Versatec Spectrum.
The versatile color hard copy printer/plotter.
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 mono-
chrome 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 con-
tinuous 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 char-
acter 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 charac-
ter 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 mono-
chrome in response to the input data stream.
And you can print over 200 pages without
changing paper or replenishing toners. Oper-
ator intervention is not needed to change
paper, add paper, change pens or ink donor
rolls when switching among color and mono-
chrome, 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 transpar-
encies. Opaque paper, clear and matte
film can be used in both monochrome and
color modes.

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

Hard copy that's not hard to get.
Get a full color hard copy record for analysis
or presentation with your Versatec Spec-
trum. 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 con-
nected 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 renews 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.

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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)
Behind your investment.

Versatec has demonstrated continued industry 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 company totally dedicated to electrostatic technology—including interfaces, software, electrographic supplies, service and accessories. Let us configure a plotting system to fit your needs.

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