VERSATEC
A XEROX COMPANY

Versatec Spectrum.
The versatile color hard copy printer/plotter.

Spectrum—the color hard copy printer/plotter that does it all.

Now, a full spectrum of color is yours with the newest Versatec electrostatic color printer/plotter—Spectrum.

Spectrum serves as a high quality plotter, a versatile CRT hard copy device or a fast printer—all in one printer/plotter. With the quiet, reliable operation of electrostatic plotting. And with Versatec's proven electrostatic color plotting techniques.

Plot brilliant color charts in one minute. Print fast data listings or reports at 17 pages per minute. Or copy your display terminal— all with the same versatile hard copy unit— Spectrum.

Only Versatec Spectrum handles any mix of graphics or text on A (11" x 8½") or B (11" x 17") size output, in color or monochrome. Spectrum can also accommodate 297mm wide media to produce A4 (297mm x 210mm) and A3 (297mm x 420mm) output for international operation. And you can print over 200 pages without changing paper or replenishing toners.

Spectrum enables shared usage and complements most popular workstations. Like all Versatec electrostatic plotters, Spectrum is compatible with most systems and supports remote operation.

Small unit size—Versatec Spectrum can be placed on a desk, or on an optional floor stand.

The Versatec advantage.

Versatec Spectrum provides these advantages:

- high speed, independent of plot density
- unattended operation
- reliable operation with lower maintenance than other technologies (no pens to be cleaned or inked)
- high speed controllers off-load rasterization from host computers
- Versatec supplies assures output quality and protects plotting system life
- backed by the leader in electrostatic color plotting—shipping monochrome electrostatic plotters since 1970—color, since 1983
- Versatec service located worldwide to protect your system uptime
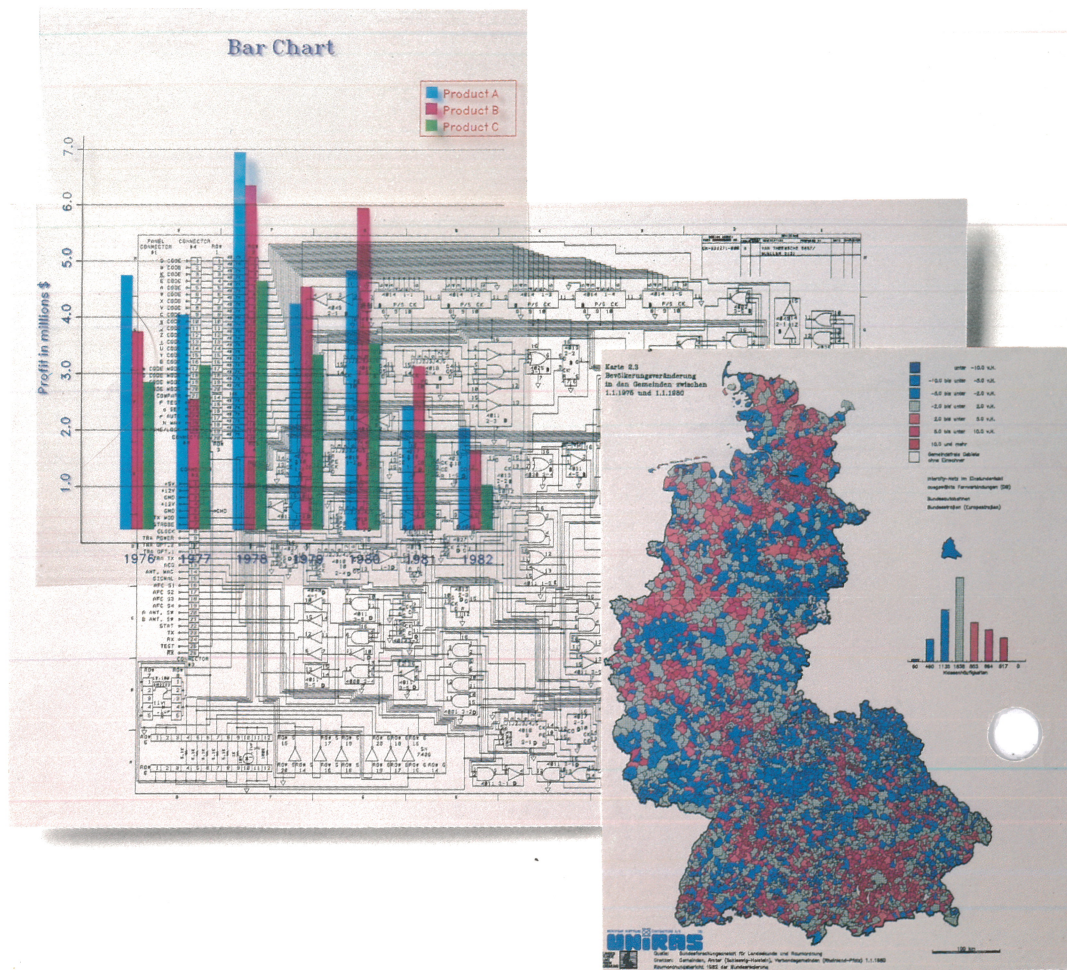
Higher resolution.

Choose from plotters offering 200 or 400 point per inch resolution—and without loss of plotting speed. Use 200 point per inch resolution for CAD, mechanical drawings or electrical schematics. Long the industry standard, 200 point per inch resolution enables sharp, full color copies. Higher resolution—400 point per inch—enables smoother curves, improved character formation—important for such applications as graphics arts, VLSI design and solids modeling. Higher resolution also makes available more addressable dots for a broader range of color. Only Spectrum offers a choice enabling you to select the resolution needed for your application.

Plotting performance you can count on.

Any image that can be digitized can be plotted. Versatec Spectrum speed is a function of paper movement, not mechanical pens or drums. Schematics, maps, charts, on paper or film, can be produced with high, 200 or 400 point per inch resolution. Plot times are independent of data density. Versatec Spectrum produces an 11" x 8½" page in full color in 75 seconds or an 11" x 17" page, in less than 90 seconds.

Use graphics to create legends, analyze data, compare information, easily identify trends. Color adds a new dimension to your data. It allows faster, more accurate decisions. Color enhances reports and pres-

Fast printer.

Need a copy in a hurry? Versatec Spectrum produces an 11″ x 8½″ page in monochrome in 5 seconds or an 11″ x 17″ page in monochrome in 10 seconds. Spectrum emulates Versatec's V-80 printer/plotter. Monochrome output can also be continuous for long plots such as well logs or PERT/CPM charts.

Software listings, parts lists, reports and other text are produced with a built-in character generator at 1100 lines per minute/17 pages per minute. Characters are well-formed using a 16 x 20 dot matrix on 200 point per inch plotters and 32 x 40 on 400 point per inch plotters for improved character definition and easy readability. Print 132 characters on an 11″ x 8½″ page for easier handling and filing. No need to make reduced copies of standard line printer output.

Only Versatec Spectrum can handle any mix of graphics or text on A (11″ x 8½″) or B (11″ x 17″) size output, in color or monochrome in response to the input data stream. And you can print over 200 pages without changing paper or replenishing toners. Operator intervention is not needed to change paper, add paper, change pens or ink donor rolls when switching among color and monochrome, A or B or continuous output.

Your choice of media.

Three popular media are available for Spectrum—enabling you to maximize system productivity and budget. Choose clear film for mapping overlays, or overhead transparencies. Opaque paper, clear and matte film can be used in both monochrome and color modes.

Compatibility.

Many popular computer systems and software support output to Versatec plotters. Additionally, Spectrum is compatible with both Versatec color and monochrome plotters—enabling you to make the most of your investment.

entations. Spectrum saves hours of repetitious drawing; while enabling you to make changes within seconds.

Unattended operation. Leave Spectrum in operation overnight to produce complex charts without worry of jets clogging, pens skipping, ink donor rolls wrinkling, paper jamming or supplies running out. A dedicated operator is not needed. Spectrum provides the versatility and throughput missing in other units.

Hard copy that's not hard to get.

Get a full color hard copy record for analysis or presentation with your Versatec Spectrum. Copy your monochrome or color CRT display. You'll see data represented in detail. An optional video controller includes a frame buffer enabling images to be captured in less than one second. You or others can continue to work with the display as one or multiple copies are produced.

A parallel data multiplexer allows users to daisy-chain additional video controllers to capture images from multiple video sources. It also allows Spectrum to be connected to a host computer so one Spectrum can be shared among printing, plotting and CRT hardcopy.

Hard copy you can keep—Versatec Spectrum hard copies are archival and won't fade with time. And if security is an issue—you need not worry about a negative image on donor rolls or ribbons being copied or read.

A full spectrum of functions from one device.

Here's how it operates.

Spectrum draws without pens or nozzles. Instead, solid colors that would take hours or be impossible to produce on a pen plotter, can be produced in under a minute. Versatec software provides for seven line colors and 256 pre-defined area colors. An additional 256 colors may be defined by the user out of a possible palette of over 1000 colors. Color shading is added without loss of plotting speed.

Programmed voltage is applied to an array of densely spaced writing nibs embedded in the writing head. Upon digital command, the nibs selectively create electrostatic dots on the paper as it passes over the head. The paper is then exposed to liquid toner, producing a permanent image. The output is dry and ready for use as it emerges. Color quality is archival and will not fade with time.

A multiple pass technique is used to produce multi-color output. Each pass writes one color and automatically rewinds to plot starting position. Four passes, each writing one color from one of four toning stations, overlay the four colors. Automatic precision tracking maintains registration.

An integral media cutter, provides crisp copies cut to your specification. Cutter operation can be automatic (A or B size plots) or to specified length under program control. Output is stacked underneath the plotter in the optional floor stand.

An internally generated test pattern helps isolate printer/plotter problems—minimizing possible system downtime.

Simple operator control minimizes operator training time so you can concentrate on your work—not learning to use a new system.

Features to fit your need.

Several features are available to ensure your color hard copy fits your needs. Let us demonstrate these standard features and show you how they can fit your needs:

Mirror image—enables image reversal, particularly useful for creating film overlays or enhancing output for blue-line reproductions.
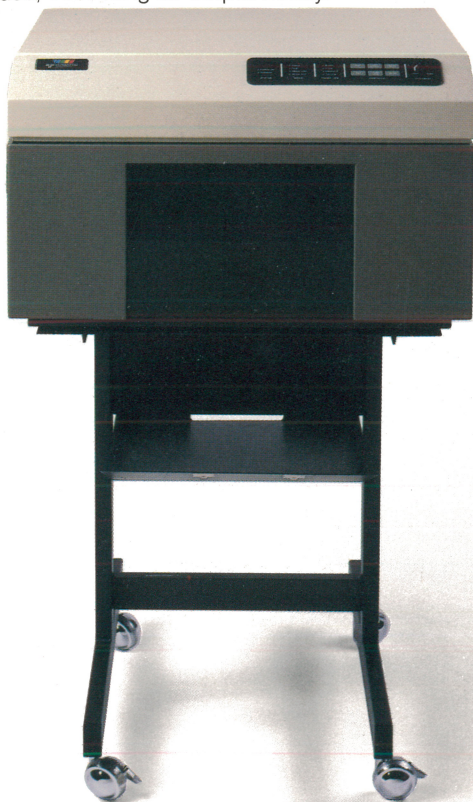
Line enhancement—provides wider line widths for added emphasis or higher contrast when producing photo copies, blue-line reproductions or microfilm.

Raster data translator—allows selection of 100 point per inch data input on 200 point per inch plotters and 200 point per inch data input on 400 point per inch units.

These options are available and enable flexible, cost effective operation:

Optional character sets.

Floor stand—positions Spectrum for easy use, collecting all output neatly.

Easy interface.

We've been designing interfaces to drive electrostatic plotters since 1969. The list of compatible computers continues to grow.

Interfaces and controllers link Spectrum with specific computer and operating systems. These data handlers provide electrical and physical connection between the computer and the plotter.

CRT hard copy controllers enable production of hard copy from most popular storage tube and raster scan displays.

Remote communications controllers and fiber optics modems allow data over telecommunications lines.

Raster Processing Machine (RPM) offloads rasterization from the host computer when plotting complex graphics. Low cost, mid-range and high performance processors allow users to match performance with application.

V-80 printer/plotter emulation—up to 1100 lines per minute printing and continuous monochrome plotting.

Compatible with other Versatec color plotters—accepts Versatec color data protocol.

Multiplexers—help share input and/or output resources including computers, data sources, and printer/plotters.
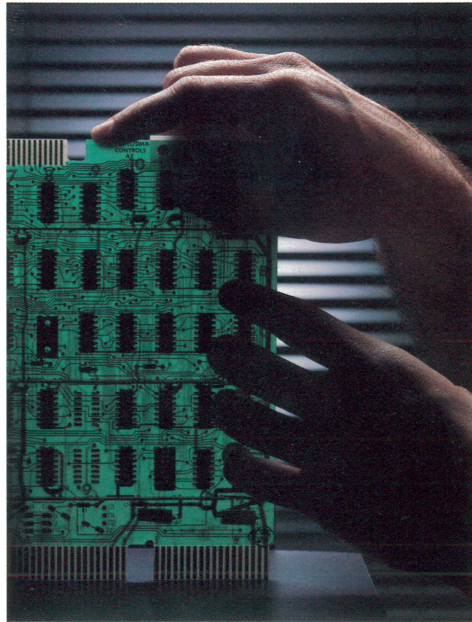
Support when you need it.

Software support.

Integrated Versaplot software packages make it easy to get your electrostatic plotter in operation. Fast FORTRAN-callable subroutines compatible with basic pen plotter routines allow most user and commercial programs to be used with Spectrum.

Supplies features.

Electrographic supplies for Spectrum have been developed specifically by Versatec. Choose from three media—including opaque paper or clear and matte back film. Toner replacement is kept simple—just add one bottle of toner to the reservoir. The toner low light indicates which toner reservoir is low. A valve on each toner bottle ensures toner flows only when the bottle is pressed into the reservoir. This valve eliminates spills and facilitates quick, clean toner replenishment. This special patented system* was developed for ease of use. Uncertain as to the type of supplies needed? Call toll free (800) 538-6468 or in California call toll free (800) 672-3307. Supplies sales professionals can answer your questions on supplies media, inventory assistance and storage. Regional warehouses expedite your order.

Easy to maintain.

Low parts count and modular design contribute to reliability and rapid identification and repair should a fault occur. Diagnostics are included for testing and simple maintenance. However, if you would like additional support, you can choose from one of the many available service plans.
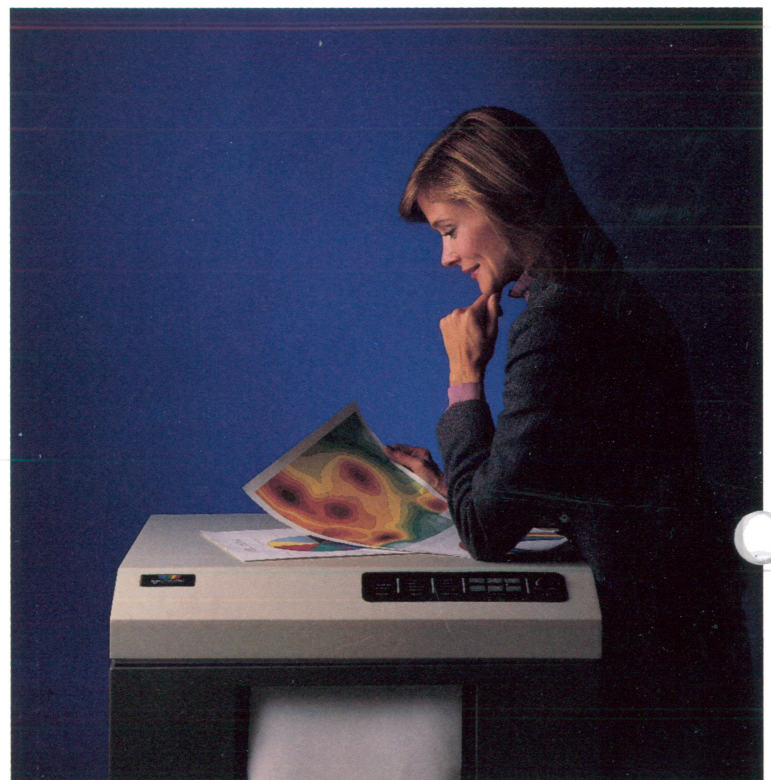
Service.

Your system performance is important to us. Versatec has conveniently located service centers that provide prompt, qualified installation. Versatec offers several service packages including a choice of on-call or full maintenance service plans. For specific information about service centers in the United States and worldwide, please call your local Versatec sales engineer.

OEM.

Ask about our special OEM support. Call (800) 538-6477 or in California, call (800) 341-6060.

*Patent pending.

Spectrum specifications

Technology:	Electrostatic dual array writing head
Resolution:	40,000 points per square inch (200 ppi) 160,000 points per square inch (400 ppi)
Toner colors:	Black, cyan, magenta, yellow
Plotting speed:	2½ inches per second
Paper width:	11 inches or 297 mm
Copy time:	A-size (11″ x 8½″) 75 sec (color); 5 sec (monochrome)
	B-size (11″ x 17″) 90 sec (color); 10 sec (monochrome)
	A4-size (297mm x 210mm) 75 sec. (color); 5 sec (monochrome)
	A3-size (297mm x 420mm) 90 sec (color); 10 sec (monochrome)
Interface:	Standard Versatec parallel; Versatec color data protocol; V-80 emulation in monochrome
Media:	Opaque paper Clear and matte back film

Specifications subject to change.

Buyer's Check List

☑ **multi-function**
(prints, plots, produces CRT hard copy)

☑ **output flexibility**
(A or B size pages, color or monochrome,
text or graphics)

☑ **cost per copy**
(as low as 7¢-10¢ in full color—3¢-5¢ in monochrome—
less than ink jet, pen or thermal transfer color output.)

☑ **easy to use**
(fast, quiet, high quality output)

☑ **choice of media**
(three to choose from including opaque paper and clear film)

☑ **maintenance**
(easy to change media; fast, clean toner replenishment)

☑ **supplies**
(toll free numbers and order assistance)

☑ **service**
(worldwide service support)

☑ **installation**
(software and controllers, available)

☑ **trust in company**
(specialists since 1969—over 40,000 installations
around the world)

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Behind your investment.

Versatec has demonstrated continued indus-try leadership by introducing the world's first electrostatic color plotter in 1982. In 1985, Versatec announced two additional widths—24 and 36 inches in our second generation electrostatic color plotter family. Versatec is the only company with a field proven installed base of electrostatic color plotter users.

Supporting this family of products is a com-pany totally dedicated to electrostatic technology—including interfaces, software, electrographic supplies, service and acces-sories. Let us configure a plotting system to fit your needs.

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