.1(operating) **DP 155 and 180:** 120/208 VAC (182 V to 220 V), KVA 8.1(operating) **Cord 1:** 50 amp, NEMA 14-50R **Cord 2:** 30 amp, NEMA 14-30R **50 Hz:** Consult your local service representative
Bypass transport	W=20.4 in / 51.9 cm H=56.1 in / 142.5 cm D=28.3 in / 71.9 cm	176 lbs / 80 kg	---	---

Space planning templates

The dimensions and space requirements for your printer components are provided earlier in this chapter. The space planning templates are designed to simplify the space planning process by helping you to create a floor plan for your base components, particularly if you have shared clearance space.

The easiest way to use the space planning templates is to move the templates around on the grid located at the end of this section and determine the optimum placement for your printer components. Make sure to consider other pieces of equipment, such as cabinets, tables, and optional equipment when planning your space. Your customer support representative can help you plan space for additional components.

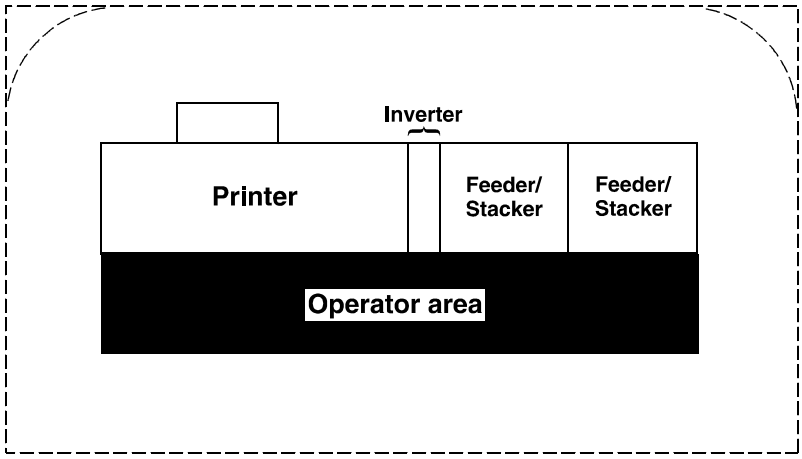
The templates are to scale with the grid; each square is equal to 12 by 12 inches / 30.5 by 30.5 cm. The curved dotted lines in the corners of the space perimeters indicate the corners that may be rounded off while still maintaining the required clearance space.

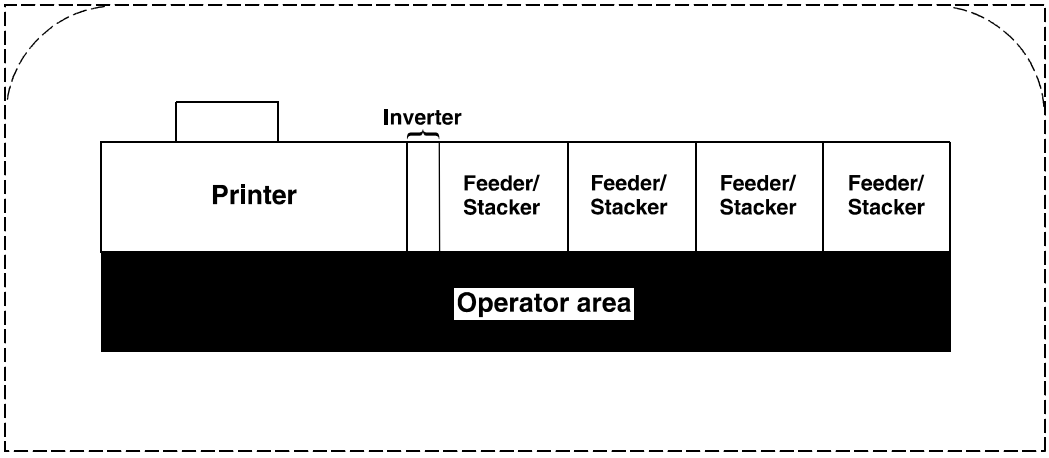
There are a number of factors to keep in mind when planning your site, including the following:

- Clearance space requirements
- Cable length

Refer to these sections in this manual when considering the various factors involved in planning the appropriate location for your printing system.

When determining your space requirements, remember to consider all of the components you plan to have installed. If you have a bypass transport or input enablement device option on your printing system, you should contact the sales representatives for the company from which you purchased your finishers and feeders, as well as your Xerox representative, to ensure that all of your space requirements are met.


Inverter
Printer
Feeder/
Stacker
Feeder/
Stacker
Operator area


Inverter
Printer
Feeder/
Stacker
Feeder/
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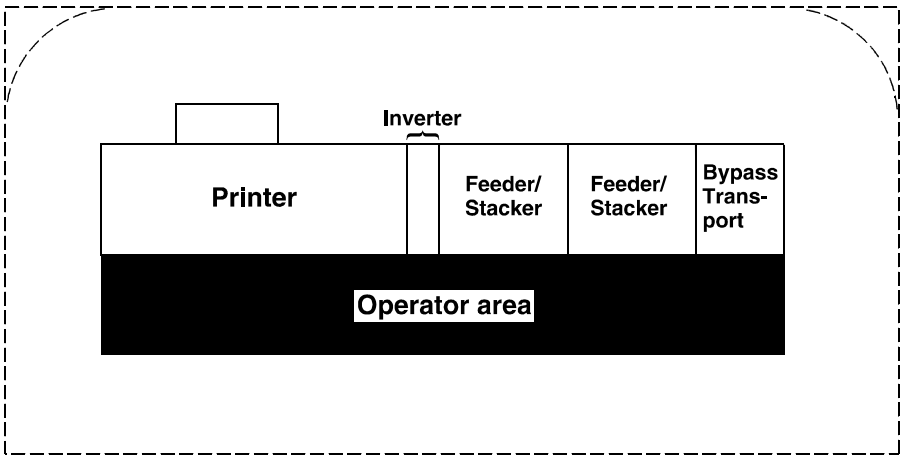
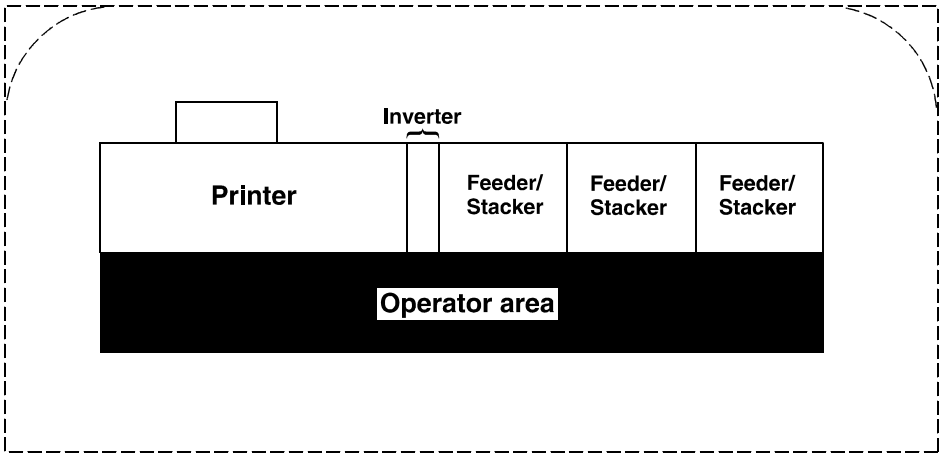
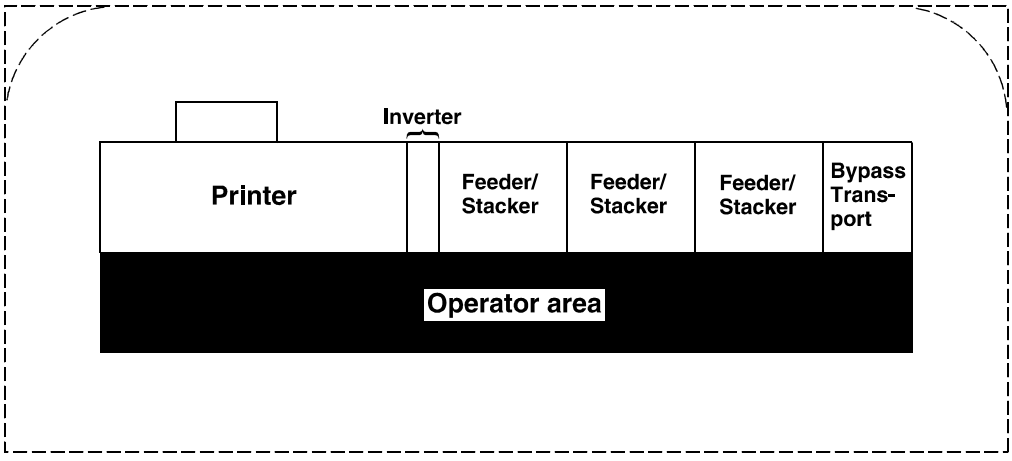
Feeder/
Stacker
Feeder/
Stacker
Operator area

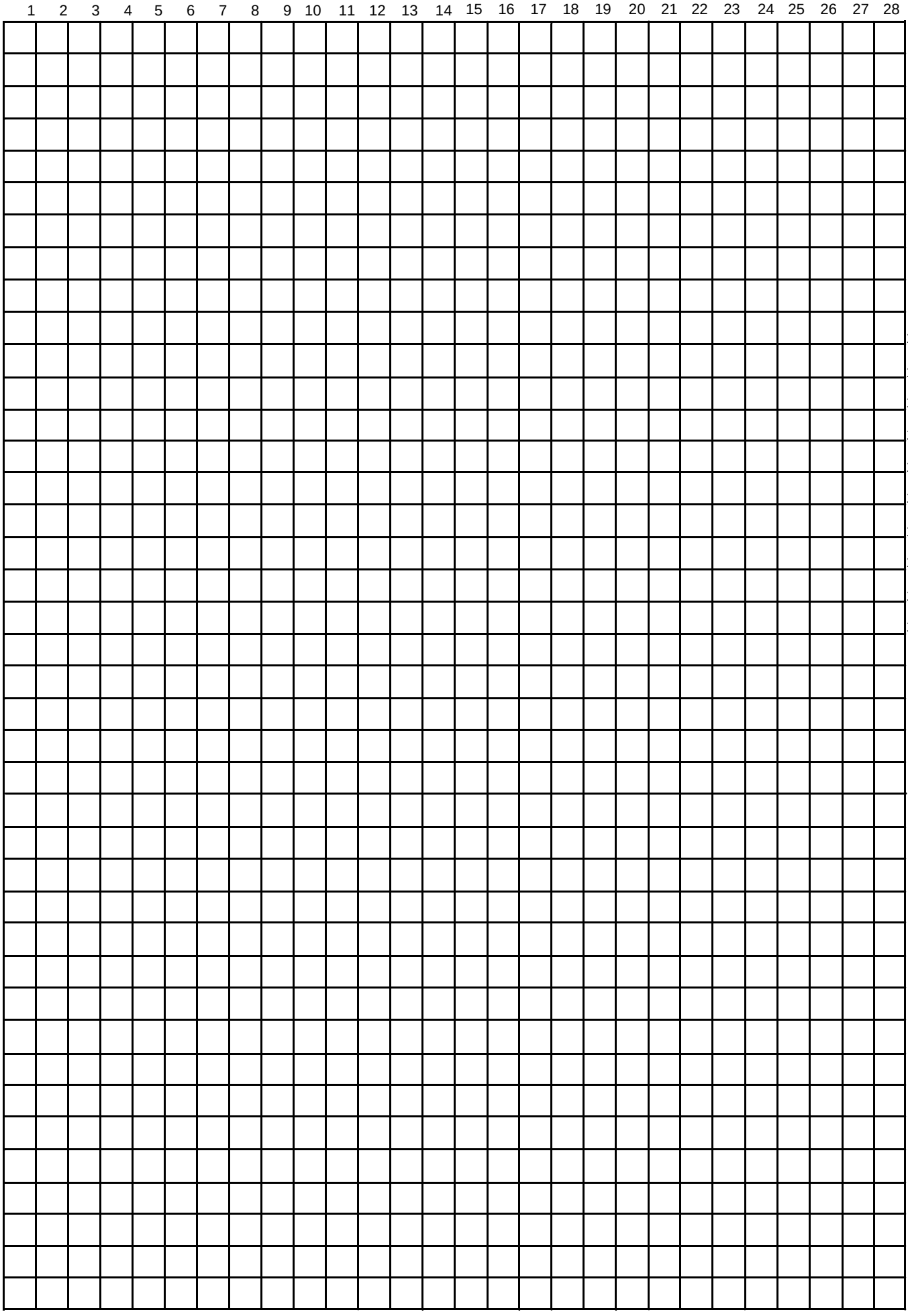

Inverter
Printer
Feeder/ Stacker
Feeder/ Stacker
Bypass Trans- port
Operator area


Inverter
Printer
Feeder/ Stacker
Feeder/ Stacker
Feeder/ Stacker
Operator area


Inverter
Printer
Feeder/ Stacker
Feeder/ Stacker
Feeder/ Stacker
Bypass Trans- port
Operator area

GRID PATTERN

1/4 inch represents one foot



Cut On Dotted Line

7. System connections

This chapter provides cable requirements for your Xerox DocuPrint 100/115/135/155/180 EPS. It also provides information about channel-attaching your printer. To ensure all of your cable requirements are met, work with your Xerox representative.

Cable lengths

Cable lengths are important considerations in planning your layout, as components can be separated only up to the length of the data interface cables that connect them.

Cables supplied with the printer are long enough to meet the needs of most installations. Some of these cables are specific lengths to conform to engineering and safety standards.

Interface cable

The printer and controller can be separated up to the length of the interface cables that connect them. The printer and controller are connected by a 20 foot / 6.1 meter cable, or an optional 50 foot / 15.2 meter cable.

Power cables

The printing system power cable lengths are as follows:

Table 7-1. Power cable lengths

Power cable	Length
Controller	8 feet / 2.4 m
Printer	15 feet / 4.5 m

WARNING

Using an inappropriate alternate cable may degrade the performance of your equipment and may also be hazardous.

NOTE: Cable length loss must be factored in if equipment is installed in a raised-floor environment. You should also consider that part of the length of a cable is routed inside the equipment to connect with interior power or data receptacles.

Cable locations

To run the cables beneath the flooring, you must know where the cables enter and exit the printer. The following diagrams shows that location marked with an X.

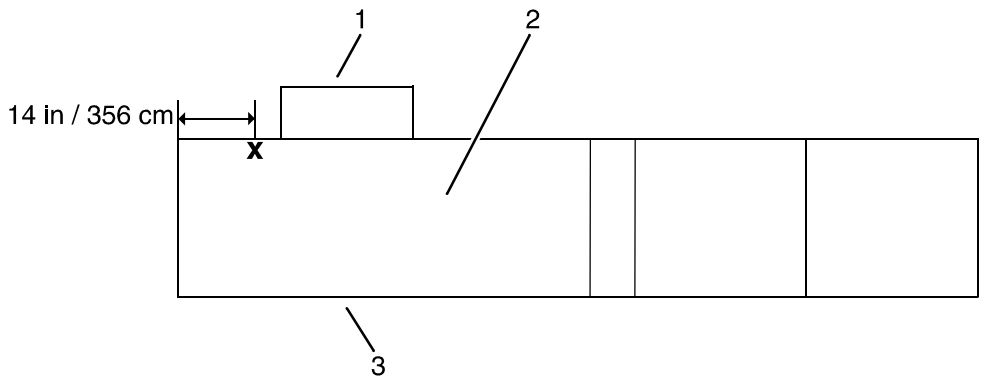


Figure 7-1. Cable enter/exit location (top view)

1. Back of printer area
2. Printer with feeder/stacker modules
3. Front of printer area

All power cords attach to the back of the printer. Power cord distances from the left end of the printer (as you face it) are:

- **DP 100, 115, and 135**–distance from end of printer:

  14 inches / 356 mm

- **DP 155 and 180**–distance from end of printer:
  - **Cord 1:** 36 inches / 914 mm (with ELCI)
  - **Cord 2:** 23 inches / 584 mm (with ELCI)

Channel attachments

The Xerox DocuPrint 100/115/135/155/180 EPS conforms to IBM standards and requirements for any channel-attached printer. When you channel-attach your printing system, keep the following in mind:

- Channel length is usually determined by the length of the cables, the number of devices on the channel, and the number of connections in the cable itself (for example, connecting two cables to each other).
- Subtract 15 feet / 3.8 m from the total allowable cable length for any device attached to the channel or for any connection of two cables.
- IBM channel cable lengths are as follows:
  - Gray: 200 feet / 61 m (with one device, 185 feet / 56 m)
  - Blue: 400 feet / 122 m (with one device, 385 feet / 117 m)

For further information, refer to the following IBM manuals:

- *IBM System 360 and System 370 Input-output Interface Channel to Control Unit OEM Information* (#GA22-6974-3825)
- *Page Printer Product Description* (#G544-3482)
- *3825 Introduction and Planning Guide* (#G544-3480)

8. Installation

This chapter describes the activities performed by you and Xerox personnel during the installation of the Xerox DocuPrint 100/115/135/155/180 EPS hardware and software components. Before installation can begin, you must complete the tasks described in the “Preparing for installation” chapter of this guide.

Installation process

Xerox personnel are responsible for the physical installation of the printing system hardware components and the software.

NOTE: For customers outside the United States, contact your local Xerox operating company for your specific installation process.

The installation process can take one or several days to complete. Equipment, software kits, and documentation kits may arrive in one day, or over the course of several days. When all of the necessary items are in place, Xerox personnel will complete the installation of the printer components.

In the United States, the steps in the installation process typically occur in the following order:

1. Xerox personnel install all printer hardware and connects the controller to your site’s network through the Ethernet connector you supply. This process takes approximately four hours if all the necessary network and electrical connectors are in place.
2. Xerox personnel load software on the controller (approximately 1.5 hours).
3. Xerox personnel download Xerox client software, if applicable, on one client workstation to validate the installation (15 minutes). Software is downloaded on another client workstation as part of training conducted by your systems analyst. All other client software installations are your responsibility.

4. Xerox personnel test the system and run sample jobs (30 minutes).
5. Xerox personnel conduct initial operations training (four to six hours).
6. Xerox personnel review preventive maintenance schedules and service call procedures.

Your responsibilities

Xerox personnel are responsible for the physical installation of the printer components and for loading the software and applications. You have the general site responsibility of ensuring that the right personnel, supplies, and network information are available.

At the time of installation, you should do the following:

- Make sure that your system administrator is available during the loading of software.
- For software loading purposes, be prepared to provide Xerox personnel with network information from the preinstallation worksheets. Refer to the *Getting Ready for Installation* manual for specifics regarding network information.
- Designate two client workstations for downloading Xerox client software if applicable: one for initial system validation and another for use in operator training provided by your systems analyst.
- If your system will be connected to an IBM host through a channel, provide the host channel address, channel unit address, and data transfer mode.
- If your system will be connected to an IBM host through Socket TCP/IP, provide the host IP address and port number.
- Check the documentation and software kits with their packing lists for completeness.
- Load Xerox client software on any additional client workstations.

  Remember that you are responsible for supplying, installing, and maintaining your client workstations and the Ethernet local area network (LAN) that connects them with the printing system.
- Have test jobs ready to run.

- Have your operators available for training.

Refer to the installation planning checklist in the “Preparing for installation” chapter of this guide for a complete list of responsibilities.

Defining the printer to the host

Prior to installation of the printing system, your host system must be configured to communicate with the Xerox DocuPrint 100/115/135/155/180 EPS. This requires defining several parameters to your host. The required information and configuration procedures differ according to your connectivity type (channel or TCP/IP), and your host environment. You will need to provide these parameters to your Xerox representative on installation day.

Software licensing

When you purchase a Xerox DocuPrint 100/115/135/155/180 EPS, you receive a license to use the operating system software. This license is enabled by entering a 20-character alphanumeric string at the controller. Your Xerox or service representative obtains this license string for you and enters it when your printing system is installed.

Ongoing maintenance

After the installation of your printing system, there are a few ongoing tasks that must be performed. These tasks may include the following:

- Maintaining an adequate inventory of consumable supplies
- Overseeing routine maintenance and meter reporting
- Arranging for additional operator training
- Ordering additional fonts
- Ordering additional documentation
- Placing service calls for hardware problems
- Obtaining assistance in solving software-related problems

As installation coordinator, it is your responsibility to designate the staff members responsible for these tasks.

Routine maintenance

A number of routine maintenance tasks must be performed to ensure maximum efficiency of your printer. These tasks include:

- Adding standard dry ink to your printer
- Adding fuser agent
- Replacing the dry ink waste container
- Cleaning sensors in the printer
- Cleaning the exterior surfaces of the system

Step-by-step instructions on performing these routine maintenance tasks are contained in the *Operator Guide*. You need to decide how many operators will be responsible for performing these maintenance tasks. Most maintenance procedures are covered in the initial operator training provided shortly after installation.

Meter reading and reporting

As print jobs are processed, the printing system accumulates, saves, and maintains usage data.

During the last five working days of each month, you need to review and transmit the data to Xerox for billing purposes. Refer to your *DocuPrint 100/115/135/155/180 EPS Operator Guide* for complete instructions on how to report meter readings.

A. Supplies

This appendix provides information and specifications for media used with your Xerox DocuPrint 100/115/135/155/180 EPS printer. Instructions for ordering supplies are also provided.

Consumable supplies (those that are depleted during operation of the system), such as paper, dry ink, developer, fuser agent, etc., must be ordered for your printer. It is important that an adequate supply of these items be on hand for installation, and that your supply be maintained afterwards.

Paper and other throughput stocks

The success of any print run is greatly dependent on the proper selection, care, and handling of the stock used.

Selecting paper

Select your paper carefully. If you do not use the proper paper, you increase the probability of paper jams and misfeeds. The stocks you use must meet the specifications set forth by Xerox for operability in the printer. For additional information about paper specifications, refer to *Helpful Facts about Paper*, delivered with your printer.

Acceptable paper stocks and sizes

The printer accepts the following standard size cut-sheet papers:

- 7 by 10 inches / 178 by 254 mm (with 7-inch kit option)
- B5: 7.17 by 10.12 inches / 182 by 257 mm (with 7-inch option)
- US Letter: 8.5 by 11 inches / 216 by 279 mm
- US Legal: 8.5 by 14 inches / 216 by 356 mm
- A4: 8.27 by 11.69 inches / 210 by 297 mm
- B4 (European): 9.84 by 13.89 inches / 250 by 353 mm
- JIS B4 (Japanese): 10.12 by 14.33 inches / 257 by 364 mm

- US Ledger/US Tabloid: 11 by 17 inches / 279 by 432 mm
- A3: 11.69 by 16.54 inches / 297 by 420 mm

Recommended weight and grade

Use a good quality, xerographic-grade paper. For best results, use paper that is 20-pound or 80 gsm (grams per square meter) bond, xerographic grade. Xerox 4024 Dual Purpose Paper provides optimal performance in the printer. (Refer to the consumable supplies table later in this appendix.)

Use paper within these parameters:

- Lightest: 16-pound (65 gsm) bond
- Heaviest: 110-pound (200 gsm) index

Characteristics

The paper stock should have the following characteristics:

- Low moisture content (a paper-to-moisture ratio below 5.7 percent). Paper with higher moisture content may curl and jam.
- Smooth surface
- Moisture-resistant wrapping
- No defects (bent edges, uneven surfaces)
- Grain long (parallel with the long side of paper)

  Paper is usually fed into the printer with the long side as the leading edge (except 11 by 17-inch or A3 paper). When you purchase paper, buy long-grain paper. Make sure the grain is parallel with the long side (long-grain) for the most reliable feeding and stacking.

Special stocks

Following are some guidelines for choosing and using special materials:

- **Labels:** Must be the type designed for high-speed printers and must meet the specifications described in the section above. Loading instructions are printed on all paper trays.

  Use only the processor feeding trays (trays 1 and 2) for labels. Load labels in the tray with the label side up.

  You can direct printed labels to any output tray. Be sure the printed labels are stacked **face up** in the output tray, to avoid ink offsetting and jams due to delamination.

- **Transparencies:** Must be the type designed for high-speed printers and must meet the specifications described in the section above. Loading instructions are printed on all paper trays.

  Load transparencies with the opaque strip to the right. All printed transparencies are delivered to the sample tray.

  As long as they meet your printer's paper specifications, you can also use:

- **Tinted paper:** Available in a variety of colors, it has many uses, including calling attention to certain printed material, separating special sections, or dividing chapters of a report.
- **Preprinted paper:** May be letterhead, forms, or logos.
- **Predrilled paper:** Has a varying number of holes for use in binders or binder rings. Before loading predrilled paper, fan it to remove loose plugs that could cause paper jams. Load predrilled paper in the printer with holes to the right.
- **Perforated paper**
- **Pre-cut or full tabs**
- **Carbonless paper**

NOTE: The printer can print on precollated or ordered stocks, including ordered tabs. However, jam recovery is not supported with these stocks.

Paper sizing and print speed

The printer paper trays have edge guide sensors that detect paper length and width. The system selects correct paper trays for the print job based on the paper size specified in the job, as follows:

- If an exact match is found, the print job continues.
- If an exact match is not found, the programmer can specify in the job for the printer to either:
  - Stop printing the job and print an error sheet
  - Print the data on an oversized sheet.

If you encounter any problems related to paper sizing, contact your lead operator, systems specialist, or service representative.

Paper width and throughput speed (LCDS printing only)

The width of the paper you use for your LCDS print job is directly related to the rate at which the printer can print the job. The rate at which a job prints is called the “throughput speed” and is measured in pages per minute (ppm).

NOTE: “Pages per minute” actually means “impressions per minute,” referring to one side of a printed sheet.

A pitch is the amount time the printer takes to image a page on the photoreceptor belt. The term “pitch mode” refers to the number of pitches that can occur during one complete photoreceptor revolution. The pitch mode in which a specific job prints is based on the paper size used for that job.

The following tables list the pitch mode boundary values, paper widths, and related printing speeds for the system. Notice that the shorter the paper width, the higher the pitch mode and the faster the throughput speed (higher page per minute rate).

Table A-1. Throughput data DP100

Pitch	Paper width	Speed
5	7 to 12.12 in / 178 to 308 mm	100 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table A-2. Throughput data DP115

Pitch	Paper width	Speed
6	7 to 10.19 in / 178 to 259 mm	116 ppm
5	10.19 to 12.12 in / 259 to 308 mm	96 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table A-3. Throughput data DP135

Pitch	Paper width	Speed
8	7 to 7.4 in / 178 to 188 mm	154 ppm
7	7.4 to 9.01 in / 188 to 229 mm	135 ppm
6	9.01 to 10.19 in / 229 to 259 mm	116 ppm
5	10.19 to 12.12 in / 259 to 308 mm	96 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm

Table A-3. Throughput data DP135 (Continued)

Pitch	Paper width	Speed
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table A-4. Throughput data DP155

Pitch	Paper width	Speed
6	7 to 10.19 in / 178 to 259 mm	154 ppm
5	10.19 to 12.12 in / 259 to 308 mm	128 ppm
4	12.12 to 15.31 in / 308 to 389 mm	103 ppm
3	15.31 to 17 in / 389 to 432 mm	77 ppm

Table A-5. Throughput data DP180

Pitch	Paper width	Speed
8	7 to 7.4 in / 178 to 188 mm	206 ppm
7	7.4 to 9.01 in / 188 to 229 mm	180 ppm
6	9.01 to 10.19 in / 229 to 259 mm	154 ppm
5	10.19 to 12.12 in / 259 to 308 mm	128 ppm
4	12.12 to 15.31 in / 308 to 389 mm	103 ppm
3	15.31 to 17 in / 389 to 432 mm	77 ppm

Each time a job requires a different paper size that changes across a pitch boundary, the system performs a time-consuming xerographic quality adjustment. When the printing speed of an LCDS job appears to degrade due to the use of mixed stock sizes, you may be able to improve the speed by using the LCDS OUTPUT command TMODE parameter in the JSL to run the print job in a lower pitch mode. Refer to the OUTPUT TMODE parameter in *Using LCDS Print Description Language* for information on using this LCDS command.

Similarly, if the system cycles down frequently because your external finishing equipment has a slower throughput rate than the printing system, you can use the TMODE parameter of the LCDS OUTPUT command to lower the pitch mode to match the speed of the finishing equipment. This can improve overall throughput by avoiding time-consuming cycle downs.

NOTE: Pitch mode changes are supported only for LCDS printing.

Paper size and pitch mode minimum and maximum

The illustrations in this section show the pitch modes in which you can operate with the smallest and largest size papers supported by the printing system.

Using small paper sizes in 8 pitch mode

Printing in 8 pitch mode provides the highest throughput speed available —up to 154 ppm for the DP135 printer and up to 206 ppm for the DP180 printer. (The DP100 printer does not support 8-pitch mode.) However, you should keep the following in mind when you select the paper you want to use for this mode:

- Paper sizes smaller than 8 inches / 203 mm in width are supported only when the optional 7 inch Paper Kit is installed on the printer.
- The leading edge of any paper used in the printer cannot be less than 10 inches / 254 mm long.

The following figure illustrates the maximum and minimum paper sizes supported in 8 pitch mode.

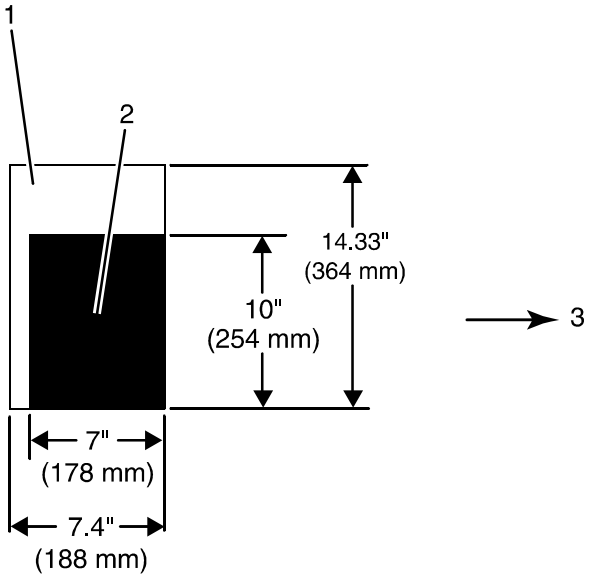


Figure A-1. 8 pitch mode paper sizes

1. Maximum paper size for 8 pitch mode
2. Minimum paper size for 8 pitch mode
3. Travel direction of sheets out of paper tray

Using large paper sizes in 3 pitch mode

Large paper sizes with widths of 15.31 to 17 inches / 389 to 432 mm are supported only in 3 pitch mode and must feed short edge first. These paper sizes slow down the throughput speed. Therefore, a short edge feed job takes longer to print than a long edge feed job.

NOTE: The system can support 14 by 17 inch / 356 by 432 mm, 20 pound or 80 gsm paper stock in 3 pitch mode. However, printing performance is not guaranteed for all types of paper of this size. Heavy (110 pound / 200 gsm) and light (16 pound / 60 gsm) weight papers can cause jams throughout the system, and are not recommended.

The following figure illustrates the maximum and minimum paper sizes supported in 3 pitch mode.

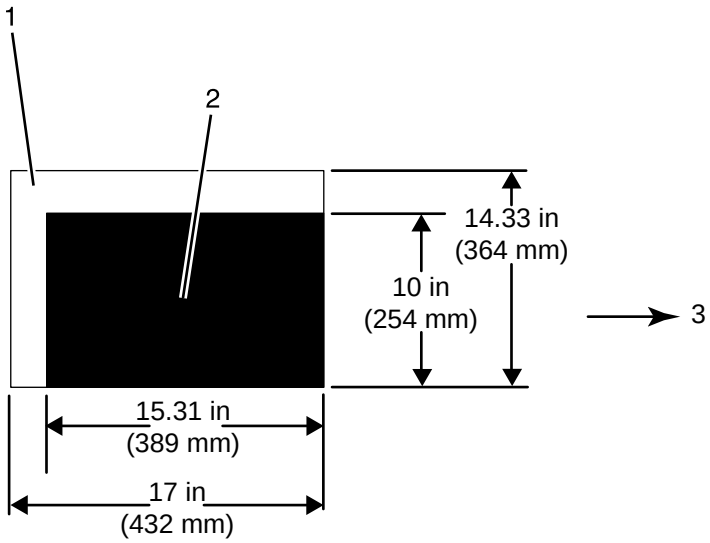


Figure A-2. 3 pitch mode paper sizes

1. Maximum paper size for 3 pitch mode
2. Minimum paper size for 3 pitch mode
3. Travel direction of sheets out of paper tray

Feed direction for standard paper sizes

Currently, 14.33 inches / 364 mm is the maximum paper length for which the system supports long edge feeding (5 to 8 pitch mode). Any papers with long edges greater than this (such as 11 by 17 inch / 279 by 432 mm paper) must be loaded for short edge feeding (3 or 4 pitch mode).

European papers

The following figures show how European paper sizes feed through the printer in various pitch modes.

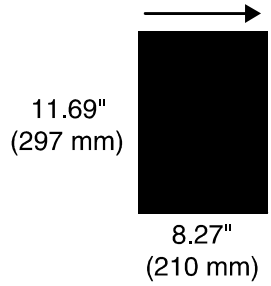


Figure A-3. A4 / 210 by 297 mm paper feeding (long edge feed)

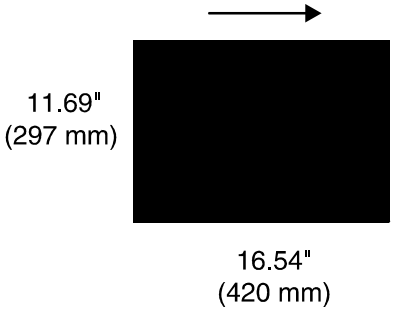


Figure A-4. A3 / 297 by 420 mm paper feeding (short edge feed)

US papers

The following figures show how some US paper sizes feed through the printer in the different pitch modes.

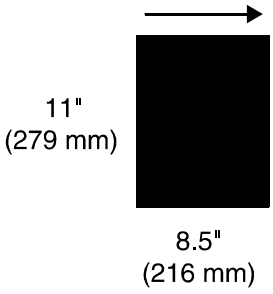


Figure A-5. US Letter / 8.5 by 11 inch paper feeding (long edge feed)

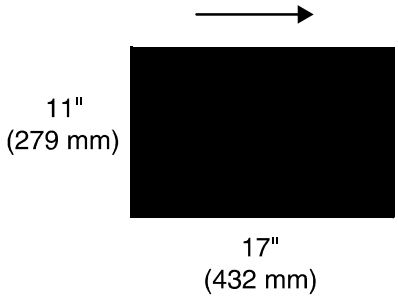


Figure A-6. US Ledger or US Tabloid / 11 by 17 inch paper feeding (short edge feed)

B4 papers

There are two versions of B4 paper: European (ISO B4: 9.84 by 13.89 inches / 250 by 353 mm) and Japanese (JIS B4: 14.33 by 10.12 inches / 364 by 257 mm). European B4 feeds long edge first, while JIS B4 must feed short edge first because its length is greater than 14 inches or 356 mm.

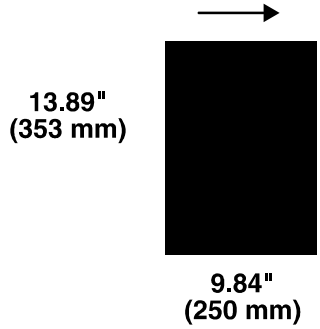


Figure A-7. B4 / 250 by 353 mm paper feeding (long edge feed)

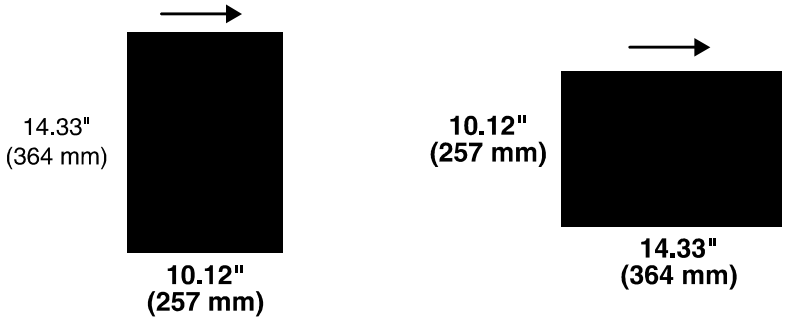


Figure A-8. JIS B4 / 257 by 364 mm paper feeding (may be long or short edge feed)

Paper care

Once you have purchased your paper, you must be sure it is stored and conditioned properly, so that it performs optimally in the printer with a minimum of jams.

Storing paper

Paper has a tendency to curl under the heat that is present inside xerographic equipment. To minimize the amount of curling, use paper with low moisture content. Paper with excessive moisture content has a tendency to jam because of the greater curl. The maximum recommended moisture content is 5.7 percent.

Keep these points in mind when preparing your paper storage area:

- Store paper in its own wrapper; do not leave it unwrapped or where it can be damaged by dampness or heat.
- Store paper on a flat surface and not on its side or edge.
- Store reams of paper in a closed cabinet.
- Always store paper in a cool, dry area. Store on pallets or shelves, not on the floor.
- Plan ahead and keep at least a day's supply of paper in the same area as the printer to allow environmental stabilization prior to printing.

For more detailed information on paper for Xerox printers, refer to *Helpful Facts about Paper*, provided with your printer.

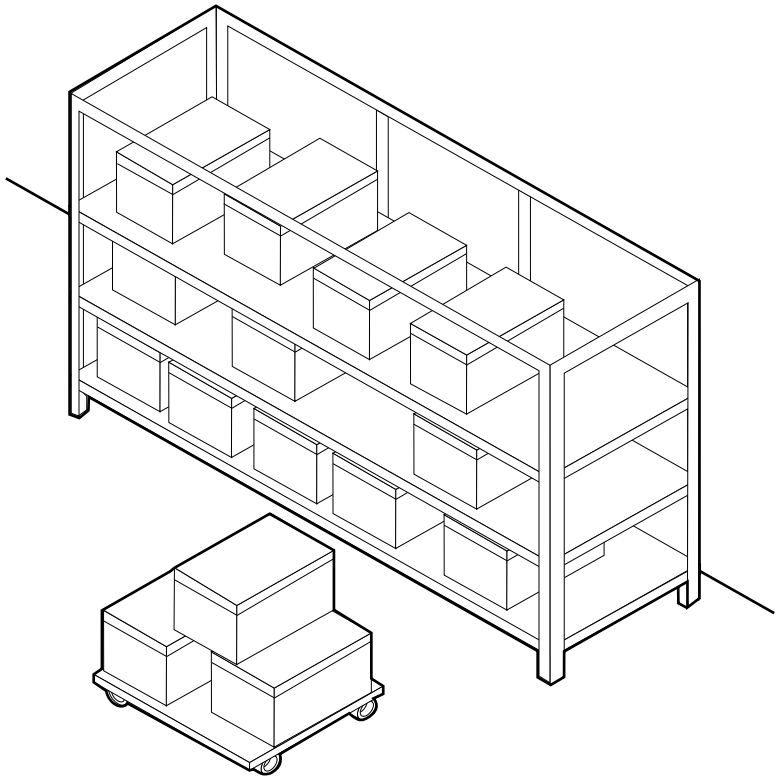


Figure A-9. Storing paper correctly

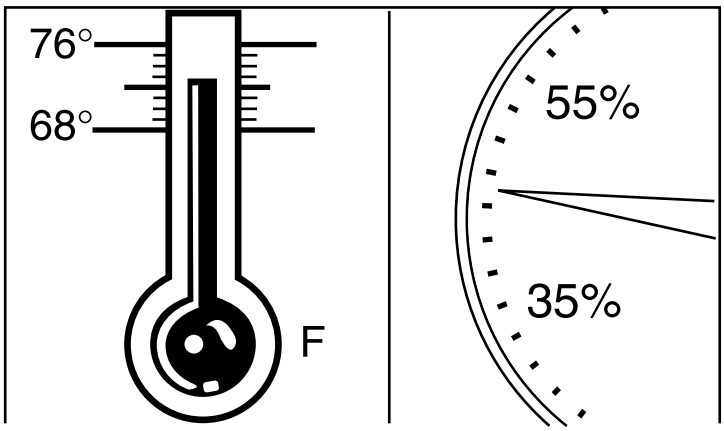


Figure A-10. Recommended temperature and humidity for paper storage

Conditioning paper

Because temperature and humidity affect paper performance in the printer, you need to condition paper before using it. To do this, store paper for a specified length of time in the same type of environment as your printer.

The length of time you should condition your paper depends on the amount of paper and the difference between the storage and operating temperatures.

NOTE: The numbers in the top two rows indicate the temperature difference between the storage area and the operating environment, not actual room temperatures.

Use the following chart to determine the length of time needed to condition stacked cartons of paper.

Table A-1. Paper conditioning: Recommended temperature differences between storage and operating areas

	Temperature differences between storage and operating areas						
	Fahrenheit						
	10^o	15^o	20^o	25^o	30^o	40^o	50^o
	Centigrade						
	5.5^o	8.5^o	11^o	13^o	17^o	22^o	28^o
Cartons	**Hours**						
1	4	8	11	14	17	24	34
5	5	9	12	15	18	25	35
10	8	14	18	22	27	38	51
20	11	16	23	28	35	48	67
40	14	19	26	32	38	54	75

Example: (See the shaded rows in the table above.) If you want to move ten cartons of paper from a storage area with a temperature of 90 ^{o}F to an operating area with a temperature of 75 ^{o}F (a 15^o difference), you should do so at least 14 hours before using the paper.

Other supplies

This section describes the supplies other than paper that are necessary for installation and afterward. Your sales representative will help you place your initial supply order.

Dry ink

Dry ink (also called toner) is the black powder that forms the image on the printed page. There are three cartridges of dry ink in each carton. You should keep at least one extra cartridge on hand at all times. The disposable cartridges are easily changed with no mess. The consumption rate of Xerox dry ink is approximately one cartridge per 60,000 pages. Use only dry ink that is specified for use in the printer, as described in the consumable supplies table.

MICR dry ink

MICR dry ink is the magnetic black powder which forms the image on the printed MICR document. There are three cartridges of MICR dry ink in each carton. The consumption rate of Xerox MICR dry ink is approximately one cartridge per 60,000 pages. Use only MICR dry ink in your MICR printer.

The dry ink that is used with the DP 100/115/135/155/180 MICR EPS is designed for MICR printing and does not function well when used in non-MICR systems. The same procedure used for non-MICR printing systems is used to add the dry ink to the 96/4635/180 MICR printer.

NOTE: Dry ink (toner) yields are based on 7% area coverage. Your yield may vary, depending on coverage.

CAUTION

Use only MICR dry ink in the DP 100/115/135/155/180 MICR EPS printers. Do not use standard dry ink. MICR dry ink cannot be reused.

Fuser agent

Fuser agent (the lubricant for the printer fuser) is a consumable item required by the printer. The consumption rate of Xerox fuser agent is approximately one bottle per 250,000 pages. For product information, refer to the consumable supplies table in this appendix.

US only: You should keep at least two boxes (each box contains one bottle) on hand for installation by the service representative.

Developer

Developer is not consumed by the printer but does have an effective life of approximately 1,000,000 pages per carton (600,000 per carton for MICR developer). Both kinds of developer are guaranteed by Xerox for 600,000 pages per carton. Developer is a required item and must be kept on hand.

Use only the developer specified for use in your printer.

CAUTION

The DP 100/115/135/155/180 MICR EPS printers require a different developer, with a different part number, from the developer used in the standard DP EPS printer. Be sure you use only designated MICR developer in the MICR printers.

The developer is changed by your service representative. For product information, refer to the consumable supplies table in this appendix.

Diskettes

Diskettes are optional items that provide loading and backup of fonts, forms, and user files to and from the printing system. The processor accepts 3.5-inch, 1.44 MB, double-sided, high density diskettes.

Cartridge tapes

The quarter-inch cartridge (QIC) tape drive uses 150 MB and 8GB cartridge tapes.

Stacker containers and pallets (optional)

Stacker containers can be placed inside the stacker bins to receive and neatly stack large amounts of output. These optional containers are available in a variety of sizes, accommodating various standard U. S. and international paper sizes. Different sized pallets for containerless stacking can also be ordered.

Fonts

Data can be printed on DocuPrint printers in many sizes and type styles called fonts. A font is a character set which has unique characteristics, such as type style, size, weight, orientation (portrait, landscape, inverse portrait, and inverse landscape), character spacing (fixed and proportional), line spacing, and postures (Roman, italic, and so forth).

There are three classifications of fonts:

- Standard fonts
- Licensed fonts
- Custom fonts

Standard fonts

For PostScript printing, a library of 51 PostScript fonts is provided with your printer's operating system software.

For LCDS printing, over 250 standard 300 dpi fonts, referred to as the AR03 font family is provided with your printer's operating system software.

Licensed fonts

Additional fonts may be ordered from your local Xerox Font Center.

Custom fonts

Custom fonts and graphic images such as company logos and signatures can be digitized by the Xerox Font Center for use on your printer.

Receiving fonts

Fonts can be received on a diskette, various tape formats, or CD-ROM from your local Xerox Font Center.

LCDS fonts may also be sent to your system from an online host computer through an IBM-compatible channel.

MICR tools

You can use the following tools to determine whether the MICR output is printing within MICR specifications:

- MICR Positioning and Dimension Gauge.
- 8 Power (X) Comparator with MICR grid.

NOTE: You should use the Custom Transfer Assist Blade to ensure acceptable MICR line quality on all MICR printing systems that use nonstandard paper sizes.

MICR Positioning and Dimension Gauge

The MICR Positioning and Dimension Gauge (part number 600T80025) consists of a thin sheet of flexible plastic attached to the bottom of a piece of hard thick plastic. The gauge is provided in a kit that includes a small magnifying glass.

To use the gauge, place the printed output between the two pieces of plastic. This allows you to compare the MICR output elements against industry standard output. Using this process, you can verify the character spacing, check the horizontal and vertical alignment, and look for spots and voids.

MICR comparator

You use the eight power (X) comparator with MICR grid to compare the characters on the MICR output to industry standard output.

The comparator is an optical tool that magnifies each character eight times. It has a built-in scale that measures the size of the MICR characters and checks for spots and voids (deletions).

Keep the following in mind when using the 8 Power (X) Comparator with MICR grid:

- Patterned paper can cause viewing problems. You should use white paper when you perform quality evaluations.
- The quality of the MICR output may vary, depending on the type of paper you use.
- Handle the comparator with care. The grid is printed on the bottom and may be damaged or worn off in time.

You can use the comparator with transmitted or reflected light.

Consumable supplies tables

A number of supplies are available from Xerox for your printer. Use the following tables to help determine your supply needs.

NOTE: Customers in the U. S. may use the part numbers in these tables to order supplies. Customers outside the U. S. should contact their local service organization for part numbers.

Paper and special stocks tables

The following tables list all throughput stocks available for the printer, with size, order number, and a brief description for each.

Table A-6. Printer stocks list

Item	Description	Part number
Paper	Xerox paper quantities are 10 reams (5,000 sheets) to a carton unless otherwise noted below.	
8.5 x 11 inch	4024 Dual Purpose Paper	3R721
A4	4024 Dual Purpose Paper	3R2594
8.5 x 14 inch	4024 Dual Purpose Paper	3R727
8.5 x 11 inch	4024 Dual Purpose Paper, 3-hole	3R723
8.5 x 11 inch	4024 Dual Purpose Paper, 3-hole*	3R2193
8.5 x 11 inch	4024 Dual Purpose Paper, 4-hole	3R1983
8.5 x 11 inch	4024 Dual Purpose Paper, 4-hole*	3R3008
8.5 x 11 inch	4024 Dual Purpose Paper, 7-hole	3R1984
8.5 x 11 inch	4024 Dual Purpose Paper, 7-hole*	3R3010
8.5 x 11 inch	4024 Smooth	3R2675
8.5 x 14 inch	4200 Dual Purpose Paper	3R2047
8.5 x 14 inch	4200 Dual Purpose Paper	3R2051
8.5 x 11 inch	4200 Dual Purpose Paper, 3-hole	3R2641
8.5 x 11 inch	4200 Dual Purpose Paper, 4- hole	3R3012
8.5 x 11 inch	4200 Dual Purpose Paper, 7-hole	3R3014
*** 5/16-inch drilled holes** **** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.**		

Table A-6. Printer stocks list (Continued)

Item	Description	Part number
8.5 x 11 inch	Dual Purpose Colors—Blue	3R3052
8.5 x 11 inch	Dual Purpose Colors—Blue, 3-hole	3R3068
8.5 x 14 inch	Dual Purpose Colors—Blue, 3-hole	3R3084
8.5 x 11 inch	Dual Purpose Colors—Green	3R3056
8.5 x 11 inch	Dual Purpose Colors—Green, 3-hole	3R3072
8.5 x 14 inch	Dual Purpose Colors—Green	3R3088
8.5 x 11 inch	Dual Purpose Colors—Pink	3R3058
8.5 x 11 inch	Dual Purpose Colors—Pink, 3-hole	3R3074
8.5 x 14 inch	Dual Purpose Colors—Pink	3R3090
8.5 x 11 inch	Dual Purpose Colors—Yellow	3R3054
8.5 x 11 inch	Dual Purpose Colors—Yellow, 3-hole	3R3070
8.5 x 14 inch	Dual Purpose Colors—Yellow	3R3086
8.5 x 11 inch	Dual Purpose Colors—Buff	3R3060
8.5 x 11 inch	Dual Purpose Colors—Buff, 3-hole	3R3076
8.5 x 14 inch	Dual Purpose Colors—Buff	3R3092
8.5 x 11 inch	Dual Purpose Colors—Goldenrod	3R3062
8.5 x 11 inch	Dual Purpose Colors—Goldenrod, 3-hole	3R3078
8.5 x 14 inch	Dual Purpose Colors—Goldenrod	3R3094
8.5 x 11 inch	Dual Purpose Colors—Ivory	3R3064
8.5 x 11 inch	Dual Purpose Colors—Ivory, 3-hole	3R3080
8.5 x 14 inch	Dual Purpose Colors—Ivory	3R3096
8.5 x 11 inch	Dual Purpose Colors—Gray	3R3066
8.5 x 11 inch	Dual Purpose Colors—Gray, 3-hole	3R3802
8.5 x 14 inch	Dual Purpose Colors—Gray	3R3098
8.5 x 11 inch**	Dual Purpose Colors, Rainbow Pack—35,000 sheets per carton**	3R3107
8.5 x 11 inch	10 Series Dual Purpose paper	3R2950
8.5 x 11 inch	10 Series Dual Purpose paper, 3-hole	3R2952

*** 5/16-inch drilled holes**
**** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.**

Table A-6. Printer stocks list (Continued)

Item	Description	Part number
8.5 x 11 inch	Dual Purpose Colors—Blue	3R3052
8.5 x 11 inch	Dual Purpose Colors—Blue, 3-hole	3R3068
8.5 x 14 inch	Dual Purpose Colors—Blue, 3-hole	3R3084
8.5 x 11 inch	Dual Purpose Colors—Green	3R3056
8.5 x 11 inch	Dual Purpose Colors—Green, 3-hole	3R3072
8.5 x 14 inch	Dual Purpose Colors—Green	3R3088
8.5 x 11 inch	Dual Purpose Colors—Pink	3R3058
8.5 x 11 inch	Dual Purpose Colors—Pink, 3-hole	3R3074
8.5 x 14 inch	Dual Purpose Colors—Pink	3R3090
8.5 x 11 inch	Dual Purpose Colors—Yellow	3R3054
8.5 x 11 inch	Dual Purpose Colors—Yellow, 3-hole	3R3070
8.5 x 14 inch	Dual Purpose Colors—Yellow	3R3086
8.5 x 11 inch	Dual Purpose Colors—Buff	3R3060
8.5 x 11 inch	Dual Purpose Colors—Buff, 3-hole	3R3076
8.5 x 14 inch	Dual Purpose Colors—Buff	3R3092
8.5 x 11 inch	Dual Purpose Colors—Goldenrod	3R3062
8.5 x 11 inch	Dual Purpose Colors—Goldenrod, 3-hole	3R3078
8.5 x 14 inch	Dual Purpose Colors—Goldenrod	3R3094
8.5 x 11 inch	Dual Purpose Colors—Ivory	3R3064
8.5 x 11 inch	Dual Purpose Colors—Ivory, 3-hole	3R3080
8.5 x 14 inch	Dual Purpose Colors—Ivory	3R3096
8.5 x 11 inch	Dual Purpose Colors—Gray	3R3066
8.5 x 11 inch	Dual Purpose Colors—Gray, 3-hole	3R3802
8.5 x 14 inch	Dual Purpose Colors—Gray	3R3098
8.5 x 11 inch**	Dual Purpose Colors, Rainbow Pack—35,000 sheets per carton**	3R3107
8.5 x 11 inch	10 Series Dual Purpose paper	3R2950
8.5 x 11 inch	10 Series Dual Purpose paper, 3-hole	3R2952

*** 5/16-inch drilled holes**
**** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.**

Table A-6. Printer stocks list (Continued)

Item	Description	Part number
8.5 x 11 inch	10 Series Dual Purpose paper, 7-hole *	3R3016
8.5 x 14 inch	10 Series Dual Purpose paper	3R2954
8.5 x 11 inch	10 Series Smooth	3R54
8.5 x 14 inch	10 Series Smooth	3R83
8.5 x 11 inch	4024 Dual Purpose, reinforced 3-hole *	3R2057
A3	4024 Dual Purpose Paper	3R91721
A3	4024 Dual Purpose Paper	3R2594
9.5 x 11 inch	65-pound divider white 2,500 sheets per carton	3R3428
11 x 17 inch	4024 Dual Purpose Paper 2,500 sheets per carton	3R729
11 x 17 inch	4024 Dual Purpose Paper, 7-hole *	3R3074
Transparencies	Xerox transparencies are packaged 100 sheets to a box. text	
8.5 x 11 inch	Clear, with a white strip on the edge	3R2780
8.5 x 11 inch	Clear, with removable strip	3R3108
8.5 x 11 inch	Clear, high speed, with paper backing	3R3028
Labels (Gummed)	Xerox labels are packaged 100 sheets to a box.	
8.5 x 11 inch	33 labels per sheet	3R3139
8.5 x 11 inch	6 labels per sheet	3R3146
8.5 x 11 inch	Custom form (uncut)	Contact Xerox Supplies Order Service
8.5 x 11 inch	1-up label	3R4476
8.5 x 11 inch	1-up label	3R4475
8.5 x 11 inch	1-up label	3R4474
*** 5/16-inch drilled holes** **** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.**		

Table A-6. Printer stocks list (Continued)

Item	Description	Part number
Tab stock	Xerox tab stock is packaged in 5-tab sets, 250 sheets per carton.	
	Straight collated singles (forward, top down): Non-drilled 90-pound, Index white Non-drilled 90-pound, blue Three-hole 90-pound, Index white Three-hole 90-pound, blue	 3R4417 3R4425 3R4418 3R4426
	Reversed collated singles (bottom up): Non-drilled 90-pound, Index white Three-hole 90-pound, Index white	 3R4415 3R4416
Cover stock	Xerox cover stock is packaged 2,500 sheets per carton.	
8.5" x 11"	65-pound, blue	3R3044
8.5" x 11"	65-pound, white	3R3041
*** 5/16-inch drilled holes** **** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.**		

Table A-7. Carbonless stocks for the printer

Pitch	Parts	Sequence	Sheets	Sheets per carton	Sets per carton	Cartons per pallet	Part number
8.5 in. x 11 in. *	2	Reverse/ Straight	Alternating CB-White CF-Canary	5000	2500	40	3R4225
	2	Straight/ Double	Alternating CB-White CB-White CF-Canary CF-Canary	5000	2500	40	3R4226
	2	Reverse/ Straight	Alternating CB-White CF-Pink	5000	2500	40	3R4227
	3	Straight	Alternating CB-White CFB-Canary	5010	1670	40	3R4230
	3	Straight/ Double	Alternating CB-White CB-White CFB-Canary CFB-Canary CF-Pink CF-Pink	5010	1670	40	3R4231
	4	Straight	Alternating CB-White CFB-Canary CFB-Pink CF-Goldenrod	5000	1250	40	3R4235
	N/A	N/A	CB-White	5000	N/A	40	3R4236
	N/A	N/A	CFB-White	5000	N/A	40	3R4238
	N/A	N/A	CFB-Canary	5000	N/A	40	3R4239
	N/A	N/A	CFB-Pink	5000	N/A	40	3R4240
	N/A	N/A	CF-White	5000	N/A	40	3R4242
	N/A	N/A	CF-Canary	5000	N/A	40	3R4243
	N/A	N/A	CF-Pink	5000	N/A	40	3R4244
	N/A	N/A	CF-Goldenrod	5000	N/A	40	3R4245

*** All papers are packaged 500 sheets per ream, with 10 reams per carton. Each ream contains only complete carbonless sets (i.e., 501 sheets in a three-part ream for 167 sets).**

Table A-7. Carbonless stocks for the printer (Continued)

Pitch	Parts	Sequence	Sheets	Sheets per carton	Sets per carton	Cartons per pallet	Part number
8.5 in. x 14 in. *	2	Reverse/ Straight	Alternating CB-White CF-Canary	5000	2500	30	3R4228
	3	Straight	Alternating CB-White CFB-Canary CF-Pink	5010	1670	30	3R4233
	N/A	N/A	CB-White	5000	N/A	30	3R4237
	N/A	N/A	CFB-Canary	5000	N/A	30	3R4241
	N/A	N/A	CF-Canary	5000	N/A	30	3R4246
	N/A	N/A	CF-Pink	5000	N/A	30	3R4247
*** All papers are packaged 500 sheets per ream, with 10 reams per carton. Each ream contains only complete carbonless sets (i.e., 501 sheets in a three-part ream for 167 sets).**							

Complete supplies list for the printer

The following table lists the supplies in addition to paper that are available for your printer. Use this table to help you determine your supplies needs.

Table A-8. Complete supplies list for the printer

Item	Description	Part number	Items / carton	Expected yield / carton
Dry ink	Consumption rate is approximately one cartridge per 60,000 pages.	6R206	3/carton	180,000 pages/carton *NOTE: Dry ink (toner) yields are based on 7% area coverage. Your yield may vary, depending on coverage.*
Dry ink, MICR	Packaged 3 cartridges per carton. Consumption rate is approximately one cartridge per 60,000 pages.	6R819	3/carton	180,000 pages/carton
Dry ink waste bottle		93K460		

Table A-8. Complete supplies list for the printer (Continued)

Item	Description	Part number	Items / carton	Expected yield / carton
Developer	Packaged 2 bottles per carton. Effective life is approximately one carton per 1,000,000 pages. (2 bottles required for replacement.)	5R161	2/carton	1,000,000 pages/ carton
Developer, MICR	Packaged 2 bottles per carton. Effective life is approximately one carton per 600,000 pages. (2 bottles required for replacement.)	5R573	2/carton	600,000 pages/carton
Fuser agent	Packaged 1 bottle per carton. Consumption rate is approximately one bottle per 250,000 pages.	8R2955	1/carton	250,000 pages/bottle
Cleaning supplies	Foam-tipped swabs	99P87256		
	Lint-free towels	35P2163		
	Magnetic head cleaning kit. Packaged 2 diskettes per box.	8R3811		
	1/4-inch (QIC) cartridge head cleaning kit	9R88432		
	Hub and Transport Cleaner	99P87486		
Diskettes	3.5-inch, double-sided, dual density, 1.44 MB, unformatted. Packaged 10 diskettes per box.	8R3704	10/box	
1/4-inch (QIC) Cartridge tapes	150 MB blank cartridge tape 8 GB blank cartridge tape	9R84168 109R00510		

Ordering supplies

To avoid unnecessary downtime, always have an adequate amount of the necessary supplies. To do this, you need to establish a procedure for checking and ordering supplies. A supplies checklist is provided at the end of this chapter to help you with this task. It lists the supplies needed for the printer and contains a column for you to enter the date when you want to place the order and a column to record the date of the actual order. The preceding consumable supplies table contains a list of Xerox supplies available for the printer.

It is important that you check your supplies regularly and order before you run out. Plan on approximately five working days for delivery after placing the order. You can make arrangements to receive them sooner in emergency situations.

Your Xerox sales representative can help you submit the initial order of supplies needed for installation. These items include paper, dry ink, fuser agent, and developer.

Once printer volume is established, planning ahead and buying Xerox supplies in quantity can save you money. The following table is a checklist you can use to keep track of the supplies you order.

When placing an order, please provide the following information:

- Your customer number (provided by your Xerox representative)
- Your printer model
- Your supply order, including the following information:
  - Item name
  - Part number
  - Quantity desired
  - If your company requires a purchase order for payment of an invoice, you need to provide the purchase order number to Xerox at the time you place the order.

To order Xerox paper, transparencies, labels, dry ink, developer, fuser agent, cartridge tapes, and diskettes, call the Xerox Supply Center at 1-800-822-2200, weekdays between 7:30 a.m. and 6:00 p.m., Pacific time.

If you prefer, you may mail orders to:

Xerox Corporation
P. O. Box 25075
Santa Ana, CA 92799-5075

To order cleaning supplies, call the Xerox Customer Parts and Product Support Center at 1-800-828-5881, weekdays between 5:30 a.m. and 5:00 p.m., Pacific time, (U.S. only).

You may also mail cleaning supply orders to:

Xerox Corporation
Parts Marketing Center
Building 214-07S
P. O. Box 1020
Webster, NY 14580

In Canada, call telemarketing for consumable supplies (non-paper):

- (English) 1-800-668-0199
- (French) 1-800-668-0133
- (Fax) 1-416-733-3086
- (Toronto only) 733-9400

In Europe and other countries, contact your local Xerox representative.

Table A-9. Supplies checklist

Use this checklist to help record the supplies and accessories you need, the date you plan to place the order, and the actual date of the order.

Item	Description and part number	Quantity	Date to order	Date ordered
Paper				
Transparencies				
Labels				
Dry ink				
Developer				
Fuser agent				
Diskettes				

Table A-9. Supplies checklist (Continued)

Use this checklist to help record the supplies and accessories you need, the date you plan to place the order, and the actual date of the order.				
Item	**Description and part number**	**Quantity**	**Date to order**	**Date ordered**
Cleaning supplies				

B. Xerox support services

Xerox provides many services in support of your printing system. This appendix contains information on the following services:

- Xerox Customer Service Support Center
- Xerox Printing Systems Customer Support Center (U.S.)
- *Xerox Customer Documentation Catalog* (U.S.)
- Xerox Documentation and Software Services (XDSS)
- Operator training
- Xerox Customer Education
- Xerox Font Services

Prior to installation, your sales representative is available to answer your questions about products, services, or billing. If you need assistance in resolving application-related problems or questions, contact your local Xerox representative.

In the U. S., you may call the Xerox Printing Systems Customer Support Center (described later in this chapter). Your system analyst is also available to assist you with applications development.

Xerox Customer Service Support Center

The Xerox Customer Service Support Center provides regular maintenance care for your printer as well as any necessary repairs. Call the Service Support Center if your printer has a hardware-related problem such as poor print quality, repeated paper jams, or connectivity problems.

Before calling your Customer Service Support Center, make sure you have tried the corrective actions described in the *Operator Guide*. If a problem persists, gather the necessary information and call your customer service support center.

To report printing system hardware or software problems, contact your local Xerox representative.

NOTE: This phone number is attached to your printer at installation time.

In the United States, call **1-800-822-2979** to report printing system hardware or software problems.

Before contacting service, make note of the following:

- Status code numbers and messages that appear on the controller monitor
- Status messages that appear on the printer control console
- Indicator lights that are lit

Your call is answered by a representative, who asks you for the model number of your printing system, and for the following:

- Machine serial number
- Your name
- Company name
- Condition or status of the printing system

The Customer Service Support representative will give this information to a Customer Service representative, who will call you back to help you resolve the problem over the phone, or to give you an estimated time of arrival.

Xerox Printing Systems Customer Support Center (U. S.)

The Xerox Printing Systems Customer Support Center is available to address your application problems or to direct you to the appropriate documentation.

The key to effective use of the Xerox Printing Systems Customer Support Center is correct identification of the problem. Before calling the center, it is helpful to have the following information available:

- The correct name of your printing system, such as the Xerox DocuPrint 2000 Series 180 EPS.
- A list of any error messages
- An explanation of how output is different from what was expected
- An assessment of whether the symptoms follow a pattern or occur randomly.

- A list of special conditions that may have caused the problem:
  - New applications
  - Changes made to the software
  - Recent service performed
  - Previous conditions under which the application has printed properly

U. S. only: To contact the Xerox Printing Systems Customer Support Center, call: **1-800-821-2797**, between the hours of 5:00 a.m. and 5:00 p.m., Pacific time.

Xerox Documentation and Software Services (U. S.)

Xerox Documentation and Software Services (XDSS) offers a variety of services that can be customized to meet your documentation needs.

XDSS distributes the documents you need to facilitate the installation and use of the Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS, other Xerox printers, and associated software.

XDSS will also send you a **Xerox Customer Documentation Catalog** free of charge upon request.

To order documents or request a **Xerox Customer Documentation Catalog**, contact your local Xerox representative or call XDSS at **1-800-327-9753**, between the hours of 6:00 a.m. and 5:00 p.m., Pacific time.

XDSS representatives will explain the services available, answer your questions, and take orders for documentation.

XDSS also has a web site from which you can order customer documentation and/or obtain a catalog. The web site address is:

http://www.xdss.com

Xerox Customer Documentation Catalog

Detailed information on documentation for DocuPrint printers and other Xerox products is contained in the **Xerox Customer Documentation Catalog.** The catalog includes a brief description of each item and its cost.

Once you are on the mailing list, updated catalogs are sent to you automatically. You may call Xerox Documentation and Software Services (XDSS) to request a catalog.

Operator training

Operator training is conducted at your location by your Xerox system analyst or other identified representative, shortly after the printing system is installed. Training takes two to four hours, depending on the system configuration. It includes hands-on practice running basic jobs, performing routine maintenance, and solving problems. Determine the number of operators you want to attend the initial training and schedule training dates and times through your Xerox sales representative.

Additional training classes, such as Advanced Customer T

raining (ACT) for operators, teach advanced service and maintenance skills. Your sales representative can give you information on availability of ACT training.

A variety of classes and workshops are available through Xerox Customer Education (refer to the following section).

Xerox Customer Education

Xerox offers classes and tutorial documents on various topics relating to printing systems and document production. For information about Xerox training courses, or to receive a catalog, contact your local Xerox representative. In the U. S., call Xerox Customer Education at **1-800-445-5554**. Customer Education has a web site where you can obtain additional information. The web site address is:

http://www2.xerox.com/go/xrx/customer_education_services/newCes.jsp

Xerox Font Services

The Xerox Font Center can send you samples and catalogs of the fonts available for your printing system.

To receive font samples, obtain price information, obtain technical support, or order licensed or custom fonts, contact your local Xerox representative.

In the U. S., call **1-800-445-FONT (-3668)** between 7:00 a.m and 4:00 p.m. Pacific time to receive font samples, obtain price information, or order licensed or custom fonts. For technical support regarding fonts (such as installing fonts or solving font usage problems), call **1-800-521-8324**.

Xerox Font Services has a web site where you can obtain additional information or order fonts. The web site address is:

http://www.font.net

C. Related publications

The Xerox DocuPrint 100/115/135/155/180 EPS documentation set includes the publications that are listed in the following sections. Refer to the “Xerox support services” appendix of this guide for information on how to order these and other publications.

DocuPrint 100/115/135/155/180 EPS documentation

The following documents contain information on the Xerox DocuPrint 100/115/135/155/180 EPS:

- *Xerox DocuPrint 100/115/135/155/180 EPS Customer Documentation CD*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Guide*
- *Xerox DocuPrint EPS Using LCDS Print Description Language*
- *Xerox DocuPrint 100/115/135/155/180 EPS Installation Planning Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS NPS/IPS Extension Operations Guide*
- *Xerox DocuPrint EPS Tape Client Job Submission Guide*
- *Xerox DocuPrint EPS Font Reference Manual*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Quick Reference Card*
- *Xerox DocuPrint 100/115/135/155/180 EPS Customer Information Quick Reference Card*
- *Xerox DocuPrint 100/115/135/155/180 EPS Job Submission Quick Reference Card*
- *Xerox DocuPrint EPS MICR User Guide*
- *Generic MICR Fundamentals Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Training Instructor Guide*

- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Training Participant Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS Programmer/ Administrator Self-study*

NPS/IPS publications

For customers who have the NPS/IPS Extension configuration and are using the Network Printer Series software, the following related publications are available:

- *Xerox DocuPrint 96/4635/180 NPS/IPS V8.0 Interactive Customer Documentation CD*
- *Xerox DocuPrint 96/4635/180 NPS/IPS System Overview Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Guide to Performing Routine Maintenance*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Troubleshooting Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Master Index*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Installation Planning Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Customer Information Quick Reference Card*
- *Xerox DocuPrint NPS/IPS Guide to Configuring and Managing the System*
- *Xerox DocuPrint NPS/IPS Guide to Submitting Jobs from the Client*
- *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*
- *Xerox DocuPrint NPS/IPS Guide to Using Page Description Languages*
- *Xerox DocuPrint NPS/IPS Solutions Guide for IPDS Printing*
- *Xerox DocuPrint NPS/IPS Decomposition Service and Tools Guide*
- *Xerox DocuPrint NPS/IPS Glossary*

Printing the customer documentation

To print the latest version of the customer documentation:

1. Create a queue, specifying ASCII for input and Duplex for output.
2. Insert the DOC CD into the CD drive.
3. Open a UNIX terminal window on the graphical user interface.
4. Enter:

   `cd /cdrom/quantumedoc/pdfs`
5. To list the names of all documents in PDF format, enter:

   `ls -l`
6. Enter the lpr location:

   `cd /usr/ucb`
7. To print the selected file (document), enter:

   `lpr -P` ***`queuename`*** **`/cdrom/quantumedoc/pdfs/`** ***`filename`***

   where filename is the name of the file to be printed.

Glossary

This glossary contains a list of terms for working with the Xerox DocuPrint 100/115/135/155/180 EPS, and a definition of each.

A3 Paper size measuring 297 by 420 mm.

A4 Paper size measuring 210 by 297 mm.

American Standard Code for Information Interchange (ASCII) Standard 7-bit code which represents alphanumeric information. Each alphanumeric character and several nonprinting characters are assigned a binary number, covering 128 possible characters. It is used for information interchange among data processing systems, data communication systems, and associated equipment.

AppleTalk Network communication protocol inherent to the Apple Macintosh operating system and supported by the DocuPrint NPS/IPS.

application software Software resident on the host or client workstation used to create print documents.

B4 Paper size measuring 250 by 353 mm.

background job Low-priority job, usually batched, which is executed automatically as system resources become available.

batch Method by which bodies of data are accumulated and grouped by kind before processing.

batch processing Allows for repetitive operations to be performed sequentially on batched data without much involvement of the computer operator.

baud Measurement of data rate in bits per second. This term is used to describe information flow between two devices. Unit of data transmitting/receiving speed is roughly equal to a single bit per second. Common baud rates are 110, 300, 1200, 2400, 4800, and 9600.

binary Numbering system based on 2 rather than 10 and containing only the symbols 0 and 1. Binary is especially well suited for use in computers and related devices since information can be represented with electric pulses (0=off, 1=on). Most computer calculations are binary.

binary digit (bit) In the binary numbering system, either of the characters 0 or 1. The bit is the basic unit of information with which a computer works. It can take the form of a magnetized spot, an electric pulse, a positive or negative charge, etc. A number of bits strung together represents a character to a computer.

Multipliers are:

1 byte = 8 bits

1 kilobyte (KB) or 1,024 bytes = 8,192 bits

1 megabyte (MB) or 1,048,576 bytes = 8,388,608 bits.

Computer space equivalents are:

1.5 KB = about 1 single-spaced typed page

30 KB = about 20 typed pages

150 KB = about 100 typed pages

bitmap Electronic definition of an image, comprised of a matrix of picture elements (pixels or dots), where a bit value of one means that the picture element is imaged, and a bit value of zero means that the picture element is not imaged. The number of picture elements in a square area is a function of the display device resolution.

bit mapped Display image generated bit by bit for each point or dot. A software-driven scanner is used to create characters and/or graphics.

bits per second (bps) In serial communication, the instantaneous bit speed with which a device or channel transmits a character.

blocking Process of combining two or more records into a single block of data which can then be moved, operated upon, stored, etc., as a single unit by the computer.

block length Number of characters or bytes contained in a block of data (the block is treated as a unit within the computer). Block length is usually invariable within a system and may be specified in units such as records, words, computer words, or characters.

boot To load a program's initial instructions of a program into the computer's memory. These instructions then direct the loading of the rest of the program. Booting may require entry of a few commands at the keyboard or the flip of a switch to begin the process.

buffer Compartment of memory in which data is stored during transfer from one device to another. Useful for (1) accumulating data into blocks before storage or processing, and (2) for adjusting differences of speed between devices, or between a device and a communicating facility.

bypass transport Optional module that moves paper from the printer to a finishing device.

byte Fixed number of bits (in data processing, usually 8) operated upon as a unit. A byte may represent a character, a machine instruction, or some other logical unit of information.

case–sensitive Treating lowercase and uppercase characters differently.

central processing unit (CPU) Interprets and executes instructions, performs all operations and calculations, and controls input and output units and auxiliary attachments.

channel

1. In data communications, a path or line that enables two or more devices to communicate (sometimes called a circuit, facility, or link).
2. In computers, a path for communication between the central processing unit (CPU) and input/output units, or between the CPU and peripheral devices.

character Single printable letter (A-Z), numeral (0-9), symbol (& % #), or punctuation mark (, . ! ?) used to represent data. Characters can also be nonprinting, such as space, tab, or carriage return.

character cell Digitized space containing a single character within a font set.

character code Code representing alphanumeric information, for example, ASCII.

character set Number of different characters used by a particular device, including alphabetic, numeric, and special characters such as symbols.

characters per inch (cpi) Designates the number of characters per inch for a particular typeface. Refer to pitch.

client software Software that manages the submission of print jobs to the controller.

client workstation Workstation connected to the network used to create print jobs (documents) and submit them to the controller.

command Statement entered that instructs the system to perform an operation.

communication line Telecommunication line connecting devices at one location with devices at other locations in order to transmit and receive information.

communication link Physical means (i.e., data link) connecting one location to another to transmit and receive information.

compatibility Characteristic of computer equipment permitting one device to use the same information or programs as another device without conversion or code modification.

compile To translate instructions written in high-level language into machine language for execution by a system.

console Functional unit containing devices used by an operator to communicate with a printer. It may consist of a display, keyboard, and certain switches or other controls.

control program An operating system program that manages job flow, input/output processing, and other overall system functions and resources.

controller Component of the DocuPrint printing system that manages the spooling and processing of print jobs.

database Information to meet specific processing and retrieval needs. Generally applies to integrated file of data, arranged for access by many subsystems.

data communications Transmission and reception of encoded information over telecommunication lines.

data file Collection of related data records organized in a specific manner so that each record is similarly structured, e.g., a payroll file set up with one record for each employee, last name first, indicating the rate of pay and all deductions.

data rate In data communications, the rate at which a channel carries data, measured in bps (bits per second).

data storage Preservation of data on various media (e.g., tape, disks, magnetic bubble memory, etc.).

data stream Format of data passed from one device to another.

data transmission Transmission of coded data over telephone or other telecommunication lines.

DCIM Data Control Interface Module. The video interface hardware which resides in the SUN workstation (the DCIM replaces the XEPI board).

decomposer Controller task that translates print data from the PDL command file into a bitmap image of the page to be printed.

default Predefined value the system uses when another value is not provided.

device Any piece of hardware other than the CPU (Central Processing Unit).

DFA Document Feeding and Finishing Architecture. Software that enables third-party feeding and finishing devices to be attached to a Xerox printer to perform pre- and post-processing functions (such as roll-feeding, saddle-stitching, booklet-making, etc.)

diagnostics Programs used to diagnose problems within the system or to help service personnel pinpoint the source of such problems.

digitize To express or represent data in digital (binary) form so that it can be processed electronically.

directory Logical grouping of files and subdirectories that are identified by name. The directory helps organize data on large storage media.

dithering The process in laser printing which uses dot patterns to simulate shades of gray or tones of a color.

DOS Disk Operating System. Operating system commonly used on personal computers. *See also* operating system.

dot Unit of measurement representing a fraction of an inch, for example, 300 dots per inch (dpi). May also be referred to as a picture element (pixel) or spot.

dry ink Minute particles of resin and carbon toner deposited and fused onto the page to create images. Toner is combined with developer to form the dry ink.

duplex Ability to send and receive information simultaneously.

duplex printing Printing on both sides (front and back) of a page. *See also* simplex printing.

electronic publishing The integrated production of documents on demand, using digitally stored documents, computerized composition, and electronic printing systems.

enabler Hardware devices or software packages that allow the printer to perform as specified.

EPS Enterprise Printing System.

Ethernet Network standard consisting of a coaxial cable or twisted pair and associated components for connecting workstations to each other, to file servers, and to peripherals. This communication system enables workstation users to share information and services.

EtherTalk Hardware interface and network software for Apple Macintosh computers that provides connection to an Ethernet network.

extension Portion of a filename that follows a period. in some instances it identifies the file type. For example, .ps specifies a PostScript file.

fault Condition which prevents proper processing of a print job and requires the intervention of an operator. For example, a paper jam is a fault.

field Preset place for entering information.

file Set of records or text that can be stored and retrieved. Organized, named collection of records treated as a unit. For offline, it is the data between the two tape marks. For online, it is the data between banner pages.

file maintenance Keeping a file up to date by regularly adding, changing, or deleting data.

finisher Any optional output finishing solution, for example, the stitcher/ stacker.

firmware Permanent programs stored in read-only memory (ROM).

fixed disk Disk drive that is mounted within a computer and is not removable.

fixed font Font containing characters with fixed spacing.

fixed pitch Font set in which every character cell has the same width. In reference to character sets, this term describes typefaces in which all character cells are of equal width. Monospaced as opposed to proportional spaced.

fixed spacing Arrangement of characters on a line so that all characters occupy the same amount of horizontal space.

font A complete set of alphanumeric characters and punctuation marks, having common characteristics such as style, width, height, and weight.

form 1. Compiled forms source library (.FSL) file. 2. Printed or typed document with blank spaces for inserting information. Specific arrangement of lines, text, and graphics stored in a computer under an identifying name. Page of data that, when preceded by proper commands, is stored on the system disk as a permanent file. It may be merged with variable data by a form start command. See also FDL; FSL.

format
1. Layout of a document, including margins, page length, line spacing, typeface, etc.
2. In data storage, the way the surface of a disk is organized to store data.
3. To prepare the surface of a disk for acceptance of data.

fuse To affix dry ink to paper by heat or pressure or a combination of both.

hard disk *See* fixed disk.

hardware Physical components (mechanical, magnetic, electronic, etc.) of a system, as opposed to programs, procedures, rules, and associated documentation. The hardware is operated by software and firmware.

HCF High capacity feeder. An optional feeder module containing two feeder trays that work independently with the standard feeder trays 1 and 2. The HCF increases the feeder capacity by approximately 2,000 sheets and allows automatic tray switching and increased uninterrupted printing time.

host Computer accessed by users which serves as a source of high-speed data processing for workstations with less computer power. Commonly referred to as mainframe.

host interface Connection between network and host computer.

identifier (id) Characters used to identify or name data and possibly to indicate certain properties of that data.

image area Area on a physical page that may contain text or graphics.

implementation Process of installing system hardware and software. Also the process of converting a design into an actual working system.

impressions per minute (ipm) The number of pages (one side) a printer can print during the space of one minute. Used interchangeably with pages per minute (ppm).

in-front page A term that refers to the top page of a double-sided sheet.

interface Hardware that provides physical connection and electronic communication between two hardware devices.

Internet Protocol (IP) address Refers to an address of any host that uses TCP/IP network protocol.

IOT Image Output Terminal. *See* printer.

job Print data and attributes required for processing and printing a document.

landscape page orientation Orientation of print lines or top of an illustration parallel to the long edge of the paper.

language Defined set of characters and symbols combined together by specific rules. Refer to high-level language and low-level language.

laser printing Technology that uses a laser to transfer character forms to a page by direct or indirect means.

library In data storage, a collection of related files or programs.

light emitting diode (LED) Solid substance that glows when a current is passed through it. Often used for indicator lights on disk drives or modems, as well as for displays on other electronic equipment.

load To enter data into storage or working registers.

Local Area Network (LAN) Network connecting computer and peripheral devices through cables.

long-edge feed (LEF) The movement of paper through the printer in the direction of the paper length (the longer side of a sheet of paper). *See also* short-edge feed.

mainframe Central processing unit (CPU) and memory of a large computer. More often used to denote any large computer of the type that might be used to control a group of smaller computers, terminals, or other devices. Refer to host.

megabyte (MB) A unit of approximately one million bytes.

megahertz (MHz)

1. Unit of cycling speed (one million cycles per second) for an electromagnetic wave (in particular, a radio wave).
2. The sending and receiving stations of a radio wave transmission must be tuned in to the same unit of megahertz.

message Information passed to the user or to a task within the system. The information is usually associated with an error, fault, or system condition.

MICR Functionality that produces a Magnetic Ink Character Recognition (MICR) line on negotiable and turnaround documents such as checks and bills. The MICR printing system prints documents using magnetic ink and special fonts to create machine readable information that allows for quick document processing. In general, MICR is used to print accounting and routing information on blank checks and other negotiable documents.

mixed environment Group of different printing systems at the same location.

network
1. System of geographically separate computers, linked to one another over transmission lines.
2. Communication lines connecting a computer to its remote terminals.

Novell Commonly used network communications protocol supported by the DocuPrint NPS/IPS.

offline Devices not under the active control of a central processing unit. For example, a computer makes output to a magnetic tape. The tape is then used by an offline printing system to produce printed data. Offline operations are much slower than online operations. Refer to online.

offset To place pages currently being printed in slightly different positions from previous pages.

online Devices under the direct control of a central processing unit, e.g., a printing system in interactive communication with a mainframe. Refer to offline.

operating system Basic host- controlling program that governs the operations of a computer, such as job entry, input/output, and data management. The operating system is always running when the computer is active. Unlike other types of programs, it does not run to an end point and stop.

orientation
1. In reference to image area, orientation describes whether the printed lines are parallel to the long edge of the paper or the short edge of the paper.
2. Choice of printing portrait (vertically) or landscape (horizontally).

page orientation Direction in which data is printed on a report. Refer to landscape page orientation and portrait page orientation.

PC Personal computer. Family of computers that most commonly run a version of DOS.

Page Description Language (PDL) Page description language used to describe the printing of jobs to a laser printing system. PDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options) of a print job.

peripheral Device used with a computer or workstation, usually for input or output. Printers, modems, and the IPS/NPS cartridge tape drives are examples of peripherals.

platform Combination of hardware and operating system software.

portrait page orientation Orientation of print lines or the top of an illustration parallel to the short edge of the paper.

PostScript Page description language developed by Adobe Systems, Incorporated. PostScript describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options) of a print job.

ppm Pages per minute.

printer Component of the DocuPrint Printing System that accepts data from the controller and prints the document according to the print attributes specified by the user. The printer also provides paper stacking, collating, and optional finishing. “DocuPrint printer” or “printer” refers to the base printer engine (IOT) only, without the controller and interface.

printer controller *See* controller.

Printer Control Language (PCL) Printer description language defined by Hewlett–Packard Company. PCL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options) of a print job.

protocol Formal set of conventions governing the format of data and the control of information exchange between two communication devices.

queue List of documents waiting to be processed.

Random Access Memory (RAM) Volatile memory used for temporary storage of data and software commands, used by programs for immediate task processing.

Read-Only Memory (ROM) Solid-state memory for programs. It cannot be rewritten.

resolution The number of dots per unit. An imaging system converts a character from digitized data into a printed image composed of these tiny dots. The greater the number of dots per inch (i.e., higher the resolution), the clearer the image is produced.

short-edge feed (SEF) The movement of paper through the printer in the direction of the paper width (the shorter side of a sheet of paper).

simplex printing Printing on one side of the page. *See also* duplex printing.

small computer system interface (SCSI) An accepted standard for connecting devices to computers.

software Programs, including operating systems, procedures, utilities, applications programs, etc., written for a system.

software application *See* application software.

spooling Process of releasing data from main memory and storing it temporarily until a peripheral device is ready to accept it, e.g., storing text before sending it to a printer.

string Connected sequence of alphanumeric characters treated as one unit of data by a program.

SunOS Operating system developed primarily by Sun Microsystems for use on Sun computers and workstations. SunOS provides inherent support for Unix and for TCP/IP.

system administrator Person responsible for configuring, operating, and maintaining the DocuPrint system, and also for installing client software on network workstations.

system controller *See* controller.

TCP/IP Transmission Control Protocol/Internet Protocol Commonly used network communications protocol supported by the DocuPrint NPS/IPS.

telecommunications The transfer of data via telephone lines.

throughput In data processing systems, the amount of data that can be processed, transmitted, printed, etc., in a specified unit of time.

transmission speed In data communications, the rate at which data is passed through communication lines, usually measured in bits per inch (bpi).

two-up Application that prints two logical pages on one side of a physical page.

Unix Operating system for computers, usually working in a network environment. Unix consists of a hierarchical system of commands, shells, files, and directories. *See also* operating system.

user interface (UI) System for gathering input from a user and presenting data to the user.

workstation Computer able to process data but designed specifically for interaction with a network.

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