

FS-820/920

Small Workgroup Laser Printer



FS-820/920

Work Hard. Print Smart

FS-820/920

Small Workgroup Laser Printer

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FS-820/920

Small Workgroup Laser Printer

Overview

Product Overview

Desktop Workgroup Printers with standard 250 Sheet Paper Drawer plus Single Sheet Multi-Purpose Tray, and 16/32MB RAM.

Basic Specifications

Technology

- 600 dpi Output, Fast 1200 dpi interpolation with no loss in engine speed
- 2400 x 600 DPI Interpolated Resolution (w/KIR)
- 256 levels of gray
- 100K Engine Life
- 6K Monocomponent Toner
- 100K OPC Drum Yield (Imaging Unit)
- 100K Heat/pressure Fusing Unit

Memory Management

	FS-820	FS-920
Std. RAM	16 MB	32 MB
Max. RAM	272 MB	288 MB
Upgrade	16, 32, 64, 128, or 256MB, 1 Slot. 100-Pin DIMMs	16, 32, 64, 128, or 256MB, 1 Slot. 100-Pin DIMMs

Speeds

	FS-820	FS-920
Simplex (PPM)		
Letter	17	19
Legal	15	15



For the latest specifications on these and on all Kyocera Products, please visit www.kmaconnect.com.

Productivity Features

- Language Selection
- Help Guidance
- Auto Start, Auto Shut Off, Auto Pre-Heat

Paper Handling

- Std. 250 Sheet Paper Drawer
- Std. Single Sheet Multi-Purpose Tray
- Paper Capacity: 251
- Acceptable Paper Sizes:
 - Drawer: 8.5" x 11, 8.5" x 13", 8.5" x 14"
 - MPT: 8.5" x 11, 8.5" x 13", 8.5" x 14" Custom (2.8" x 5.8" - 8.5" x 14")
- Paper Weights:
 - Drawers: 16 - 28 lb. Bond
 - MPT: 16 lb Bond - 90 lb. Index
- Input Materials:
 - Bond Paper, Recycled Paper, Transparencies, Labels, Envelopes

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Controller Specifications

Networking Compatibility

- Windows 9x/Me/NT4.x/2000/XP
- Mac OS 8.x/9.x/10.x (FS-920 Only)
- UNIX: Sun OS 4.1.x; Solaris 2.x; AIX; HP-UX(LPR)

Print Controller Specifications

- FS-820: PowerPC405 192MHz
- FS-920: PowerPC405 266MHz

Connectivity / Interface

- Standard IEEE 1284 Parallel (Nibble/ECP), Full Speed
- USB 2.0

Expansion

- Optional IB-100 External Printer Server

Drivers

- KX Driver for Windows®
- PPD for Mac (FS-920 Only)
- PPD for Linux/UNIX
- Certified Uni Driver

PDL/Emulations

- FS-820: PRESCRIBE, PCL6 (XL, PCL 5e)
- FS-920: PRESCRIBE, PCL6 (PCL XL, PCL 5e), KPDL3, (PS3), IBM ProPrinter X24, Epson LQ850, Diablo 630, Line Printer

Font Support

- FS-820:
 - 14 Outline Fonts for PCL6 (XL/5e)
 - 1 Bitmap Font
- FS-920:
 - 80 Outline Fonts for PCL6 (XL/5e, KPDL3)
 - 1 Bitmap Font

Utilities

- KPrint
- PRESCRIBE Utilities

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With the Optional IB-100 Print Server Specifications

Networking Compatibility

- Windows 98SE/Me/NT4.x/2000/XP
- Mac OS 8.x/9.x/10.x (FS-920 Only)
- UNIX: Sun OS 4.1.x; Solaris 2.x; AIX; HP-UX(LPR)

Print Controller Specifications

- FS-820: PowerPC405 192MHz
- FS-920: PowerPC405 266MHz

Printer Interface

- Full Speed USB 2.0

Network / Interface

- 10/100BaseTX

Supported Protocol

- TCP/IP, IPX/SPX, AppleTalk, NetBEUI

PDL/Emulations

- FS-820:
PRESCRIBE, PCL6 (XL, PCL 5e)
- FS-920:
PRESCRIBE, PCL6 (PCL XL, PCL 5e), KPDL23,
(PCL3), IBM ProPrinter X24, Epson LQ850, Diablo 630,
Line Printer

Utilities

- KM-NET Viewer, KM-NET for Clients,
Kyocera Command Center, KPrint, PRESCRIBE Utilities

Connectivity/Interfaces:

- Std. Full-Speed USB 2.0
- Std. Parallel
- Std. Compact Flash Card Slot (Type 1)

Output:

- 250 Sheet Face-Up Tray

Input:

- 250 Sheet Tray



FS-820/920

Small Workgroup Laser Printer

Technology

Building Upon Success

The FS-1010 has been a large success for Kyocera. Following the ECOSYS tradition, Kyocera brought to market a fast, quality printer that offered the lowest Total Cost of Ownership (TCO) in the industry.

And now, we are pleased to announce the introduction of our newest Small Workgroup Laser Printers, namely the FS-820 and FS-920. These fast, productive systems build upon the incredible benefits of the FS-1010 while offering additional memory, a faster processor, and increased speeds. Combine this with the high yield, long-life consumables, a low acquisition cost, and you will find yourself with one of the most cost effective Small Workgroup Devices in today's marketplace.

Under the Hood

There are several product enhancements, aimed at increasing productivity and enhancing reliability. These product enhancements are listed in the chart to the right.

Versatility

From the single user to small-workgroup user, the FS-820 or FS-920 make the perfect desktop printer. For those who require a resource for printing highly sensitive material, or for those who just require a conveniently located device to print their everyday documents, these machines can fulfill almost every user need. Users can direct connect this printer to their PC, or with the optional external network interface, users can network these machines into powerful workhorses to increase productivity.

	1010	820	920
Printer CPU	200MHz	192MHz	266MHz
Printer Memory Std/Max	16MB/144MB	16MB/272MB	32MB/288MB
USB Interface	Yes	Yes	Yes
PDF Direct Print	No	Yes	Yes
Warmup Time	15 sec	16 sec	16 sec
Output Speed	15ppm	17ppm	19ppm
Toner Capacity	6K	6K	6K

The FS-820 and FS-920 are excellent examples of Kyocera's tradition of productivity, reliability and versatility, with long-life consumables, reduced maintenance and a low Total Cost of Ownership (TCO). By providing the most comprehensive package available today Kyocera is setting the standard with print technology.

In the following sections, we'll delve deeper inside the product, to give you a rich understanding of what to expect with these great products. Let's take a closer look.

FS-820/920

Small Workgroup Laser Printer

Printing

The Print Controller

The Power PC405 192 and 266MHz controller available for the FS-820 and FS-920 (respectively) can be described as the “brains” within the printer. Megahertz or MHZ describes the “clock speed” of a CPU. The CPU for the FS-820 runs at 192MHz or 192 million cycles per second, while the FS-920 runs at 266MHz. So what does this mean to the Workgroup? Faster processing of documents, which increases productivity.

Printer Memory

Depending on Client applications, the amount of Printer Memory, or RAM (Random Access Memory) will impact printing significantly. As applications have grown more sophisticated, and clients within the Workgroup environment have taken advantage of these new levels, electronic documents are now larger. To that end, a higher amount of RAM is needed. The Printer Memory on the FS-820 is standard at 16 MB, while the FS-920 is standard at 32MB, with the option to upgrade to 272 (FS-820) or 288MB (FS-920) via 100-Pin DIMMS.

Interfaces

Whether you will connect your system to a network or a single PC, the types of interfaces are of great importance. In many environments, you may need a hybrid approach. When designing our Printers, Kyocera took this into consideration. It is important to note and distinguish between the different types for Printing.

Interface	Transmission Rate	Best Used For	Comments
Standard			
Parallel	7 to 9 Mbps	Desktop Printing, Direct Connection	Std in almost all printers today
Full-Speed USB 2.0	Up to 12 Mbps	Desktop Printing, Direct Connection, MAC environments	Easiest way to direct connect most devices
Optional			
External NIC (IB-100)	10/100BaseTX	Network Printing	USB connection alone

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Printing

Print Resolution

Customers interested in fast laser printing are often confused when the subject of resolution comes up. More is better, right?

Print Resolution does play a significant role in the way a document looks when imaged. The problem lies when a higher resolution affects print speed.

The Print System on the FS-820/920 is capable of printing in Fast 1200 Mode, without any loss in speed. What is Fast 1200 Mode? Fast 1200 Mode is an interpolated 1800 x 600 DPI for printing. Kyocera even further refines its Fast 1200 Mode with Kyocera Image Refinement (KIR). This refinement "smoothes" the digital data, creating a crisp clear image allowing for a maximum resolution of 2,400 x 600 DPI.

Printing can also be achieved in true 600 x 600 mode.

PDL/Emulations

How you print is as essential as what you print. Depending on your environment and applications, different PDLs or Page Description Languages may be necessary. In today's print environment, the most prevalent PDLs are HP's PCL and PostScript.

Kyocera offers PCL 6 on both the FS-820 and the FS-920. KPDL3 is only available on the FS-920. Whether your customers are printing simple office applications, or require complex PostScript control, our devices have the capability to productively output the document.

PRESCRIBE

PRESCRIBE is the native command language and PDL of all Kyocera devices. What makes PRESCRIBE so unique is the ability to customize our Printers and MFPs so we conform and fit within customer's applications and workflow. PRESCRIBE can be used for Forms and Letterhead printing, secure data printing, as well as more complex solutions such as creating filters that "read" print-stream code.

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Printing

Font Support

By providing the appropriate fonts for PCL and PostScript printing, the benefits are two-fold. First, from a visual perspective, what appears on paper is the same as it appears on screen, Second, it drastically reduces the RIP time, since the fonts do not need to be imaged as bitmaps.

Should customers require fonts to be printed that are not resident on the device, they can be printed as bitmaps, though this may slow down the RIPping.

PDF Direct Print

Kyocera's PDF Direct Print software allows users to print any Adobe PDF file without having to open either Adobe Acrobat, or the Acrobat Viewer. By selecting the PDF file via PDF Direct Print, users can set number of sets, paper and finishing options, and the printer they wish to output the document to. PDF Direct Print is a fantastic way to improve the efficiency of your prospect's users, while utilizing the full functionality of your Kyocera product.

KX Driver

Kyocera's KX Driver is our GUI for all of our devices in a PC environment. The GUI on the KX Driver is virtually the same, regardless of Windows® Operating System, Kyocera Device or specified PDL. This makes the KX Driver an incredibly unique Printer interface, and is a great way to market your connected devices. Since the KX Driver was developed internally, we can make changes, respond to market developments and stay flexible, especially with an ever changing technology like computers. Moreover, since we do not source our driver from a third-party, response to any changes can be instantaneous.

Located within the KX Driver are a number of tabs designed with ease of use in mind. These tabs include:

- Media
- Layout
- Imaging
- Output
- Prologue/Epilogue
- Watermarks
- Profile
- About

As you can see on the following page, we have described each of these tabs so that you can gain a better understanding of what these machines are capable of doing.

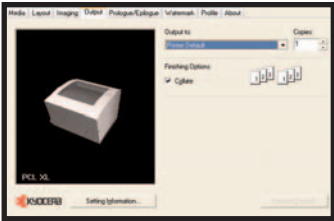
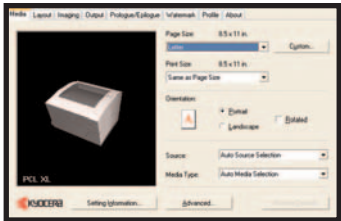
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Printing

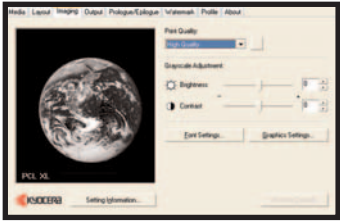
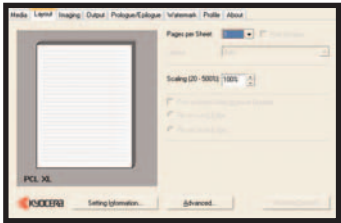
KX Driver

Media Tab - This tab gives you access and control over the size and type of paper required for output. Orientation of portrait and landscape can be selected. Also within the Media tab is the selection for Advanced Printing features, such as Covers and Inserts, and Transparency interleaving. These are key items to show customers, who may be used to hand collating documents that require different media.



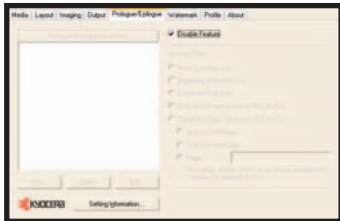
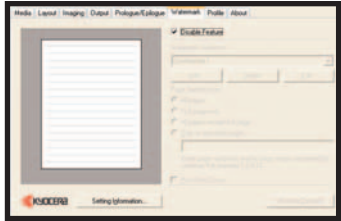
Output Tab - Finishing and destination can be selected under the Output tab. (with the appropriate machine & accessories)

Layout Tab The Layout tab allows for N-UP Printing, Scaling from 20-500%, Duplex and Booklet Mode. In addition, an Advanced tab when utilizing Booklet Mode allows for Gutter settings to be adjusted.



Imaging Tab This tab gives the client complete control over Image Quality, including Resolution, Brightness and Contrast adjustment and Font Selection.

Watermark Tab - Watermarks can be selected, as well as created for documents. Click on this tab to utilize this function.



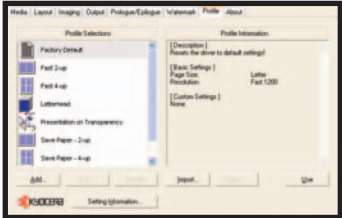
Prologue/Epilogue Tab - Prologue/Epilogue contains the commands and data commands for PRESCRIBE Forms printing. Ideally, when required, the KX Driver for a device will be set as a Virtual Printer, with all commands in place, ready to output the desired document.

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Printing

Profile Tab - This tab displays, and describes all of the default Job profiles. In addition, the user has the ability to create their own custom print jobs to their FS-820/920 from a list of available paper sizes and and print layouts.



About Tab - To view more information on the KX Driver being utilized with your machine, select this tab. This tab shows you the current KX Driver version along with any plug-ins being used.

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Yields

When Printing Makes “Cents”

As is the tradition of all Kyocera Printers, the FS-820 and FS-920 has an extremely long-life consumable yield for it's class. This design approach reduces scheduled downtime and running costs.

Monocomponent Toner

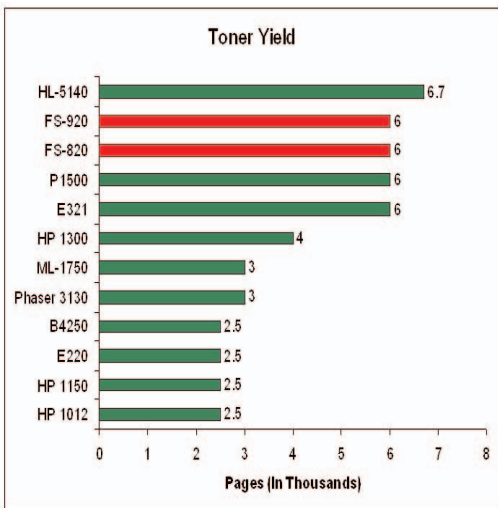
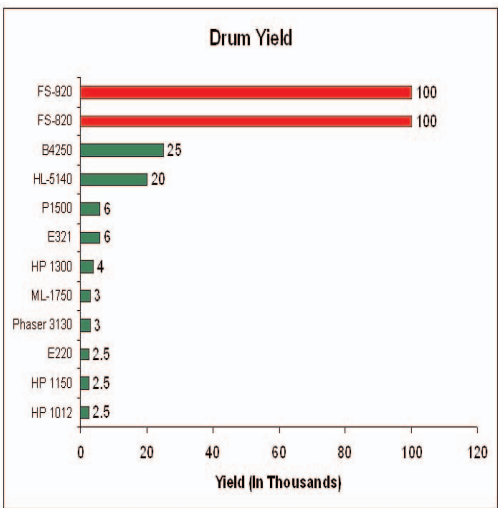
Manufactured by our own company, with a high quality assurance, the Toner Yield on the FS-820 and FS-920 is 6K, based on standard 5% coverage.

The 100k OPC drum and long-life toner contribute to these machines having one of the best CPP's in the industry....Under 2 cents a page!

Kyocera ECOSYS® technology provides customers with a printing product that incorporates long-life consumables and the lowest comparable cost per page

A Tradition Of Excellence

Whether you take our word for it, or you turn to virtually every independent industry source, the plain and simple fact is the high reliability and productivity of our devices, played in no small part by our exceptional yields and impressive technology. Now that's a story to share.



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Specification Analysis

Who is the Competition?

The following models compete in the same segment as the FS-820/920. These challengers will be your most likely adversaries when trying to place the printers in your territory. It must be stressed as current as this list is today, the digital marketplace changes twice as fast. Make it a point to understand the capabilities of future product offerings from the manufacturer who will mostly likely be your number one competitor.

<u>Model Name</u>	<u>PPM</u>	<u>Network</u>
Brother HL-5140	21	Opt
HP LaserJet 1012	14	Opt.
HP LaserJet 1150	17	Opt
HP LaserJet 1300	19	Opt
Lexmark E220	18	Opt
Lexmark E321	20	Opt
Oki B4250	23	Opt
Samsung ML-1750	17	No
Xerox Phaser 3130	17	No

Marketplace Positioning

The following charts are graphic representations of the FS-820/920's position in the marketplace. Comparisons include:

- Drum Yield
- Standard Paper Capacity
- Maximum Paper Capacity
- Multi Purpose Tray Capacity
- Toner Yield
- Toner Adds
- Print Controller MHz
- Standard Printer RAM
- Maximum Printer RAM Capacity

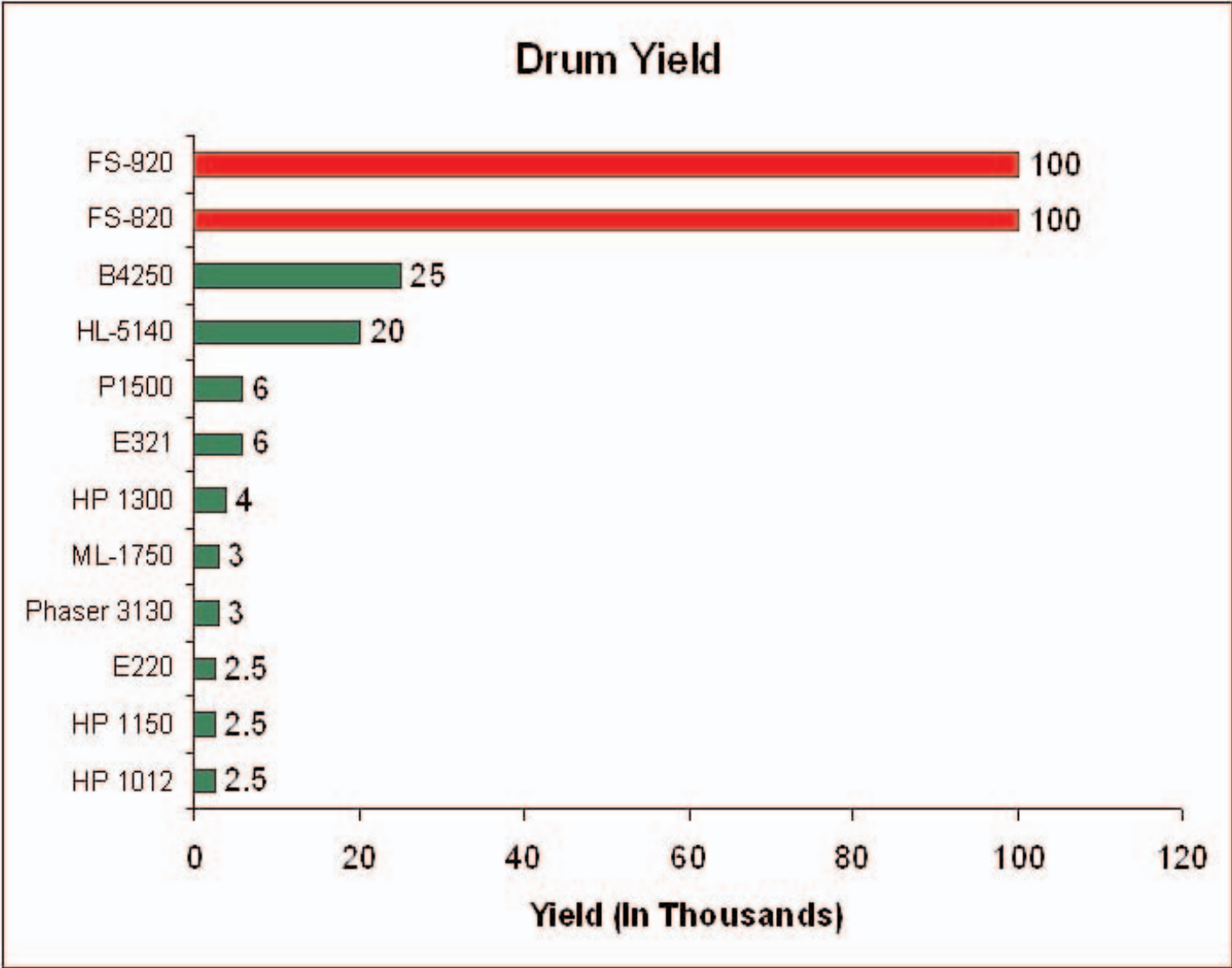
As you will see, the FS-820 and FS-920 excel in every category!

Use this information to you advantage when engaging your customers and prospects. Then demonstrate then the value of these machines.

FS-820/920

Small Workgroup Laser Printer

Specification Analysis



Drum Yield

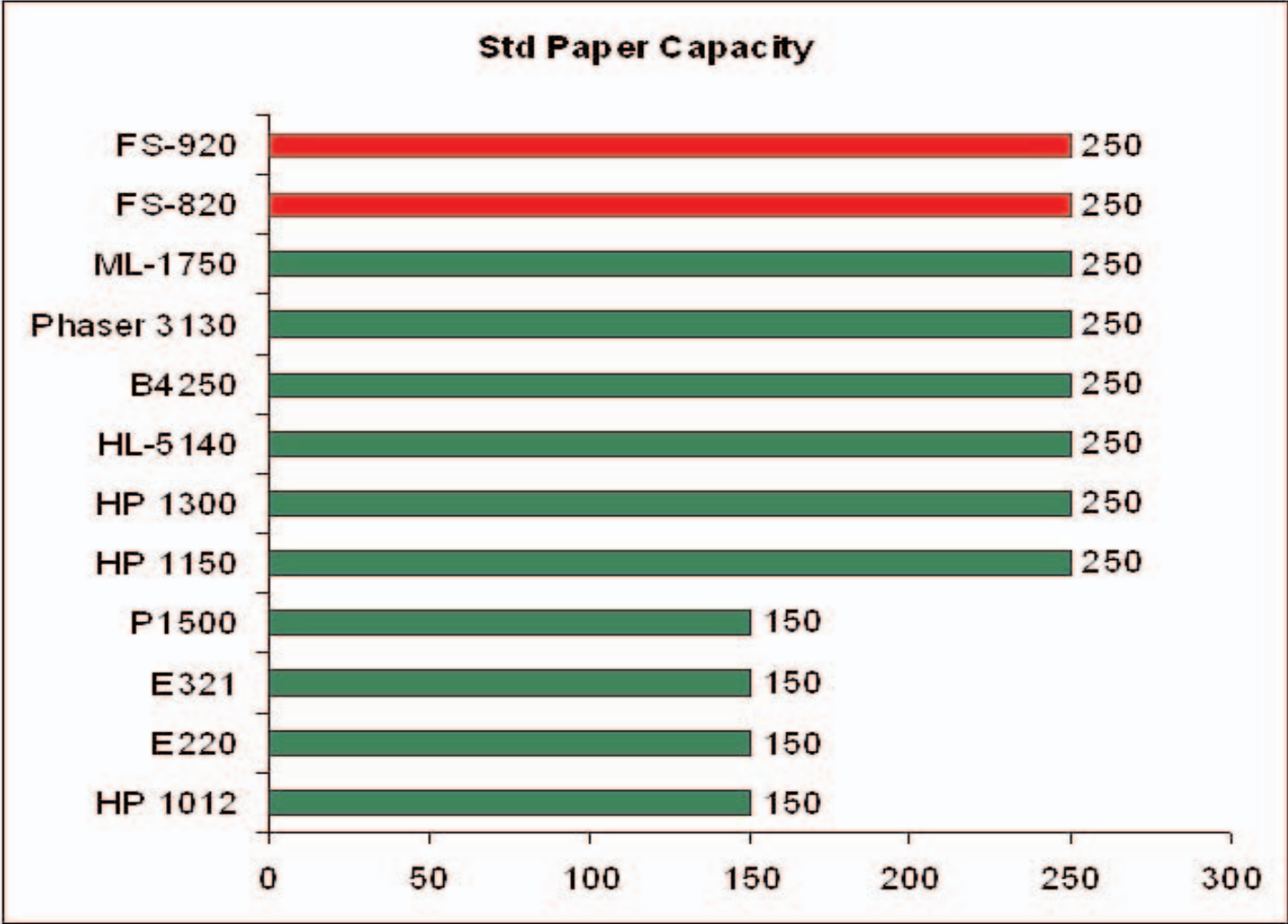
The number of impressions a drum can handle directly impacts the amount of times that the Printer needs to be serviced, as well as the Total Cost of Ownership (TCO). Whether the service is a toner replacement, such as replacing an all-in-one container in an HP, Lexmark, IBM or Xerox, or an actual drum unit itself; the service call requires some form of “down time”. With the FS-820/920, the Drum of the Printer will last much longer to that of the drum of a competitor. This means more productivity, less service requirements, and increased savings due to fewer replacement parts. Also, unlike all-in-one systems, our drum yield is not affected by image area.

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Small Workgroup Laser Printer

Specification Analysis



Standard. Paper Capacity

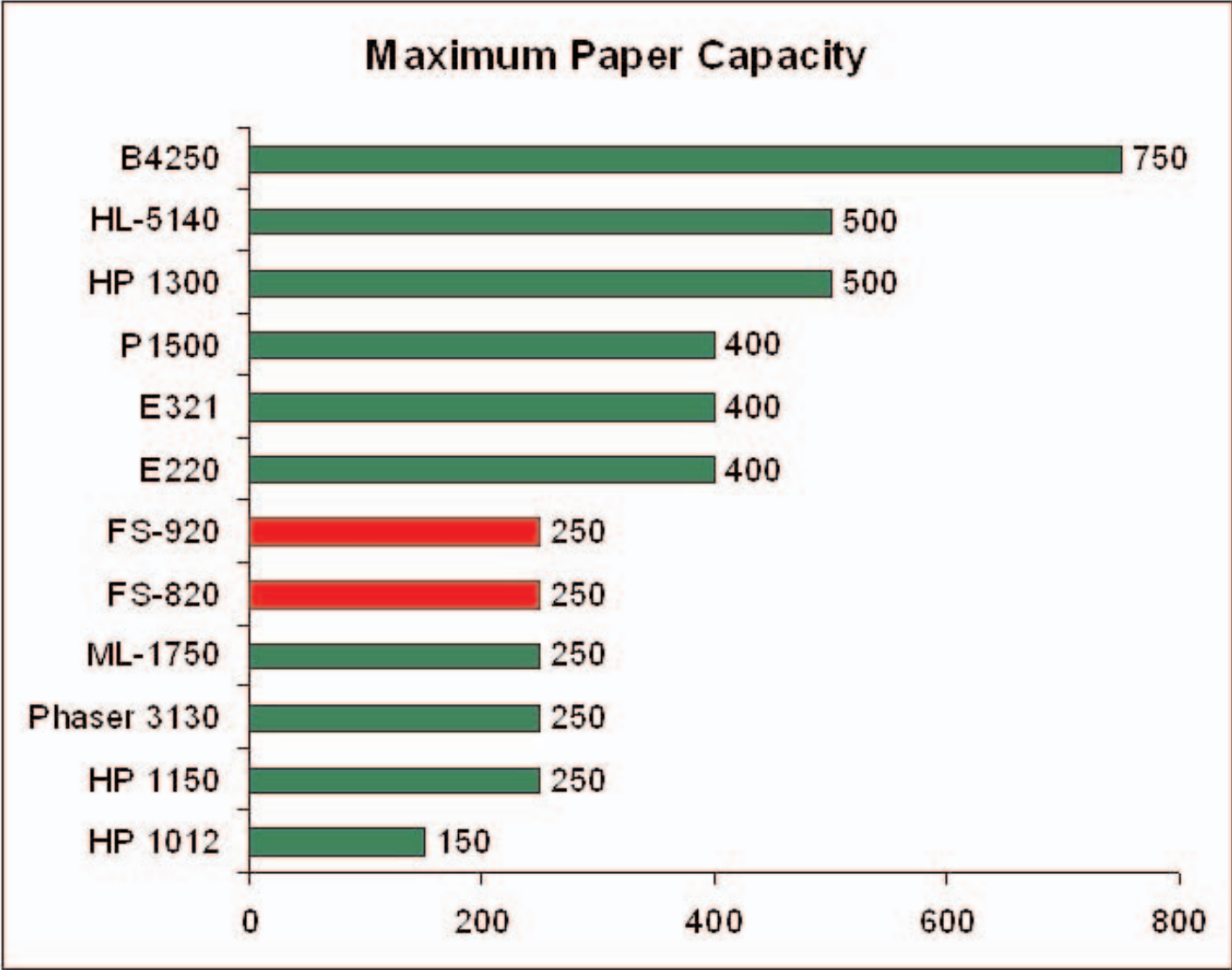
This chart represents the amount of paper that comes standard with these printers directly from the manufacturer. Out of the 12 units reviewed, the FS-820/920 are at the head of the pack. With a standard 250 sheet paper drawer, the Kyocera models give the user more than enough capacity to handle everyday desktop printing right out of the box.

CLASS LEADER

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Small Workgroup Laser Printer

Specification Analysis



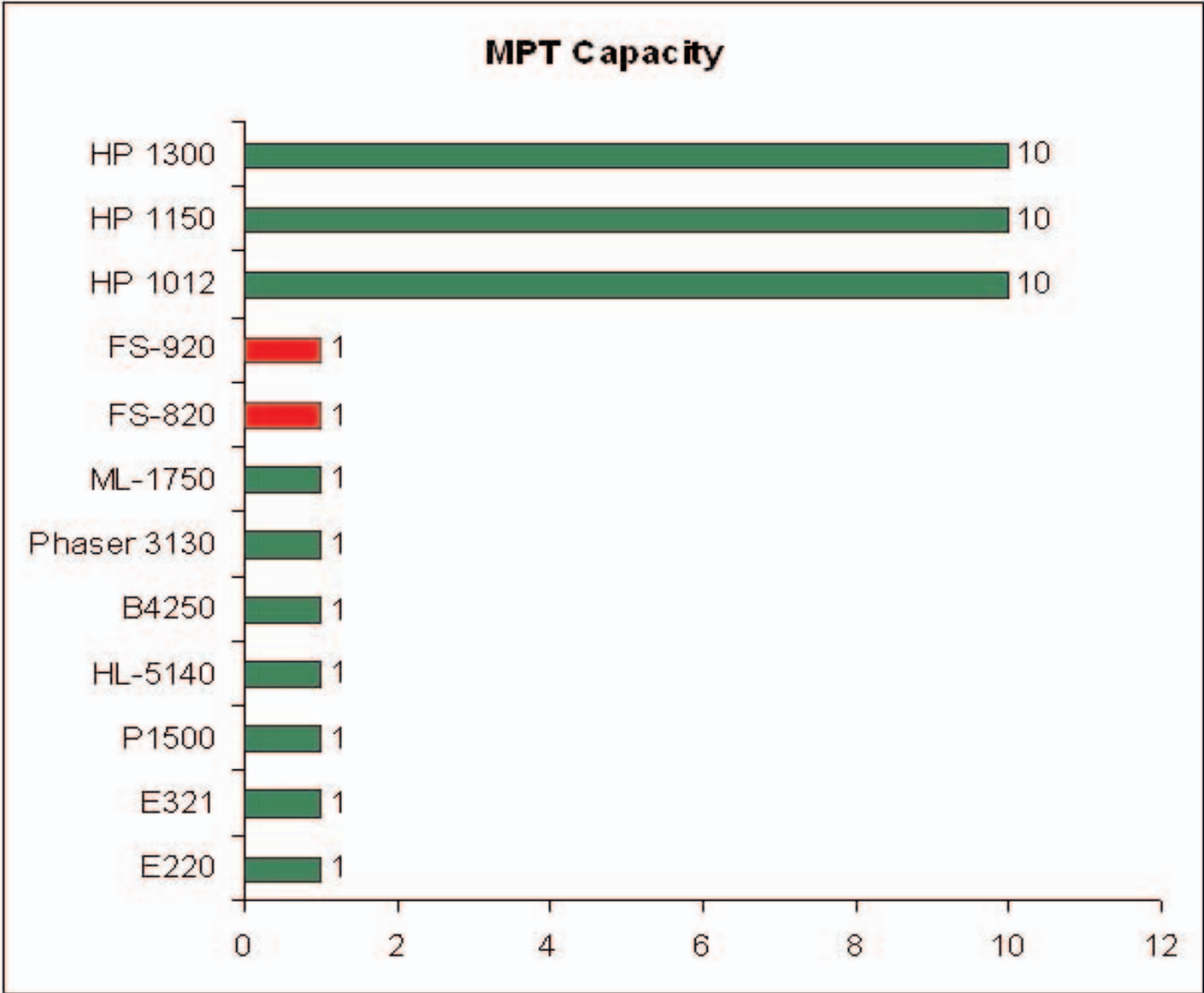
Maximum Paper Capacity

This chart represents the maximum number of sheets of paper that a printer can hold. On the FS-820/920, there are no options for additional paper trays. The maximum capacity is 251 sheets, with the single sheet MPT. While some competitors may state that their products can handle more paper, remember that this is a Small Workgroup/Desktop device and devices in this environment do not have a heavy need for additional paper sources. Printers like the Okidata B4250 boast large paper capacities, however purchasing and maintaining these paper sources becomes very expensive. This can price the printer right out of the customer's consideration process.

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Specification Analysis



Multi-Purpose Tray Capacity

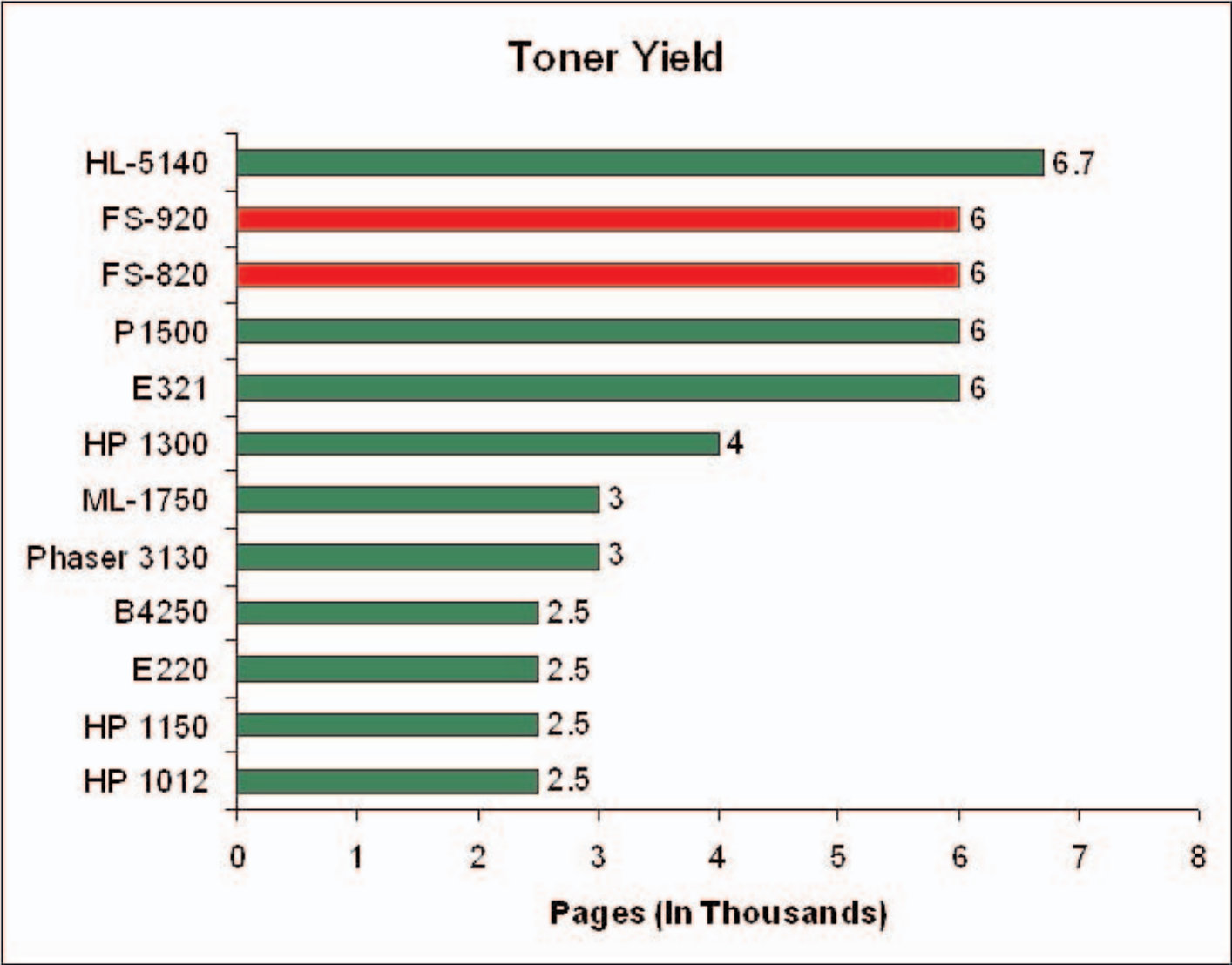
The Multi-Purpose Tray (MPT) is an extra paper source for running heavier stocks, envelopes and transparencies through the printer. The MPTs of the FS-820/920 are single sheet. In this segment of the market, single sheet MPTs are quite common. While some competitors offer a slightly larger MPTs, just remember that heavier stock takes up more room, so your customer will probably be loading the MPT just as often as they would on the Kyocera printers.

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FS-820/920

Small Workgroup Laser Printer

Specification Analysis



Toner Yield

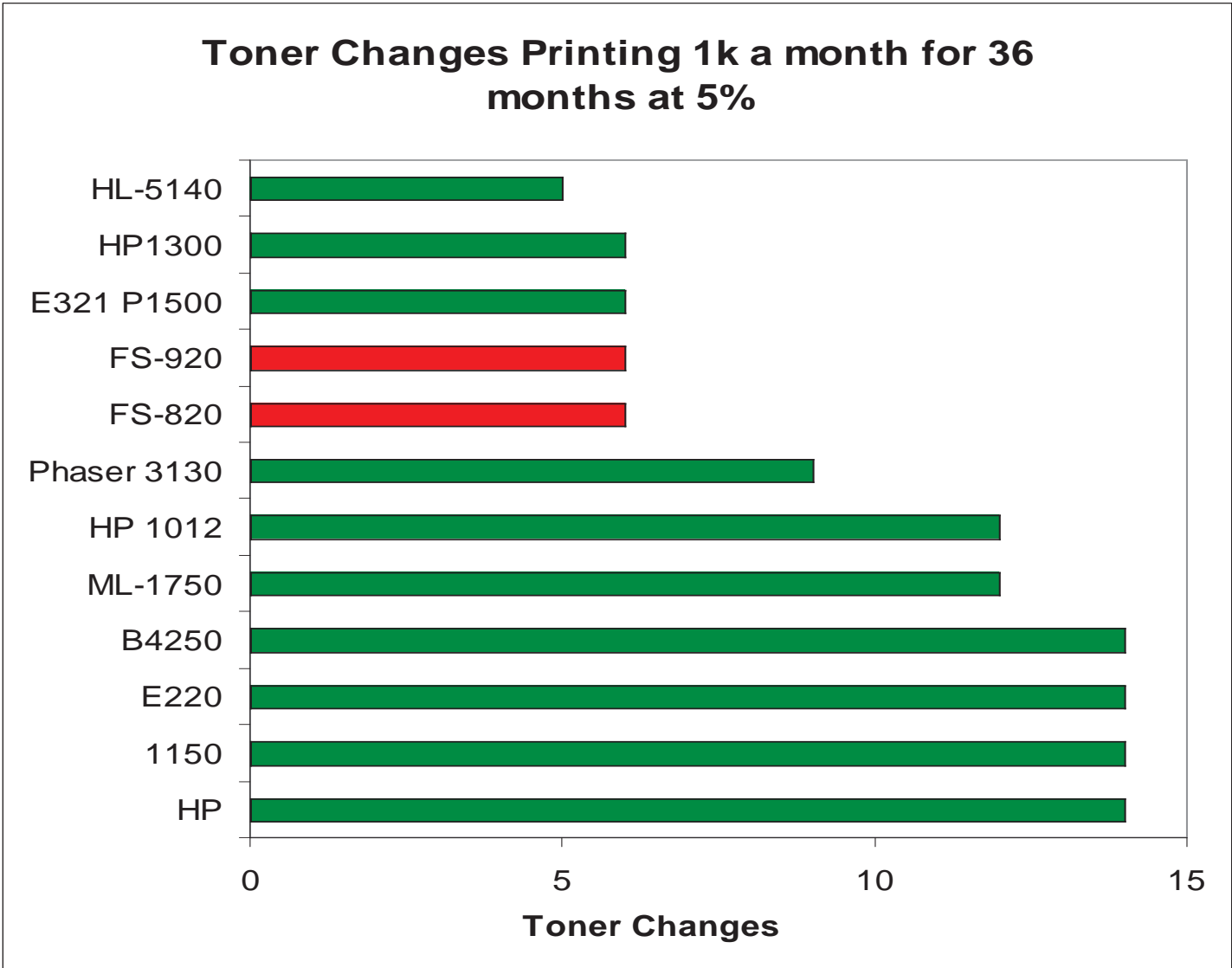
Toner yield is a major discussion point when it comes to acquiring a new piece of office equipment. Based on a 5% image area, the FS-820/920's toner container yields 6,000 images. While some of the competitor's yields are close, or even exceed the yield of the Kyocera Models, you will need to look at a few other factors as well. The first, and most important factor is Cost Per Page (CPP). With a high CPP, it doesn't matter how high your toner yield is, your cost for printing will be much higher. With the FS-820/920, the yield of the toner container and the CPP are Class Leading.

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FS-820/920

Small Workgroup Laser Printer

Specification Analysis



Toner Replacements

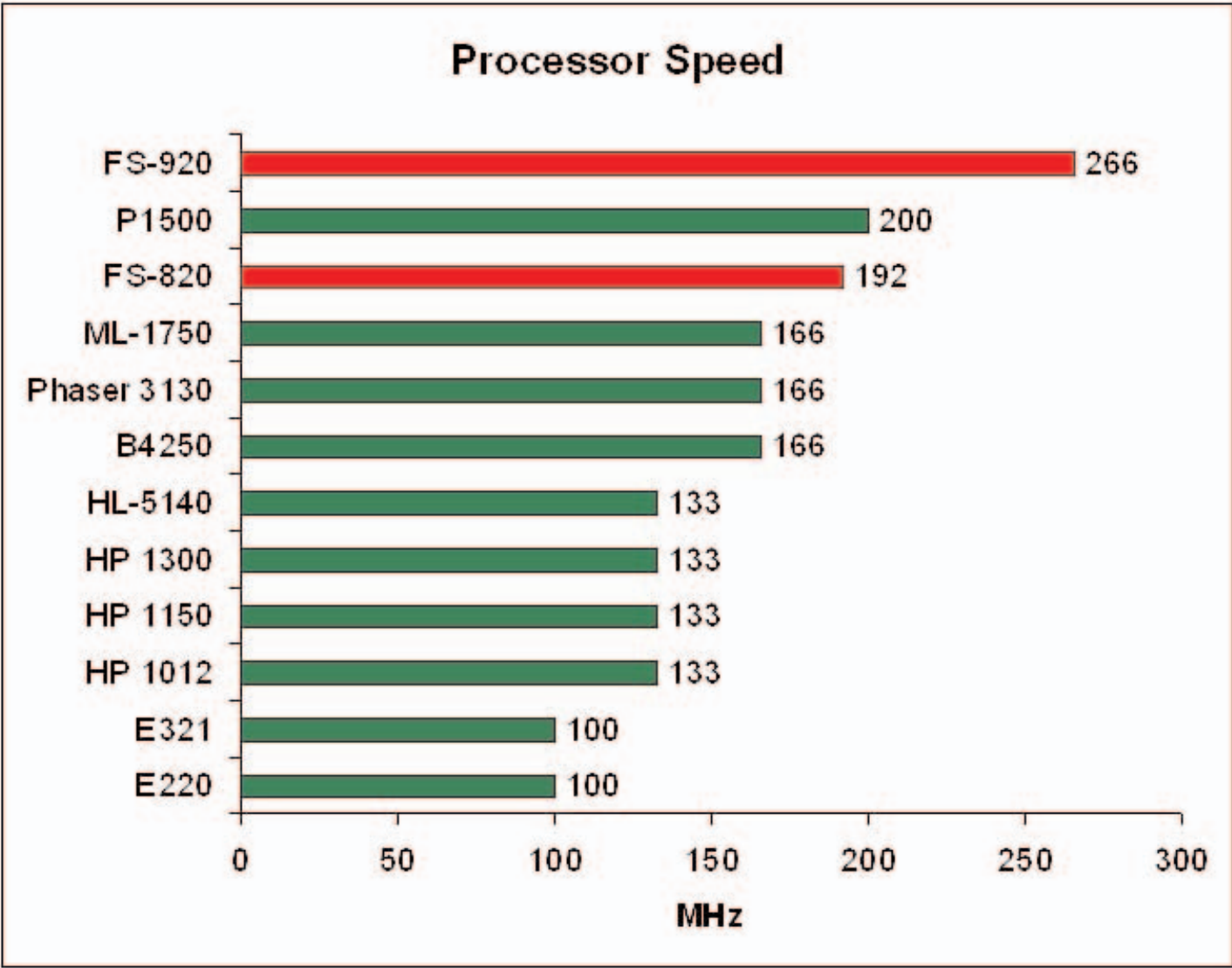
This chart represents toner adds for the FS-820/920 and their respective competitors over a 36-month period at 1,000 pages per month. While toner would be added 6 times for the FS-820/920, a few things should be remembered. While you may need to add toner more often than one of the competitors, the CPP of the FS-820/920 is far lower than that of its competitors, bringing the Total Cost of Ownership (TCO) down drastically. A single user may print more than this a month, further increasing the savings versus the competition. Also, unlike Brother, the FS-820/920 does not require drum replacements just to add toner

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FS-820/920

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Specification Analysis



Processor Speed

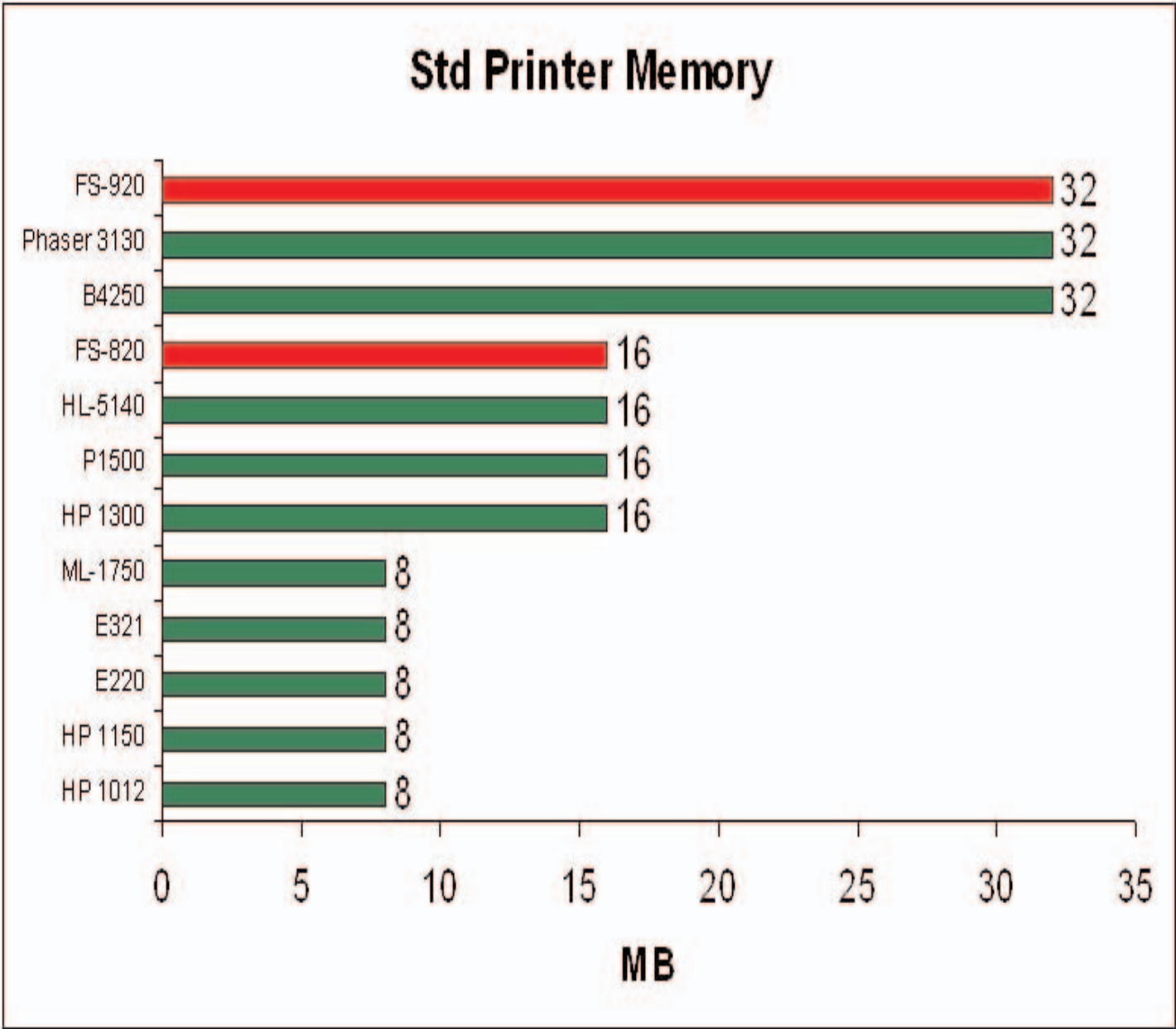
The FS-820 utilizes a PowerPC 405 192 MHz processor, while the FS-920 utilizes a PowerPC 405 266 MHz processor. The clock speed of any print controller system is an important part of productivity for any printer. The FS-820/920 also hold leading positions among the competition in their segment.

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Specification Analysis



Standard Printer RAM

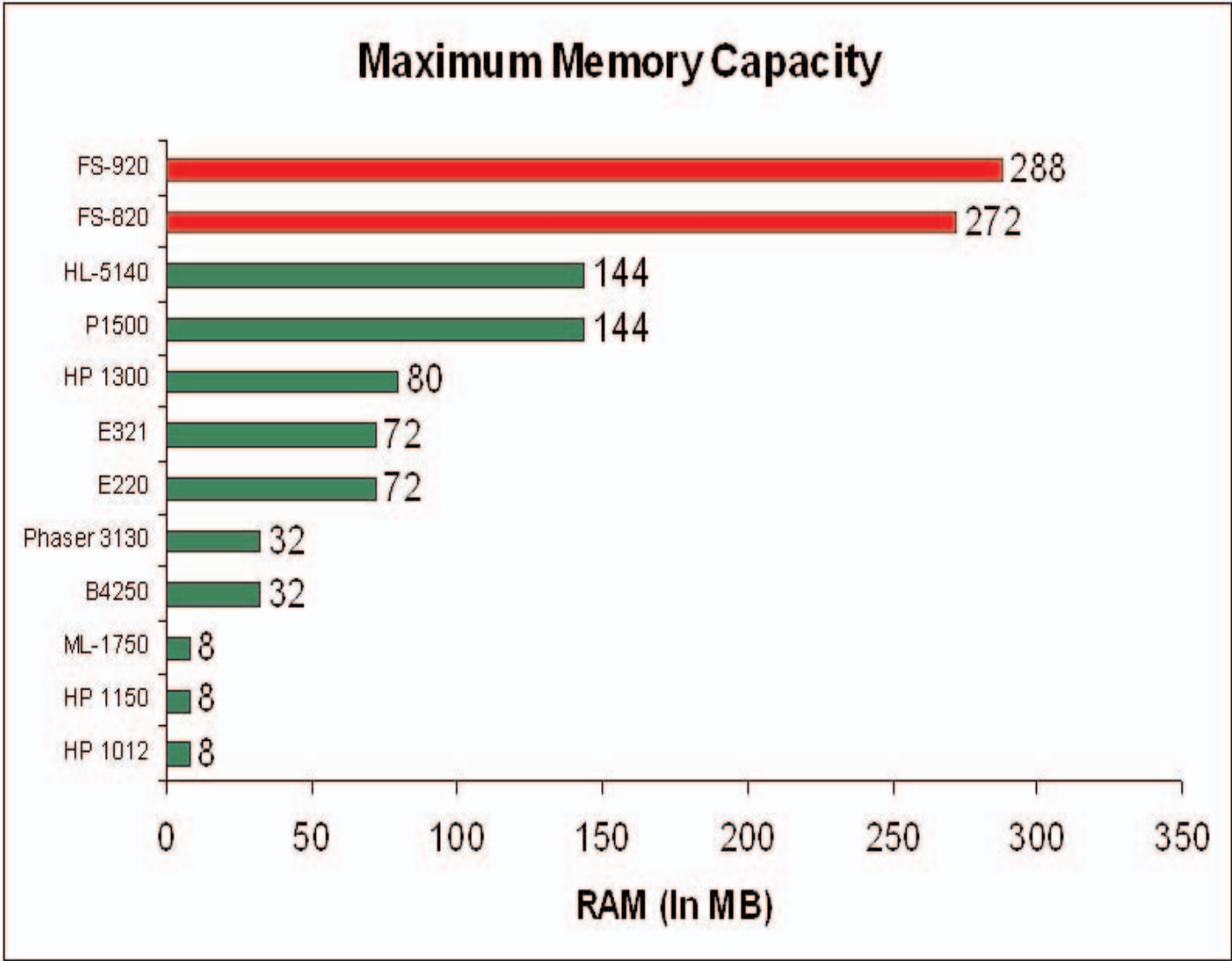
RAM or Random Access Memory is an important component to any printer. It allows each device to process jobs faster for faster output. On the FS-820, 16MB comes standard, while the FS-920 has 32MB of memory standard. The FS-820/920 sit among the top of the list of competitive models.

FS-820: CLASS LEADER
FS-920: BEST IN CLASS

FS-820/920

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Specification Analysis



Maximum Printer RAM Capacity

The FS-820/920 maxes out at an impressive 272MB (FS-820) and 288MB (FS-920). With this amount of RAM, the FS-820/920 are geared towards handling even the most demanding of requests from the Small-Workgroup and single user environments. While some of the competition may argue that you shouldn't need more than 256MB of RAM, keep in mind that these printers can be called upon to process large print jobs. Even if the prospect's needs aren't that high today, the higher capacity allows the product to grow with their needs.

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MSRP Analysis

Drawing out the Bottom Line

While the specifications and features of a Printer are very important, the first and last thing that a prospect will look at will be price. Within the higher speed segments of the printer market, acquisition price is just as important as operation cost when considering a product. Unlike slower-speed systems, if the purchase price of a printer is \$50 too high, then the difference in operating cost may be enough to sway their purchasing decision. To further your Sales efforts, we have analyzed the competition, using published MSRPs, to give you a better idea of what you are up against.

Even with all of this information, we can not stress enough about the TCO value associated with Kyocera printers. This will be one of your largest weapons in selling these products

The MSRP comparisons include:

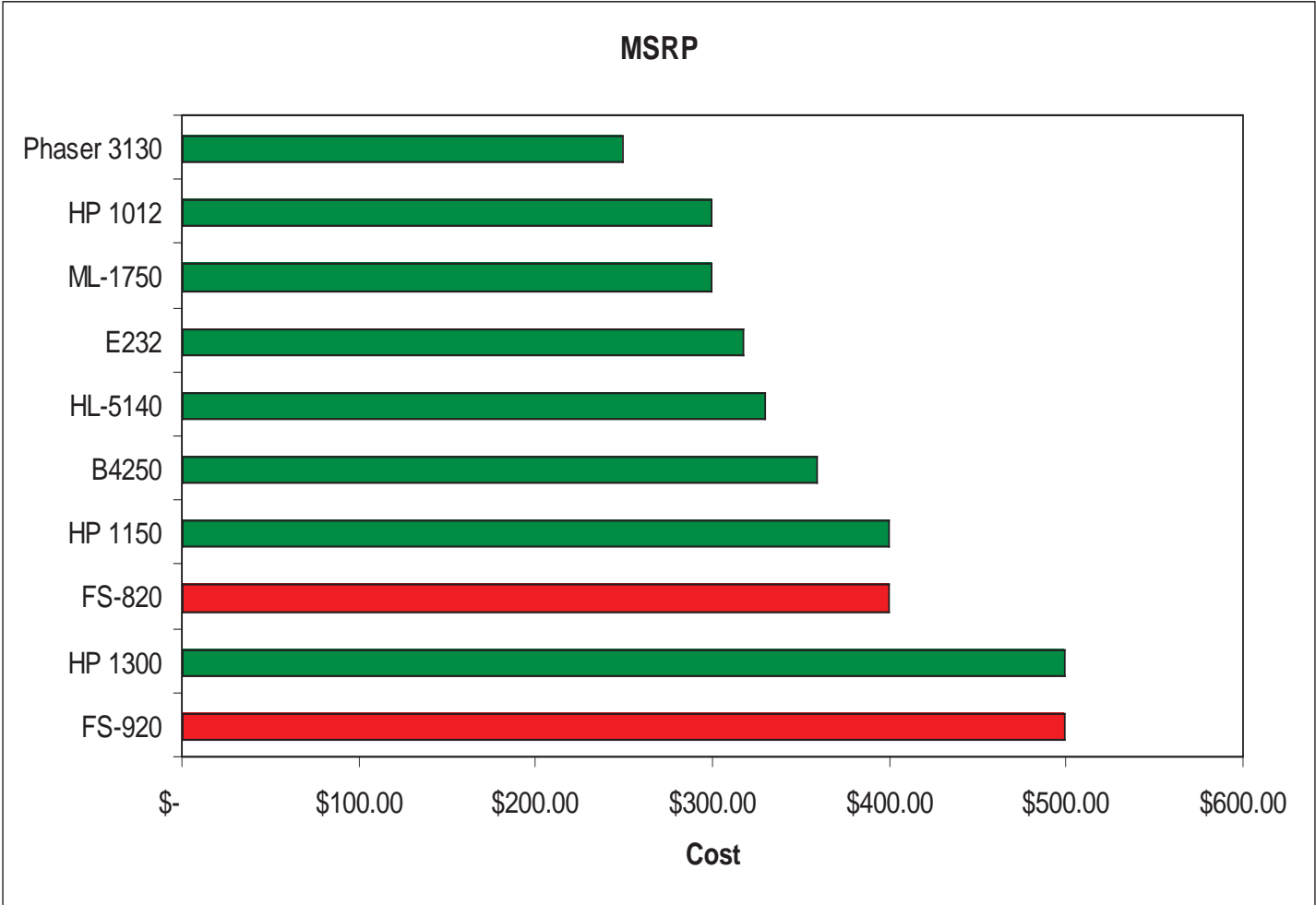
- Mainframe MSRP
- MSRP Cost Per Page
- Overall Mainframe & Toner Total Cost of Ownership

After reviewing the comparisons, I'm sure you will agree that when you consider the strong product features with the competitive price we offer, the right solution for your customers will be a Kyocera Solution.

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Small Workgroup Laser Printer

MSRP Analysis



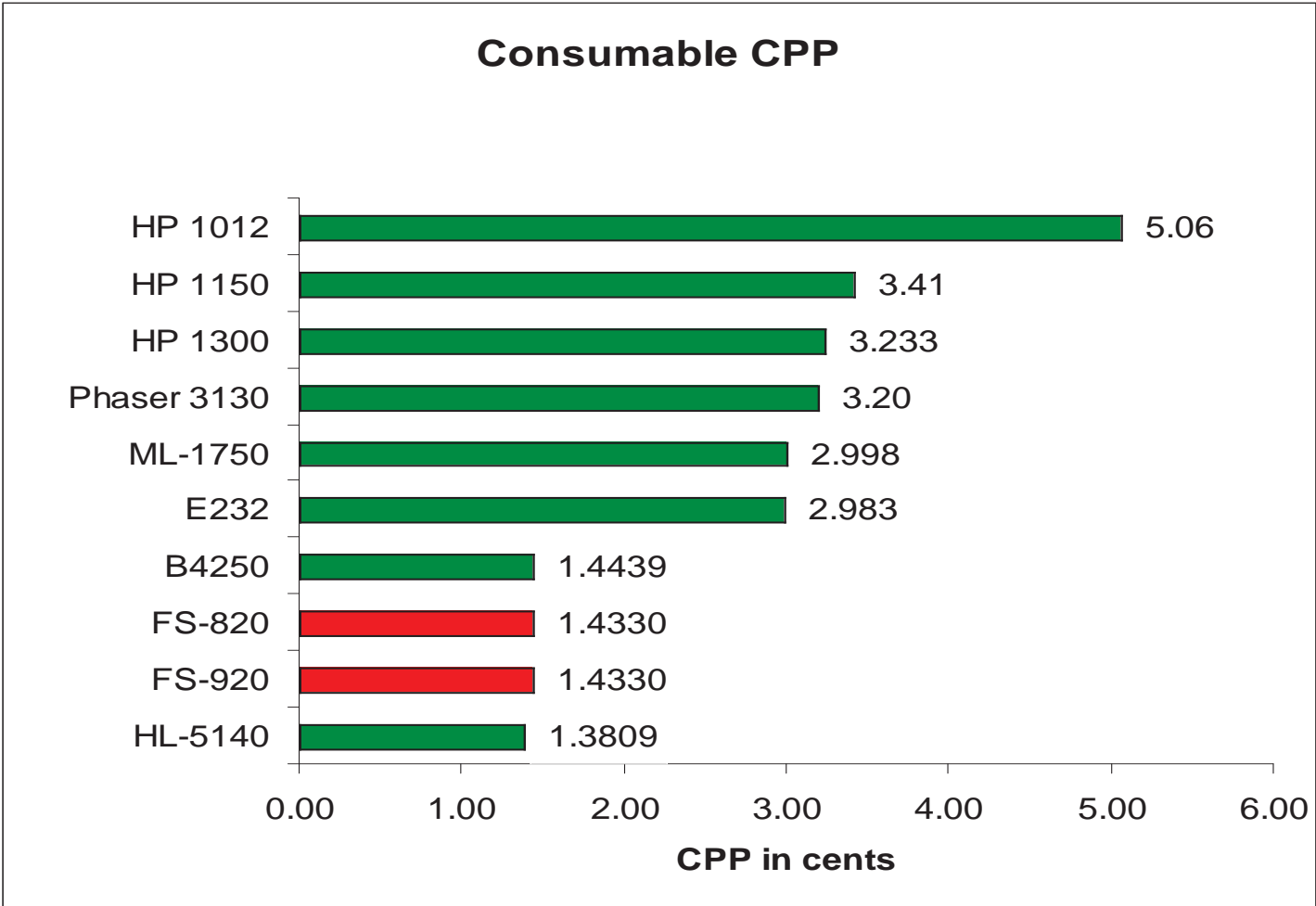
Mainframe MSRP

As you can see, the FS-820/920 falls towards the back end of the pack. With an MSRP of \$399/\$499 respectively, the FS-820/920 are some of the higher priced Printers. However, the FS-820/920 has both a value to the Dealer and to the Customer. By selling the message of these machine's low CPP and TCO, you will find it much easier to justify the value of these machines to a prospect. Focus on CPP and TCO. Combine that with the functionality that these machines offer, and you have yourself a real winner to deal.

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MSRP Analysis



Cost Per Page

Operational cost of a Printer is always an important factor during the purchase process. Cost Per Page, while often overlooked, can be one of the most important features to cover when talking to your prospect. With the FS-820/920, CPP is definitely a topic of conversation that you need to discuss. The FS-820/920 has a CPP of 1.43 cents per page. If you were to look at the overall cost of printing on the FS-820/920, and compare it to the HP LaserJet 1012, you would see that the FS-820/920 operates at almost **ONE THIRD** the cost. You will also see a dramatic savings on many other competitive models as well.

CLASS LEADER

FS-820/920

Small Workgroup Laser Printer

Trademarks

Trademarks

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PostScript is a registered trademark of Adobe Systems, Inc.

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