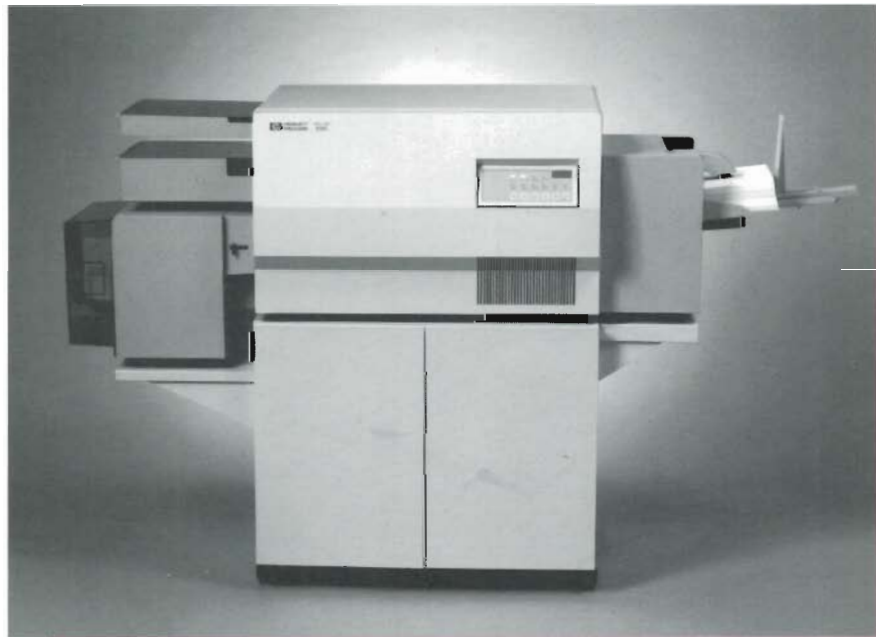


**Sales Guide  
Internal Use Only**

**HP 5000 Cut Sheet Printers  
March 1994**



**Introducing the HP 5000 C30  
and C30D ... the affordable  
midrange printers you've been  
waiting for!**

## Sales Resources

This Sales Guide provides the basic information you'll need to sell HP's new midrange cut sheet printers, the HP 5000 C30 and C30D. You'll find out how to position the advantages of the HP 5000 family including HP PCL desktop to data center compatibility, HP Support, and complementary third-party products. You'll also learn how to quote the HP 5000 C30 and C30D and where to go for more assistance.

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# Product Summary



## Product Features and Functionality

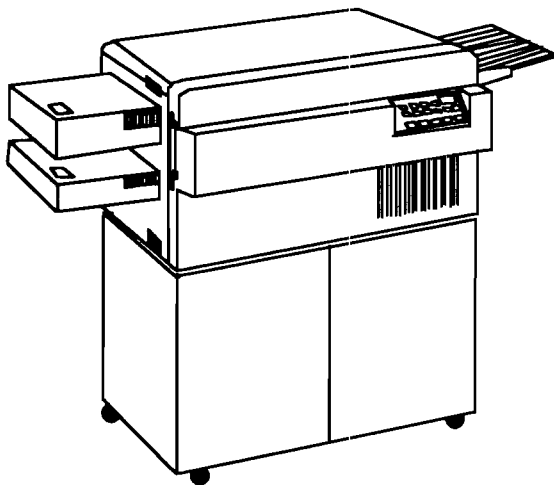
<b>HP 5000 Cut Sheet Printers</b>	C30, C30D (C30D has duplex printing capability)
<b>Speed</b>	30 pages per minute (15 pages per minute duplex)
<b>Paper</b>	Cut Sheet
<b>Printing Technology and Resolution</b>	LED Electrophotographic, 300 x 300 dots per inch
<b>Maximum Monthly Duty Cycle</b>	Simplex: 200,000 pages Duplex: 100,000 pages
<b>Printer Language</b>	PCL Level 5
<b>Input Capacity (using 20 lb. paper)</b>	800 sheets standard, 1750 or 3050 sheets with optional High Capacity Input accessories
<b>Output Capacity (using 20 lb. paper)</b>	550 sheets standard, 1400 sheets with optional High Capacity Output accessory
<b>Systems Supported</b>	HP 3000 Series 900, HP 9000 Business Servers

## Pricing, CPL, Availability

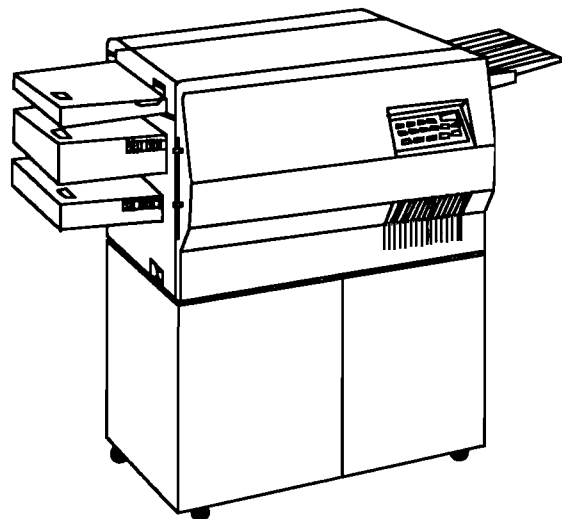
<b>CPL Date</b>	March 1, 1994
<b>U.S. List Prices</b>	\$15,950 for C30, \$21,340 for C30D
<b>Distribution Channel</b>	SF 40
<b>Initial Shipments</b>	April, 1994
<b>Availability</b>	4 weeks

## Target Markets and Customers

<b>Target Customers</b>	Customers with monthly print volumes between 75K and 400K pages who need high quality output text and/or electronic forms capability
<b>Target Applications</b>	Invoicing, billing, direct mail, financial statements



**HP 5000 C30**  
Starting at \$15,950



**HP 5000 C30D**  
Starting at \$21,340

# 1. New Products

## Introducing HP 5000 Cut Sheet Printers

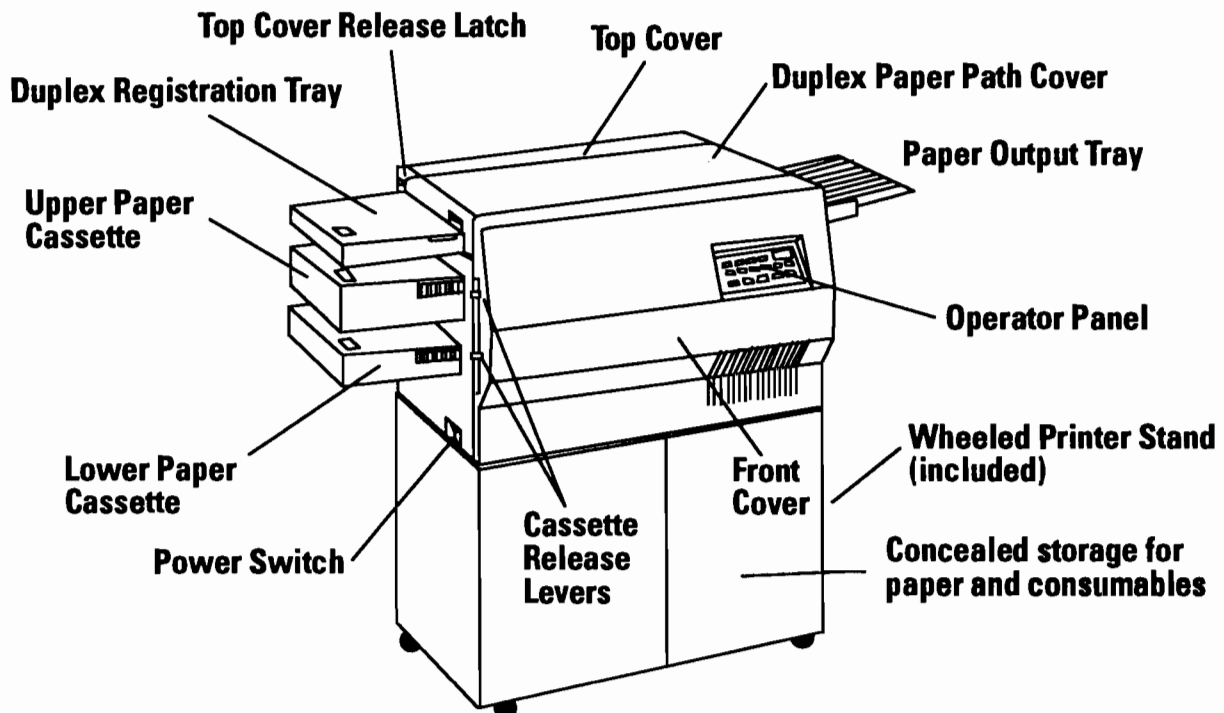
### New 30 Page-per-Minute Cut Sheet Printers

The HP 5000 printer family adds two new members, the HP 5000 C30 and the C30D. The C30 is a PCL Level 5 compatible, 30 page-per-minute cut sheet simplex (single-sided) printer. The C30D is similar but with the ability to perform duplex (double-sided) printing. The C30 and C30D are ideal for environments where the flexibility of desktop printing is desired but higher print speeds and duty cycles are needed.

### HP 5000 C30/C30D Feature Summary

- 30 pages per minute (simplex, A4 or letter size)
- PCL Level 5
- 300 dpi (dots per inch) resolution
- 200,000 pages per month duty cycle for simplex printing, 100,000 pages per month for duplex printing
- Rugged construction for continuous printing capability
- Clean consumable replenishment/replacement
- User maintainable for low maintenance costs
- LED Imaging Array for sharpness over entire printed area
- Straight paper path for no paper curl and reduced paper jamming
- C30D duplex printing at 15 pages (30 page sides) per minute
- Programmable output jogging for job separation
- Integrated parallel and serial interfaces
- LAN interface via HP JetDirect EX interface (purchased separately)
- Matching wheeled printer stand
- High capacity input and output options

Figure 1.1 HP 5000 C30D



**30 Page-Per-Minute Performance**

The C30 and C30D offer 30 page-per-minute performance to meet the printing requirements of midsize data centers and networks. In addition, the C30 and C30D, because of their performance and ability to run continuously, may be a better fit than high-end LaserJet printers in environments with periods of peak printing activity.

**Duplex Printing at No Loss in Speed**

The C30D offers duplex printing to reduce paper costs and storage requirements for printed output. Unlike many printers with duplex printing capability, the C30D suffers no performance degradation in duplex mode and can print duplex at 30 page sides per minute, yielding 15 double-sided pages per minute. By comparison, the LaserJet 4Si printer prints simplex (single-sided) at 17 pages per minute but prints duplex at 7.5 pages (15 page sides) per minute.

**Continuous Printing Capability**

The C30 and C30D are ruggedly constructed and can be operated continuously for peak printing periods such as end of month processing. This contrasts with the maximum guideline of 1 - 4 hours of daily operation for most desktop printers.

**Dual Diskette Drives**

The C30 and C30D feature dual 3.5" floppy disk drives for storing fonts and microcode, thus making it easy to access different fonts and perform function code updates.

**4 Megabytes of Program Memory**

The C30 and C30D come equipped with 8 and 10 megabytes of memory, respectively. With both the C30 and C30D, 4 megabytes of this memory is available for the buffering of incoming PCL data and macros.

**Wheeled Printer Stand Included**

Both the C30 and C30D include as standard a matching wheeled printer stand. This attractive stand features hinged doors which provide concealed storage for paper and consumables. The printer stand also provides shelf support for the High Capacity Input and High Capacity Output accessories.

**No Special Environmental Requirements**

The HP 5000 C30 and C30D can run on ordinary office current and have no special environmental requirements. HP 5000 cut sheet printers, only slightly larger than an HP LaserJet 4Si printer, are also quite economical with regards to space requirements and require far less space than comparable printers such as the Xerox 4235.

## PCL Level 5 Support for Electronic Forms Capability

### PCL Level 5 Support

The HP 5000 C30 and C30D support PCL Level 5 and are most comparable in PCL language functionality to a LaserJet IIISi printer. This means that applications can be designed and written so that printing can be performed transparently to desktop LaserJet printers, midrange HP 5000 cut sheet printers, and HP 5000 production capacity fanfold PCL printers.

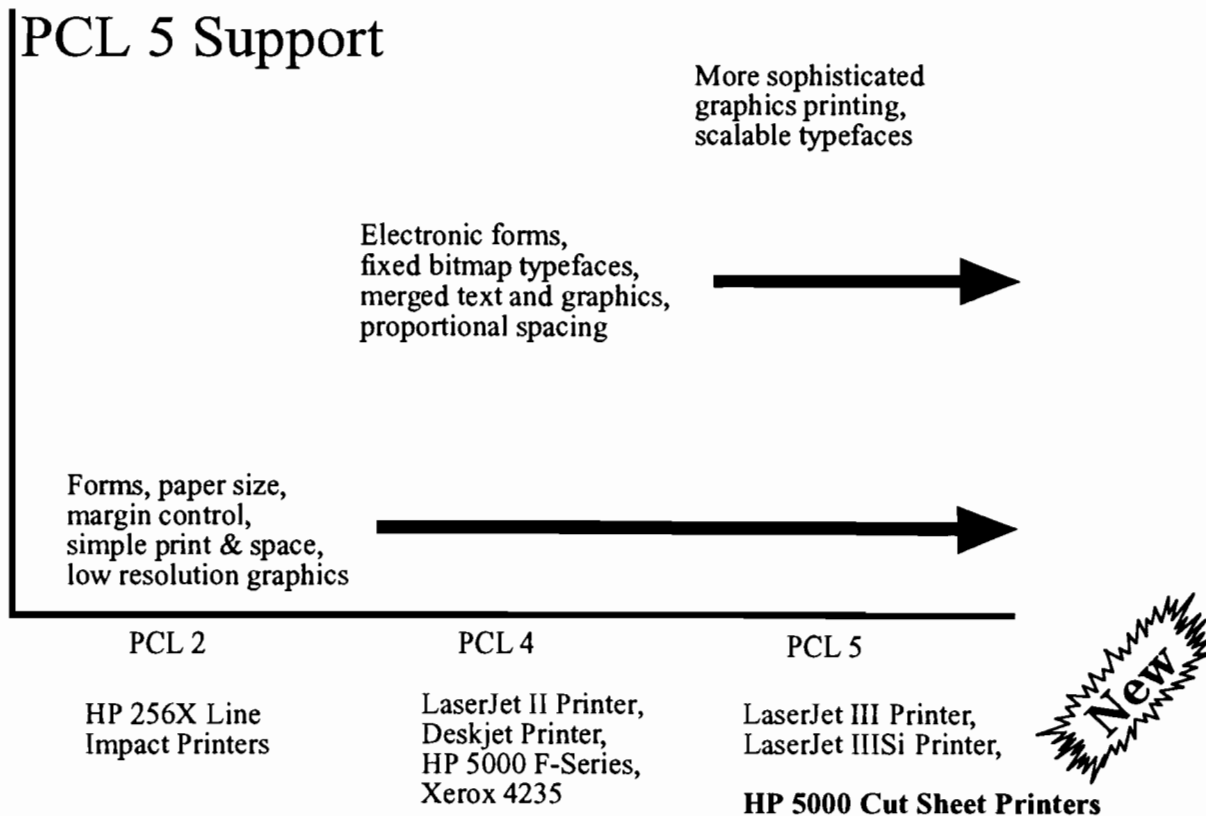
### PC-based Electronic Forms Design and Page Formatting Tools

With the electronic forms capability provided by PCL support, a business can design its own forms and then print these forms on demand, eliminating the procurement lead time, cost, and stocking required with preprinted forms, a substantial cost savings for most customers. With electronic forms, there is no need to change paper to change forms or to discard obsolete unused form stock.

The HP 5000 C30 and C30D are supported by a number of third-party, PC-based form design products. These tools feature user-friendly WYSIWYG (What You See Is What You Get) interfaces that make it easy to design and maintain electronic forms. For a list of third-party form design software products, see Table 4.1 of this Sales Guide.

For information on the performance of the C30 and C30D with PC applications, please see the Question and Answer Section at the end of Chapter 2 of this Sales Guide.

Figure 1.2





## New HP 5000s Feature High Quality Output, High Reliability

### High Quality Output

The HP 5000 C30 and C30D printers feature high quality 300 dpi output with electrophotographic and fusing advances that provide a very high uniformity of dots on the page, thus providing a clarity of print and figures not equaled by other printers in this performance range. With HP 5000 cut sheet printers, fill areas are uniformly filled, not uneven as with many other printers.

### LED Imaging Array for Sharp Focus Over Entire Printed Area

The C30 and C30D form their print images with an LED Imaging Array. This LED array eliminates the use of moving parts such as mirrors to direct laser beams and provides a fixed focal length over the entire printed surface, thus ensuring a sharp, consistent image over the entire printed area.

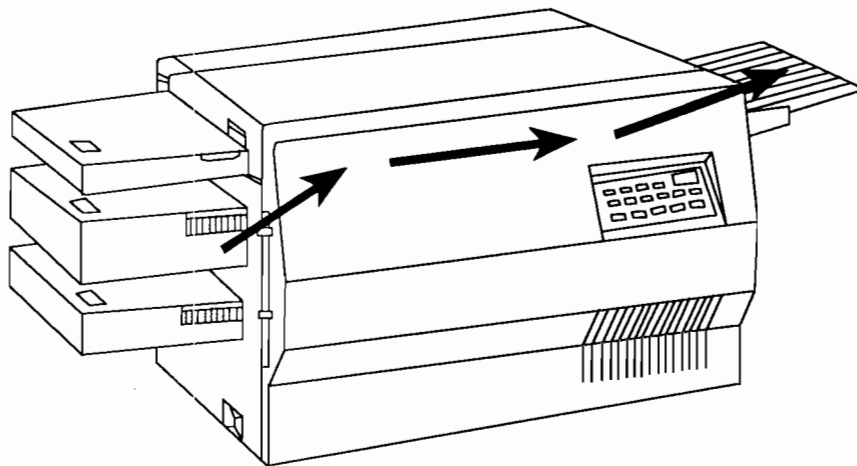
### Straight Paper Path for High Reliability, No Paper Curl

In many cases, cut sheet printers route paper through complicated paths involving multiple rollers and page inversions. These page inversions introduce paper curl and increase the chances of a paper jam. The HP 5000 C30, on the other hand, features a straight paper path for virtually no paper curl and reduced possibility of paper jamming. If a paper jam does occur, the paper path can be accessed by simply opening the top cover of the printer and checking three color-coded and easy to reach locations. With the C30D, one page inversion is added when printing in duplex mode.

### Straight Paper Path Allows Use of Heavier Card Stocks

With their inversionless straight paper path for simplex printing, HP 5000 cut sheet printers can support the use of heavier card stocks than other printers that contain more complicated paper paths.

Figure 1.3 HP 5000 Cut Sheet Printers Feature a Straight Paper Path



**Straight Paper Path for Virtually No Paper Curl and Fewer Paper Jams**

## Low Maintenance Costs Through Customer-Replaceable Components

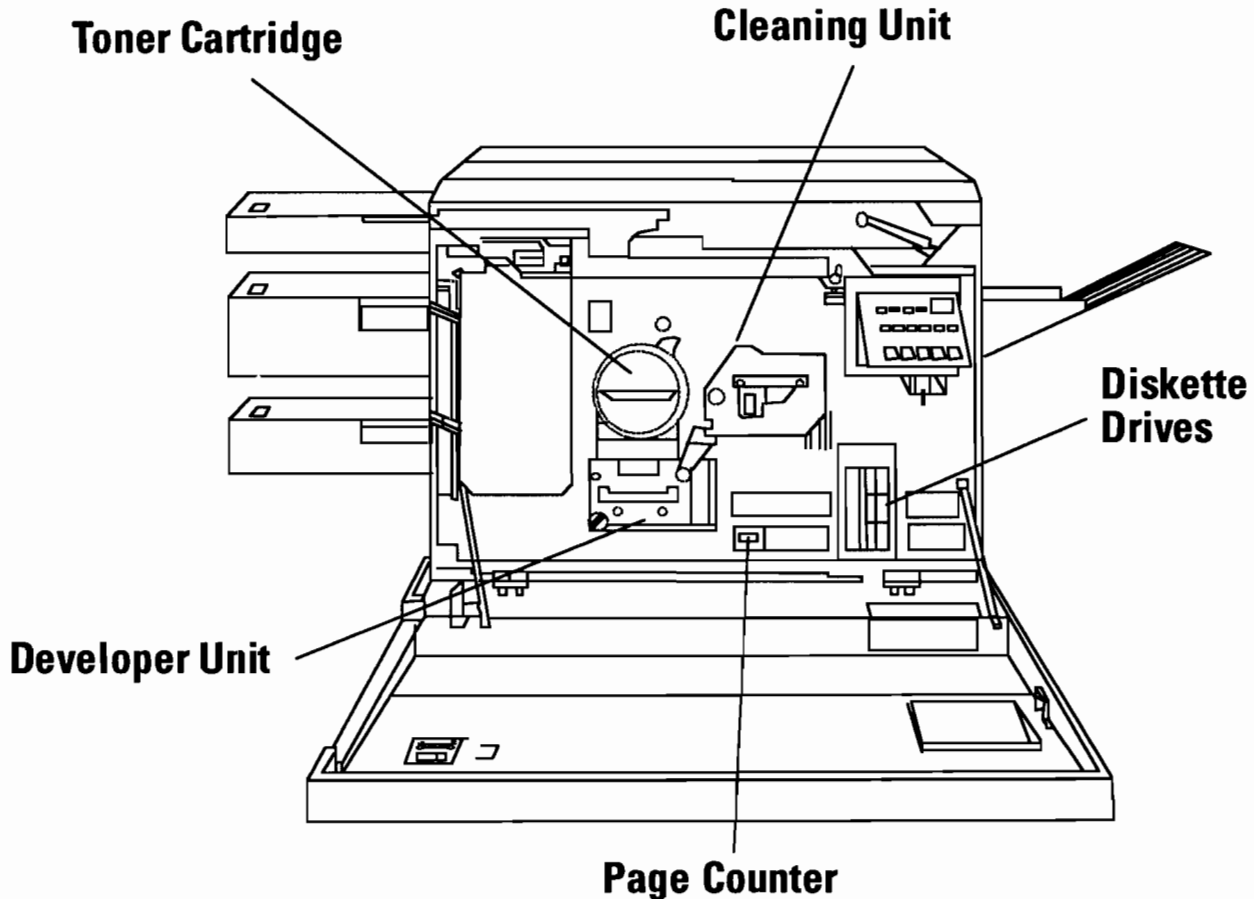
### User Maintainable

Similar to HP LaserJet printers, the HP 5000 C30 and C30D are largely user maintainable. All major printing components (photoconductor, developer, fuser, and cleaning unit) are packaged in easily replaced cartridges. Replacement of these components can be performed by opening the top or side access panel, loosening a few thumb screws by hand, removing the old unit, inserting the new unit, and then re-tightening the retaining thumb screws. Each replaceable unit has a life measured in page sides (letter size) as shown in Table 1.1. Customer personnel are responsible for tracking page counts via the page counter behind the front panel of the printer and replacing consumables and components at recommended intervals.

### Low Maintenance Costs

With many major components packaged in cartridges that are easily replaced by customers, HP 5000 cut sheet printers achieve very low monthly maintenance charges which help keep their overall cost of ownership low. For example, the monthly maintenance charge for 5x13 coverage for the Xerox 4235, a 35 page-per-minute duplex printer, is \$435. The comparable maintenance charge for the C30D is just \$160, substantially less than half of the Xerox cost.

Figure 1.4 Front View of C30D with Front Access Door Open



### Clean Toner Replacement

Toner for the C30 and C30D is packaged in cartridges which eliminate the need to add toner via bottle, making toner replenishment easy and clean. Toner replenishment is accomplished by removing the depleted cartridge, inserting the new cartridge, and rotating the new cartridge to release the toner.

### Adjustable Toner Coverage

The developer unit of the C30 and C30D features adjustable toner coverage. This feature is useful for applications such as graphics applications which frequently require higher toner coverages in order to achieve high quality output.

### Ordering Consumables

Customers in the US can order HP 5000 C30 and C30D consumables by dialing HP SafetyNet at 1-800-538-8787. Customers outside the US may order C30 and C30D consumables through their local sales offices.

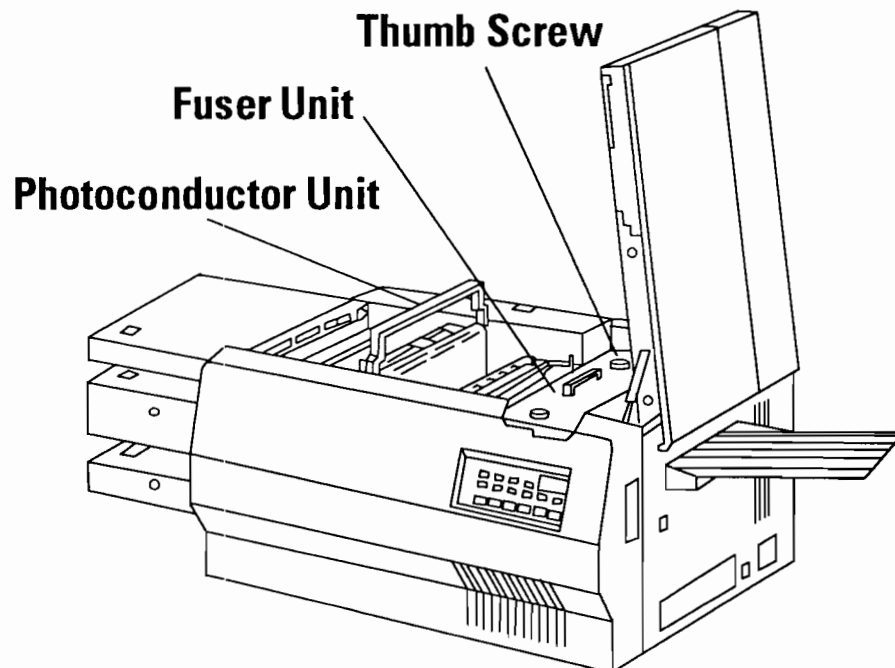
**Table 1.1 HP 5000 C30/C30D Consumables**

Description	Part Number	Price	Estimated Yield*
Toner, 2 cartridges	C4006A	\$109	17,000 pages per cartridge**
Toner, 8 cartridges	C4007A	\$376	
Photoconductor	C4008A	\$298	80,000 pages
Fuser, 100-127 VAC	C4009A	\$570	150,000 pages
Fuser, 200-240 VAC	C4010A	\$570	
Cleaner	C4011A	\$298	200,000 pages
Developer	C4012A	\$795	400,000 pages

\* letter-sized page sides. Yields will vary by customer application, operator handling, and environment; HP does not guarantee the yield of any consumable.

\*\* 4% page coverage in normal setting.

**Figure 1.5 C30D with Top Cover Open**



## Optional High Capacity Input, High Capacity Output

**High Capacity Input Accessories** The C30 and C30D have two slots for paper input cassettes and come standard with 550 and 250 sheet cassettes. The 550 sheet cassette can only be used in the upper cassette slot. The lower cassette slot can be occupied by either a 250 sheet cassette or an optional High Capacity Input (HCI) accessory. Either of two HCI accessories with capacities of 1200 or 2500 sheets (using 20 lb. paper) can be ordered. The 1200 sheet HCI handles letter and A4 size paper and is available immediately. The 2500 sheet HCI handles letter, A4, and legal size paper and is *scheduled to be available in June of this year*. These HCI accessories, when used in conjunction with the 550 sheet input cassette in the upper cassette slot, provide total input capacities of 1750 or 3050 sheets.

**High Capacity Output Accessory** The standard output tray for the C30 and C30D holds up to 550 sheets (using 20 lb. paper). The High Capacity Output (HCO) accessory can hold up to 1400 sheets (using 20 lb. paper). Both the standard output tray and the HCO support jogging (offsetting) via PCL command for job separation. The HCO allows over 45 minutes of continuous unattended simplex printing or over 90 minutes of continuous unattended duplex printing.

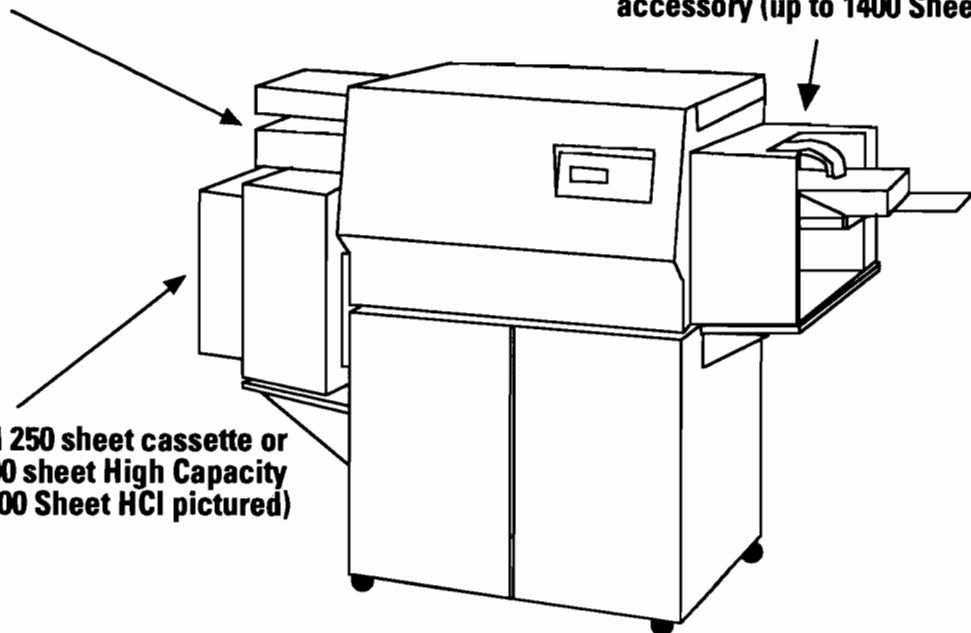
**Where to Sell the HCI and HCO** Sell HCI and HCO accessories in environments where the printer may operate unattended for periods of time or printing is performed fairly continuously. Sell the HCO when the customer has print jobs in excess of 550 pages.

Figure 1.6 C30D with HCI and HCO Installed

550 Sheet Input Cassette (upper slot only)

Optional High Capacity Output accessory (up to 1400 Sheets)

Lower slot can hold 250 sheet cassette or optional 1200 or 2500 sheet High Capacity Input accessory (2500 Sheet HCI pictured)



## Connecting to HP 9000 and HP 3000 Systems

### LAN, Parallel, and Serial Interfaces

The HP 5000 C30 and C30D feature integrated parallel and serial interfaces. In addition, the HP JetDirect EX network interface (purchased separately) can be used to provide a LAN connection. The parallel and LAN interfaces provide the best overall performance. Best location flexibility is provided by the LAN interface.

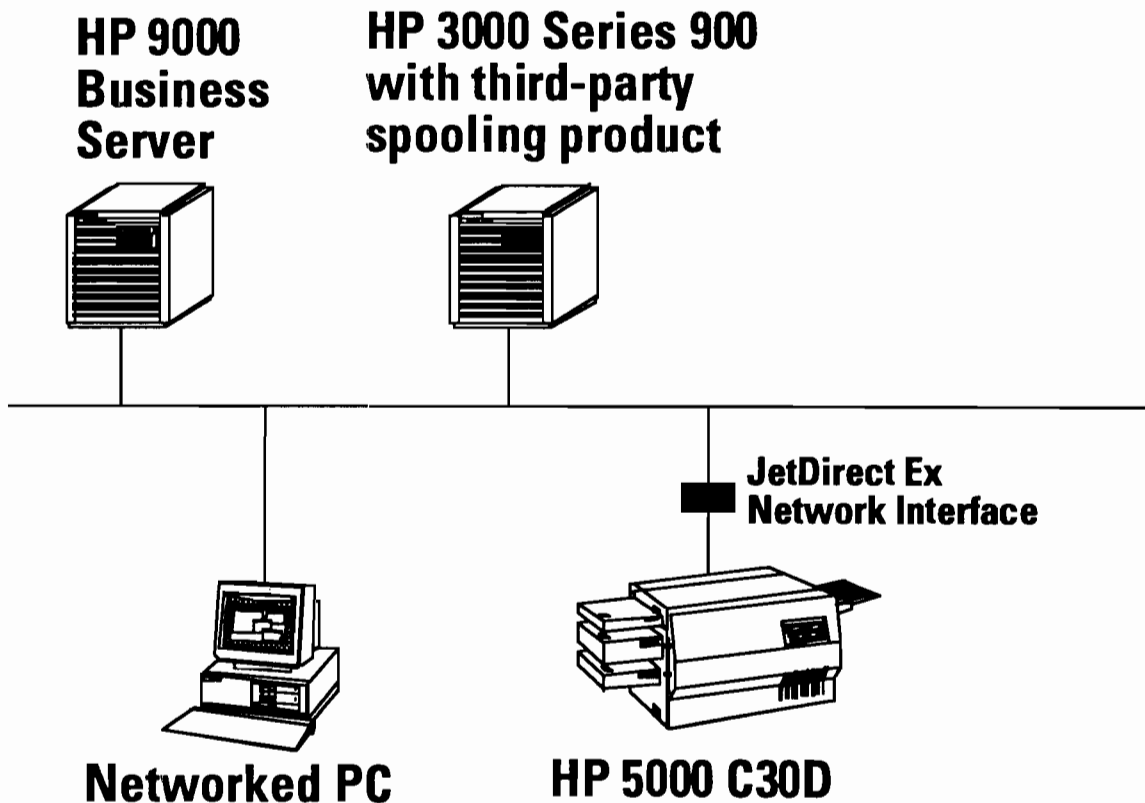
### Parallel Interface

The HP 5000 C30 and C30D printers can be direct-connected to HP 9000 Business Servers via a parallel (Centronics) interface. The parallel interface can provide the lowest cost means of interfacing a C30 or C30D to an HP 9000 Business Server.

### LAN Interface

The HP JetDirect EX external network interface (purchased separately) can be used to connect the C30 and C30D to an HP 3000 Series 900 LAN, HP 9000 Business Server LAN, or a mixed LAN with both HP 9000 Business Servers and HP 3000 Series 900s. The LAN interface provides good performance, maximum location flexibility, and allows a C30 or C30D to be shared by multiple systems. The JetDirect EX provides an intelligent interface between a LAN and the parallel Centronics interface of the C30 and C30D. PC networks on the LAN using network operating systems can also access the C30 and C30D via the JetDirect EX interface. HP systems can use TCP/IP to send print files to a C30 or C30D when using the LAN interface.

Figure 1.8 C30D as Shared LAN Printer



**LAN Connection to HP 3000 Series 900**

Best printer performance for an HP 3000 will be achieved with the LAN connection. However, this method of connection also requires third-party network spooling software such as NBSpool from Quest Software, Unispool from Holland House, Transpooler from NSD, or SpoolMate from Unison-Tymlabs.

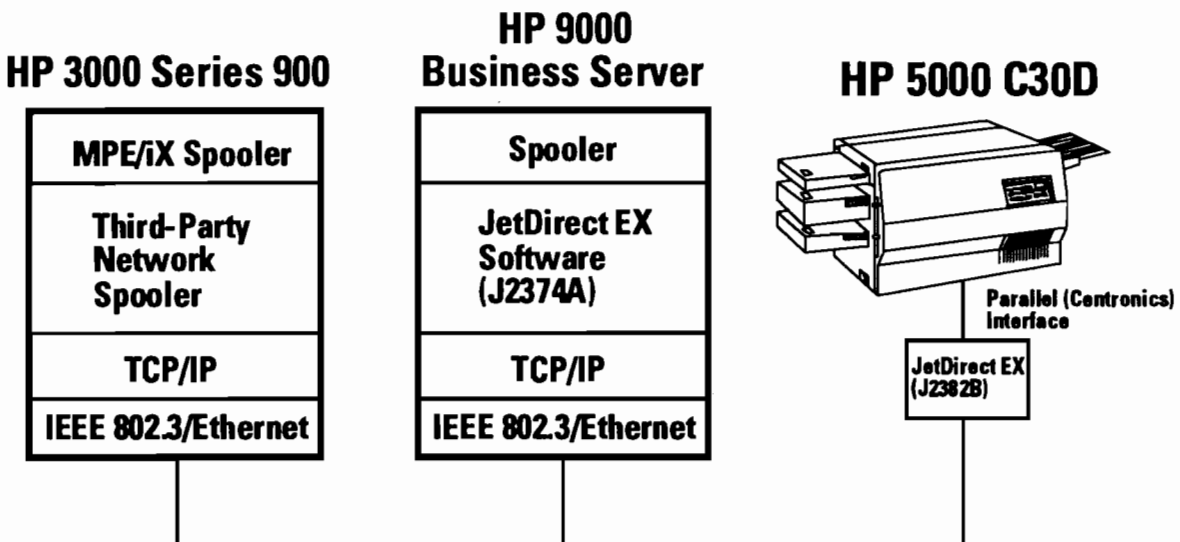
**Serial Interface**

The C30 and C30D can be connected serially (using RS-232 or RS-422) to an HP 3000 Series 900 DTC or an HP 9000 Business Server DTC or MUX. Minimum acceptable serial performance requires a DTC or MUX port with a speed of 38.4 Kbaud. For best serial performance, applications using an HP 5000 cut sheet printer over a serial connection should print only light text with simple electronic forms. Performance over any serial link will be degraded with dense text (large numbers of characters per page), complex electronic forms, or graphics.

**Table 1.4 Interfacing Considerations**

Interface/System	HP 9000 Business Server	HP 3000 Series 900
Parallel (Centronics)	Connect to system Centronics card, use parallel cable (see Table 3.5 for cable choices), maximum supported distance is 5 meters.	Not Supported
LAN	Order JetDirect EX interface (J2382B), parallel cable (see Table 3.5 for cable choices), and JetDirect software for HP-UX systems (J2374A) separately.	Order JetDirect EX interface (J2382B) and parallel cable (see Table 3.5 for cable choices), must have third-party network spooling product such as NBSpool from Quest Software, Unispool from Holland House, Transpooler from NSD, or SpoolMate from Unison-Tymlabs.
Serial	Use DTC or MUX configuration similar to that used with LaserJet printers. Recommend 38.4 Kbaud port and light text printing with simple electronic forms.	Use DTC configuration similar to that used with LaserJet printers. Recommend 38.4 Kbaud port and light text printing with simple electronic forms.

**Figure 1.9 Using JetDirect EX with HP Systems**



## 2. Selling the HP 5000 C30 and C30D

### Product Positioning

#### Where to Sell HP 5000 Cut Sheet Printers

Sell HP 5000 cut sheet printers as primary system printers on midrange HP 9000 Business Servers and HP 3000 Series 900 systems or as distributed printers for large departments on high-end systems. Also, sell HP 5000 cut sheet printers as alternatives to line impact printers for higher quality output and electronic forms capability.

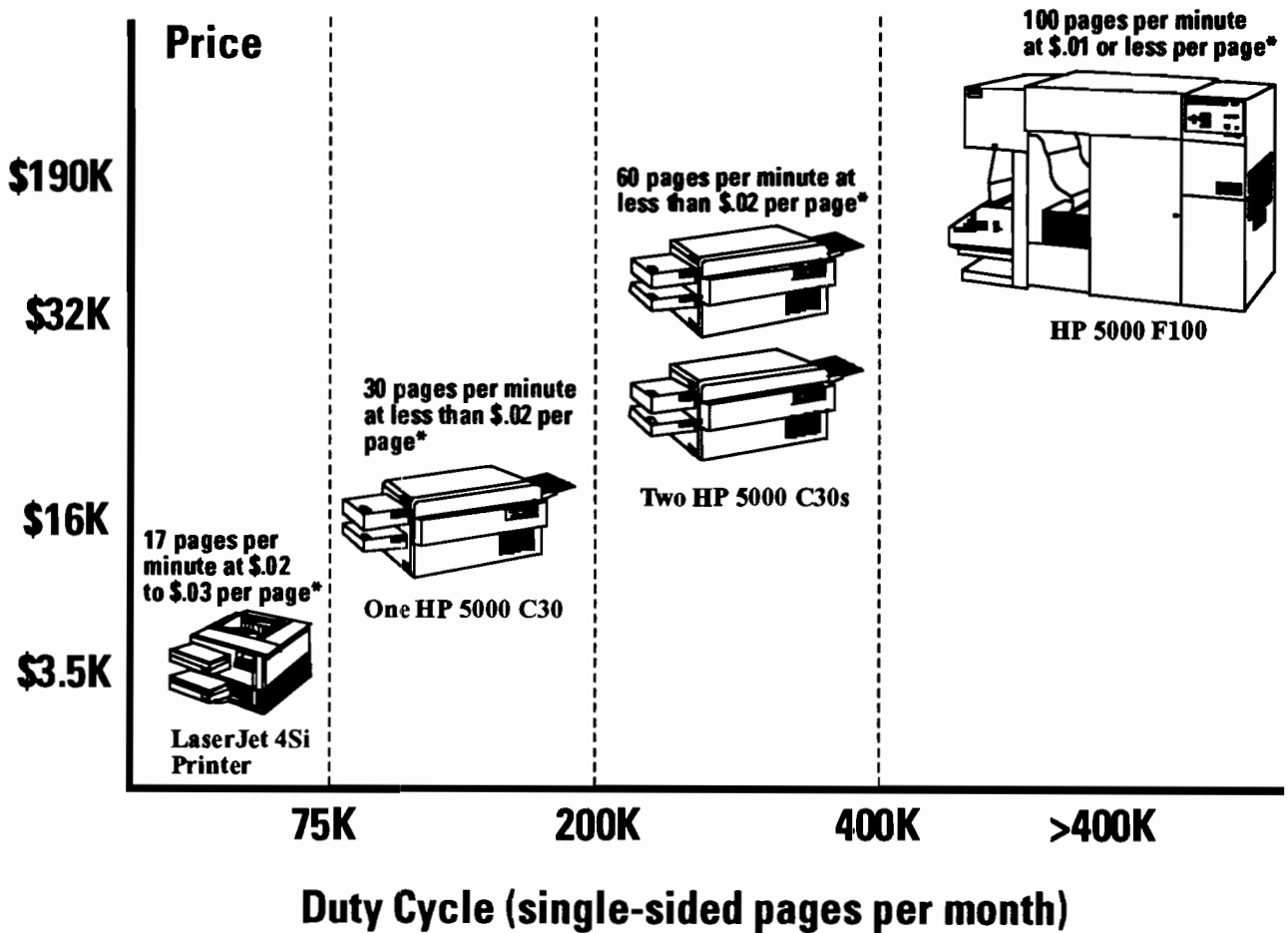
#### Key Purchasing Criteria

Look for a buyer with midrange printing requirements (75,000 to 400,000 pages per month) who wants high quality output or wants to use electronic forms.

#### Target Applications

Possible target applications include billing and invoicing, direct mail marketing applications, financial statement production, internal report generation, and the printing of long text listings.

Figure 2.1 Price Versus Duty Cycle



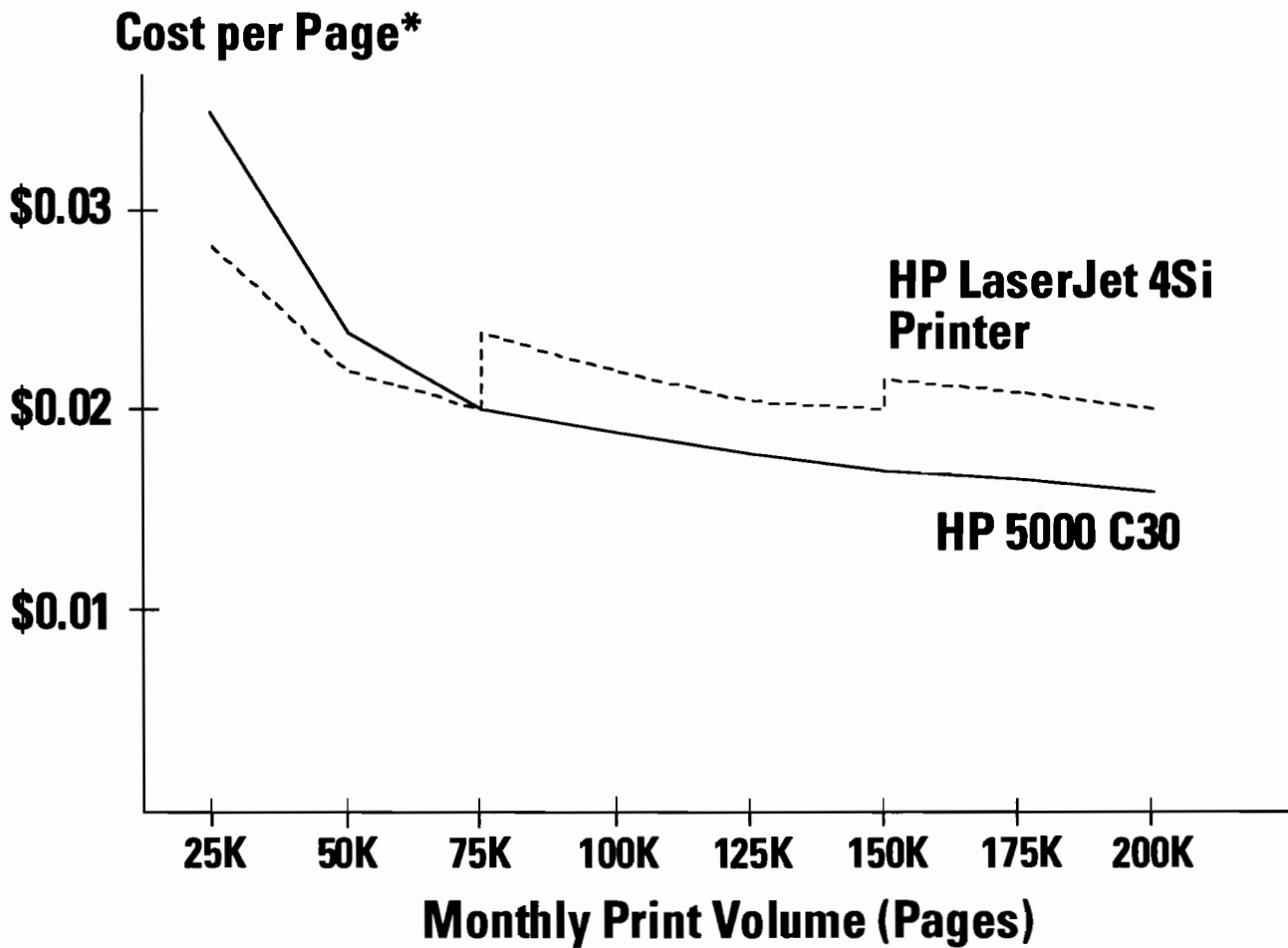
\* Per page printing cost includes maintenance, depreciation, and consumables.

## Positioning Versus Other HP Page Printers

### Positioning versus HP LaserJet Printers

Compared to HP LaserJet printers, HP 5000 cut sheet printers are more cost effective for monthly print volumes exceeding 75,000 pages. Additionally, the C30 and C30D feature rugged construction ideal for mid-duty production printing environments where hundreds of thousands of pages per month are printed and system printers may be required to run continuously during peak printing periods such as month-end processing. By contrast, HP LaserJet printers are designed for and used in environments of relatively low volume distributed printing. The C30 and C30D have nearly two times the performance of the highest performing LaserJet printer, the LaserJet 4Si printer, which prints at 17 pages per minute. The duty cycle of the C30, at up to 200,000 pages per month, is over 2.5 times the duty cycle of the LaserJet 4Si printer.

Figure 2.2 HP 5000 C30 and HP LaserJet 4Si Printer Cost of Ownership Comparison



\* Single-sided letter size pages. Includes depreciation, maintenance, and consumables. LaserJet 4Si printer cost per page at 5% toner coverage.

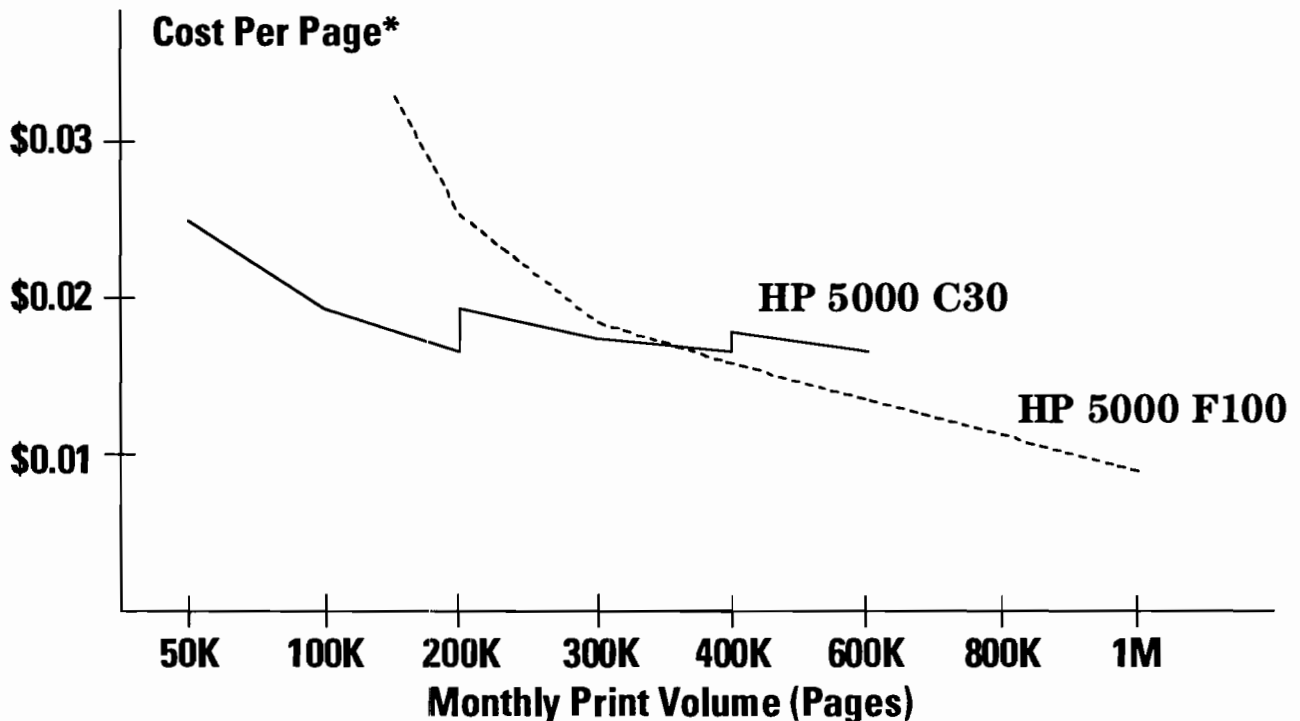


### Positioning versus the HP 5000 Fanfold Printers

HP 5000 fanfold printers, such as the 100 page-per-minute F100, are designed to provide the lowest per-page printing cost for high volume printing environments. HP 5000 fanfold printers support a variety of sophisticated front-end and back-end paper handling equipment to minimize operator staffing requirements. In general, an HP 5000 fanfold printer should be considered when customer print volumes are 400,000 or more pages per month. At 400,000 or more pages per month, the cost savings with an F100 can probably justify the higher acquisition cost and the more demanding power and environmental requirements.

The C30 and C30D can provide a solution when printing volumes are lower, duplex printing is required, the customer is sensitive to acquisition price, or cannot provide the environmental requirements by the HP 5000 fanfold printers. In an environment where the speed of an HP 5000 fanfold printer is required, a C30 or C30D can be sold as a backup printer for business-critical printing.

Figure 2.2 HP 5000 C30/C30D Costs Lower at Less Than 350K Pages Per Month



\* Single-sided letter size pages. Includes depreciation, maintenance, and consumables

## Positioning Versus Line Impact Printers

### High Quality Output Suitable for the Most Demanding Uses

The 300 dpi (dots per inch) output of the C30 and C30D is 4 to 18 times the highest resolution achievable on dot matrix line impact printers. With 300 x 300 dpi output, HP 5000 cut sheet printers are suitable for any application, such as mail direct marketing, where quality is a principle consideration.

### The Economy and Convenience of Electronic Forms

Electronic form design for HP 5000 cut sheet printers is easy with PC-based WYSIWYG software tools. HP line printers provide this capability in a more basic and less friendly way with the QMS command language.

### Support from a Large Number of Third Parties

HP 5000 cut sheet printers are supported by a large number of third-party form design software products. These third-party products, most of which support PC-based WYSIWYG form design, allow electronic forms to be designed or altered easily and efficiently. See chapter 4 for more details on HP 5000 C30 and C30D third-party support.

### Duplex Printing to Reduce Paper and Storage Costs

The HP 5000 C30D can perform duplex printing (printing on both sides of the sheet), something not possible with impact printers. Duplex printing reduces paper costs and storage space requirements and saves on postage costs if printer output is mailed.

### Impact Printers Still Have a Role to Play

Line impact printers have a role to fill in environments where there is no need for the flexibility or quality of laser printing and printing at the absolute minimum cost per page is important. Line impact printers tend to be very rugged and can feature very high duty cycles relative to printers such as the HP 5000 cut sheet printers. Additionally, line impact printers are more efficient in printing multi-part forms.

**Table 2.1 Competitive Comparison with Impact Printers**

Feature/Product	C30/C30D	Line Impact Printer (HP2567C)
Speed	30 pages per minute (simplex) 15 pages per minute (duplex)	1600 lines per minute (simplex only, 27 pages per minute at 60 lines per page)
Price	Starting at \$15,950	\$34,835
Operating cost per singled-sided page (maintenance, consumables, depreciation)	<\$0.02	<\$0.01
Resolution	300 x 300 dpi	Up to 140x144 at slower speeds
Print language	PCL 5	PCL 2
Electronic forms	PCL 5	QMS Command Language
Multi-part forms	Simulated (print multiple times)	Yes
Duty Cycle (single-sided Pages per month)	200,000	650,000
24x7 Monthly Support Costs	\$180 for C30, \$200 for C30D	\$262

## Beating the Competition

### Winning Against The Competition

You have a winning advantage with the C30's affordable low price and the ability to provide a single vendor solution. When selling the C30 and C30D on HP systems, your primary competitors will be the Xerox 4235 and the QMS 3225.

### You Beat Xerox Big on Price

With the 30-50% price/performance advantage of the C30 and C30D over the Xerox 4235, your most effective competitive weapon against Xerox is price. You also have the advantage of HP's commitment to multi-vendor printing standards versus Xerox's proprietary orientation. Xerox's top-down sales approach will rely heavily on their reputation in the copier and high-end printer business. See Appendix A for more information regarding winning against Xerox.

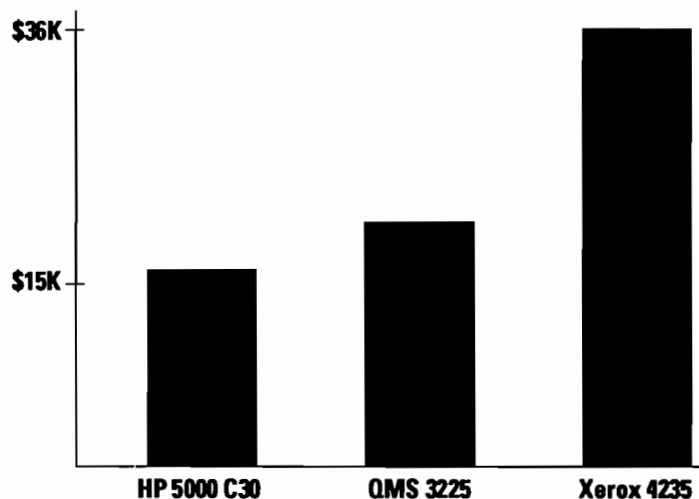
### Win Against QMS With Price, PCL, and Single Vendor Solution

QMS, a major player in desktop printing, also offers mid-volume production printing solutions targeting the UNIX marketplace. The C30 and C30D have a 15% price/performance advantage against the QMS 3225 simplex and duplex printers. Also, you have the advantage of HP's stronger printer and customer support reputation and the single vendor solution you can offer. The strength of the QMS 3225 is its high performance controller and feature-rich software (e.g., Postscript). Many QMS strengths are neutralized in a PCL-only environment. You win by selling the customer on PCL as a superior desktop to data center solution. In addition, HP will introduce a Postscript-capable HP 5000 printer by the end of 1994.

### Single Vendor Solution Wins Against Other Similar Products

You may also encounter the Siemens-Nixdorf 2030, ATI 7030, or Printronix 3016 when selling mid-volume printing solutions. These products use the same OEM print engine as the C30 and are all slightly higher in price. You can win against all these competitors by stressing HP's printer reputation and the advantage of a single vendor solution.

**Figure 2.3 HP 5000 C30 Has Lowest Price Compared to Major Competitors**



## What to Look Out For

To avoid customer satisfaction issues when selling the C30 and C30D, check to see if any of the following may present a major issue for your customers.

### **Performance will Degrade with Complex Graphics**

The HP 5000 cut sheet printers are not designed for intensive graphics printing and performance will suffer with complex graphics. A midrange printer with a high performance controller for printing complex graphics at higher speeds is planned for the end of 1994.

### **PC Applications May Not Print at Full Speed**

PC applications do not always emit efficient PCL code. Consequently, PC applications may not be able to print at full speed on the C30 and C30D.

### **HP 3000 Needs Third-Party Spooling Software for LAN Connection**

The HP 3000 requires third-party spooling software to access an HP 5000 C30 or C30D on a LAN connection. The cost of third-party spooling software generally ranges from \$2,000 to \$5,000 and will depend on the system and the spooling software.

### **Serial Performance Lower**

Performance over a serial link will be degraded for complicated electronic forms, graphics, and pages with large numbers of characters. The serial link should have a speed of 38.4 Kbaud. Serially connected printers should be limited to light text-only applications with simple electronic forms.

### **Migration from HP 2680 will Require Conversion**

Like HP LaserJet printers, the HP 5000 cut sheet printers do not support HP 2680 environment files. Moving from the HP 2680 to an HP 5000 cut sheet printer requires either a migration using third-party conversion tools or a redesign of forms using third-party forms design software. Refer to Table 4.1 for third parties who can assist in migration from an HP 2680.

### **Enabling Jam Recovery May Degrade Performance**

The C30 and C30D can be configured so that the current page is kept in printer memory until the page successfully exits the printer. This mode is known as jam recovery and enables the printer to reprint the current page in the event of a paper jam. Currently, enabling jam recovery on the C30 and C30D may result in degraded performance. The amount of performance degradation is application-dependent. Given the low jam rates of the C30 and C30D, full-time enabling of jam recovery may not be required for many customer applications.

### **No Field Upgrade from Simplex to Duplex**

The C30 cannot be field-upgraded to a C30D. Sell the C30D if the customer will ever need duplex printing capabilities.

### **Customers Must Track Consumables**

With the HP 5000 C30 and C30D, the customer must track page counts for consumables replenishment and component replacement (this is somewhat analogous to tracking vehicle mileage for the purpose of performing periodic maintenance). The HP 5000 C30 and C30D have a page counter located behind the front cover (a duplex printed page equals two pages). A log book is supplied with the C30 and C30D for the purpose of tracking use and consumables replacement history.

**Input and Output Capacities  
are not Matched**

It is possible to configure a C30 or C30D so that the input capacity is more than the output tray can accept. This could be a restriction for environments where high volume printing is performed unattended.

**2500 Sheet HCI Not Available  
at First Release**

The 2500 sheet High Capacity Input (HCI) accessory will not be available until June of 1994.

**Fewer Paper Trays**

Some printers with comparable performance have three or four paper trays which allow greater flexibility in holding different types and sizes of paper.

**11x17 Ledger Not Supported**

The HP 5000 C30 and C30D do not support 11X17 inch ledger or A3 size paper. This may be an issue for customers who plan to use the C30 or C30D for the printing of large engineering drawings.

**LaserJet Font Cartridges Not  
Supported**

The HP 5000 C30 and C30D do not support HP LaserJet font cartridges. Fonts for the HP 5000 cut sheet printers are either loaded from diskette or downloaded from the host.

**HP 3000, HP 9000 Do Not  
Support PCL Jogging Command**

Currently, neither the HP 3000 spooler nor the HP 9000 printer model file support the PCL command which causes the printer output tray to jog (offset). Because of this, output jogging currently requires the application to emit the PCL command which causes the output tray to jog.



## Questions and Answers

***Can the C30 or C30D be used to replace an HP 2680 printer?***

The HP 5000 C30 or C30D can be used to replace an HP 2680 printer where monthly print volumes do not exceed 200,000 page sides per C30 or C30D. However, HP 2680 Environment files are not supported on the C30 and C30D and the customer will have convert. For customers running 400,000 or more pages per month on HP 2680s, the HP 5000 F100 is a better fit and will provide a smoother migration path.

***How does one perform a conversion from an HP 2680 to a C30 or C30D?***

One must buy a formatting product from a third-party for the design of the forms being converted. Conversion and consulting services may also be available from the formatting vendors. For a list of third-party software vendors and their capabilities, refer to Table 4.1.

***Why are HP 2680 environment files not supported on the C30 and C30D?***

The C30 and C30D, with performance and duty cycle less than HP 2680s, are not direct replacements for HP 2680 printers. The market focus for the C30 and C30D is PCL functionality and open systems capabilities.

***Can multiple C30s be proposed instead of a single HP 5000 fanfold printer?***

If a customer cannot afford the acquisition price of an HP 5000 fanfold printer or cannot meet the environmental requirements, it may be possible, depending upon monthly print volumes, to propose multiple HP 5000 cut sheet printers instead. However, if a customer needs the performance of the HP 5000 fanfold printers or wants the lowest cost per page, then an HP 5000 fanfold printer is the right choice.

***Are there situations where one might sell a C30 or C30D along with an HP 5000 fanfold printer?***

If the customer has a variety of printing requirements, consider selling an HP 5000 cut sheet printer and an HP 5000 fanfold printer. With this combination the customer will have a full range of printing capabilities from high speed fanfold printing to cut sheet duplex printing, all based on PCL. The customer will also have some redundancy in his printing resources.

***Are the C30 and C30D available to VARs?***

Yes. The C30 and C30D are on schedule A3001, Column 1.

***Are the C30 and C30D available for Demo/Development discounts?***

Yes.

***What if my customer would like to add more memory to his printer?***

An additional 4 or 8 megabytes of memory can be added to the C30 and C30D to provide additional storage for downloaded forms and fonts. The HP part numbers to order are D2974A for the 4 Mb memory upgrade and D2975A for the 8 Mb memory upgrade (70ns IBM-compatible SIMM memory). It is recommended that the installation of additional memory be performed by the HP Customer Engineer Organization.

***Are there any plans for higher speed cut sheet printers?***

Current plans call for a 30 page-per-minute cut sheet printer with high performance graphics printing and a 40 page-per-minute cut sheet printer to be available by the end of 1994.

***What about highlight color?***

There are currently no plans to offer highlight color on the C30 and C30D. Highlight color is not available on printers in this performance and price range.

***What about imaging capabilities or PostScript support?***

The HP 5000 C30 and C30D do not support CCITT imaging and Postscript at first release. These capabilities will be supported by the end of 1994.

***When will the C30 and C30D support MICR printing?***

The HP 5000 C30 and C30D will support MICR (Magnetic Ink Character Recognition) printing in Q4 of FY94. Call the Sales Response Center if your deal needs MICR support earlier.

***When will the C30 and C30D support envelope printing?***

Envelope printing with the C30 and C30D will be available in Q4 of FY94. Call the Sales Response Center if your deal needs envelope printing sooner.

***Are educational discounts available for the C30 and C30D?***

Yes, but not with the standard 12-month warranty. Call the Sales Response Center for educational discount authorization.

***Are warranty extensions available for the C30 and C30D?***

No.

***Are the C30 and C30D customer installable?***

No. Installation requires some brief product preparation by a CE.

***Are the HCI and HCO customer-installable?***

The HCI and HCO are customer-installable and can be ordered and installed by the customer at a later date if not originally purchased with the printer.

The HCI and HCO require some additional side clearance beyond that required by the standard input and output trays. The HCI requires approximately 6" of additional clearance and the HCO requires approximately 1 foot of additional space.

***Is there a recycling program for consumables?***

A program is currently under evaluation.

***What is the availability of paper handling solutions such as higher capacity paper input and output capabilities?***

HP is working with third parties to develop additional paper handling capabilities. Please call the Sales Response Center if you have a specific requirement.

***My customer uses a custom LaserJet printer font cartridge. Can this font cartridge be used with the C30 and C30D?***

The C30 and C30D do not support LaserJet printer font cartridges. However, it may be possible to load custom fonts onto the printer's font floppy. Call the Sales Response Center for more information.

***How simple is consumable replacement?***

Consumable replacement with the C30 and C30D requires no tools and can be learned by the average user in less than 30 minutes. Maintenance training is provided by CEs at the time of installation.





### 3. Ordering Information and Product Structure

**Table 3.1 HP 5000 C30/C30D Ordering Information and Product Structure**

Part Number	Description	Price
C4000A	HP5000 Model C30 page printer (100 - 127 VAC, 60 Hz)	\$15,950
	Option 0EQ - 50 Hz power conversion kit for Japan (100 VAC, 50Hz)	No Charge
C4001A	HP5000 Model C30 page printer (200 - 240 VAC, 50 Hz)	\$15,950
C4002A	HP5000 Model C30D page printer (100 - 127 VAC, 60 Hz)	\$21,340
	Option 0EQ - 50 Hz power conversion kit for Japan (100 VAC, 50Hz)	No Charge
C4003A	HP5000 Model C30D page printer (200 - 240 VAC, 50 Hz)	\$21,340
C4016A	1200 sheet High Capacity Input accessory	\$1,395
C4004A	2500 sheet High Capacity Input accessory	\$2,095
C4005A	1400 sheet High Capacity Output accessory	\$1,395
C4006A	Toner for C30/C30D printers, 2 cartridges	\$109
C4007A	Toner for C30/C30D printers, 8 cartridges	\$376
C4008A	Photoconductor for C30/C30D printers	\$298
C4009A	Fuser for C30/C30D printers, 100-127 VAC	\$570
C4010A	Fuser for C30/C30D printers, 200-240 VAC	\$570
C4011A	Cleaner unit for C30/C30D printers	\$298
C4012A	Developer unit for C30/C30D printers	\$795
C4013A	Additional 250 sheet paper input cassette	\$175
C4014A	Additional 550 sheet paper input cassette	\$195

**Table 3.2 HP 5000 C30/C30d Monthly Support Prices**

	02G Priority Plus (7x24, 4 hour response)	02A Priority (5 Day 8-5, 4 hour response)	02C Next Day (5 Day 8-5)
C30	\$180/mo	\$144/mo	\$115/mo
C30D	\$200/mo	\$160/mo	\$128/mo
1200 Sheet HCl	\$25/mo	\$20/mo	\$16/mo
2500 Sheet HCl	\$25/mo	\$20/mo	\$16/mo
1400 Sheet HCO	\$25/mo	\$20/mo	\$16/mo

**Table 3.3 HP 5000 C30/C30D Support Option Prices**

	OS6 Priority Plus (7x24)	OS5 Priority Plus (7x24)	OS3 Priority (5 Day 8-9)	OS2 Next Day (5 Day 8-5)	OS1 Priority (5 Day 8-5)	OS0 Next Day (5 Day 8-5)
C30	\$1,755	\$1,755	\$1,296	\$1,035	\$1,296	\$1,035
C30D	\$1,947	\$1,947	\$1,440	\$1,152	\$1,440	\$1,152
1200 Sheet HCl	\$244	\$244	\$180	\$144	\$180	\$144
2500 Sheet HCl	\$244	\$244	\$180	\$144	\$180	\$144
1400 Sheet HCO	\$244	\$244	\$180	\$144	\$180	\$144

Notes: System support options provide for one year of printer maintenance (9 months following expiration of the 3 month warranty). Options OS0, OS1, and OS5 do not include system software telephone support. Options OS2, OS3, and OS6 include system software telephone support.

**Table 3.4 HP 5000 C30/C30D Discount Schedules**

Schedule	Column
A3000	Column 1
A3001	Column 1

**Table 3.5 Jet Direct EX Ordering Information**

Product	Description	US List
J2382B	JetDirect EX Network Interface	\$499
J2374A	JetDirect Software for HP-UX (unlimited license)	\$199
C2912B	3-meter shielded parallel cable	\$27
92284A	2-meter shielded parallel cable	\$39

**Figure 3.1 European HP 5000 Cut Sheet Ordering Example for HP 9000 Business Server**

Product	Description	US List	Comments
C4003A	HP5000 Model C30D page printer (200 - 240 VAC, 50 Hz)	\$21,340	HP 5000 duplex cut sheet printer (200 - 240 VAC, 50Hz)
C4004A	2500 sheet High Capacity Input accessory	\$2,095	High Capacity Input accessory
C4005A	1400 sheet High Capacity Output accessory	\$1,395	High Capacity Output accessory
J2382B	JetDirect EX Network Interface	\$499	LAN interface
J2374A	JetDirect EX software for HP-UX systems	\$199	Software required for HP-UX systems
92284A	2-meter parallel cable	\$39	Cable for connecting printer to JetDirect EX

**Figure 3.2 North American HP 5000 Cut Sheet Ordering Example for HP 9000 Business Server**

Product	Description	US List	Comments
C4002A	HP5000 Model C30D page printer (100 - 127 VAC, 60 Hz)	\$21,340	HP 5000 duplex cut sheet printer (100 - 127 VAC, 60Hz)
C4004A	2500 sheet High Capacity Input accessory	\$2,095	High Capacity Input accessory
C4005A	1400 sheet High Capacity Output accessory	\$1,395	High Capacity Output accessory
J2382B	JetDirect EX Network Interface	\$499	LAN interface
J2374A	JetDirect EX software for HP-UX systems	\$199	Software required for HP-UX systems
92284A	2-meter parallel cable	\$39	Cable for connecting printer to JetDirect EX

## 4. Complementary Third-Party Products

### Third-Party Software for Formatting and Spooling

To take advantage of the electronic forms and network printing capabilities of the C30 and C30D, most customers will want to consider the purchase of third-party form design and spooling products. Spooling products allow print management and provide capabilities such as prioritization of print files, print file deferral for printing at a later time, and print queue re-prioritization. Additionally, network spooling products allow the transparent transfer of print files across a network to the print server for printing on an HP 5000. The use of the C30 and C30D on LANs with the HP 3000 requires the use of a third-party spooling product.

### Complementary Software Solutions

The tables included in this section are intended to serve as rough guides for software solutions. Note that these lists do not provide feature evaluations, nor does HP endorse or support any particular third-party product. Capabilities vary widely between these products and are constantly changing as vendors release new versions. It is best that customers perform their own evaluation or contact the PSO for assistance.

### Formatting Software

Several vendors offer PCL-compatible formatting software on both HP 3000 and HP 9000 systems. This software can be used to design electronic forms and to format variable data that originates on any system in the network, as long as the data is transferred as a "flat file" or in ASCII format. Additionally, some of this software can be used to migrate printing applications that were written for non-HP PCL printers. Formatting software vendors are listed in Table 4.1 of this chapter.

### Formatting Software Has Two Components

Third-party form design products consist of at least two components. One component is the electronic form design software. Generally, the drawing of lines, logos and fields for electronic forms is done either by a command language or by a graphical interface running on a PC. The electronic form is then uploaded to the HP system driving the printer. The second component of the formatting package is the software running on the host system which merges the electronic forms with variable print data. This component creates the spoolfile which will be printed. The formatting vendors listed in Table 4.1 should be contacted for more information on their products. Ask your customer if they are currently using any of these products. This can simplify the vendor selection process. Customers may also find creative ways to utilize other PCL-compatible software such as PC-based word processors to meet their page formatting needs.

*Note: General PC applications not originally targeted for HP 5000 printers may be inefficient in the use of HP PCL commands (a phenomena which may not be readily apparent in a lower speed LaserJet printer). HP cannot guarantee full speed printing on HP 5000 printers in every case. Each application should be tested for HP PCL efficiency and HP 5000 printing performance.*

**Table 4.1 Formatting Software Vendors**

Vendor*	Product Name(s)	Formatting product runs on ...	Merge product runs on ...	Special Capabilities
Appic/Vital Soft	StarJet	MPE V/E, MPE/iX, HP-UX, Domain, AIX, VMS, Ultrix, MS-DOS, SCO Unix	MPE V/E, MPE/iX, HP-UX, Domain, AIX, VMS, Ultrix, MS-DOS, SCO Unix	
JetForm	JetForm	MS-Windows, NewWave	MS-DOS, MS-Windows, NewWave, MPE V/E, MPE/iX, HP-UX, AIX, VMS, Ultrix, SUN OS, SCO Unix, PC-LANs	
Proactive Systems	Fantasia	MS-Windows, MPE V/E, MPE/iX, HP-UX	MPE V/E, MPE/iX, HP-UX	HP 2680 Migration
Unison-Tymlabs	Lasersoft	MS-Windows, MPE V/E, MPE/iX	MPE V/E, MPE/iX	
Unison-Tymlabs	Formation	MS-Windows	MPE V/E, MPE/iX, HP-UX	HP 2680 Migration
SMM/Design	Spinner	MPE/iX, HP-UX, MS-DOS	MPE/iX, HP-UX	HP 2680 Migration
Elixir	Elixir Edition	MS-Windows	MS-Windows	Xerox Migration IBM Migration

\* See Table 4.3 for third party addresses and phone numbers.

### Spooling software

A number of spooling capabilities and products are available for HP 5000 customers. The standard system spooler may suffice, or the customer may desire a network spooling product to automatically route spool files between systems on a network.

Table 4.2 lists spooling products from HP and third-party vendors. Some of these products provide network spooling capabilities. The table lists the type of system required for an HP 5000 print server and the systems from which output can be spooled over the network.

The listed vendors should be contacted for more information on their products. Table 4.3 lists software vendor phone numbers and addresses.

**Table 4.2 Spooling Software Vendors**

Vendor*	Product Name	HP 5000 Server	Network Spooling	<i>Supports remote spooling from these systems</i>					
				MPE V/E	MPE/iX	HP-UX	PC LAN	IBM	DEC
Hewlett-Packard	MPE/iX Spooler	HP 3000	no						
Hewlett-Packard	Netware 3000	HP 3000	yes	X	X	X	X	X	X
Hewlett-Packard	Resource Sharing	HP 3000	yes	X	X		X		
Hewlett-Packard	HP-UX Spooler	HP 9000	no						
Hewlett-Packard	Netware 9000	HP 9000	yes	X	X	X	X	X	X
Hewlett-Packard	OpenSpool/UX	HP 9000	yes			X			
Holland House	Unispool	HP 9000/HP 3000	yes	X	X	X	X		
NSD	Transpooler	HP 9000/HP 3000	yes	X	X	X	X		
Quest	NBSpool	HP 9000/HP 3000	yes	X	X	X	X	X	X
Unison-Tymlabs	SpoolMate	HP 9000/HP 3000	yes	X	X	X	X	X	X

\* See Table 4.3 for third party addresses and phone numbers.

**Printing IBM AFP Files**

You may encounter situations where the customer wants to begin offloading an IBM mainframe but has an investment in IBM Advanced Function Printing (AFP) that he wants to protect. With the idaPSS and idaRPP products from I-Data, IBM AFP files on a mainframe can be converted to PCL, data compressed, transferred over a network link to an HP 3000, decompressed, and then printed on an HP 5000 printer.

**Migrating from IBM AFP, Xerox Metacode**

You may also encounter situations where the customer is looking for ways to migrate from IBM AFP or Xerox Metacode to a more open printing standard such as PCL. Elixir is one vendor that supports a large number of printing languages and can provide tools and help in migrating from closed proprietary environments such as IBM AFP and Xerox Metacode. While Elixir is one of the dominant formatting vendors in the Xerox and IBM worlds, PCL is actually a native language for them. Elixir products use PCL and HP LaserJet printers for the design and proofing of documents. After documents and forms are designed and proofed using PCL and LaserJet printers, they are then converted to IBM AFP and Xerox Metacode for printing on IBM and Xerox printers.

**Table 4.3 Addresses and Phone Numbers for Software Vendors****Appic**

Product: StarJet  
 123 rue de Petit-Vaux  
 91360 Epinay sur Orge  
 France  
 Phone: (+33 1) 64 54 87 37  
 Fax: (+33 1) 64 84 42 69

**Design/3000**

Product: Spinner  
 P. O. Box 13086  
 Salem, Oregon  
 97309-1086  
 Phone: 503-585-0512  
 Fax: 503-585-1706

**Design/3000**

Product: Spinner  
 International Sales Office  
 System Software International  
 4-6 St. Andrews Road  
 Droitwich, Worcs.,  
 England WR9 8DN  
 Phone: (+44 905) 79 4646  
 Fax: (+44 905) 79 4505

**Elixir Technologies Corp.**

P.O. Box 1559  
 Ojai, California 93024  
 Phone: 805-641-5900  
 Fax: 805-641-5920

**Holland House**

Products: Unispool, StarJet  
 P.O. Box 91027  
 Austin, Texas 78709  
 USA  
 Phone: (+1 512) 288-7540  
 Fax: (+1 512) 288-4240

**Holland House B.V.**

Products: Unispool, StarJet  
 Molenkampsweg 1  
 P.O. Box 3000  
 5306 ZX BRAKEL  
 Netherlands  
 Phone: (+31 4187) 3000  
 Fax: (+31 4187) 3060

**I-Data USA**

Product: RPP/3000  
 19 Walt Whitman Road  
 Huntington Station,  
 New York 11746  
 USA  
 Phone: (+1 516) 243-6600  
 Fax: (+1 516) 351-1273

**I-Data International**

Product: RPP/3000  
 Vadstrupvej 35-43  
 2880 Basvaerd  
 Denmark  
 Phone: (+45 44) 44 00 77  
 Fax: (+45 44) 44 07 54

**JetForm**

Product: JetForm  
 5674 Stoneridge Drive  
 Suite 202  
 Pleasanton, California 94588  
 USA  
 Phone: (+1 510) 734-8776  
 Fax: (+1 510) 734-0369

**NSD**

Product: Transpooler  
 1400 Fashion Island  
 Fourth Floor  
 San Mateo, CA 94404  
 USA  
 Phone: (+1 415) 573-5923

**Proactive Systems**

Product: Fantasia  
 4 Main Street, Suite 240  
 Los Altos, CA 94022  
 USA  
 Phone: (+1 415) 949-9100

**Proactive Systems, Ltd.**

Product: Fantasia  
 Central Court, Knoll Rise  
 Orpington, Kent  
 BR6 OJA  
 UK  
 Phone: (+44 689) 891 475

**Quest Software**

Product: NBSpool  
 610 Newport Center Drive  
 Suite 890  
 Newport Beach, Ca 92660  
 USA  
 Phone: (+1 714) 720-1434

**Unison-Tymlabs**

Products: Lasersoft, Formation,  
 Spoolmate  
 675 Almanor Avenue  
 Sunnyvale, CA 94086  
 USA  
 Phone: (+1 408) 245-3000

**Unison-Tymlabs, (UK)**

Products: Lasersoft, Formation,  
 Spoolmate  
 Parkinson House, Vaughan Road  
 Hertfordshire, Harpenden  
 AL54EQ  
 UK  
 Phone: (+44 582) 462 424

**Vital Soft**

Product: StarJet  
 1153 Bordeaux Drive  
 Suite 101  
 Sunnyvale, CA 94089  
 USA  
 Phone: (+1 408) 745-7680  
 Fax: (+1 408) 745-6681

## 5. Additional Information Sources

### Where to go for More Information

The following are places where you can get more information and assistance on HP 5000 cut sheet printers.

#### Data Sheet

The HP 5000 cut sheet printer data sheet part number is 5091-9788E. This data sheet is available from the Literature Distribution Center, PowerTools, and HPFirst.

#### Sales Guide

Additional copies of this Sales Guide are available from PowerTools or the Literature Distribution Center using part number 5091-9789E. Note that this Sales Guide is an internal document only and is not to be provided to customers.

#### Hotline Articles

The following HP 5000 cut sheet printer hotline articles are available on the GSY Hotline and on PowerTools:

C30PRES (C30/C30D sales presentation, in Lotus Freelance format)

C30COMP (C30/C30D competitive comparison)

C30COO (C30/C30D cost of ownership, Lotus wk1 format)

#### Factory Contacts

The following are contacts for HP 5000 printer information:

- Sales Response Center
- CSY or GSY Sales Development Engineers
- For complex issues contact one of the following:

Americas	Alex Early (+1 408) 447-1095
Europe	Sally Beythoun (+49 7031) 14-1091
Asia Pacific	Winston Lin (+81 78) 993-2907

## Appendix A - Competing with Xerox

### The Company

Xerox's greatest strength is their reputation as the leader in data center printing. It is likely that they have an existing relationship with your customer by supplying copiers or printers. Xerox has an extensive worldwide sales, support, and consulting capabilities and will sell their printers direct. Xerox has many similarities in selling tactics with IBM. They will "sell high" and focus on the customer relationship rather than product features.

The vast majority of Xerox sales have been proprietary printers on IBM mainframes. Although many of their printers now support Postscript and PCL, they are more comfortable selling their proprietary technology. You can gain the advantage with HP's exclusive focus on multi-vendor industry standards and our superior desktop to data center compatibility.

Xerox is likely to claim more printer experience than HP. However, HP has developed the most successful printers in the industry - the HP LaserJet printer family. With the C30, HP has "scaled up" from LaserJet printers while preserving the low price and open, standards-based printing environment which have made LaserJet printers such an outstanding success. Also, HP's experience with both systems and printers is crucial for providing an integrated, single vendor solution. And, while HP's support is rated #1, Xerox has a poor reputation for interfacing in the HP systems environment.

### Xerox 4235 Competes with the C30D

The Xerox product most directly comparable to the C30/C30D is the Xerox 4235. The 4235 is the entry-level data center printer in Xerox's product line. The Xerox 4235 is a 35 page-per-minute printer with a duty cycle comparable to the duty cycle of the C30/C30D. The Xerox 4235 bundles in duplex printing as well as extensive paper handling capability. As a result, its standard functionality is more comparable to that of the C30D. The C30 offers you a lower-end model for the price-sensitive customer.

### The 4235 Only Supports PCL 4

The Xerox 4235 only supports PCL 4. Through the support of PCL 5 on the C30 and C30D, your customers gain support for scalable fonts and compressed graphics, thereby improving the appearance and readability of printed output.

### The 4235 is a "beast" of a Printer

The Xerox 4235 is not well matched in terms of size to HP's compact midrange systems and servers. It requires 3x the floor space, and it is more than 3x the weight of the C30D. However, the added size and complexity of the 4235 have allowed Xerox to include more paper handling flexibility than the C30D offers even with high capacity paper handling accessories installed.



## You Win Big on Price

Price is your biggest advantage when competing against the Xerox 4235. The C30 and C30D have a 55% and 40% price advantage, respectively, over the Xerox 4235. HP's maintenance costs are a third of Xerox's. Your customers can expect a 30% lower total cost for printing due to the C30's low purchase and maintenance pricing.

Xerox will be forced to claim the Xerox 4235 is a more rugged and reliable product than the C30D to justify the very high price. However, the duty cycle of the Xerox 4235 is actually lower than that of the C30D. Additionally, if the Xerox 4235 printer is so reliable, then why are its support costs triple those of the C30D?

Figure A.1 Competitive Comparison with Xerox 4235

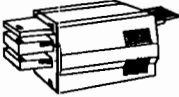

	<b>HP C30D</b>		<b>Xerox 4235</b>
			
<b>Speed</b>	<b>30 ppm</b>	<b>+ 17%</b> →	<b>35 ppm</b>
<b>Duty Cycle</b>	<b>200,000 pg/mo</b>	<b>- 25%</b> →	<b>150,000 pg/mo</b>
<b>Price</b>	<b>\$21,340</b>	<b>+ 68%</b> →	<b>36,000</b>
<b>Support</b>	<b>\$160/mo</b>	<b>+ 118%</b> →	<b>\$435/mo</b>
<b>Language</b>	<b>PCL5</b>		<b>PCL4</b>

Table A.1 Competitive Comparison Table

	HP C30/C30D	Xerox 4235	QMS 3225
<b>Speed</b>	30 images per minute	35 images per minute	32 images per minute
<b>Duty Cycle (pages/Month)</b>	200,000	150,000	200,000
<b>Print Technology</b>	LED Array	Laser	Laser
<b>Resolution (dpi)</b>	300x300	300x300	300x300 400x400 (Postscript)
<b>Print Language</b>	PCL 5 Postscript Level 2 (Q4CY94)	Xerox Postscript PCL 4	Postscript PCL 5
<b>Imaging (CCITT Group 4)</b>	Q4CY94	Yes	Yes
<b>Duplex</b>	Yes, with C30D	Yes	Yes
<b>Straight Paper Path</b>	Yes	No	No
<b>Paper Types</b>			
Cut Sheet	Yes	Yes	Yes
Transparency	Yes	Yes	Yes
Labels	Yes	Yes	Yes
Envelopes	Q4FY94	No	No
<b>Paper Sizes</b>			
Letter (8.5x11)	Yes	Yes	Yes
A4 (8.3x11.7)	Yes	Yes	Yes
Legal (8.5x14)	Yes	Yes	Yes
Ledger	No	Yes	Yes
<b>Paper Input</b>			
Drawers/Trays	2	4	3
Standard	550/250	550/250/550/2000	250/250
Optional	550/2500, 550/1200	N/A	250/250/1000
Maximum	3050	3350	1500
<b>Paper Output</b>			
Trays/Hopper	1	2	2
Standard	550	250/2000	750/750
Optional	1400	N/A	N/A
Maximum	1400	2250	1500
<b>User Interface</b>	Front Panel	CRT/Menu Driven	Front Panel
<b>Jam Recovery</b>	Yes	Yes	Yes
<b>Offset Job Stacking</b>	Yes	Yes	Yes
<b>Standard Host Interfaces</b>	Centronics Serial	Centronics Dataproducts Serial	Centronics Dataproducts Serial
<b>Optional Host Interfaces</b>	Ethernet	Ethernet SNA/SDLC	Ethernet Token Ring
<b>Concurrent Interfaces</b>	No	Yes	Yes
<b>Dimensions (HxWxD)</b>	38.75x48x20 inches 985x1220x508 mm (C30D with printer stand)	39.6x61.2x24.6 inches 1006x1555x625 mm	27.5x37.4x25.8 inches 700x950x655 mm
<b>Weight</b>	C30: 132 lbs. (60 kg) C30D: 161 lbs. (73.2 kg)	593 lbs. (270 kg)	187 lbs. (85 kg)
<b>List Prices</b>			
Simplex	\$15,950	N/A	\$19,995
Duplex	\$21,340	\$36,000	\$23,490
<b>Monthly Maintenance (5x13)</b>	\$160 for C30D \$144 for C30	\$435	\$331
<b>Cost/Page (@100K pages)</b>	\$0.02	\$0.03	\$0.02
<b>Printer Stand Included</b>	Yes	N/A	N/A

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