Xerox DocuPrint 4050/4090 IPS System Overview Guide

THE DOCUMENT COMPANY

XEROX

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

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

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.

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

⚠ **Warning:** Improper connection of the equipment grounding conductor may result in risk of electrical shock. ⚠

- 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 Printer 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.

Table of contents

Introduction

This *Xerox DocuPrint 4050/4090 IPS System Overview Guide* provides an overview of the individual components of the DocuPrint IPDS Printer System (IPS) and how they work together. This reference is designed to provide you with background information that can be used to make informed decisions regarding printer use and performance.

About this guide

The *Xerox DocuPrint 4050/4090 IPS System Overview Guide* provides information to help you quickly determine hardware, software, and connectivity requirements for printing from various clients to DocuPrint IPS.

This reference is useful for workstation users, printer operators, and system administrators who want to understand the overall DocuPrint IPS. Managers can use the reference information to assist them in making planning decisions.

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

Contents

This guide contains the following chapters:

- Chapter 1, "System overview," identifies and describes the function of the major components of the DocuPrint 4050 and 4090 IPS.

- Chapter 2, "Printer Controller," provides the information on the Printer Controller components, software, and fonts.

- Chapter 3, "User interface," describes the features of the IPS graphical user interface.

- Chapter 4, "Printer," details the base printer components and optional printer components.

- Appendix A, "Paper and other supplies," provides information and specifications on paper and other media used with the IPS, as well as instructions for ordering supplies.

An index is provided at the back of the guide.

Conventions

This guide uses the following conventions:

- All caps and angle brackets — Within procedures, the names of keys are shown in all caps within angle brackets (for example, press <RETURN>).

- *Italics* — Document and library names are shown in italics (for example, the *Xerox DocuPrint 4050/4090 IPS System Overview Guide*).

- Capitalization of graphical user interface (GUI) window titles matches the titles as they appear on the screen. In cases where a window does not have a title, it is referenced using all lower case. For example:

  — At the graphical user interface, use the Output Configuration window to group the trays.

  — The main window displays the current system status.

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 could affect the safety of people. ⚠

Related publications

This document is part of the Xerox DocuPrint IPS publication set.

Xerox documents   Following is a list of all Xerox DocuPrint IPS documents. For a complete list and description of available Xerox documentation, refer to the *Xerox Customer Documentation Catalog* (publication number 610P17517), or call your service representative.

Application Programmer/System Administrator Quick Reference Card

Customer Information Quick Reference Card

Generic MICR Fundamentals Guide

Glossary

Guide to Configuring and Managing the System

Guide to Performing Routine Maintenance

Helpful Facts About Paper

Installation Planning Guide

Master Index

Messages Guide

Solutions Guide

System Overview Guide

Troubleshooting Guide

Xerox Standard Font Library Font User Guide

The documentation set also includes an electronic version, the *DocuPrint IPS Interactive Customer Documentation CD*.

IBM documents   Following are related IBM documents. Contact your local IBM representative for ordering instructions for IBM AFP/PSF manuals that might be useful for your specific installation.

IBM 3825 Page Printer Product Description

IBM Intelligent Printer Data Stream Reference

IBM Advanced Function Presentation Printer Summary

IBM ITSC Distributing AFP Printing from a Host System

IBM Advanced Function Printing Data Stream Reference

IBM Data Stream and Object Architectures: Mixed Object Document Content Architecture Reference

Guide to Advanced Function Presentation

1.   System overview

This chapter introduces the DocuPrint 4050 IPS and the DocuPrint 4090 IPS printing systems. It describes the systems' hardware and software components, features, functions, and modes of operation.

Functional overview of the DocuPrint IPS

DocuPrint IPS printers support:

- Duplex printing

- Media handling of multiple weights, sizes, and types

- Optional modules for enhanced finishing and output to third-party finishing devices

- Optional high-capacity feeder which provides additional feeder trays.

The IPS emulates an IBM AFP Group 3 page printer with the Advanced Function Image and Graphics (AFIG) option and can print in all the following PSF environments:

- MVS
- VM (channel-attached only)
- VSE (channel-attached only)
- OS/2
- OS/400 (with TCP/IP only)
- AIX

Note: Although PSF/VSE does not support TCP/IP directly, a printing system with PSF/2, PSF/6000, or IBM InfoPrint Manager can attach to a PSF/VSE system and the PSF/2, PSF/6000, or IBM InfoPrint Manager can furnish the TCP/IP support for the IPS printer.

For information on the minimum PSF levels needed to support the IPS, refer to your *Xerox DocuPrint 4050/4090 IPS Installation Planning Guide*.

Major system components

The IPS has the following main components, each of which is described in greater detail in later chapters of this guide:

Printer Controller The Printer Controller accepts IPDS data from the host, processes the data, and sends it to the printer using the IPS operating system for IPDS or the NPS operating system for PostScript or PCL.

The Printer Controller provides the printer with print data and commands and receives status information from the printer.

Host Channel Unit: On channel-attached systems, the Printer Controller has an additional component called the Host Channel Unit, or HCU. The HCU contains the channel communications board, and handles communication between PSF and the controller when data is received over a bus and tag connection.

Graphical user interface The full-color graphical user interface (GUI) provides an easy-to-use, mouse-driven interface to the IPS. Using the windows on the GUI screen, you can configure your system; perform diagnostic and administrative tasks; and set up, change, and implement system options, and run print jobs.

The IPS main window displays the current system status, as well as the current printer settings, including the current input and output tray configurations. From the IPS main window you access the various menus and windows you use to configure and operate the system. Refer to the chapter "User interface" in this guide, for more detailed information on the IPS graphical user interface components.

Printer The printer accepts data from the Printer Controller and prints the document according to the print options specified by the user. The printer also provides paper stacking, collating, and optional finishing.

The 4050 and 4090 IPS are monochrome printers. Print jobs that contain color commands are printed in black.

Host connectivity options

The IPS can be set up to receive data from a host in one of two ways:

- Over a channel with bus and tag cable connection, via the Host Channel Unit (HCU)

- Through a Token Ring or Ethernet interface, using TCP/IP protocol (not available in a VM or VSE host environment)

  Note: A transmission rate of at least 16 megabits per second should be used with a Token Ring interface on the IPS. (Overall performance depends on network traffic and job density.)

Channel-attached configuration Figure 1-1 illustrates the components of a channel-attached IPS. This configuration requires a Host Channel Unit (HCU) to interface between the host channel and the IPS controller.

Figure 1-1. **4050/4090 IPS: channel-attached configuration**
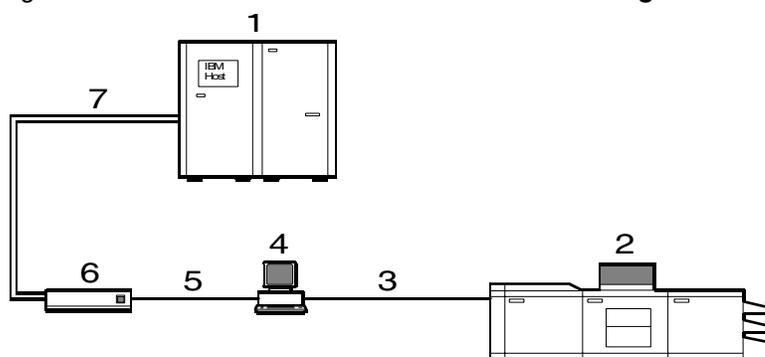
 1   **Host system (PC or mainframe)**
 2   **4050 or 4090 IPS printer**
 3   **Printer interface cable**
 4   **Printer Controller**
 5   **SCSI interface**
 6   **Host Channel Unit (HCU)**
 7   **Bus and tag cables**

TCP/IP configuration If you are using Token Ring or Ethernet with TCP/IP, as shown in figure 1-2, the bus and tag cables and the HCU are not required.

Figure 1-2. **4050/4090 IPS: TCP/IP configuration**
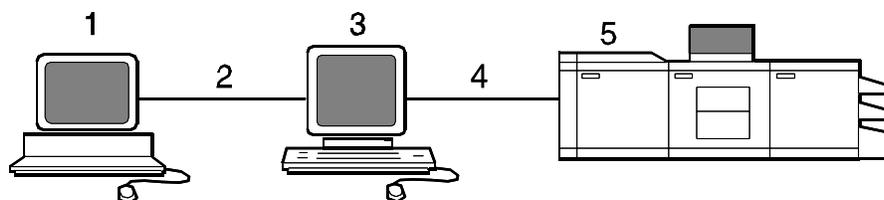
 1   **Host system (PC or mainframe)**
 2   **Token Ring or Ethernet network connection**
 3   **Printer Controller**
 4   **Printer interface cable**
 5   **4050 or 4090 IPS printer**

IPDS data stream

All IPDS resources (print data sets, page definitions, form definitions, page segments, fonts, and overlays) supported by the IBM 3825 and 3827 printers are supported by the Xerox IPS software. Additionally, there are several data towers supported within the AFP environment which are fully supported by the IPS software, to a level supported by the IBM 3825 and IBM 3827 printer capabilities:

- **IM Image IMD1**

- **FOCA:** Font Object Content Architecture

- **MO:DCA-P:** Mixed Object Document Content Architecture for Presentation

- **PTOCA PT1, PT2, and PT3:** Presentation Text Object Content Architecture

- **IOCA:** Image Object Content Architecture

- **GOCA:** Graphics Object Content Architecture

- **BCOCA:** Bar code Object Content Architecture

- **OL1:** Overlay One

- **PS1:** Page Segment One

- **Line mode data streams**

Each of the data objects follow the same object rule of containing delimiting fields with structured fields describing each object.

Dual Mode

Xerox DocuPrint Dual Mode option enables both DocuPrint NPS and IPS systems to coexist on the same Printer Controller (Sun workstation). This allows the DocuPrint system to receive data streams supported by NPS and IPS, including IPDS, PostScript Levels 1 and 2, HP PCL5c, HP PCL5e, and ASCII.

Either of the following types of configurations may be used:

- The same Token Ring or Ethernet connection can be used for both IPDS (IPS) and Postscript/PCL (NPS).

- Both a Token Ring card and an Ethernet card can reside in the Sun workstation controller, with one being used for IPDS and the other for PostScript/PCL.

- Bus and tag attachment through the HCU can be used for IPDS, and Token Ring or Ethernet connection for the NPS.

When the DocuPrint system is in IPS mode, it can accept PostScript and PCL data streams in the background; however, it can print these jobs only after it is switched to NPS mode. However, when the system is in NPS mode, it cannot accept IPDS data streams in the background.

4050/4090 IPS hardware features

The 4050 and 4090 IPS provide numerous features that can be enabled or configured using the graphical user interface on the printer controller.

Multiple input trays

Two addressable input trays are standard with the printing system. Two additional feeder trays are available as options. These trays can be used to configure print jobs in the most effective manner. For example, the trays can be used to provide nonstop printing of a complex job that requires multiple paper stocks, or only a few paper stocks, but using the continuous loading capability of the input trays. A different tray can also be selected for each copy of a specific page in a print job; for example, to provide different paper colors for specific pages.

Feeder tray capacities, based on 20-pound or 80 gsm (grams per square meter) bond, are:

- **Tray 1:** 1000 sheets

- **Tray 2:** 500 sheets

- **High-capacity feeder trays (3 and 4)**: 1000 sheets each.

Advanced paper handling

The DocuPrint 4050/4090 IPS can handle paper stocks ranging in size from 8.5 by 11 inches / 216 by 279 mm to 8.5 by 14 inches / 216 by 356 mm, including A4, and in weight from 20-pound or 80 gsm bond to 110-pound / 200 gsm index. Jobs can also be printed on special stocks such as labels and transparencies.

The printer engine monitors the print job so that, should a paper jam occur, the job resumes on the correct page, providing complete document integrity.

300 dpi resolution

The DocuPrint 4050/4090 IPS provides high print quality at 300 dpi resolution. It can receive data at 240 or 300 dpi; The controller coverts 240 data to 300.

Caution: The DocuPrint 4050/4090 IPS must be configured to the same font resolution as the host input data stream (refer to your *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System* for instructions on configuring for the correct input resolution). Conflicts between the input font resolution and the IPS configuration could result in inability to print the job, or in missing variable data in the output.

Better print quality is usually achieved if you convert all 240 dpi and 300 dpi fonts and other resources to 300 dpi before printing, rather than leaving the conversion for the controller to do. However, you should always run test prints to validate your particular application.

Multiple output trays/bins

Your 4050/4090 IPS is available with one of two stacker types: a dual stacker, with two output trays, or a stitcher/stacker which can offset and/or place a wire stitch in sets of up to 50 sheets.

Output tray capacities, based on 20-pound or 80 gsm stock:

- **Dual stacker trays 1 and 2:** 720 sheets each
- **Stitcher/stacker:** 2000 sheets.

Note: The equivalent grams per square meter of 20-pound paper is actually 75 gsm. However, there is no standard 75 gsm paper — the available stock that is closest in weight to 20-pound paper is 80 gsm.

User interface

The IPS full-color graphical user interface provides an easy-to-use, mouse-driven interface to the IPS. Using the graphical screens, you can configure your system; perform diagnostic and administrative tasks; and set up, change, and implement system options.

The IPS main window displays the current system status, as well as the current printer settings, including the current input and output tray configurations. From the IPS main window you access the various menus and windows you use to change the system settings and perform diagnostic and administrative tasks. Refer the "User interface" chapter in this guide for further information on the IPS graphical user interface.

Figure 1-3.   **IPS main window**
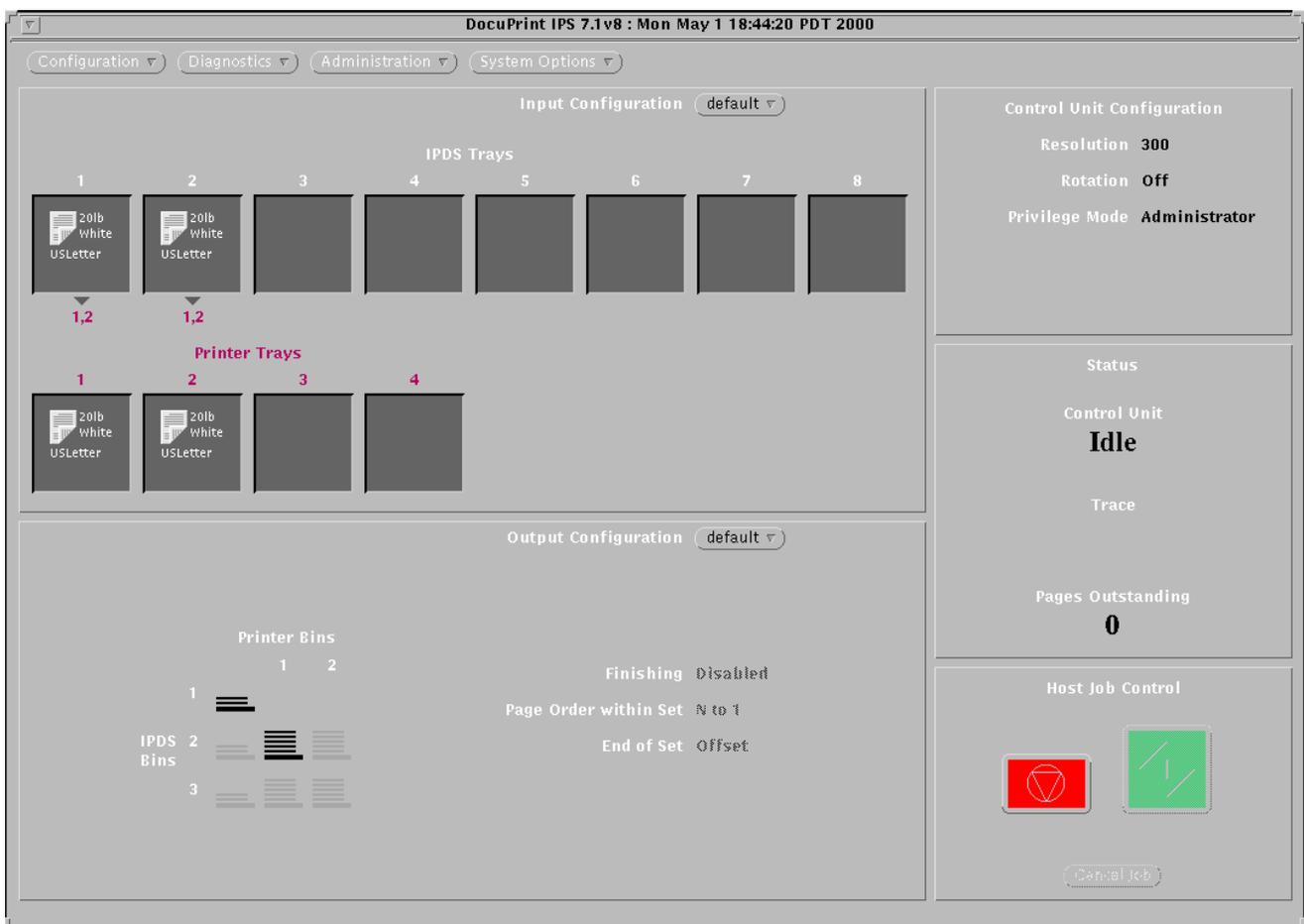
Software features

The following special IPS software features increase system flexibility.

Note: Additional features are as follows:

- Enhanced N-Up (For information, refer to *Dash 11.*)

- Trace facility enhancements (For information, refer to *Dash 11.*)

- Remote diagnostics (For information, refer to the section "Sixth Sense Technology" in this chapter.)

- Background color for OCA colors (For information, refer to *Dash 11.*)

Mixed paper sizes within a job

The IPS can print jobs that call for a mix of paper sizes, without needing to interrupt or slow down printing.

An example of such an application would be a multi-page billing statement consisting of:

- One or more 8 1/2 by 11-inch sheets itemizing charges, and

- A final 8 1/2 by 14-inch page containing the rest of the billing items, the total amount due, and a tear-off section to mail back with payment.

Note: When a print job calls for paper sizes that span over different pitch modes, the software will either cycle down or run at a lower pitch mode, based on the different pitch modes required, the paper sizes called for, the speed of the printer, and the time it takes to shut down the printer.

Note: Paper size and printer trays cannot be changed while the job is running.

Note: Mixed paper sizes are not supported for stitching. If your system has a stitcher/stacker, the printer cycles down if it detects any specification for stitching different sized papers.

Tray selection capabilities

You can select a different input tray or output bin for each job. You can also select a different input tray for each page of a job.

Input tray
With the input tray selection capability at the Copy Subgroup level, you can select a different input tray for each copy of a page of a job. You can use this capability to print each page of a multiple-part form on a different color paper stock, or to print the cover of a job on a card stock and to print specific pages within the job on a different color stock.

To specify a different input tray for each job, use the BIN command in the SUBGROUP level of the COPYGROUP in the FORMDEF.

Output tray
With the output bin selection capability you can select a different output bin group for each print job. This selection requires two steps:

1. At the host, set the JCL keyword OUTBIN in the OUTPUT statement to specify a bin number from 1 to 65535, or use the OUTBIN command in the FORMDEF to specify a bin number from 1 to 255.

2. At the graphical user interface, use the Output Configuration window to group the trays. You must also select Allow Host Control from the Bin Selection Mode pull-down menu.

IOCA Replicate and Trim

The IPS also supports Replicate and Trim, which improves the processing of IM and IO images that contain large areas of shaded graphics. (IM images are resolution-dependent images that cannot be compressed or scaled; IO images are resolution-independent.)

The IOCA Replicate and Trim capability allows for faster transmission to the printer of AFP applications with IM images that have large or widespread shaded areas. It also reduces the storage area required on the host and on the printer.

Mixed plex

The IPS allows switching between plex modes (simplex to duplex and vice versa) within and between jobs without shutting down the printer.

Switching of plex modes occurs as follows:

- **From simplex to duplex:** The switch is done without a printer shutdown or dead cycles.

- **From duplex to simplex:** The switch is done without a printer shutdown. However, the printer may, if necessary, dead cycle to clear the paper path of all duplex sheets before feeding the first simplex sheet.

Users can avoid switching from duplex to simplex mode (and thus, avoid the dead cycles) by using the Maximum Simplex GUI panel to perform simulated simplex. For more details, refer to the "Setting the system configuration" chapter in the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System*.

Note: When you print simplex pages in duplex mode, the throughput speed is halved. The blank back pages of the simulated simplex sheets are counted as billable pages by the system's meter.

Enhanced N-Up

Enhanced N-Up provides the following capabilities:

Sheets   On a given sheet, users can place individual pages:

- At any position on either side of the sheet

- In any orientation

- In any size that fits on the sheet

Each side of the sheet of paper can have up to four pages.

Overlays   Users can place overlays relative to any partition origin, with or without variable page data from the application program.

Users can specify different overlays for each page.

Offsets   Users can specify different offsets for each page.

Rotations   Users can specify different rotations for each page.

Form ejection   Users can specify form ejection to a new partition or a new sheet.

Trace facility

To help diagnose problems, the system provides a trace mechanism. Trace files store system configuration information, maintain TCP/IP protocol headers, and time-stamp all records.

For detailed information on this feature, refer to the "Setting the system configuration" chapter in the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System*.

Overstrike, underscore, subscript, and superscript

Support for the PT2 Subset of PTOCA enables the IPS to print overstrikes, underscores, subscripts, and superscripts where specified in jobs.

Page origin rotation for continuous form jobs

The 90-degree page origin rotation feature enables the IPS to print jobs designed for continuous form printing, without the need to rework an existing application. At the user interface, you can set a job's page origin to be rotated 90° to accommodate printing continuous form jobs on cut-sheet paper.

Double-byte fonts

Double-byte fonts consist of characters that are larger and more complex than the single-byte characters making up the Roman alphabet. Therefore, each character of a double-byte font requires two bytes to represent it. Some languages requiring double-byte fonts include Chinese, Korean, and Japanese.

The IPS supports printing with certain double-byte fonts, which can be used in combination with single-byte fonts.

The following double-byte character sets are supported:

- Simplified Chinese
- Traditional Chinese
- Japanese
- Korean
- Thai.

Note: When using double-byte fonts, the font loading time will increase if a font change occurs between reports.

Outline font support

The IPS supports the use of IBM outline fonts for both single- and double-byte applications. These fonts may be downloaded during the jobs or may be loaded into the system and made resident through the use of a user interface option on the Configuration menu.

These outline fonts allow users to specify a single font that can be rasterized in a variety of point sizes by the IPS. The IBM outline fonts are based on Adobe type 1 and type 0 fonts that are in PostScript format.

Note: The IPS supports printer resident *outline* fonts. It does not support printer resident *raster* fonts.

Printer resident font support

The IPS stores both single-byte and double-byte fonts locally on the Printer Controller and does not require you to download the fonts from the host. This can lead to significant performance gains, especially when the printer is attached remotely.

Users can also set the default font for text or barcode Human Readable Interpretation (HRI) to one of the installed fonts to replace a font that is distributed with the system.

Fonts can be installed from an IBM supplied font CD or via FTP to the Controller workstation.

Note: The IPS supports printer resident *outline* fonts. It does not support printer resident *raster* fonts.

Processing options

The IPS allows users to specify processing options using the GUI. For example, changing the model number reported to the host. Refer to the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System* for details on these options.

Message translation

The IPS provides some message translatability for the GUI and printer monitor. Users can select the language of their choice from a GUI menu option.

Configuration file processing

The IPS adds a version identifier to the configuration files. The identifier allows for migration of configuration data from one release to a subsequent release at upgrade time. The IPS allows users to save, upgrade, and restore configuration data such as input and output tray mappings and DFA configurations.

PCI Bus support

The IPS supports the SUN Peripheral Component Interconnect (PCI) Bus architecture, in addition to the S-Bus platform. PCI support provides the following advantages:

- Migration of Printer Controller components to newer technology

- Higher performance on the Printer Controller

- Wider selection of system peripherals

- Adherence to industry standards.

Access control by privilege mode

The IPS controls access to various functions based on four privilege modes:

1. User

2. Operator

3. Administrator

4. Service.

Depending on the privilege mode set by the Customer Service Engineer, users will have access to certain graphical user interface (GUI) functions, while other functions will be grayed out. Refer to the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System* for details on this functionality.

Software license

When an IPS is purchased, the owner needs a license to use the operating system software. After a user calls in with a host ID (Sun SPARC/Ultra host ID), the user will receive a license string.

The user license is enabled by entering the 20-character authorization text string at the Printer Controller keyboard. Your Xerox service representative can obtain the license text string for you and enter it when your IPS is installed, or when you receive your IPS software upgrade. For details on how to obtain the license string from Xerox, refer to the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System*, in the chapter "Setting up the printer controller."

Until the license string is entered, your IPS cannot receive data from the host to print. You can power on and boot the system, and perform all offline tasks such as setting up input and output configurations, but the IPS remains in Disabled mode and cannot print.

Although your service representative usually does this for you, you are able to enter your license string yourself from the IPS main window. The procedures are outlined in the chapter "Setting up the printer controller" in your *Xerox DocuPrint 4050/4090 Guide to Configuring and Managing the System*.

Note: If your system will be operating in Dual Mode, it requires *two* license strings: one for IPS and one for NPS.

Remote service (Sixth Sense Technology)

Sixth Sense Technology is a user-friendly suite of tools that allow service personnel to connect with a customer system and evaluate its performance while the system is being used. The Customer Service Engineer (CSE) can troubleshoot problems remotely, transfer, apply, and remove patches remotely, and, if an on-site call is required, arrive with the solution to fix the problem.

Customer benefits of using this technology include:

- Diagnostic help and identification of required parts before the service visit

- Planned visits based on known problems and/or replacement of wear-out items

- Customer self-maintenance to provide faxed replacement change reminder to trained operators.

Using the Sixth Sense Technology, CSEs can access your system's diagnostic data remotely using a regular telephone line almost as if they were at the Printer Controller (SPARCstation).

For security reasons, the customer maintains control of the modem connection, and may leave the modem disconnected. Also, the customer provides a password for access to the Sixth Sense Technology via the modem.

For information on enabling and disabling of the Sixth Sense Technology, refer to the chapter "Calling for Service" in your *Xerox DocuPrint 4050/4090 IPS Troubleshooting Guide*.

2. Printer Controller

This chapter describes the DocuPrint IPS Printer Controller (also called the system controller). It includes a list of component hardware, software, and fonts, and discusses the key elements of software operation.

Components of the Printer Controller

The Printer Controller enables you to use proprietary Xerox IPS hardware, firmware, and software to control the printer. It has the following major hardware components:

- **Sun UltraSPARC workstation.** The Sun workstation has a high-performance RISC processor chipset, based on the industry-standard Scalable Processor Architecture (SPARC) and a high-capacity hard disk drive. It contains the following components:

  — Processor

    – Hard disk

    – Diskette drive

    – CD-ROM drive

    – Connectivity boards for Ethernet and, optionally, Token Ring

  — Monitor

  — Keyboard

  — Mouse

- **Host Channel Unit (HCU)** (Channel-attached systems only). The HCU contains the channel communications board. This is used only when printing data received over a channel via a bus and tag connection.

Note: Some elements and components of the Printer Controller are accessible only by a service representative; for example, the diagnostics for the Sun workstation processor.

Note: Printer controller hardware configurations are subject to upgrade.

The Sun Ultra workstation consists of the processor, monitor, keyboard and mouse. Both Sun Ultra 2 and Sun Ultra 60 workstations are available.

Figure 2-1. **Components of the Sun Ultra 2**
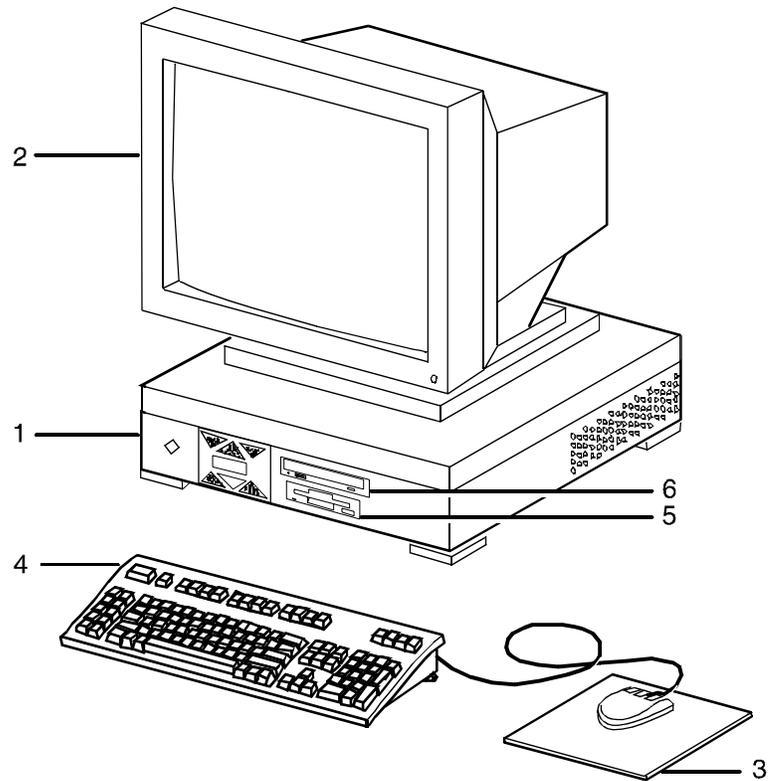
1   **Processor**
2   **Monitor**
3   **Mouse and mouse pad**
4   **Keyboard**
5   **Diskette drive**
6   **CD-ROM drive**

Figure 2-2. **Components of the Sun Ultra 60**
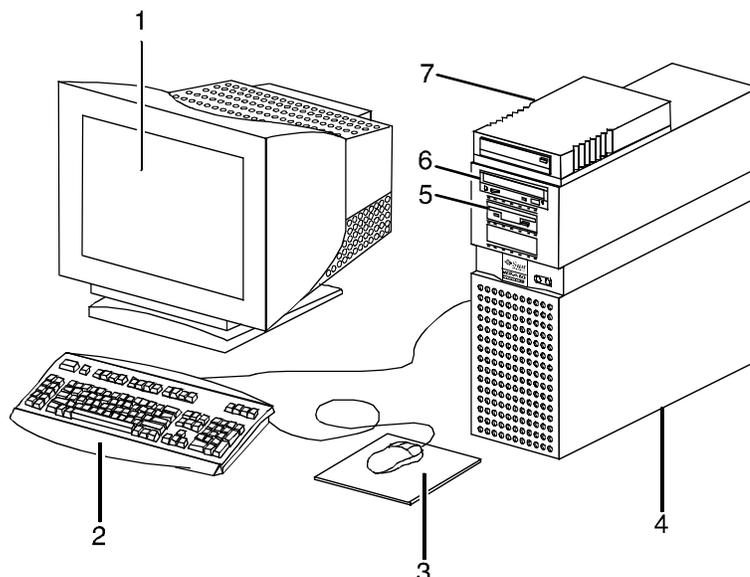
1 **Monitor**
2 **Keyboard**
3 **Mouse**
4 **Processor**
5 **Diskette drive**
6 **CD-ROM drive**
7 **Cartridge tape drive**

Processor

The processor is the central processing unit (CPU) of the Sun workstation. It contains a power switch, a hard drive, a diskette drive, a CD-ROM drive, a power receptacle and outlet, connectors, and ports.

A Data Control Interface Module (DCIM2) card for the Sun Ultra 2, or a PCIM2 card for the Sun Ultra 60 is installed in the processor, to which the printer cable is connected. In addition, the processor contains the connectivity boards for Ethernet and, optionally, Token Ring.

Hard disk

One addressable, high-speed, high-capacity hard disk is provided. The hard disk stores the operating system, the IPS application, and any buffered pages. Do not use the hard disk to store other applications or data except as directed by your service representative.

Diskette drive

The floppy disk drive is located in the processor, on the front section of the UltraSPARC. It uses industry standard 3.5 inch, 1.44-MB, double-sided, high-density floppy disks. This disk drive is not an input source for print jobs or for any other data or application. It is reserved exclusively for use by a service representative to update software and to store files.

CD-ROM drive

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

Cartridge tape drive

An optional 8 GB, 4 mm external SCSI cartridge tape drive also is available for the IPS. Like the diskette and CD drives, this tape drive is not an input source for print jobs or for any other data or application. It provides the service representative with another means of loading system maintenance files or saving diagnostic information.

Monitor

The monitor has a high-resolution color screen, which displays the IPS graphical user interface screen.

Keyboard

The type 4 or 5 keyboard has 107 alphanumeric keys, symbol and special character keys, an extended character set, and function keys.

Mouse

The mouse has three buttons. The left and right buttons are used to select IPS functions. The center button provides additional functions that you will not be required to use.

If your workstation has an optical mouse, it must remain on its designated metallic pad to be active. If the mouse has a roller ball instead of an optical sensor underneath, it requires a non-metallic pad.

## Host Channel Unit (HCU) — channel-attached systems only

The HCU handles all of the IPDS communications and handshaking with PSF on the host when receiving data over a channel. (It is not used when the IPS is printing data using TCP/IP.)

- The front panel of the HCU has a single-digit LED display, which enables you to monitor power-up and offline status, and alerts you to error conditions. (Refer to your *IPS Messages Guide* for an explanation of the HCU codes displayed here.)

- The back panel of the HCU has a power switch and outlet, bus and tag cable input and bypass connectors, and a dual serial port. The standard switching power supply is capable of 10 amp on the 5-volt output.

Note: You are responsible for obtaining, stringing, and maintaining *fully-populated* bus and tag cables.

Figure 2-3. **Host channel unit (HCU)**
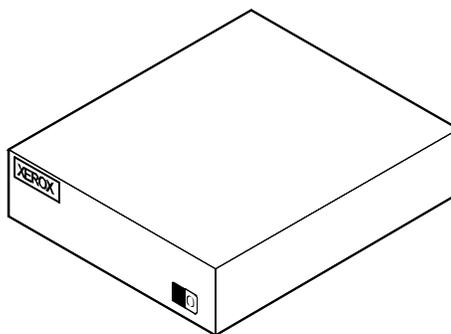
Placement of the processor

When you place your Printer Controller processor on a desktop, make sure to allow at least 6 inches / 152 mm of unobstructed space at the rear and both sides of the processor. Do not allow any piece of equipment to blow warm air into the air-intake vents of the processor.

Caution: Do not place a monitor with a base larger than the processor on top of the unit. Do not block any fan or vents on the sides or rear of the processor.

Caution: If you plan to move the Printer Controller, make sure to consult with your service representative.

3.   User interface

The IPS graphical user interface on the Printer Controller enables you to interact with the IPS. It contains windows and pull-down menus through which you can perform operator and system administrator tasks.

Graphical user interface screen

After you power on the HCU (if appropriate) and the Sun workstation, the Printer Controller monitor displays three windows:

- IPS main window
- IPS Console window
- IPS Print Engine Monitor window.

The **IPS main window** is the largest window on the screen. The main window displays the current system setup, the current system status, and any jobs that are running. This window also provides access to menus and subwindows from which you can configure and operate your system.

The **IPS Console window** displays messages that warn you of Printer Controller problems. (This window initially displays below the IPS main window on the left, but it can be moved where desired.)

Note: High frequency service indicator (HFSI) messages may appear occasionally in this window. These messages do not indicate any problem, merely that you should advise your service representative to check the indicated areas during the next service call.

The **IPS Print Engine Monitor window** shows printer error messages, indicates the printer status and displays printer and DFA messages. (This window initially displays below the IPS main window on the right, but it can be moved where desired.)

The IPS Print Engine Monitor window (below the IPS Main window, on the right) shows error messages (for example, a printer door is left open), indicates the printer status and displays printer messages.

The following figure shows these windows on the screen of the Printer Controller monitor.

Figure 3-1. **Printer Controller monitor with IPS main window, IPS Console window, and IPS Print Engine Monitor window**
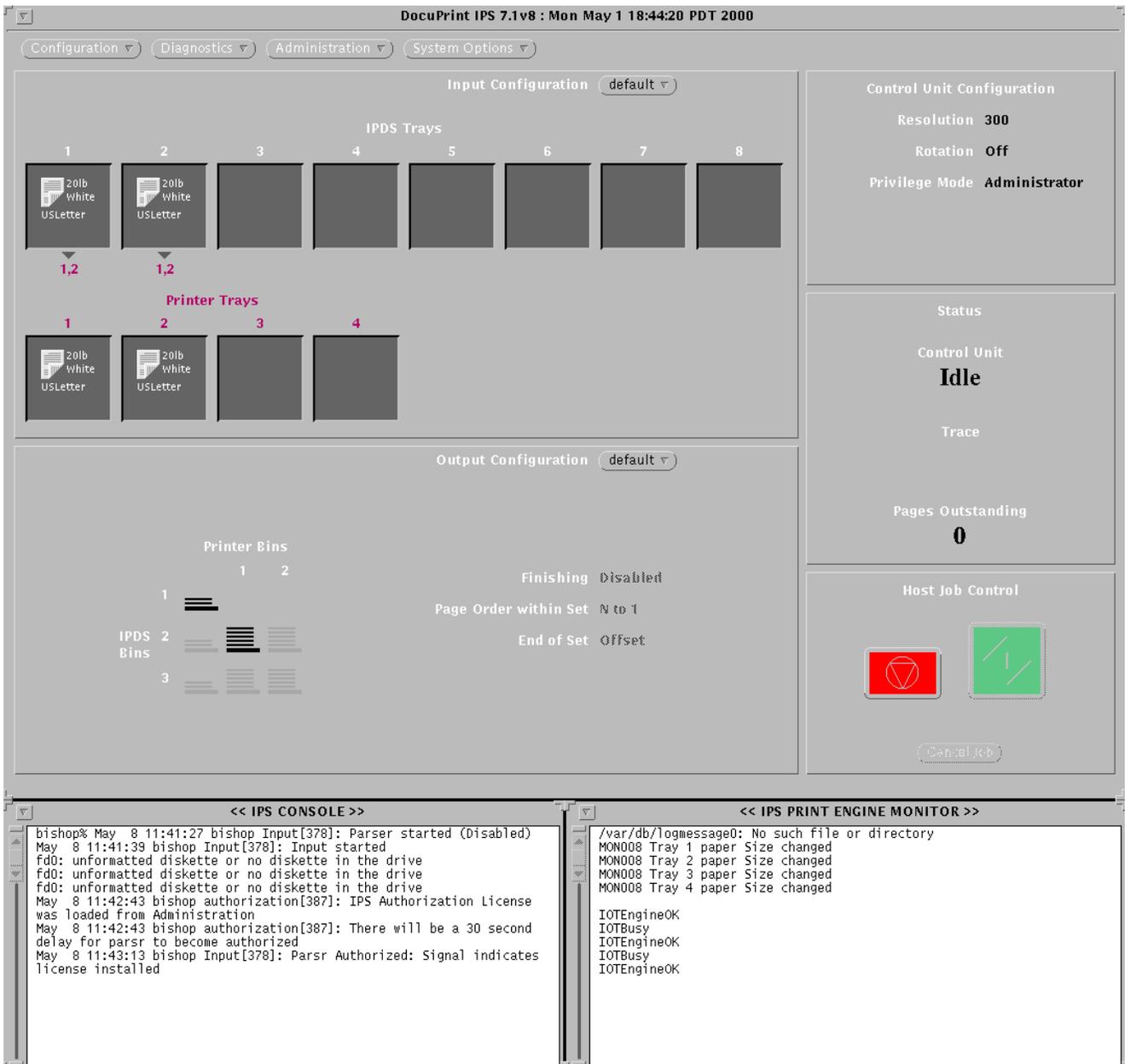
IPS main window

Use the IPS main window to access other windows for configuring, setting up, and operating the system, for monitoring the current setup and status of the system, for performing various administration tasks, and for interrupting and resuming printing.

Figure 3-2. **IPS main window**
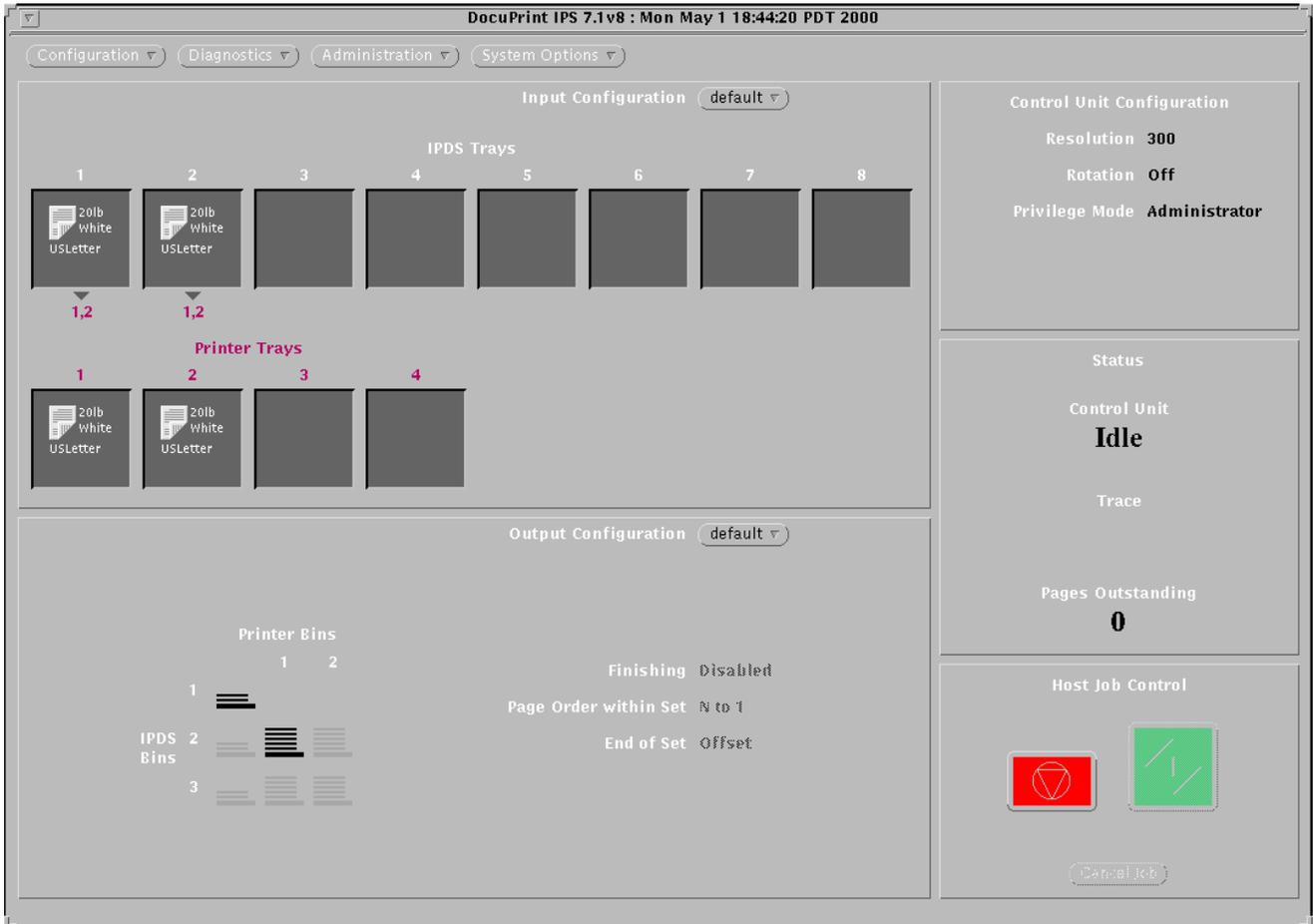
The IPS main window consists of the following:

- **Menus:**
  — Configuration
  — Diagnostics
  — Administration
  — System Options
- **Input Configuration** section, which provides access to the windows that enable you to configure input trays to feed required paper stocks, and to set up margin values. It also displays the current configuration of the feeder trays.

- **Output Configuration** section, which provides access to the direct windows that enable you to direct printed output to the desired output tray or bin. It also displays the current configuration of the stacker trays.

- **Setup and status information**, which consists of the following sections:

  — Control Unit Configuration section, which displays the current configuration of the system

  — Status section, which indicates what the printer is doing

  — Host Job Control section, which allows you to stop or continue job processing.

For detailed information on the main window and its various functions, refer to the chapter "Introduction to the graphical user interface" in the *Xerox DocuPrint 4050/4090 IPS Guide to Configuring and Managing the System*.

4. Printers

The IPS printer (sometimes referred to as the image output terminal or IOT) is where the actual printing takes place. This chapter discusses the components of the 4050/4090 IPS printer.

Printer components

The DocuPrint IPS printers contain a xerographic engine, two standard feeder trays, a sample tray, the printer control console, and one of two output tray configurations: the dual stacker or the stitcher/stacker.

Components overview

The components of the base printer for the 4050 and 4090 IPS are shown in figure 4-1

Figure 4-1.   **DocuPrint 4050/4090 IPS printer (shown with dual stacker)**
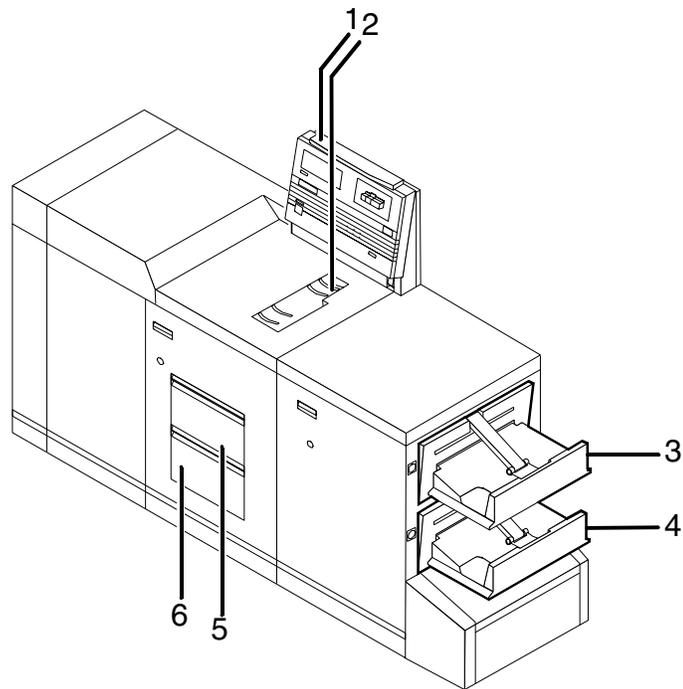
1   **Printer control console**
2   **Sample tray**
3   **Stacker tray 1**
4   **Stacker tray 2**
5   **Feeder tray 1**
6   **Feeder tray 2**

These components are described in more detail in the following sections.

Printer control console

The printer control console contains message and graphic displays, as well as printer status indicator lights that alert you to printer conditions. These indicators and the Information button help you to solve printer problems. The Stop and Continue buttons give you temporary control of the printer, without interrupting input processing.

Figure 4-2. **4050/4090 IPS printer control console**
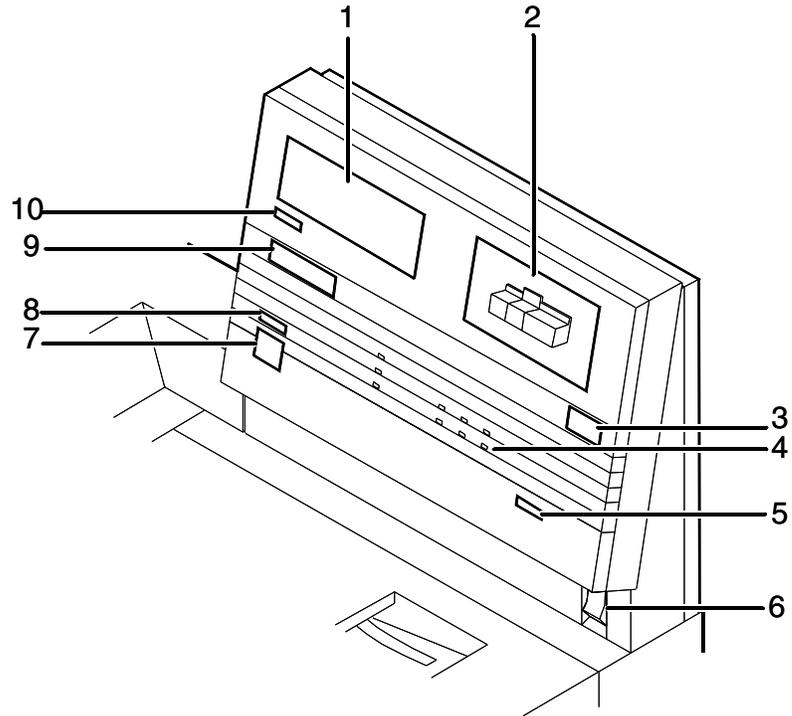
1	Message display
2	Graphic display
3	Wire percentage indicator
4	Feeder tray indicator lights
5	Sample button (disabled)
6	Power on/off switch
7	Continue button
8	Stop button
9	Fault code display
10	Information button

Message display   Shows printer status and simple operating and maintenance instructions in a two-line message display.

Graphic display   Assists you in locating the area where the printer problem occurred, as indicated by the message in the message display.

Wire percentage indicator   Displays the percentage of stitcher wire remaining on the spool. This indicator appears only if your printer has the stitcher/stacker output configuration.

Feeder tray indicator lights Indicates selected feeder trays and the size of paper loaded in each tray.

Sample button (disabled) The IPS does not support printing sample pages while a job is running. Therefore, the Sample button does not function, and pressing it has no effect on system operation.

Power on/off switch Controls power to the printer and is used primarily by service representatives.

Fault code display Shows the number of prints completed and displays the printer fault messages, such as L152. When a fault message displays, the corresponding message (for example, "Stitcher is out of wire" or "Spool not rotating") appears in the message display.

Stop button Use the Stop button to halt printing without issuing a command at the Printer Controller keyboard.

Continue button Use the Continue button to resume printing.

While it is formatting a complex page, the Printer Controller may cycle down the printer if the page image is not available within a certain time frame. If this occurs, the following message appears:

```
Press <CONTINUE> to resume printing
```

You can ignore this message. As soon as the page image is available, the Printer Controller cycles up the printer and printing automatically resumes.

Information button When "*i*" appears on the message display, you can press this button for additional information on printer operation. You can press the button repeatedly for more information as long as "*i*" appears.

Sample tray

This output tray receives sample prints of system files, rejected prints, and transparencies. The capacity of the sample tray is 100 sheets of 20-pound or 80 gsm (grams per square meter) paper.

Dual stacker trays 1 and 2

Each output stacker tray has a capacity of 750 sheets of 20-pound or 80 gsm paper (1500 sheets total capacity). An alternatives to the dual stacker configuration is the stitcher/stacker.

Feeder trays

The standard configuration contains two feeder trays with the following capacities (based on 20-pound or 80 gsm paper):

- **Tray 1:** 1000 sheets
- **Tray 2:** 500 sheets. (Except for capacity, this tray is identical to tray 1.)

High-capacity feeder: An additional feeder module containing two trays (trays 3 and 4) is available as an option. Each high-capacity feeder tray holds 1000 sheets of 20-pound or 80 gsm paper, for a total of 2000 additional sheets.

Printer configurations

The DocuPrint 4050 and 4090 IPS are available in several configurations, containing either the dual stacker or the stitcher stacker, and may include the high-capacity feeder.

High-capacity feeder

The high-capacity feeder (HCF) provides two additional feeder trays, which work interchangeably with feeder trays 1 and 2, allowing automatic tray switching and increased uninterrupted printing time.

Figure 4-3.　**4050/4090 IPS printer with high-capacity feeder**
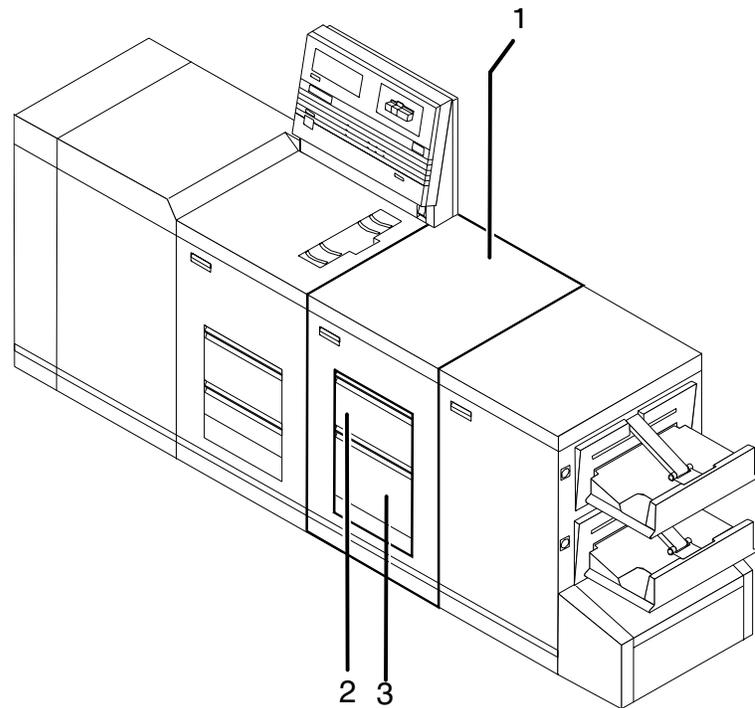
1　High-capacity feeder module
2　Feeder tray 3
3　Feeder tray 4

Tray capacities　Each high-capacity feeder tray holds 1000 sheets of 20-pound or 80 gsm paper.

Paper sizes　Both high-capacity feeder trays handle paper sizes from 8.5 by 11 inches / 216 by 279 mm to 8.5 by 14 inches / 216 by 352 mm. This includes international paper size A4 (8.27 by 11.16 inches / 210 by 283 mm).

Printer stackers

The stacker, or output section, provides the capacity for stacking, offsetting, report collating, print sampling, or stitching (stitcher/stacker configuration). Your IPS has either a dual stacker or a stitcher/stacker.

Dual stacker

The dual stacker contains two identical output trays. Using the Output Configuration windows on the graphical user interface, you can send output to either or both of these trays in the desired order.

Figure 4-4.   **4050/4090 IPS printer with dual stacker**
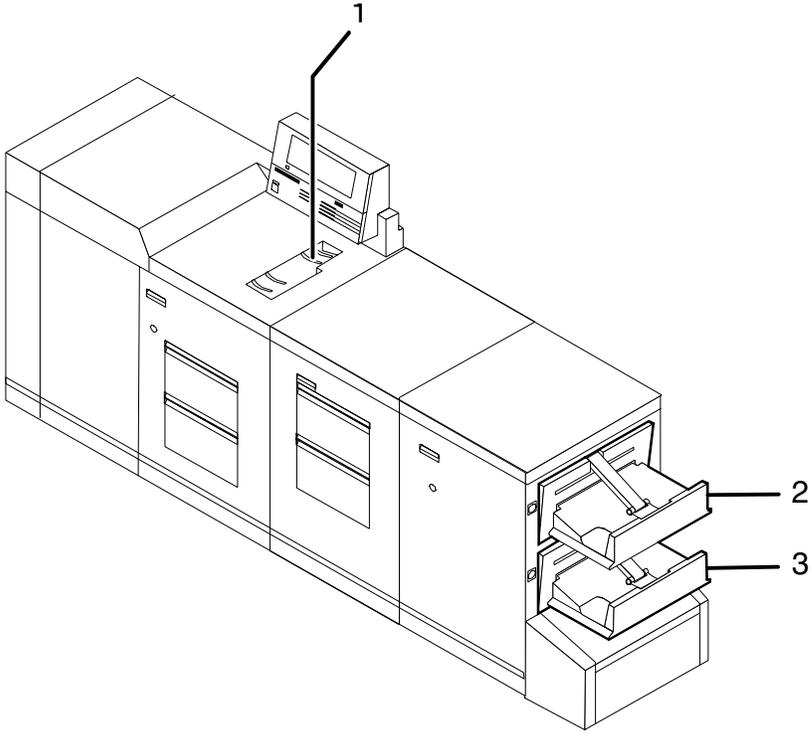
1	Sample tray
2	Stacker tray 1
3	Stacker tray 2

Sample tray Used for sample prints, rejected prints, and transparencies. Holds up to 100 sheets of 20-pound or 80 gsm paper.

Stacker tray 1 Holds up to 750 sheets of 20-pound or 80 gsm paper.

Stacker tray 2 Identical to stacker tray 1.

Stitcher/stacker

The stitcher/stacker can place a wire stitch or staple in stacks of up to 50 sheets. It can also offset jobs and reports.

Figure 4-5. **4050/4090 IPS printer with stitcher/stacker**
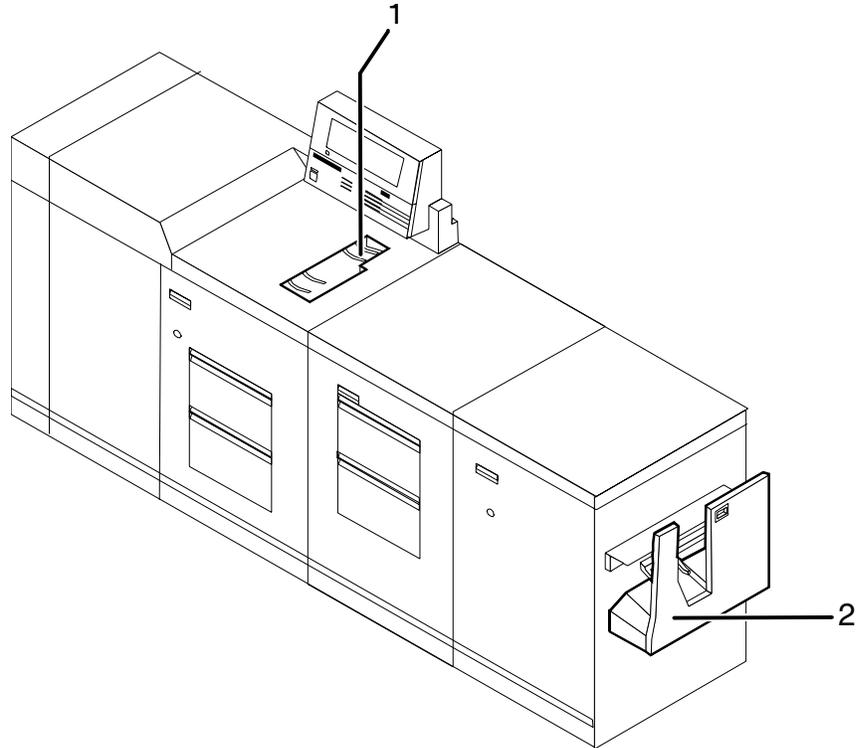
1 Stitcher/stacker tray
2 Sample tray

Sample tray   Used for sample prints, rejected prints, and transparencies. Holds up to 100 sheets of 20-pound or 80 gsm paper.

Stitcher/stacker tray   A single tray for output that is stitched (stapled) and/or offset. The tray holds up to 2000 sheets of unstitched 20-pound or 80 gsm paper, or an equally high stack of stitched sets (200 two-sheet sets). A stitched set consists of up to 50 sheets of 20-pound or 80 gsm paper. The wire supply provides up to 35000 staples.

Additional IPS printer features

Additional features of the DocuPrint 4050/4090 IPS printers include:

Instruction labels Located throughout the printer to assist you with jam clearance and other tasks.

Power savers To conserve energy, the printer has two power savers: one for the raster output scanner (ROS) and one for the fuser.

After a predetermined period, each of these parts times itself out and shuts down. The time-out period can be adjusted by a service representative to meet your needs. The Printer Controller automatically brings the printer out of power saver mode when there is a document to be printed.

- The ROS power saver times itself out after about an hour of inactivity and requires about 30 seconds to warm back up.

- The fuser power saver times itself out after about four hours and requires four to seven minutes to warm up.

Language button Systems with the dual language option have this button to select a different language, such as French instead of English, for the message display.

Figure 4-6. **Language button on the printer control console**
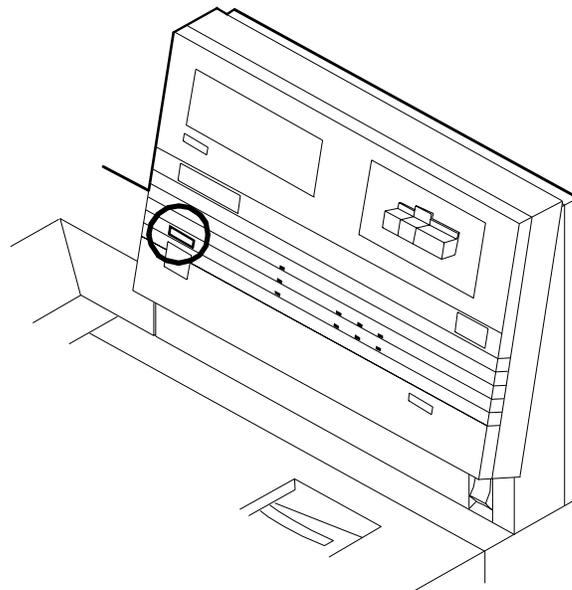
Printer paper paths

The paper path is the route materials (paper, transparencies, labels, and so on) follow through the printer from the feeder trays to the output bins or finisher receptacle.

Simplex paper path   The following figure illustrates the simplex (one-sided output) paper path of a printer with a dual stacker tray and standard feeder tray.

The materials move from either feeder tray 1 or feeder tray 2 and are stacked in either stacker tray 1, stacker tray 2, or the sample tray, depending on your selection at the beginning of the job.

Figure 4-7.   **Simplex paper path (dual stacker configuration)**
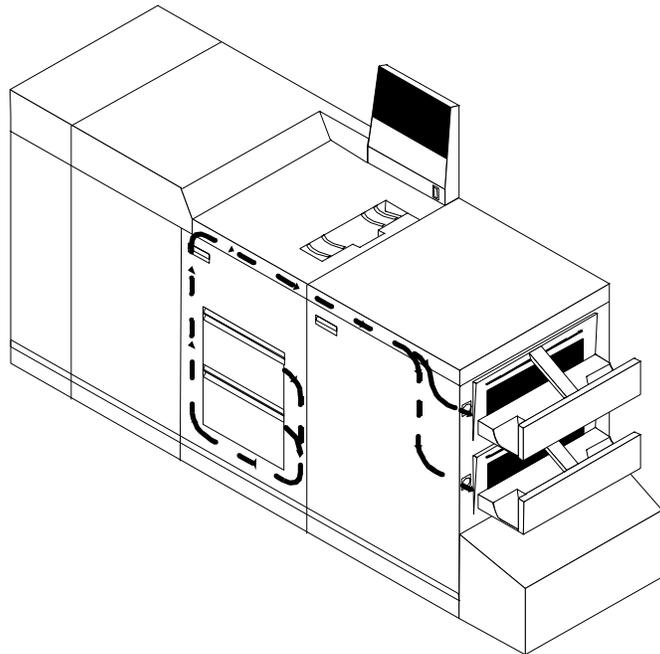
Duplex paper path   The following figure illustrates the duplex (two-sided output) paper path of a printer with a dual stacker and standard feeder.

Materials may originate in either feeder tray 1 or feeder tray 2. The duplex paper tray receives the materials before they go through a second time to receive the second image. As the pages move through for the second image, they follow the simplex path. The pages are then stacked in either stacker tray 1 or stacker tray 2, depending on your selection at the beginning of the job.

Figure 4-8.   **Duplex paper path (dual stacker configuration)**
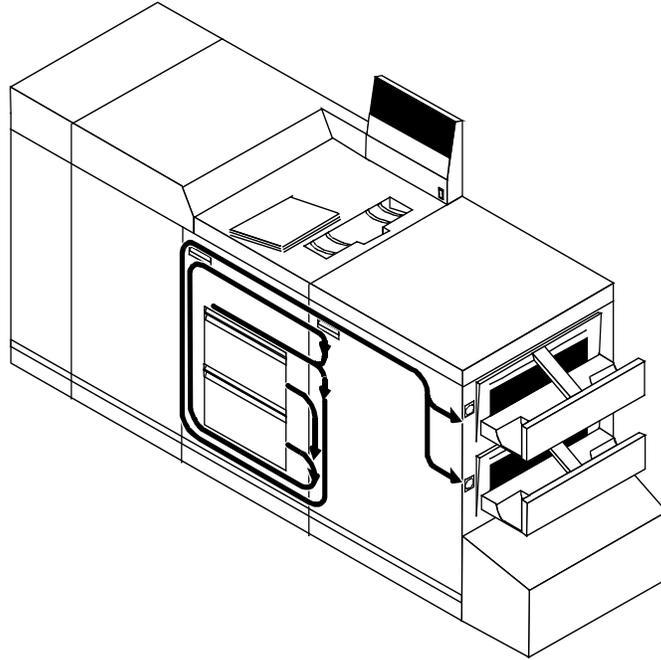
High-capacity feeder paper path   When you add a high-capacity feeder to your system, only the beginning of the paper path changes, which is the source of paper supply. (This is the same for both simplex and duplex paper paths.)

The following figure illustrates the simplex paper path of a printer with the high-capacity feeder.

Figure 4-9.   **Simplex paper path on printer with high-capacity feeder**
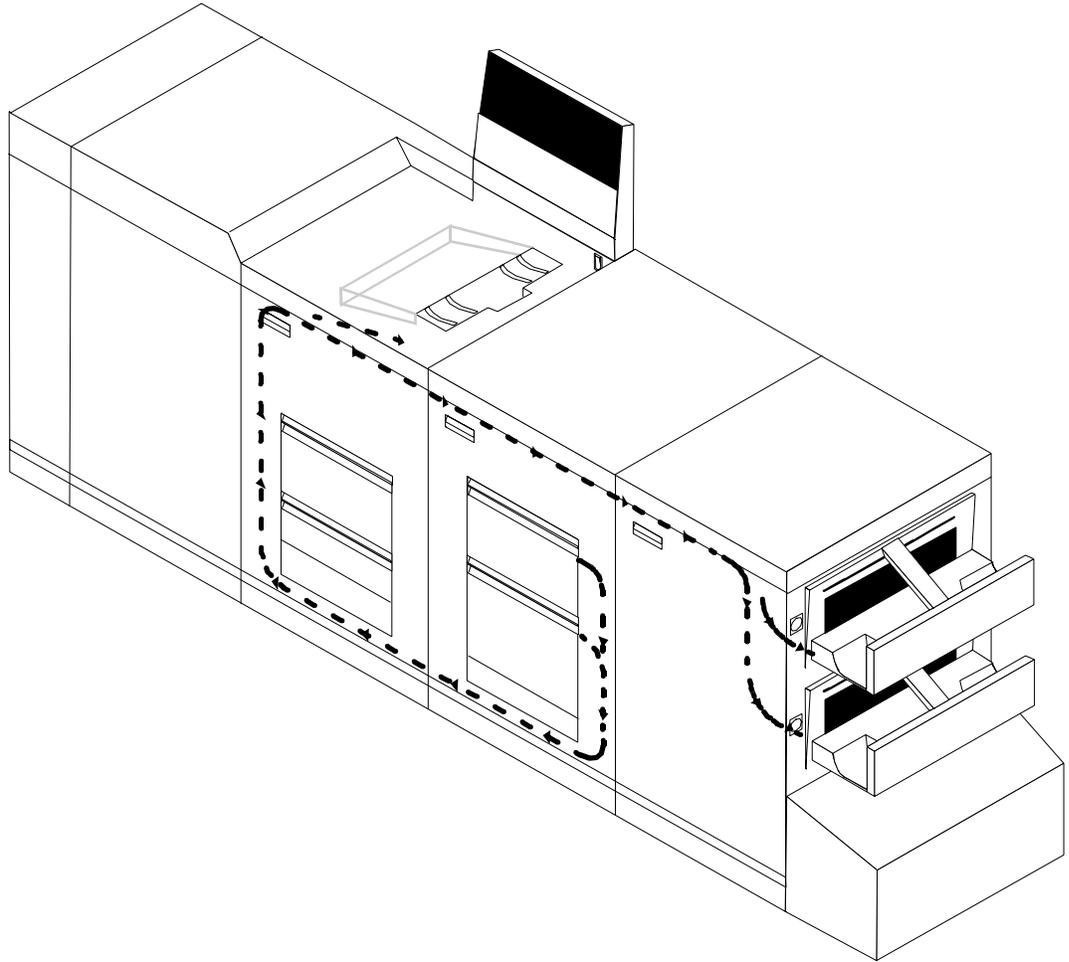
Stitcher/stacker paper path   If you have the stitcher/stacker option, the paper path is the same, except there is only one tray for the output (other than the sample tray).

A.   Paper and other supplies

This appendix provides information and specifications for the media you use with your Xerox DocuPrint 4050 or 4090 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

You need to 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 your *System Overview Guide* and to *Helpful Facts about Paper*, both delivered with your printer.

Acceptable paper stocks and sizes

Your 4050 or 4090 printer accepts the following standard size cut-sheet papers:

- 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

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 in this appendix.

Use paper within these parameters:

- Lightest: 20-pound or 80 gsm bond

- Heaviest: 110-pound or 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. 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.

  Load labels with the label side up. You can direct them to any output tray.

- **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**

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-1.   **Storing paper correctly**
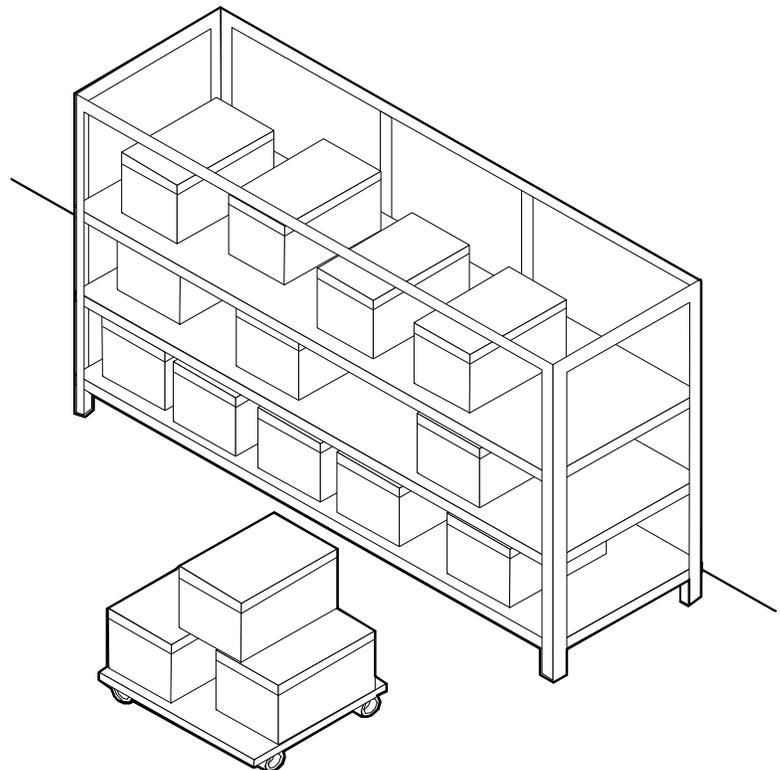
Figure A-2. **Recommended temperature and humidity for paper storage**
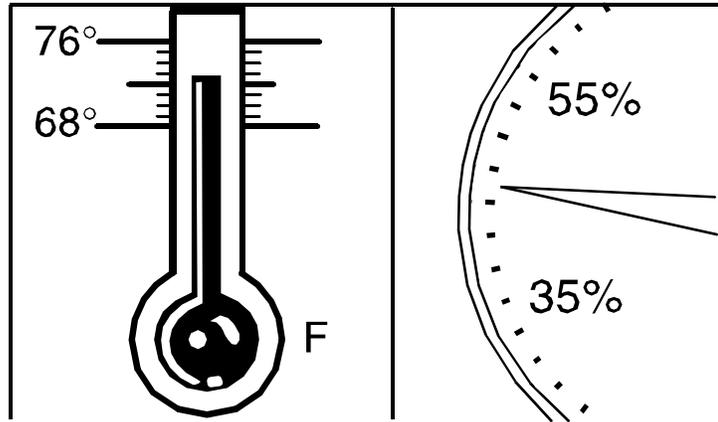
Conditioning paper   Because temperature and humidity affect paper performance in the printer, you need to condition paper before using it. To do this, store paper for a specified length of time in the same type of environment as your printer.

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

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

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

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

Cartons	Hours						
Temperature differences between storage and operating areas							
Fahrenheit							
	10°	15°	20°	25°	30°	40°	50°
Centigrade							
	5.5°	8.5°	11°	13°	17°	22°	28°
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 °F to an operating area with a temperature of 75 °F (a 15° 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 which 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 45,000 pages. Use only dry ink that is specified for use in the 4050 or 4090 printer, as described in the consumable supplies table.

Fuser lubricant

Fuser lubricant is a consumable item required by the printer. You should keep at least two boxes (each box contains two tubes) on hand for installation by the service representative. The consumption rate of Xerox fuser lubricant is approximately one tube per 120,000 pages. For product information, refer to the consumable supplies table in this appendix.

Developer

Developer is not consumed by the printer but does have an effective life of approximately 300,000 pages per bottle, guaranteed by Xerox. Developer is a required item and must be kept on hand.

Use only the developer specified for use in your 4050 or 4090 printer.

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 optional 4 mm cartridge tape drive uses 5 GB or 8 GB tapes.

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   A library of 51 fonts 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 are received on a diskette from your local Xerox Font Center.

Consumable supplies tables

A number of supplies are available from Xerox for your DocuPrint 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 4050/4090 printers, with size, order number, and a brief description for each.

Table A-2. **Stocks list for 4050/4090 printers**

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	4024 Smooth	3R2677
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

*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-2.   **Stocks list for 4050/4090 printers** (continued)

Item	Description	Part number
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 inches	4200 Primary Image	3R5802
8.5 x 14 inches	4200 Primary Image	3R5804
8.5 x 11 inches	4200 Primary Image, 3-hole	3R5803
8.5 x 11 inch	10 Series Dual Purpose Paper	3R2950
8.5 x 11 inch	10 Series Dual Purpose Paper, 3-hole	3R2952
8.5 x 11 inch	10 Series Dual Purpose Paper, 3-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
*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-2.   **Stocks list for 4050/4090 printers** (continued)

Item	Description	Part number
Transparencies	Xerox transparencies are packaged 100 sheets to a box.	
8.5 x 11 inch	Clear, with a white strip on the edge	3R2780
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
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.		

Complete supplies list—4050/4090 printers

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-3.   **Complete supplies list for 4050/4090**

Item	Description	Part number	Items/carton	Expected yield
Developer material	Packaged one container per carton. (Needs replacement only if current supply becomes contaminated.)	5R302	1/carton	
Diskettes	3.5-inch, 1.44 MB, double-sided, high density diskettes. Packaged 10 diskettes per box.	8R7683	10/box	
Dry ink	Dry ink is packaged six bottles per carton. (Consumption rate is approximately 45,000 pages per bottle.)	6R301	6/carton	270,000 prints/carton
Fuser lubricant	Packaged two tubes per carton.	8R983	2/carton	240,000 prints/carton
Cartridge tape	4mm blank cartridge tape, 5GB	9R01190		
	4mm blank cartridge tape, 8GB	109R00314		
Cleaning supplies	4mm cartridge head cleaning kit	9R01189		
	Foam-tipped swabs	99P87256		
	Lint-free towels	35P2163		
Stitcher wire	Packaged one reel per box.	8R1174	One reel	32,000 staples

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 appendix 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 consumable supplies table, above, 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 lubricant, and developer.

Once your printer volume is established, planning ahead and buying Xerox supplies in quantity can save you money. Your Xerox supply specialists can help you. There are two centers available to assist you:

- To order Xerox paper, transparencies, labels, dry ink, developer, fuser lubricant, stitcher wire, 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 the following address:

  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 the following address:

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

  Please provide the following information when placing orders:

- Your customer number (provided by your Xerox sales 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.

The following table is a checklist you can use to keep track of the supplies you order.

Table A-4.   **Supplies checklist for 4050/4090 printer**

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, and special stocks				
Dry ink				
Fuser lubricant				
Diskettes				
Stitcher wire				
Cartridge tapes				
Cleaning supplies				

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