# XEROX

## XEROX 4590 COPIER / PRINTER

### WITH COPY-SERVER AND CONTROLLER

## CUSTOMER EXPECTATIONS DOCUMENT

**Version: 2.0**

*January 3, 2005*

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## INTRODUCTION

The purpose of this document is to help you understand the current features and capabilities of the Xerox 4590 Copier/Printer. It is recommended that you review this material prior to your signing an order for a Xerox 4590.

This document addresses high-level expectations.

For optimum media selections, refer to the Recommended Materials List available from your Xerox representative. Additional information is contained in the Materials Usage Guide included with the documentation you will receive.

## PRODUCT OVERVIEW

The Xerox 4590 Copier/Printer is a 90 page per minute, black and white, digital offering designed for large offices and small/medium size central reproduction departments or print shops.

## XEROX 4590 COPIER/PRINTER HIGHLIGHTS

- Print speed: 90 ppm
- Copy Resolution: 600 x 600 dpi with resolution converted to 2400 x 2400 dpi
- Print Resolution: 1200 x 1200 dpi RIP with image enhancement to 2400 x 2400 dpi
- Scan speed / capacity: 100 ipm simplex or duplex / 250 sheet capacity
- Substrate support: 13" x19.2" / 216 gsm / 80 lb. cover in main trays, 253 gsm (140 lb index) in bypass tray
- Paper capacity: up to 8,225 sheets / 8 trays
- First copy out: 3.0 seconds from platen
- Ability to load toner while printing
- Integrated copy server and controller
- Single network connection to support both controller and copy server
- Larger archive capacity for integrated copy server (14.6 GB storage space)
- 500 mail boxes for saving files
- Ability to save print jobs on copy server
- Split scan book copying capability
- Monthly duty cycle of 500K
- Improved reliability

# Optimum Product Performance

## Print Volume Range

The Xerox 4590 is a network-able digital black and white copying, printing, and scanning system designed to provide benchmark image quality and performance for its product class.

This product is designed to be operated in the range of 70K to 175K copies / prints per month. The duty cycle for the 4590 is 500K prints.

The number of copies or prints between service calls on a digital copier / printer is dependent on several aspects. The following factors are examples of conditions known to affect service frequency and/or print quality

- Monthly output volume

- Throughput materials (paper)

- Environment (heat, humidity and ventilation)

- High toner density and area coverage

- Image quality requirements

- Operator training

The Xerox 4590 Copier/Printer is designed for a range of monthly print volumes.
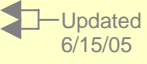
| System | Average Monthly Print Volume (AMPV) | Conditions |
|---|---|---|
| Xerox 4590 Copier  /Printer | 70K to 175K | 8.5 in x 11 in / A4 |

Maximum <u>duty cycle:</u>                Up to 500K prints per month

<u>Duty cycle</u> is defined as the maximum monthly copy / print volume support under standard vendor supplied service (single shift coverage). This defines the upper end of the expected customer volume band for the device.

Customers consistently running volumes above 175,000 monthly should expect a significant change in machine reliability or performance. Customers should consider higher volume machines or multiple machines if average monthly volume approaches the duty cycle of 500,000 on a consistent basis.

Environmental Factors

| Environmental Factor | Recommended | Minimum | Maximum |
|---|---|---|---|
| Temperature | 70°F (22°C) | 50°F (10°C) | 90°F (32°C) |
| Humidity | 45% RH | 15% RH | 85% RH |
| Power Consumption (approximate) Source:208-240 +6%-10% 15A, 60Hz Source:220-240 +6%-10% 16A, 50Hz Note:Energy Star (eStar) compliant ◁—Updated 6/15/05 | | Standby Low Power: 473.5w Sleep Mode: W105w | Running ~3.6 KW |
| Noise (Approximate sound pressure level at operator position) | | Standby (dbA) 5.8LWAd | Running (dbA) 8.4LWAd Peak (dbA) 8.9LWAl |
| Nominal Voltage (Processor) | | 208 | 240 |
| Heat Output | | Standby: 1460 BTU/Hr | 50 Hz run is 11,335 BTU/Hr. 60 Hz run is 9688 BTU/Hr. |

# Product Space & Power Requirements

## Power cord

The power cord will be included in the system. This is a 250V/15A cable with a length of 8.2 feet (250 cm).

| | Western Hemisphere |
|---|---|
| Single Phase | 2 wire, + ground 15 ampere |
| Line to Line Service | 208-240 volts AC 15 ampere |
| Customer Provided Receptacle (or equivalent)* | NEMA Part No. 6-15R |
| Frequency | 60 HZ single phase |
| Power Cord Length | 8.2 feet |
| The Western Hemisphere Xerox 4590 requires sole use of 15 ampere outlet. Consult the diagram (right side) to confirm the existence of this outlet in the proposed installation space.  *This receptacle, also used for common air conditioning units, is available at most hardware stores | 6-15R (NASG only.  All others: Flying-leads) |

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# Power Saver Mode

The Xerox 4590 is installed with a Power Saver feature that will automatically shut off the machine power if no copy or print data is received for a specified period.  When the 4590 is in power save mode, power to the control panel and fuser unit is reduced to save energy. The display will be turned off but the Power Saver button on the control panel will be lighted to indicate this machine is in the Power Saver mode.

To resume using the 4590, press the Power Saver button.

The Power Saver feature has two modes:

- Low Power Mode    Power consumption is reduced to approximately 253 Watts.
  It will take about 45 seconds to warm up the 4590 when exiting Low Power Mode.

- Sleep Mode    Power consumption is reduced approximately 13 Watts.
  It will take about 5 minutes to warm up the 4590 when exiting Sleep Mode

The intervals for Low Power Mode and Sleep Mode are adjustable and can be specified in 1-minute increments, from 1 to 240 minutes.

# Product Space Requirements

***The main Xerox 4590 Copier/Printer components are:***

• Print Engine (includes Duplexing Automatic Document Feeder (DADF), Scanner, User Interface, Right Side UI Mounting Kit, Bypass Tray, and Nationalization Kit)

• Finisher (2/3 Hole Punch with Post-Process Inserter OR 2/3 Hole Punch with Post-Process Inserter and Booklet Maker)

Optional:

• Folder Module (C / Z fold)

• High Capacity Feeder (2 drawer) (HCF)

• Foreign Interface Device (FID)

• Mobility Plate Kit

**Note:** The Xerox 4590 is also available in a copier-only configuration.

***Installation Considerations***

• The Xerox 4590 Copier/Printer without the High Capacity feeder is approximately 67.1 inches (1702 mm) wide and approximately 30.8 inches (782 mm) deep.

• Moveable installations can be moved to within 10 inches (254 mm) of the rear wall after installation. During installation, keep approximately 24 inches (610 mm) from the wall for rear access.

• In a stationary installation, the rear of the system must be at least 24 inches (610 mm) away from the wall.

• There should be a minimum of 78 inches (1981 mm) clearance from the floor to the nearest overhead obstruction.

• The electrical outlet must be located within 6 feet (1828 mm) to the right of the right rear corner of the main processor, or no more than 3 feet (914 mm) to the left of the left rear corner of the main processor (when facing the equipment).

• The power cord must have sole use of the circuit. The outlet / circuit cannot be shared with any other devices or equipment.

## Space Requirements / Service Space Envelope
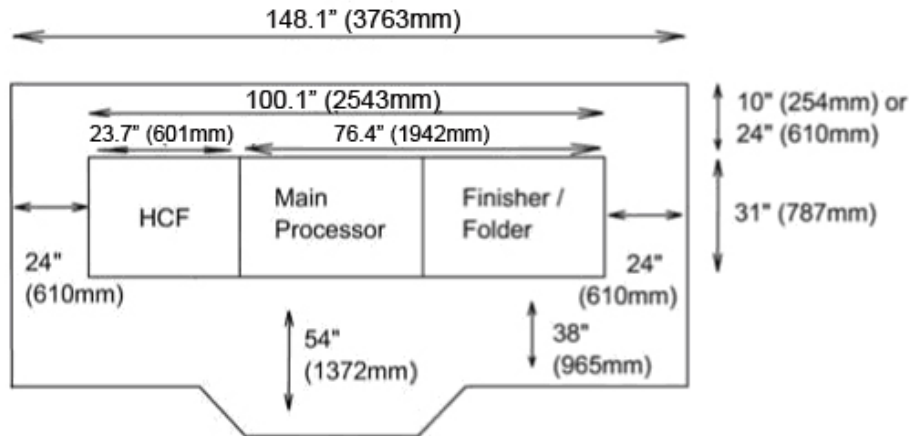


**Note 1:** The dimensions shown are absolute minimums.
**Note 2:** 78" (1981 mm) minimum height clearance in service envelope.
**Note 3:** Location of left rear corner of main processor should be marked with tape for delivery personnel. (See diagram above)

| Service/Operational Space | Moveable Installation [1] | Stationary Installation |
|---|---|---|
| Rear of Main Processor / System | 10"/254mm | 24"/610mm |
| Front of Main Processor | 54"/1372mm | 54"/1372mm |
| Front of HCF and Finisher/Folder | 38"/965mm | 38"/965mm |
| Side of System | 24"/610mm | 24"/610mm |

[1] Moveable installation dimensions can be used when system is installed on hard surface (concrete, wood, and/or mobility plate, etc.).

| Module Dimensions | Width | Depth | Height | Weight |
|---|---|---|---|---|
| Main Processor + Base Finisher + Multi-sheet Inserter (closed) | 71.9"/ 1825mm | 31"/ 787mm | 57.3"/ 1455mm | 840 lbs./ 381kg |
| Main Processor + Booklet Maker + Multi-sheet Inserter (closed) | 72.1"/ 1830mm | 31"/ 787mm | 57.3"/ 1455mm | 895 lbs./ 406kg |
| Main Processor + Base Finisher + Folder + Multi-sheet Inserter (closed) | 79.7"/ 2025mm | 31"/ 787mm | 57.3"/ 1455mm | 928 lbs./ 421kg |
| Main Processor + Booklet Maker + Folder + Multi-sheet Inserter (closed) | 79.9"/ 2030mm | 31"/ 787mm | 57.3"/ 1455mm | 983 lbs./ 446kg |
| Main Processor with HCF + Base Finisher | 92.4"/ 2346 mm | 31"/ 787mm | 57.3"/ 1455mm | 1151 lbs./ 522kg |
| Main Processor with HCF + Booklet Maker | 92.6"/ 2351mm | 31"/ 787mm | 57.3"/ 1455mm | 1204 lbs./ 546kg |
| Main Processor with HCF + Base Finisher + Folder | 100.1"/ 2543mm | 31"/ 787mm | 57.3"/ 1455mm | 1279 lbs./ |

| | | | | 580kg |
|---|---|---|---|---|
| Main Processor with HCF + Booklet Maker + Folder | 100.3"/ 2548mm | 31"/ 787mm | 57.3"/ 1455mm | 1332 lbs./ 604kg |

| Service/Operational Space / Moveable | Width | Depth | Height | Weight |
|---|---|---|---|---|
| Main Processor + Base Finisher + Multi-sheet Inserter (closed) | 119.9"/ 3045mm | 95"/ 2413mm | 78"/ 1981mm | 840 lbs./ 381kg |
| Main Processor + Booklet Maker + Multi-sheet Inserter (closed) | 120.1"/ 3050mm | 95"/ 2413mm | 78"/ 1981mm | 895 lbs./ 406kg |
| Main Processor + Base Finisher + Folder + Multi-sheet Inserter (closed) | 127.7"/ 3245mm | 95"/ 2413mm | 78"/ 1981mm | 928 lbs./ 421kg |
| Main Processor + Booklet Maker + Folder + Multi-sheet Inserter (closed) | 127.9"/ 3250mm | 95"/ 2413mm | 78"/ 1981mm | 983 lbs./ 446kg |
| Main Processor with HCF + Base Finisher | 140.4"/ 3566mm | 95"/ 2413mm | 78"/ 1981mm | 1151 lbs./ 522kg |
| Main Processor with HCF + Booklet Maker | 140.6"/ 3571mm | 95"/ 2413mm | 78"/ 1981mm | 1204 lbs./ 546kg |
| Main Processor with HCF + Base Finisher + Folder | 148.1"/ 3763mm | 95"/ 2413mm | 78"/ 1981mm | 1279 lbs./ 580kg |
| Main Processor with HCF + Booklet Maker + Folder | 148.3"/ 3768mm | 95"/ 2413mm | 78"/ 1981mm | 1332 lbs./ 604kg |

| Service/Operational Space / Stationary | Width | Depth | Height | Weight |
|---|---|---|---|---|
| Main Processor + Base Finisher + Multi-sheet Inserter (closed) | 119.9"/ 3045mm | 109"/ 2769mm | 78"/ 1981mm | 840 lbs./ 381kg |
| Main Processor + Booklet Maker + Multi-sheet Inserter (closed) | 120.1"/ 3050mm | 109"/ 2769mm | 78"/ 1981mm | 895 lbs./ 406kg |
| Main Processor + Base Finisher + Folder + Multi-sheet Inserter (closed) | 127.7"/ 3245mm | 109"/ 2769mm | 78"/ 1981mm | 928 lbs./ 421kg |
| Main Processor + Booklet Maker + Folder + Multi-sheet Inserter (closed) | 127.9"/ 3250mm | 109"/ 2769mm | 78"/ 1981mm | 983 lbs./ 446kg |
| Main Processor with HCF + Base Finisher | 140.4"/ 3566mm | 109"/ 2769mm | 78"/ 1981mm | 1151 lbs./ 522kg |
| Main Processor with HCF + Booklet Maker | 140.6"/ 3571mm | 109"/ 2769mm | 78"/ 1981mm | 1204 lbs./ 546kg |
| Main Processor with HCF + Base Finisher + Folder | 148.1"/ 3763mm | 109"/ 2769mm | 78"/ 1981mm | 1279 lbs./ 580kg |

| | | | | |
|---|---|---|---|---|
| Main Processor with HCF<br>+ Booklet Maker + Folder | 148.3"/<br>3768mm | 109"/<br>2769mm | 78"/<br>1981mm | 1332<br>lbs./<br>604kg |

# System Configuration and Installation

## Installation Preparation

- Electrical requirements and space requirements must be satisfied prior to equipment delivery.

- Physical delivery of the Xerox 4590 will be by a Xerox authorized carrier. The Customer Service Engineer (CSE) will install the entire system. The customer is responsible for connecting equipment to their network.

- Some carpeted flooring or uneven surfaces may require the installation of a mobility plate to allow the product to be moved during normal maintenance activities.

- A minimum of 78 inches (1,981 mm) clearance from the floor to the nearest overhead obstruction is required.

## Standard Configuration

As a standard configuration, the Xerox 4590 is delivered with a Duplexing Automatic Document Feeder (DADF), 4 paper trays, bypass tray, automatic print duplexing, a base finisher including a 100 sheet stapler and a 2 and 3 hole punch, and the Post-Process Inserter. In addition, the 4590 comes with an active de-curler unit that can be adjusted to several positions using buttons located on the finisher for better paper handling in the assembly.

## Accessories

| Accessory | Description |
|---|---|
| High Capacity Feeder (2 drawer) | This optional paper source becomes "Tray 6" and "Tray 7" and adds 4,000 sheet additional paper capacity on the Xerox 4110. The High Capacity Feeder handles letter size paper within 16 lbs – 80 lb cover (60-216 gsm) weight range. |
| Folder Module | Enables the user to run jobs with "Z" fold on large stock, "Z" & "C" trifold on letter stock. |
| Booklet Maker Finisher | This option allows the user to run Booklets with or without saddle stitching and bi-fold. |
| Mobility Plates | Allow the 4590 system to be installed on uneven floor or heavy carpet. |
| Printer Upgrade Kit | Adds network printing capabilities to a Copier-only configuration. |
| Data Security Kit | The Data Security Kit includes Image Overwrite and Data Encryption functionality and is being made availability via ValueQuix |
| Convenience Stapler | The Convenience Stapler is available via the Customized Applications Service (CAS) organization and is only available on the Xerox 4590 configuration that includes a High Cap Feeder and Work Shelf.  The CAS Information in the collection:<br>**xww.thefic.xerox.com/dsweb/View/Collection-104762** |
| Job Based Accounting | Enables job data (copies, prints, and scan-to-network jobs) to be pulled over the network connection to an external workstation where it can be processed by a third-party application for accounting purposes. |

| Accessory | Description |
|---|---|
| Foot Switch | This footswitch is a convenient for actuating the "Start Print" button when doing repetitive open platen work.  This electronically operated switch is easy on the feet to use!  This device actuates the "Start Print" function only and cannot be used to stop the copy cycle.  Convenient when using Bates Stamping. See http://xww.cas.world.xerox.com/cas/uFootSw.htm |

## System Installation

Allow 4 to 6 hours to complete the system installation.

# Operations

| | Xerox 4590 |
|---|---|
| Warm Up | • First Power up within 5 minutes |
| First Copy Out Time* | • With Platen: less than 3.0 sec<br>• With DADF: less than 3.9 sec |
| First Print Out Time | • PS Print: 5.14 seconds (Standard Resolution)<br>• PS Print: 6.97 seconds (High Resolution) |
| Restart Time | • From Low Power Mode within 45 seconds |
| Scan Speed | • 100 images per minute |
| Scan Resolution | • 200 to 600 dpi<br>• Black and White only |
| Scan data format | • TIFF<br>• PDF<br>• Multi Page TIFF |
| Copy Resolution | • Copy Resolution: 600 x 600 dpi with resolution converted to 2400 x 2400 dpi |
| Print output Resolution | • Print Resolution: 1200 x 1200 dpi RIP with image enhancement to 2400 x 2400 dpi |
| No of Continuous Copies | • 9,999 sheets<br>4590 may pause temporarily to perform an image stabilization process. |
| Copy Server Function | • Yes |
| Store job | • Up to 15,000 pages |
| Toner loading while run | • Yes |
| Paper Jams | • Automatic cycle down purge clears as much paper from the paper path as possible. |
| Job Integrity | • System will only complete a job when it is accurate. |
| Job Recovery | • Available |
| Build Job Function | • Available |
| Job Complete Time Display | • Available |
| Billing Meters | • Available |
| Program Scan Ahead | • Available |

*  Conditions are: A4 LEF using Tray1, 100%, 1 side copy face up out put

# Supplies and Component Yields

The consumable supplies listed below are engineered specifically for use in the Xerox 4590/4110 and provide the highest and most consistent image quality, maximum 4590 productivity and up time. These consumable supplies are designed with several replaceable units, which are replaced as needed by Xerox Customer Service Engineers for ERUs and by customers for CRUs listed below.

All yields estimates are based on the 6% area coverage at standardized conditions using 8½" x 11" / A4 Xerox 20 lb Bond (80 gsm) stock. Please note that actual yields vary greatly depending on area coverage, papers stock, and image quality control settings. The current estimates are shown below.

The device informs the user in advance when replacements are required.

## Customer Replaceable Units (CRU) / Supplies.

| CRU | Part No. | Qty per Box | Yield Estimates |
|---|---|---|---|
| Toner Cartridge *1 | 006R01237 | 1 | 81,000 prints |
| Toner Waste Box | 008R13001 | 1 | 210,000 prints |
| 100 Sheet Capacity Staples *2 | | | |
| 100 page Staple Refill | 8R12898 | 5,000 x 3 sets | |
| 100 Page Cartridge Refill | 8R12912 | | |
| 50 Sheet Capacity Staples | | | |
| 50 page staple cartridge*3 | 8R12919 | | |
| 50page Staple Refill | 8R12920 | 5,000 x 3 sets | |
| Booklet Staples | | | |
| Booklet Staple Refill*4 | 8R12925 | 5,000 x 4 sets | |

*1 Expected Toner Cartridge yield is measured per bottle based on 6% coverage and will vary depending on area coverage, the density setting and paper size

*2 Comes installed in 4590. Filled with 1 to 5,000 staples per cartridge refill, this cartridge typically lasts the life of the 4590.

*3 Required for initial 50-sheet stapler capacity order. Filled with 1 to 5,000 staples per cartridge refill. This cartridge lasts the life of the 4590 and can be used in place of the100 sheet cartridge if stapling 50 pages or less. (Less staple overlap)

*4 Booklet Finisher Only

***Staple Cartridge Limitation***: If a job with more than 50 sheets is selected with stapling, and a 50 sheet cartridge is currently installed, stapling is disabled. Note that NO message is displayed on the UI screen.

This means that if the 50 sheet staple cartridge is loaded in the 4590 and a job with more than 50 sheets is sent to be stapled, a mis-staple or stapler jam will probably occur. If the 50 sheet staple cartridge is used, it is the responsibility of the operator to ensure that jobs exceeding 50 sheets are not submitted for stapling.

## Service Engineer Replaceable Units

In addition to consumables, the Xerox 4590 is designed with a fuser cleaning cartridge and drum cartridge that are ordered and installed by Xerox Customer Service Engineers. These ERUs are listed in the table below.

| ERU | Part No. | Qty per Box | Yield Estimates |
|---|---|---|---|
| Drum Cartridge* | 013R00610 | 1 | 505,000 prints |
| Fuser Cleaning Cartridge (Web) | 008R13000 | 1 | 300,000 prints |
| Black Developer | 005R00704 | 1 | 6,000,000 prints |

* Actual life will vary based on customer usage patterns.

- A CSE looking at the life of the unit must order a replacement drum cartridge when indicated by the equipment.

- Service orders and replaces the Waste Toner Bottle when needed.

## Disposal Process

Empty dry ink containers and waste containers are safe and approved for local recycling with common commercially used plastics.

Empty dry ink containers or waste containers must not be disposed in or set near fire.

All Toner Waste Bottles include a prepaid return shipping label, plastic bag, and tie in the box. This is the preferred method of disposal.

More information can be found at www.xerox.com, under Online Supplies Ordering, Cartridge Recycling Program.

# Network Tools

## Control Panel

The control panel is located at the center on top of the 4590. It consists of operation buttons, LED indicators, and a touch-screen.

The Touch Screen is located at the center of the control panel. Operational messages and touch-sensitive feature buttons are indicated on this display.

## Internet Services

The Internet Services feature enables functions such as; displaying the status of this machine as a printer and its print data; altering configurations; as well as accessing mailboxes using a Web browser in a TCP/IP environment.

# Network Connectivity

The Xerox 4590 supports industry standard network protocols and page description languages.

| | Xerox 4590 Copier/Printer |
|---|---|
| **Networks Interface** | Ethernet Interface (10/100 Base T) |
| **Network Protocols** | TCP/IP      (SMB, LPD, Port 9100, IPP)<br>IPX/SPX    (NetWare)<br>NetBEUI    (SMB)<br>EtherTalk    (AppleTalk) |
| **PDLs** | PCL5c, PCL6, PostScript, PS3, TIFF, PDF, HPGL2, ESC-P |
| **Memory Capacity** | 512 MB (max: 512 MB) |
| **Document Submission** | Windows 95, 98, ME, 2000, XP<br>Windows NT 4.0<br>Windows Server 2003<br>Unix<br>Macintosh (PS driver only) |

No driver support for DOS applications.

# Scanner

There are two methods of loading documents when copying with the Xerox 4590.

### Document Glass (Platen)

On the document glass, you can place a single sheet, a book or other similar document up to A3 size paper.

When manually scanning on the document glass, only standard size documents can be detected automatically. For non-standard size documents, enter a custom size in the Original Size menu on the user interface.

### Dual Automatic Document Feeder (DADF)

The DADF supports single sheet and multiple sheet documents with sizes ranging from 5" x 8" / A5 to a maximum of 11" x 17" / A3 size document. The DADF can auto-detect only documents of standard sizes. For documents that are not a standard size, input the size in the "Original Size" menu on the User Interface.

| | Document Glass | DADF |
|---|---|---|
| **Sheet Weight and Capacity** | | 16 lb Bond (60 gsm) – 250 sheets<br>-- to --<br>110 lb Index (203 gsm) – 100 sheets |
| **Scan Size** | Up to 11" x 17" / A3<br>Max: 297 mm x 432 mm | 5" x 8" / A5 to 11" x 17" / A3 Size<br>Min: 139 mm x 210 mm<br>Max: 297 mm x 432 mm |
| **Scan Resolution** | • 200 / 300 / 400 / 600dpi<br>• 2-bit gray 256 shades | |
| **Scan Image File Format** | • TIFF<br>• PDF<br>• Multi-page TIFF | |
| **Scan Services** | • Scan to Mailbox<br>• Mailbox to PC<br>• Scan to E-mail<br>• Scan to FTP<br>• Scan to SMB | |

### Scan Speed

| Original Size | Simplex (ipm) | Duplex (ipm) |
|---|---|---|
| 8.5 x 11 (A4) LEF | 100 | 100 |
| 8.5 x 11 (A4) SEF | 75 | 70 |
| 8.5 x 14 (B4) SEF | 65 | 58 |
| 11 x 17 (A3) SEF | 55 | 55 |
| A5 LEF | 110 | 110 |
| A5 SEF | 100 | 100 |
| B5 LEF | 110 | 110 |
| B5 SEF | 78 | 70 |

## Input Document Substrates

Document substrates that are <u>not</u> recommended for use in the DADF include envelopes, metallic cover stock, transparencies, label stock, silver photographic paper, tab stock, NeverTear© (or other manufacturers' equivalent), coated stock and those substrates whose intrinsic characteristics limit or prevent the separation of documents with friction-retard feeding mechanisms without causing misfeeds, multifeeds, jams or document damage.

# Scan Services

| Feature | Capability |
|---|---|
| Scan to Mailbox | Yes |
| Mailbox to PC | Yes |
| Scan to E-mail | Yes |
| LDAP support | Yes |
| E-mail local stored address list | 500 |
| E-mail data size limit | 2048KB (1-65535KB adjustable) |
| Scan to FTP | Yes |
| Scan to SMB | Yes |
| Mailbox number | 500 |
| Files per box | 1,000 |
| Document type settings | Text, text & photo, photo |
| Document size input | Platen: 0.6" to 11.7" (15-297mm)<br>Feeder: 0.6" to 17.0" (15-432 mm) |
| Variable reduction/enlargement | 25-400% |
| Edge erase | 2mm (0-50mm adjustable) |
| Center erase | 0mm (0-50mm adjustable) |

# Integrated Copy Server

| Feature | Capability |
|---|---|
| Storage Space | 14.6 GB |
| Copy job save | Yes |
| Print job save | Yes  (Save only, managed by Print Driver) |
| Page preview | No |

# Image Quality / Printable Area

The Xerox 4590 will feed stocks up to 13" x 19.2" (330.2 mm x 487.7 mm) in Trays 3, 4, 5.
Imaging characteristics are as follows:

| | Copy | Print |
|---|---|---|
| Image Resolution | 600 x 600 dpi scan resolution<br>Print resolution 2400 x 2400 dpi | 600 x 600 dpi RIP resolution: Standard mode<br>1200 x 1200 dpi RIP resolution: High Quality mode<br>Print resolution 2400 x 2400 dpi |
| Gray scale | Stochastic screen, 256 Gray levels | 106 Lines Per Inch, 129 Gray levels: Standard mode<br>150 Lines Per Inch, 256 Gray levels: High Quality mode |
| Maximum Image Size* | 11.7" x 17" (297 mm x 432 mm) | 12" x 18.9" (305 mm x 480 mm) |

\* The standard area that can be printed leaves a margin of 4.1mm on all four edges of the paper (for SRA3, 320mm wide), a margin of 11.5mm left and right. Note that the actual printing area may vary depending on the printer (plotter) control language.

# Paper Handling from the Main Trays

The Xerox 4590 is capable of feeding a wide variety of stock types.

Non-Grade A paper may result in extra service calls and a higher jam rate due to contamination. Optimum performance can only be achieved with Grade A paper. Please refer to the Xerox Supplies Web Site: **www.xerox.com/supplies** for helpful facts about paper.

The total paper capacity of the Xerox 4590 using normal paper is 8,225 sheets.

| Paper Tray | Capacity (sheets)* | Paper Size | Weight | Paper Type |
|---|---|---|---|---|
| Tray 1 | 1,100 | 8½" x 11 / A4 | 16 lb Bond (52 gsm) to 80 lb Cover (216 gsm) | • Plain<br>• Recycled<br>• Lightweight (52 - 63 gsm)<br>• Heavyweight 1 (106 - 216 gsm)<br>• Side 2 Paper (preprinted)<br>• Hole Punched<br>• Xerox Carbonless Stock** |
| Tray 2 | 1,600 | | | |
| Tray 3 | 550 | *Variable, from...* 5.5" x 7.2" (140 mm x 182 mm) to 13.0" x 19.2" (330 mm x 488 mm) | 16 lb Bond (52 gsm) to 80 lb Cover (216 gsm) | • Plain<br>• Recycled<br>• Lightweight (52 - 63 gsm)<br>• Heavyweight 1 (106 - 216 gsm)<br>• Side 2 Paper (preprinted)<br>• Hole Punched<br>• Tab Stock 1 (106 – 216 gsm)<br>• Xerox Carbonless Stock** |
| Tray 4 | 550 | | | |
| Tray 5 (Bypass Tray) | 250 | *Variable, from...* 4" x 6" / Post Card to 12.5" x 18" / SRA3 Max: 13" x 19.2" | 16 lb Bond (52 gsm) to 140 lb Index (253 gsm) | • Plain<br>• Recycled<br>• Transparency<br>• Lightweight (52 - 63 gsm)<br>• Heavyweight 1 (106 - 216 gsm)<br>• Heavyweight 2 (217 - 253 gsm)<br>• Labels<br>• Side 2 Paper (preprinted)<br>• Hole Punched<br>• Tab Stock 1 (106 - 216 gsm)<br>• Tab Stock 2 (217 - 253 gsm)<br>• Xerox Carbonless Stock** |

- *Capacity is measured with 80 gsm sheets.
- ** Supported XEROX Carbonless stock: Universal Single part, Two-Part, Three-Part and Four-Part stock (part numbers for each is available on www.xerox.com/suppiles)

# Paper Handling from the Alternate Trays

The Xerox 4590 has a post-process inserter and optional high-capacity feeder.

| Paper Tray | Capacity (sheets) | Paper Size | Weight (gsm) | Paper Type |
|---|---|---|---|---|

| Paper Tray | Capacity (sheets) | Paper Size | Weight (gsm) | Paper Type |
|---|---|---|---|---|
| Tray 6* & Tray 7* | 2,000 2,000 | • 8½" x 11" / A4<br>• 6.9" x 9.9" / B5<br>• 8.0" x 10.5"<br>AND<br>*Variable, from...*<br>11.7" x 8.3"<br>(297.2 mm x 210.8 mm)<br>to<br>12.9" x 9.4"<br>(327.7 mm x 238.8 mm) | 16 lb Bond (52 gsm) to 80 lb Cover (216 gsm) | ▪ Plain<br>▪ Recycled<br>▪ Lightweight (52 - 63 gsm)<br>▪ Heavyweight 1 (106 - 216 gsm)<br>▪ Side 2 Paper (preprinted)<br>▪ Hole Punched |
| Tray 8 (Post-process inserter) | 175 | 8½" x 11" / A4 to 11" x 17" / A3 | 16 lb Bond (52 gsm) to 90 lb Cover (220 gsm) | *Preprinted Stock on...*<br>▪ Plain<br>▪ Recycled<br>▪ Lightweight (52 - 63 gsm)<br>▪ Heavyweight 1 (106 - 216 gsm)<br>▪ Hole Punched |

*Tray 6 & 7 is an optional 2 drawer High Capacity Feeder

### About types of paper loaded in trays

The 4590 automatically detects the size and orientation of loaded paper in trays. Plain paper is set as default for each of the trays. Paper can also be named and set as user-defined stock.  Up to five paper types can be set as user-defined stock.

### About automatic tray selection

Automatic tray selection is active if Auto is selected for paper selection. If the 4590 senses that there are two or more corresponding trays in automatic tray selection, the 4590 gives higher priority to the tray having the highest paper type priority set at the Tray Paper Type.

Tray 5 (Bypass) cannot be selected in automatic tray selection.

# Finishing Features

The Xerox 4590 will be provided with a mandatory option from two finishing modules listed below.

- **Staple Finisher**   Provides inserter; offset stacking, hole punch and stapling.

- **Booklet Finisher (option)**  Provides booklet making and folding in addition to inserter, offset stacking, hole punch, and stapling.

- **Folder Module (option for either Finisher)**

> Provides C and Z Tri-fold to A4 or 8.  5x11 size paper and Z-fold on A3 or 11x17 and B4 size paper.

The finisher is fitted with the Inserter and also could be installed with an optional folder module.

Xerox 4590 is not DFA compatible and is not available to connect on-line with third-party vendor finishing equipment.

Staple Finisher Specification

| | Staple Finisher Capacity | | |
|---|---|---|---|
| | **Un-Stapled** | **Stapled** | **Condition** |
| **Inserter** | 175 sheets | | 16 lb Bond (60 gsm)<br>to<br>90 lb Cover (220 gsm) |
| **Top Tray** | 500 sheets | - | Maximum: 11" x 17" / A3<br>Minimum: 4" x 6" / Post Card<br>Weight: 16 lb Bond (60 gsm)<br>to<br>140 lb Index (253 gsm) |
| **Stacker Tray** | 3,000 sheets | 200sets or 3,000 sheets | Maximum: 11" x 17" / A3<br>Minimum: 7" x 10" / B5 SEF<br>Collated / Un-collated<br>7" x 10" / B5,<br>8½" x 11" / A4 |
| | 1,500 sheets | 100 sets or 1,500 sheets | 7" x 10" / B5,<br>8½" x 11" / A4 LEF<br>10" x 14" / B4,<br>11" x 17" / A3 SEF |
| | | - | 13" x 19.2" / SRA3 |
| **Stapler** | 100 sheets<br>50 sheets (option) | | |
| **Punch position** | 2 or 3 (North America) | | Max weight: 32 lb Bond (120 gsm) |

Booklet Finisher Specification

The Booklet Finisher specifications are the same as the above listed Staple finisher specification, but with the features shown below.

| | | **Condition** |
|---|---|---|
| **Booklet Tray** | Paper Size | 11" x 17" / A3,<br>8½" x 11" / A4 |
| | Tray Capacity | 20 sets |
| | Max Stapling Capacity | 15 sheets |
| | Staple Position | Double |
| | Basis weight | 16 lb Bond (60 gsm)<br>to<br>24 lb Bond (90 gsm)<br>**or**<br>1 cover sheet, up to 217 gsm, 14 sheets of 24 lb. Bond (90 gsm) |
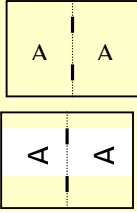
Z-Folding Specification

|  |  | **Condition** |
|---|---|---|
| **Z-Folding** | Paper Size | 11" x 17" / A3<br>10" x 14" / B4 |
|  | Loading Capacity | Max 30 sheets (11" x 17" / A3)<br>Single side folding only<br>Max 20 sheets for 10" x 14" / B4 |
|  | Basis weight | 16 lb Bond (60 gsm)<br>to<br>24 lb Bond (90 gsm) |
|  | Ejection Tray | Finisher Tray |
| **C- and Z-fold IN or OUT output to Letter Folder tray** | Paper Size | 8½" x 11" / A4 |
|  | Number of folded sheet | 1 sheet |
|  | Loading Capacity | 40 sheets |
|  | Basis Weight | 16 lb Bond (60 gsm)<br>to<br>24 lb Bond (90 gsm) |
|  | Ejection Tray | Three-Folding ejection Tray |

Staple Position

| Position / Paper size | Front Stapler Horizontal text | Rear Stapler Horizontal text | Front Stapler Vertical text | Rear Stapler Vertical text |
|---|---|---|---|---|
| **LEF** **8.5x11"** **8x10"** **B5** **16K** | A | A | A | A |
| **LEF** **A4** | A | A | A | A |
| **SEF** **8.5x11"** **8.5x13",** **8.5x14",** **11x17" A4,** **B4, 8K** | A | A | A | A |
| **SEF** **A3** | A | A | A | A |
| **LEF** **8.5x11"** **A4** **8 x 10"** **B5** **16K** | A | A | A | A |
| **SEF** **8.5x11"** **8.5x13",** **8.5x14",** **11x17" A3,** **A4, B4, 8K** | A | A | A | A |

Booklet Finisher Staple Position

| Paper Size | Position | Specs, Position, Skew |
|---|---|---|
| 8. 5x11"<br>A4<br>8. 5x14"<br>B4<br>11x17"<br>A3 | A ⎪ A<br><br>∀ ⎪ ∀ | +/-1mm staple skew from the crease<br>\*\*\*\*\*\*\*\*\*\*\*\*\*\*<br>120mm+/-1mm from the top staple to the top of the bottom staple |
|  | 8. 5x11"=42.5mm<br>A4 =39.5mm<br>8. 5x14"=42.5mm<br>B4 =63mm<br>11x17"=74.2mm<br>A3 =83mm | X1mm+/-2mm from the edge of the paper to the top of the top staple |

## Folding Accuracy

- Specs using standard paper (80gsm) ratio of 95%

- Booklet Skew is 1.5mm for A4 and 2.0mm for other sizes

- Bi-Fold skew is less than 2.5mm

- Z-fold (large document) skew is +/- 1mm from the left to +/- 1.5mm to the right of the fold

- C Fold skew is 1.5mm on top and 2mm +/- 2mm on the outside fold and 4mm +/- 2mm on the inside fold

- Z-Tri-Fold skew is 1.5mm on top and 2mm +/- 2mm on the outside fold and 2mm +/- 2mm on the inside fold

## Thickness of Folded Paper

- Specs using standard paper (80gsm) ratio of 95%

- Booklet thickness on the open sides =

    < 22mm with 5 sheets
    < 40mm with 10 sheets
    < 65mm with 15 sheets

- Bi-Fold

    < 22mm with A4
    < 30mm with A3

- Z-Fold, C Tri-Fold and Z-Tri-Fold

    Less than 15mm

# Billing Meters

The Xerox 4590 provides accurate billing of all copies/prints through the electronic billing meter within the unit. There is no mechanical meter on the Xerox 4590.  Meters can be accessed and read from the control panel.

Meters track copies, scans and prints.

Paper run through the Post-Process Inserter will not increment the billing meter.

# Foreign Interface Device (FID)

The Foreign Interface Device (FID) which is an accessory to the 4590 enables a third party device to perform external electronic accounting functions. Typical third party companies include, but are not limited to, Copytrac, Equitrac and Danyl. When the FID is enabled the 4590 will not function until an account number is entered into the 3rd party device.

The FID is installed by a CSE. Installation takes approximately 15 minutes.

When Installing the FID, to count copies only (not prints), set DIP switches as follows:

- Switch #7 & #8 = ON
- Switch # 5 = OFF

To count both copies and prints, set DIP switches as follows:

- Switch #7 & #8 = OFF
- Switch # 5 = ON

*Limitations of the Foreign Interface Device (FID)*

- The FID will not function with any 3rd party "Debit" devices such as: Coin Op, magnetic debit cards, etc.
- Customers have the choice to track network print jobs only.
- The 4590 must be enabled to track network print jobs. By default, this feature is disabled. To enable tracking, the CSE will need to make a change on the 4590.

# Job Based Accounting

Enables job data (copies, prints, and scan-to-network jobs) to be pulled over the network connection to an external workstation where it can be processed by a third-party application for accounting purposes.

# Compatibility Chart for 3rd Party Solutions using the FDI or JBA:

|  | Compatible | Compatible with Limitations | Not Compatible |
|---|---|---|---|
| **Accounting Solutions:** |  |  |  |
| **Control Systems:** |  |  |  |
| XTrak w/JBA |  | ✔ |  |
| CopiTrak w/FDI | ✔ |  |  |
| ScanTrak 5.8.1 | ✔ |  |  |
| **Equitrac:** |  |  |  |
| Equitrac Office w/JBA |  | ✔ |  |
| Equitrac Office w/FDI | ✔ |  |  |
| Equitrac Express w/JBA |  | ✔ |  |
| Equitrac Express w/FDI | ✔ |  |  |
| ScanPost |  |  | ✘ |

| | Compatible | Compatible with Limitations | Not Compatible |
|---|---|---|---|
| Xerox Page Accountant | | ✔ | |
| | | | |
| **Fax Solutions:** | | | |
| Captaris RightFax 9.0 | | ✔ | |
| Omtool Genifax | | ✔ | |
| Streem StreemCenter | | ✔ | |
| Xerox Office Fax Pro | | ✔ | |
| | | | |
| **Scan Solutions:** | | | |
| EFI SendMe | ✔ | | |
| IProTech Copy+ | ✔ | | |
| Omtool AccuRoute and AccuRoute Law Office | ✔ | | |
| NSi AutoStore 4.01 (see Xerox SMARTDocument Travel) | ✔ | | |
| RSA Qdirect.EDU | ✔ | | |
| Verity LiquidOffice | ✔ | | |
| Verity Teleforms | ✔ | | |
| Xerox SMARTDocument Travel 4.01 | ✔ | | |
| | | | |
| **SAP Solutions:** | | | |
| Xerox SAP PCL and PS device types | ✔ | | |
| Xerox SAP R/3 Postscript Intelligent Barcode Printing Solutions | ✔ | | |
| Xerox Barcode Pro PS | | | ✘ |
| Xerox Font Management Utility | | | ✘ |

# Cautions and Limitations

## Loss of Data on the Hard Disk Drive

Saved data may be lost if the 4590's hard disk fails due to external shocks, or if the power is removed in a manner not consistent with the methods described in the operator guide. Xerox is not responsible for such data loss or for any consequence caused by such data loss.

## Loss of Data in the Job Queue

Upon a system reset, print jobs stored in the queue will be lost and will need to be resubmitted. This does not affect the print jobs stored to hard disk or other non-volatile media.

## When print results appear to differ from the settings

Insufficient memory for the print page buffer may cause the following unexpected results:.

- Single-sided printing when duplex was specified

- Jobs are canceled (if a page cannot be rendered in the print page buffer, the entire job including that page is canceled)

## Meter counts for duplex printing

- For duplex printing, depending on the application being used and the way in which the number of copies is specified, blank pages may be inserted automatically. In this case, the blank page inserted by the application is counted for metering purposes.

## Software compatibility clarification between 4590 and WCP offerings

- Scan to PC Desktop is not compatible with the 4590

- SMARTsend is compatible with the 4590. However,

  o If HP-GL is enabled on 4590, prints on A4 or next largest size paper. Text output not well aligned. Use e-mail confirmation instead.

  o 4590 does not appear to respond to broadcasts. Use setup by entering IP address or hostname instead.

- The 4590 is compatible with SMART eSolutions.

# System Productivity: Xerox 4590 Copier/Printer

The Xerox 4590 is designed to provide benchmark image quality and performance in its product class. This product can automatically perform two-sided copying or printing on paperweights up to 80 lb Cover (216 gsm) and paper sizes up to 12" x 18" / SRA3 size from paper trays 1, 2, 3, 4,6 and 7 in the optional High Capacity Feeder.

Manual two-sided copying or printing can be done from Tray 5 (Bypass) for paperweights over 216 gsm and up to 140 lb Index (253 gsm) and paper sizes over 12" x 18", SRA3.

As with any cut-sheet copier or printer, duplex performance will not match the performance for single-sided copying. Paper jam rates may be higher than the same throughput material in simplex mode.

**Copy / Print output speed sourcing paper from tray 1 to 4 and HCF Tray 6 and 7**

| Paper Size | | Xerox 4590 | |
|---|---|---|---|
| | | Simplex | Duplex |
| B5 LEF | | 95 | 86** |
| B5 SEF | | 64 | 64 |
| A4 LEF / 8.5 x 11 LEF | | 90 | 81** |
| A4 SEF / 8.5 x 11 SEF | | 64 | 64 |
| B4 SEF / 8.5 x 14 SEF | | 56 | 56 |
| A3 SEF | | 56 | 56 |
| 11x17 SEF | | 50 | 50 |
| 12x18 SEF | | 34 | 34 |
| A4 LEF + Tab* | With Cleaning Cycle | 21 | |

| Paper Size | | Xerox 4590 | |
|---|---|---|---|
| | | Simplex | Duplex |
| 8.5x11 + Tab* | Without Cleaning Cycle | 56 | |

\* Tab papers are fed from Tray 3 or 4.

\*\* Same speed as simplex image per minute after printing 2nd page and also after printing 2nd set

**Copy / Print output speed sourcing paper from Tray 5 (Bypass)**

| Paper Size | Xerox 4590 | | | |
|---|---|---|---|---|
| | **Without High Capacity Feeder** | | **With High Capacity Feeder** | |
| | **Simplex** | | **Simplex** | **Duplex** |
| B5 LEF<br>A4 LEF<br>8. 5x11 LEF | 49<br>(55) ** | 33 | 59<br>(70) ** | 64<br>(70) ** |
| Heavyweight Long Edge Feed<br>(A4 / B5 / 8. 5x11 LEF) 80 lb Cover<br>(216 gsm) to 140 lb Index (253gsm) | | - | 49<br>(55) ** | - |
| B5 SEF<br>A4 SEF<br>8.5x11 SEF<br>B4 SEF<br>8.5x14 SEF<br>A3 SEF<br>11x17 SEF | 31<br>(33) ** | 33 | 31<br>(33) ** | 33 |
| Heavyweight Short Edge Feed<br>(B5, A4, 8. 5x11, B4, A3, 11x17 SEF)<br>80 lb Cover (216 gsm) to 140 lb Index (253gsm) | | - | | - |
| A4 LEF Transparency | 49 (55) ** | - | 59 (70) ** | - |
| A4 LEF Label | 49 (55) ** | - | 49 (55) ** | - |
| A4 LEF Tab | 17 (32) * | - | 17 (32) * | - |
| 12x18 SEF | 17 (32) * | - | 17 (32) * | - |

\* The number shown inside the parenthesis( ) is when not having cleaning cycle.
\*\* After printing 2nd page and also after printing 2nd set, speed will be increased to indicated number inside the parenthesis ( ).

# Responsibility Matrix

| Action | Responsibility | |
|---|---|---|
| | Customer | Xerox |
| Ensure adequate space and power to install system | X | |
| Unpack system / components | | X |
| Connect all system components prior to powering up the system | | X |
| Provide power wall receptacle for system | X | |
| Install the client software | X | |
| Install printer to network | X | |
| Confirm network integrity | X | |
| Acquire and install client workstation network hardware and software | X | |
| Order and replace drum cartridge | | X |
| Insure document security | X | |
| Remove and ship failed components to Xerox | | X * |
| Provide Helpline Support | | X * |
| Provide spared parts | | X * |
| Provide service | | X * |

*Xerox responsibility when a Full Service Maintenance Agreement (FSMA) is purchased. If FSMA is not purchased, this action becomes a customer responsibility.

## Customer Support

The Xerox Customer Support Centers are available to provide general information, answer questions and take service calls. You can reach the Customer Support Center at the following toll-free phone numbers:

United States          1-800-821-2797
Canada                 1-800-939-3769

To order paper and other throughput materials, please contact the Supplies Marketing Center at 1-800-822-2200 in the U.S. or 1-800-668-0199 (English), 1-800-668-0133 (French) in Canada.

## Customer Training

Fee-based training courses or hourly sessions are available. Contact your Xerox Sales Representative for more information.

## Analyst Services

A variety of services are available from your Xerox Systems Analyst. All services are billable. Please contact your Sales Representative for more information.

## Services Support

Servicing the system from Portable Work Station (PWS) **does not** require Ethernet / Phone customer connections.

*Special considerations or performance limitations identified by Xerox and agreed to by the customer:*

_____

_____

_____

_____

_____

_____

_____

_____

_____

*I have reviewed this document and understand the specifications listed:*

_____
Customer

_____
Xerox Sales Representative