List of all known
Wide Format Inkjet Printers
Abstract

By popular request here is a list of all large format printers we know about. We include primarily current models (year 2002) along with models that are sufficiently recent that they are still readily available, as well as occasional relics that we have been able to find out about.

I have not yet found any other comprehensive list nor a really complete history of large format printers, so this list had to be built up whenever and wherever information became available.

In a few cases we list prior models when we know the model designations. However if you are considering a used printer, you need to be sure to ask for the FLAAR Reports on Used Printers. In most cases a used wide format printer is not a good idea.

Inkjet printers are the core of this list, though we include other technologies such as LED digital photo printers and thermal transfer from colored tapes and so on. Up to now we do not include older technologies which were mainly for blueprints. The present list is primarily digital, not mere reprographic machines. However we get an increasing number of requests from architects, engineers, and planners who specifically want to know which monochrome wide format printer to consider buying, so we may add a special section on reprographic printers in the future.

This first list is alphabetical. Alphabetical in every sense, by manufacturer and by model name. Thus some equipment is included more than once, once under the company name, again under the model designation. There is no consistency however. Lesser known models are only under their manufacturer’s name.

Another list on www.large-format-printers.org is by technology (electrostatic, thermal transfer, piezo, etc). www.large-format-printers also has an extensive list of printers by theme: printers for billboards, printers for fine art giclee, etc. However you can get such lists more easily, and with much more comparative information, by asking for the pertinent “FLAAR Reports.” Just remember to fill out the Inquiry Form each time. The person who sent you your first reports may not be the same person who receives your subsequent request, so may not have your earlier Inquiry Form at all.

We may have overlooked a few printers. If you know of any, please send us details. However we do not list one-of-a-kind printers, nor any printers where their specifications are not clearly presented on their corporate web site. Thus some printers advertised on the Internet have alluring labels, but if you peel off the sticker you find it’s a basic Mutoh underneath. Mutoh is a perfectly good printer, but all Mutoh’s are essentially identical and have the same or similar piezo printheads as the Epson 9000. Its only the house brand and associated advertising claims that differ. Thus the purpose of the following list is to provide public information to assist people in making their decision of what printers are best suited for their specific needs.

This list includes cutter-plotters that also print (such as Roland, Encad, and Graphtec) but does not include vinyl cutters since they don’t print (they only cut).

If you own or know about one of the printers for which we lack end-user reports, please send us your experiences so that we may utilize and publish it for education of others.
**FLAAR Inventory of Large Format Printers**

**3M**, Scotchprint Printer 2000, electrostatic, toner, 400 dpi, for outdoor or dye sub heat transfer. Fast, low production cost, equipment is very expensive, electrostatic technology has been at a standstill for several years and has not improved in quality at all. 3M and RasterGraphics are the only electrostatic printers still available new (they were manufactured previously but were unsold and are in warehouses).

**A.B. Dick**, DeSign U. System, 42”. We know nothing more about this printer. Never saw it at a single tradeshow.

**Accuplot**, MileHigh Engineering Supply Company, OEM of Mutoh. Several Accuplot branded Mutoh printers with Epson piezo printers were available in previous years. In its heyday Mile High was a known and reliable company with capable people to answer questions. In the years 1999-2001 you could find the staff from Mile High at most major trade shows across the country. However we have not seen them at any tradeshow recently and their web site [www.accuplot.com](http://www.accuplot.com) has been off the air. We were unable to find either company’s home page (Mile High or Accuplot) on any Internet search engine (during repeated attempts May-June 2002). Thus we do not know the status of this company nor of their products. Mutoh USA web site lists them for older models but Accuplot is not listed for the new Mutoh Falcon II.

**Agfa**, several years ago rebranded ColorSpan as Agfa Montana, Montana II. However Agfa no longer sells ColorSpan printers. Agfa Sherpa, OEM of Mutoh Falcon but only 720 dpi. Agfa house brand of RIP is PosterShop (from Onyx, a division of Gretag and now Oce). Agfa’s Sherpa 24” printer is just a barely relabeled Epson 7000 or potentially Epson 7500 if for pigmented ink. Agfa GrandSherpa in various widths is rebranding of Mutoh Falcon 2 with Epson 10000 printheads. One version serves as a proofer; another version serves as a sign printer. This printer has 8 colors (Epson 10000 on its own has six). As of March the printer was still in beta stage; as of July this printer was still rather new but is available via Agfa.

**Alpha Merics**, Spectrum, phase change, solid ink (melted wax), 612 dpi, upright, any material, any thickness. But little details on the web site. They did not respond to a request for information. I understand that these printers cost over $100,000. Solid ink was used by Tektronix in their ill-fated Phaser 600, put out of its misery when Xerox bought Tektronix and eliminated its large format portion. Solid ink has not been very successful in other large format printers but there is always the potential of a miracle. Models are Spectrum 5248, 5290, 70100.
Comprehensive list of all wide format printers that ever existed

ANAgraph, originally named the SpectrumJet SP-62, six color piezo, 720 dpi, oil-based inks as well as 3M solvent inks (pigmented), 62” on 64”. I need to double check on this, but somehow I got the impression it requires coated media. SpectrumJet, renamed Arizona 30, was sold as the Gerber Orion for about a year. 360 dpi (the claimed 720 dpi is unlikely with its Xaar printheads), entry-level solvent ink printer. Looks well constructed. Gerber version was very slow and as typical of most Xaar printheads and solvent ink systems, generic horizontal banding. Now Oce sells a newer version again as the Arizona 30. Slightly faster, less banding. Since this is the third generation of the same printer, they should have worked out the glitches my now. In other words, this is more mature than some of the newer pseudo-solvent (lite solvent) printers popping up everywhere in the last year.

Aprion, M.A.G.I.C., supporters say it’s the most impressive technology on the horizon; detractors say its just fluff and puff (vaporware).

Arizona printers are a challenge to keep track of. Originally they were made by RasterGraphics, Then Gretag bought RasterGraphics. Then Gretag bought ANAgraph but sold that printer to Gerber, and so on. It’s especially difficult to find reliable information on older printers such as the Arizona 5000, even though it’s still sold by some resellers.

Arizona 30, originally branded as the ANAgraph SpectrumJet, then re-named and reborn as the Gerber Orion, Xaar piezo, 360 dpi, solvent based inks, very slow; banding as typical of all solvent ink systems. This year (2002) reborn again as Arizona 30, faster and less banding.

Arizona 90 Digital Screen Press, in vogue during 2002. This is a lower cost version of the Arizona 180.

Arizona 180, six color piezo, 309 dpi; 52” on 54” media; its solvent inks require venting. We like the quality of the better models of Arizona. It’s the best solvent ink printer we have seen so far. This is also labeled the “Digital Screen Printer.”

Arizona 1000, evidently a rebranded Mimaki. We would welcome more information if you have, or had, one of these.

Arizona 1100-3, piezo, solvent-based inks, four colors, 360 dpi, 111” width.

Arizona 5000; its hard to keep track of these models.

Arizona T220, flatbed for rigid material.

Atlantec (don’t know anything about this printer other than the name) unless this is a dye sub printer in which case is not wide format and does not below in this list.

Aztec, a rebranded solvent ink printer from D.G.I, Korea sold by Banner Artist. Appears to be the same printer as sold by SIM.
**Barco**, the.factory (that’s the name of the model, “the dot factory”), about one million dollars. Xaar piezo heads which limits dpi to 360 but has the advantage of accepting water-based inks, oil and solvent based inks, and UV curable inks. Made for wallpaper and other decorative wall coverings. Offhand 360 dpi is rather low for a design that is viewed as closely as wallpaper. Barco recently merged with another prepress company (PurupEskofot) and the resultant combo has a totally new name, Esko-Graphics. Since the.factory printer was shown at DRUPA 2000 under the Barco name, evidently this printer has shifted to a company named Dotrix.

**Bel2000**, a flatbed inkjet printer using Aprion M.A.G.I.C. technology, 63 x 102 sheets, six color, 600 dpi. The web site offers zero additional information. Evidently this printer is intended to print on corrugated packaging material.

**Bellise**, Gretag, now Oce, Epson piezo heads, dye-based inks only. Bellise Plus, Gretag, Epson piezo heads, pigmented inks only. We heard that the Bellise was quietly dropped but have no confirmation. Although we like many of the Arizona and other Gretag (Oce) printers, the Bellise never impressed us. It suffered the usual problems of Epson printheads: slowness and banding defects.

**Brady Corp**, bought by Fuji, now Fuji-Hunt, Brady Colorpix Pro, piezo, 180 dpi; 32- dpi on 54” model. Discontinued though still exhibited at DRUPA 2000 and at Photokina 2000. Unlikely it would be seen at Photokina 2002. For comments on such obsolete printers, ask for the FLAAR Report on “Used Printers.”

**Brady** (another Brady company not related to that which went to Fuji), see Variatronics poster printer.

**CalComp Technology**, CrystalJet; The original CrystalJet company went bankrupt; promising new piezo technology but never finished. Evidently the printheads were difficult (expensive) to manufacture. Kodak evidently bought the remnants of CrystalJet. Kodak’s recent attempt to produce their 5260 piezo printer uses advertising hype uncannily similar to the hype of the failed CrystalJet. Other CalComp printers are the TechJet 720C, TechJet 5500 and TechJet 5500GA.

CalComp 5524, 5536, 5624
CalComp Drawingmaster DM600, DM800
Calcomp ColorMaster
I believe what is left of CalComp is now a division of Budde. Budde sells media for the CalComp printers that are still in existence.

**Canon**, there web site fails to provide information on their 8500 inkjet model for 13 x 19” size. This printer produces beautiful output and is less quirky than the Epson 1520 or Epson 3000.
Comprehensive list of all wide format printers that ever existed

BJ-W3000, for CAD
BJ-W3050, for CAD
Canon BJ-W7000 based on old Selex engine and not recommended due to low dpi and potential banding across the image;
Canon BJ-W9000, 1200 dpi, much improved; downside is no pigmented inks at all. PosterJet is the most economical RIP for this Canon printer.
SR850E
Canon was showing new printers at IPEX 2002, such as a printer for doing business cards. Not wide format, but very useful. However it was not possible to find these printers on the obtuse Canon web site.

ColorGrafX, 8900
ColorGrafX 8954-DS electrostatic, part of Xerox, totally abandoned. This means don’t buy even a used one, even if cheap…tough to get service or parts on printers that have been discontinued and abandoned on top of that.
ColorGrafX X2 (2001), printheads probably based on a Xaar concept, an update of the outmoded XES Xpress, also oil based. Sold by XES (Xerox Engineering Systems).

ColorSpan, originally LaserMaster, then Virtual Fund now owned by MacDermid ColorSpan
ColorSpan, 72” DisplayMaker XII, 1999, top quality, 1800 apparent dpi
newer 52” Esprit which offers 1200 apparent dpi, 8 colors for just $15,000.
ColorSpan, FabriJet, for textiles
ColorSpan Giclee (drum design), Sept. 1998.
ColorSpan DisplayMaker Mach 12, 12 printheads, HP thermal from HP DesignJet 5000 series, March 2001 onward. A Mach 12 printer is being installed at the FLAAR facility at BGSU this summer.
FLAAR has multiple reports available on various aspects of the ColorSpan DisplayMaker XII and new Esprit. Since FLAAR dedicated 30 years to professional photography of ancient art, archaeology, and architectural history, we are always impressed by any printer such as ColorSpan which does such a great job producing photo-realistic exhibit-quality large format prints.

Earlier ColorSpan models
ColorSpan DesignWinder, 300 dpi predecessor of the current higher dpi giclee drum-design printer. 1996
ColorSpan DisplayMaker Professional XL60
DisplayMaker, Professional printer (circa 1993-1995, Encad built, CS modified, 300 dpi, 4-color, 36 inches). We know instances of this printer still at work printing photos in photo labs.
ColorSpan (LaserMaster) DisplayMaker Express, a 406 dpi piezo solid-ink printer, one of the earlier piezo printers on the market. May 1995.

LaserMaster DisplayMaker Professional 2 (300 dpi, based on Encad printhead)

LaserMaster DisplayMaker Professional 3 (600 dpi, Encad, see FLAAR report on “should I consider a used printer”)

I do not know of any web site which lists early models or which gives a complete history of the industry’s early makes and models. Thus we don’t have full lists of the early models of each manufacturer.

If you wish additional information on the ColorSpan printers, ask for the various FLAAR reports that provide comparative reviews, or e-mail productinfo@colorsapan.com

Color Wings, we saw this German dye sublimation textile printer using Encad (Lexmark) thermal heads in the Compedo booth at a European trade show. Very impressive output. This is because 300 dpi is okay for textiles. You can’t see the benefits of 1440 dpi on the weave pattern of a textile anyway.

Color Wings Texjet 152, 300 dpi, four colors, dye sub ink, prints 150 cm on max 203 cm

Conde, OEMed Mutoh Falcon printers for banner making system especially circa year 2000-2001. I do not know if they intend to continue and also to rebrand the Mutoh Falcon II.

DyeTransWF3600, WF4300, WF6200,

DyeTransWFJ500, WFJ600

Copyer Co., Ltd (see Selex).

Creo, formerly CreoScitex, Iris, many different models, all proofers; one is rebranded Mutoh.

Iris43WIDE
Iris2PRINT
Iris4PRINT

Iris Gprint no longer made; another company, Improved Technologies, retrofits the Iris 3047 as the Ixia. The non-giclee model of Iris 3047 and other models of Iris are changing rapidly as Iris evolves.

CreoScitex PressJet, sheet-fed wide format printer

Scitex Vision is a separate company, Idanit Novo, super-wide format (grand format)

If you wish additional information specifically on the Iris Gprint ask for the FLAAR report on this fine art printer. Otherwise we do not have individual reports on any of the other CreoScitex printers.

Creon, Azero, from the Orient, entry level billboard printer attempting to upset Vutek. In a few years future generations of such printers will probably take over the market in ThirdWorld countries where Vutek, Nur and other printers are too expensive.
CrystalJet 42, CrystalJet 54, from CalComp. In 1998 these printers were hyped as though they actually existed. Even Iris Graphics (Scitex) planned to sell this printer. Their version was priced at a marked up $35,000 (CalComp offered their original version for $30,000). In truth the printer could not be manufactured to tolerances. This was the most expensive large format printer failure of all times. Kodak bought what was left of the failed technology a year later. The new Kodak 5260 is so far suffering the same birthing pains as the CrystalJet.

Cymbolic Sciences, Gretag Imaging, now Oce, LightJet, 300 to 400 dpi in this class of digital printer equals an apparent 4000 dpi which is effectively continuous tone. Along with the Durst Lambda this is among the world’s best digital photo printer yet made, all $150,000+ worth. 2002, LightJet now has a model which offers wider and longer output, the LightJet 500XL, max width of 76.5 inches.

Data Mate Co, Rembrandt VI, Rembrant V2, piezo, 10’ width; tough to determine whether it’s a 180 dpi printer or 360 dpi; probably the lower.

DaVinci from LAC Corporation. Inadequate dpi. Current model is the LAC Robo Art. If you have to wait for spare parts from a distant land, may not be a good investment. Very low dpi; we found the output from the LAC Art Robo so poor as to be an embarrassment. A year later the output had improved slightly, but Vutek, Oce(Gretag Arizona) and all other companies offer such superior output I don’t fully understand the reason for using any printer nowadays with inadequate dpi.

D.G.I., DGI OJ52 and OJ62, piezo, much to my surprise is not solvent based but rather oil-based pigment ink, 200 to 400 dpi, 20 sq meters an hour is rather slow. 4 colors are rather few in comparison to six-color popularity.
- REX-52, solvent based inks.
- REX-62, solvent based inks.

Sure is tough to figure out about these Korean printers. Out of 3,000 e-mails only two lone people ever asked about this printer (frankly we had never heard of it before last year). Their web site (dgi-net.com) did not display completely until you use Flash. One e-mail said the company’s former name was Dilly? I always wonder about a printer that I never see at a single trade show in Germany or the USA? How can you expect to get spare parts? Now (2002) D.G.I. is exhibiting at ISA and other sign tradeshows in the USA. Their web site has friendly greeting from their President. SIM and Aztek are rebranded D.G.I. printers.

DigitalPainter, OEM of the basic 720 dpi Epson printhead made by Mutoh, hence comparable to Mutoh Falcon, Kodak, Agfa, etc. Also called the Gicleechrome. Today (summer 2002), that is basically the same head as in the Epson 9000, which is several generations old.
Digital Printing Systems (DPS), piezo printers for wallpaper and comparable kinds of production. DPS is a new company and we have not yet seen their printers in action.

DPS65, piezo, via Aprion, 600 dpi, roll to roll for wall coverings
DPS75T, via Jemtex, sheet-fed, 72” width, continuous inkjet technology.

**DuPont**, OEMs a textile printer from Vutek.

**DuraChrome, SummaChrome**, thermal transfer produces nice images.

**Durst Lambda** (equivalent of the LightJet from Gretag). (Durst-Dice America in USA)
Durst Lambda Pi50
Durst Lambda 130 Plus, $299,000 more or less.
Durst Lambda 131 Plus
Durst Epsilon 30, LED photo imager

**Durst Rho 160**, originally Xaar heads; I believe they switched to the better quality available from Spectra printheads, a flatbed inkjet printer for printing on thick and/or rigid material with UV cured inks, over $150,000 and not fully in production. UV cured inks are not yet a mature technology.

**Eastech**, IO-6200, piezo, 62”, 720 dpi; never heard of this printer before. Evidently a Taiwan rebranding of an Epson piezo printhead machine. Sure is elusive because two search engines had nary a listing, nada.

**Encad** printers are also rebranded and sold by Kodak, OCE, Graphtec, and other companies. The initial Encad printers used Hewlett-Packard heads; quickly they switched to Lexmark when HP itself began showing interest in producing its own large format inkjet (Encad was first).

We get the impression that even up to the model 600 the ink tube arrangement is most politely described as “ink splatter everywhere.” People complain about how many sets of clothes they have lost to Encad ink splatter (when loading ink, when trying to get rid of air bubbles, or when cleaning clogged heads). Otherwise, Encad printers last forever. Just be aware of the quirks of the older models. One advantage of Encad printers, you seldom see banding. New models (700 and 800 series) are pre-primed and no longer as messy installing new printheads. New models, however, have auto-shutdown printheads. The printhead turns itself off totally, forever, after a bit more than one liter of ink. No options that we know of.
Encad NovaXsell I get the impression this is the NovaJet 500 with software to make quick and easy signs for selling vegetables at grocery stores, etc.

Encad CADJet 1,
CADJet 2, CADJet 2D for 24", CADJet 2E for 36"


Encad NovaJet I
Encad NovaJet II
Encad NovaJet 48GA (experimental prototype not sold under this name)


Encad NovaJet Pro 36 (late 1995)

Encad NovaJet Pro 50
Encad NovaJet PROe 42" and PROe 60" (1997) originally priced at $20K and $30K

Encad Nova Cut, two models, one 24" the other 54" (comparable still sold by a sign company)

Encad Chroma 24 (1997)

Oce begins selling Encad PROe printers

Kodak begins selling Encad PROe printers (1997)

Encad NovaJet Pro 600e (1998) 42" and 60" ($15K and $20K); suffered class action lawsuit.

Encad 1500 TX (textile printer via Gerber)
Encad NovaJet 500, 42" and 60", 300 dpi, dual ink lines (1999)
Encad NovaJet 505, 42" and 60", 300 dpi, dual ink lines.

Encad NovaJet 630, 42" and 60", 600 dpi, dual ink lines
Encad NovaJet 700, 42" and 60", 600 dpi, dual ink lines, some had skewing. But later manufacturing run had skewing problem under control.

Encad NovaJet 736, 36" for budget entry level
Encad NovaJet 750, dual sets of 4 ink lines but only 4 printheads at a time.

CADJet 3D (2000)
Encad NovaJet 850, new 8 color model, still 600 dpi; no EFI Fiery RIP works with 8 colors. Also sold by Kodak, Ilford, and Oce under their each own brand designations, thus by Oce as CS5090. Has fan, something found also on ColorSpan, but no fans or media heaters on any HP DesignJet.

Encad NovaJet 880, can handle thick and flat material in addition to normal roll-fed inkjet media.

CadJet T-200 (2002) looks like an Encad NovaJet Pro from the year 1996, even with 300 dpi printheads, but presumably has better features than the original model.

Over the years Encad printers have appeared relabeled under brand names such as Graphtec SignJet Pro JX1130, JX 1060, Xerox VivagrafX XL and XL50, Xerox 2230ij, Kodak 2042 and 3060, Kodak 4042, 4060, 4742, 4760, Oce 5350 42" and 60". One of the really early ColorSpan (LaserMaster) printers may also have had Encad-Lexmark printheads but I can’t always keep track.
**Epson** 1270, desktop, hybrid inks, suffers ozone vaporization of cyan ink.
Epson 1280, replaced the ill-fated 1270.
Epson 1520, an older model; slow, poor paper feed design. Cranky.

Epson 2000p, pigmented inks; B+W may glow green, very slow.
Epson 2200, to overcome quirks and deficiencies of earlier printers. They may finally have gotten it right.
Epson 3000, slow, paper feed system is the first part to break; may frequently get digital indigestion due to inadequate software drivers; needs a very expensive RIP to really function properly. The RIP costs more than the printer (which is why it does not come with the printer to begin with).
Epson 5000; used as proofer. We don’t hear much about this printer.
Epson 5500, introduced 2001, variable drop, pigmented ink. Nice model.
Epson 7000 and Epson 9000, very colorful prints, very slow, occasional mechanical problems, may have inconsistent color. It is my understanding that true dpi of this generation of Epson piezo printhead is 180 dpi.
Epson 7500 and Epson 9500, colorful output, good gamut considering pigmented inks, may have color shift problems, very slow; limited kinds of media, uncertain about printing on glossy photo papers. The 7500, however, is the only 24” printer with inkjet technology that has pigmented inks (the Encad Chroma 24 is not in the running due to grainy dot pattern, obsolete drivers and lack of economical RIP).
Epson 7600 and Epson 9600. Available either with dye inks or pigmented inks. New as of summer 2002, to overcome quirks and deficiencies of earlier 7000, 7500, 9000, and 9500. Actual dpi of printheads is 360; rated at 1400 x 2800 dpi.
Epson 10000 (dye), 10000CF (pigmented), 44” wide, 1440 dpi from 360 dpi printheads, non-interchangeable ink (can’t change back and forth from dye to pigmented).
Epson printers are also sold by Agfa, Fuji, and Ilford, but barely relabeled.

**Friend or Faux Technologies**, from Pixation, WireJet PM 1500.
Last year discontinued from Pixation; a year later reborn again. Low dpi and you have to assemble air system yourself and/or brew your own ink mixture.

**Fuji-Hunt**, resurrected the old Brady printer, Fuji Piezo ColorPix. Outmoded technology and to our knowledge no longer sold. Very low resolution; very dotty grainy appearance.
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**GCC** SignArt Nautilus, thermal wax or resin ribbon heat transfer. [www.gccworld.com](http://www.gccworld.com). This appears to be made in Asia. I have not noticed this printer at any tradeshow. Appears to print about 36 inches (no specs in ad in the BigPicture Magazine).

**Gerber** AccuPlot, simple, traditional (non-inkjet) plotters, both old-fashioned pen plotters and flatbed plotters. Gerber Edge, thermal transfer, sprocket-fed; 15" so not really “large” format. Gerber Edge2, 300x600 dpi, not really “large” format. Gerber Maxx, thermal transfer, 34” on 36”; holds six colors at a time. Comparable thermal transfer printers would be from Summa or Matan. Gerber Orion, Xaar piezo, 360 dpi, solvent based inks, very slow, banding. This model was made by Anagraph; as of early 2002 is no longer sold by Gerber. New improved model a tad faster with less banding is now sold by Oce as the Arizona 30. Gerber also makes a variety of vinyl cutters, sprocket-fed.

**GicleeChrome**, the same as Digital Painter, namely a Mutoh Falcon I with Epson printheads, similar to the standard six color Mutoh Falcon or the older 4 color Mutoh.

**Gigantagram**, see Lazer Images, a printer which uses “magic markers” with solvent ink instead of inkjet printheads. Can only print letters or line designs, no TIF images; hence no photographs whatsoever.

**Gradco**, Mammoth, 44”, similar heads to the Epson 9000. Prints on flat and rigid materials up to 3” thick.

**Graphtec** (Western Graphtec in the USA), SignJet Pro, JX1060, JX1130, 300 dpi version of older Encad with grainy Lexjet printheads. Be wary; not recommended; the new models are so much better there is little comparison. Graphtec JX2150 (60”), JX2100 (42”), two new models March 2001, dual parallel CMYK with 600 dpi HP printheads from HP DesignJet 2000cp series, nice.

**Gretag** Sphera, unsure whether this is still an active model. Gretag, see also RasterGraphics, Bellise, Arizona, Cymbolic Sciences, LightJet

**HP** DesignJet 250c, 350c

HP DesignJet 430, 450C, 455ca, 488CA series, CAD

HP DesignJet 650c series

HP DesignJet 750C Plus, 750CM, 755cm
Hewlett-Packard ColorPro CAD (for drawings) and ColorPro GA (proofers), desktop for up to tabloid size, only four colors, thermal printheads, no pigmented inks. Probably just 600 dpi.

HP DesignJet 1050C, 1055CM (on-board mini-RIP), GIS, CAD, good for line drawings combined with basic photo-quality, 600 dpi, no pigmented color inks (black is pigmented however). Fast. FLAAR has one of these printers; excellent speed; consistent banding and occasional printhead problems but architects seem so content with the speed and nice color that they don’t worry about the banding. The architects and students on our university campus like the output. Works well with both PC and Mac.


HP DesignJet 2000cp (no RIP), 2500cp (mini-RIP on board), 2800 (with EFI Fiery hardware RIP); same for 54,” HP 3000cp, 3500, 3800. Four color, 600 dpi, thermal printhead, interchangeable dye based and pigmented inks. These models are still available but are being phased out and replaced by the 5000 and 5000ps. You can get excellent prices on demo models of the 2xxx and 3xxx, complete with full HP factory warranty. E-mail colorguru@colordna.com a national HP dealer. As typical of the better models of HP these printers work equally well with PC or Macintosh.

HP DesignJet 500, 500ps (ps=PostScript, a basic component of RIP software). GIS, CAD, replaces all the HP 4xx, 6xx, and 7xx models. Includes photo-quality capability. No pigmented inks. Nice quality; slow. Functions with Mac but works better with a PC since most CAD software is for PC. So far not many after-market RIP is available, so that means you need the 500ps model to insure basic (albeit slow) RIP capability.

HP DesignJet 800, 800ps, GIS, graphic design, noticeably faster and slightly better photo quality than 500 and 500ps. Only four colors; no pigmented inks. Works with both PC and Mac. The 800 printer is better in all respects than the 500 series.

HP DesignJet 5000 and 5000ps, photo-realistic, can print on textiles, backlit, vinyl: can do signs, posters, banners, photos, even fine art giclee, and fast. 1200 dpi, six colors, easy to run, idiot-proof for first-time user yet good enough quality for professional user. Last year we tested a beta set of the pigmented inks; their color gamut is outstanding. We liked the first HP 5000 we got that this week we added a second HP 5000ps at our other university (FLAAR is concurrently at two universities; have many printers under evaluation at each university).

HP 10ps, 20ps, and 50ps; six colors, dye ink only; for proofing.
Idanit Novo, grand format, solvent ink

I-Jet, the house brand of Improved Technologies, for a Mutoh Falcon (I)+ Wasatch RIP which are capable of photo-realistic photographs and fine art giclee quality. Improved technologies also makes the Ixia. IT now sells the Mimaki JV4 rather than the Falcon II because the Mimaki came out more quickly with the Epson 10000 printheads.

Ilford, OEMs Encad, ColorSpan (no longer), and Vutek using RIPStar version of PosterShop RIP. Offers very good longevity for all its inks; offers monokrome (quad tone black inkset) and several kinds of media.

Infiniti, FY-6250. solvent ink, only four colors, Xaar printheads, 200 dpi. Obviously intended for economy prints at modest quality to be viewed from long distance. I know nothing about the original of this printer. I am guessing it comes from outside USA.

Inca Digital Printers, Eagle 44.

Iris, Creo(Scitex), Iris 3024, proofer
Iris 3047, proofer; renowned as a cranky machine.
Iris 3047Gprint is a slightly modified Iris 3047 proofer. Original list price was $85,000. The Gprint is reportedly no longer manufactured since 1999. This model has a number of structural defects that result in defects in the print itself. These defects have now been eliminated by a complete re-design by Improved Technologies who offer the Ixia which replaces the Iris. An Ixia is the same size and shape, produces the same image as the older Iris, but requires less maintenance and produces more images with flawless quality than the quirky Iris. FLAAR has a complete report on the reality of the problems inherent in the Iris Gprint. Hard to believe anyone would buy this printer used after reading about the legendary problems of the bad design of the Iris. Much better to get the Ixia version of this printer.

Ixia, Improved Technologies, the new redesigned and improved version of the former IrisGPrint (Iris 3047). Ixia is made by taking a former Iris, throwing out all the Iris parts there were poorly designed to begin with, and replacing them with a totally rebuilt designed by the former service technicians who used to repair the old Iris printers. Discussed in the FLAAR report on fine art printers.

JRL Systems, 1230D, 1220E, 1235C, old fashioned plotter for CAD.
Kodak, OEMs Encad 300 dpi and 600 dpi printers from Encad; OEMs Mutoh printers with Epson printheads. Has some excellent media but otherwise not innovative.
Kodak 2042, 2060 (OEM of Encad)
Kodak 3038, 3043, 3062, piezo, so probably Mutoh
Kodak 4042, 4060, 4742, 4760 (OEM of Encad)
Kodak 4842, 4860
Kodak 5260, Brother piezo printheads; body manufactured by Mimaki. As of IPEX tradeshow (April 2002) the printer does not yet print at high speeds without severe banding defects. At 170 sq ft per hour it prints attractive photo quality. Output on nano-porous must be laminated. FLAAR as a complete separate report on this printer.

Konica Iguazu 1044SD, 8 color printer, evidently Xaar piezo heads. Not yet in production. Details available in FLAAR report on DRUPA trade show and on CeBIT 2001 trade show. As of Print ’01 this printer was no longer offered by Konica. In other words, it was never sold in the USA.

LAC Corporation, DaVinci 3100, Da Vinci 5700 LAC Vehicle Art Robo, acrylic paint, 3 years outdoors without lamination. Certain aspects of this printer remind me of the Friend or Faux. As typical of brochures, no price is listed and the specs don’t really explain the technology nor the printhead design. The printer is relatively slow, though not as bad as an Epson piezo system. Dpi looks suspiciously low; not adequate for photo-realistic quality. Output is worse than even the Fuji-Brady and the Xerox Xpress. Thus we find the model designation “Art” potentially misleading.

LaserMaster, the forerunner of (MacDermid) ColorSpan.

Lazer Images, Gigantagram Instant Vinyl & Banner System; clever pen-plottter retrofitted with “magic-marker” type refillable pens that mark out letters and designs; multiple colors (at least six?). However can’t do TIF images or any photographs. This is a vinyl-cutter cum-marker system, not an inkjet.

Leggett & Platt Digital Technologies, accept UV pigmented, dye, and solvent inks. These are about the only printers designed from scratch rather than being inkjet adaptation of a cutter or old pen-plottter.
Virtu MX, 92”, piezo
Virtu RS, 98”, piezo
Virtu TX, 138”, piezo: shows all the high-tech you get for about a million dollars.

LightJet 430, CymbolicSciences, GretagImaging (now part of Oce), laser light, helium-neon and argon-ion, continuous tone 300 dpi is equivalent to 4000 dpi. 50” wide.
Matan Sprinter, Sprinter B, thermal transfer, high quality for outdoor use with no lamination; costs over $150,000+
Matan now has desktop sized thermal transfer printer, Spark 1612 (see FLAAR Reports on thermal transfer printers for details).


Mile High Engineering Supply Company, see Accuplot, former OEM of Mutoh Falcon I generation. But we have not heard anything from Mile High or Accuplot brand in the last year. They stopped showing up at tradeshows. We do not know whether the company went out of business or not. www.accuplot.com is no longer a functioning web site either.

Mimaki TJ-50
Mimaki JV-1300, many models, Epson piezo heads.
Mimaki, TextileJet TX 1600s, Epson piezo, reactive and acid inks, 7 colors, 720 dpi, 65” width, textile printers
Mimaki, cutter-plotters
Mimaki JV-900, JV-1300
Mimaki JV2
Mimaki JV2-160I MS, mild solvent inkjet printer.
Mimaki JV2-180I MS, 73” mild solvent ink printer.
Mimaki JV4-130 (54”), -160 (66”), -180 (75”), Epson piezo, six colors, pigmented, dye, disperse inks.
Mimaki JV4, same printheads as Epson 10000, but Mimaki JV4 has dual sets, hence faster. Mimaki is very ink friendly; you can use many different inks (not possible with any Epson). Contact sy@mimakiusa.com.
Mimaki JF-0604, flatbed, 16.5” x 23.5”, 7 color Epson piezo, 720 dpi
Mimaki JF-1215, 48 x 72” flatbed, 7 colors.

Mutoh is the company that manufactures the Epson large format. Mutoh printers are very similar; use basically the same Epson heads but different sheet metal housing. Mutoh is the company that also manufactures printers for Agfa, Accuplot, Conde, Digital Painter, Kodak, Improved Technologies I-Jet, SignWarehouse; even one of the Iris proofers is more or less the same Mutoh under the Iris label. Iris does, however, add additional features and software not available in the basic Mutoh Falcon.
Mutoh HJ 800 (discontinued in 1998)
Mutoh SpectraJet HiFi
Mutoh Falcon RJ-800 series, four color; RJ-801C, A1 size, 615 mm; RJ-800C, A0 size, 905 mm, 720 x 720 dpi (not 1440).
Mutoh Falcon CAD
**Mutoh Albatross** , solvent ink printer now labeled the Mutoh Tomahawk. This printer has a numerical designation in Europe, India and elsewhere. This may be the Mutoh PJ-1304NX (India). Not very successful. The replacement model is the Mutoh Toucan (NXPro in India and other countries).
Mutoh Toucan-64 (PJ-1614NX), 180 dpi true resolution rated at 720 dpi.
Mutoh Toucan-87 (PJ-2216NX), 87 inch version
Mutoh Falcon Outdoor; seems to be same model as Mutoh Rock Hopper. If I recall correctly they do not publicly identify the printheads (remember when Cadillac did not identify that it’s motors were actually made by Chevrolet). However I am guessing the heads are from Xaar. I will get confirmation shortly and update this page this autumn.
Mutoh Falcon II, uses same heads as in Epson 10000. Agfa is first company to OEM this new printer, as the Agfa GrandSherpa, in several widths. Available as turnkey proofing system and as turnkey sign printing system. A tad slow for either.

**Nur** Blueboard, grand format, solvent ink.
Nur Blueboard HiQ+
Nur Salsa Ultima 2400, piezo, 8’ width, solvent ink
Nur Salsa Ultima 3200, piezo, 10’6” width, solvent ink.
Nur Salsa Ultima 5000, grand format
Nur Fresco 1800, wide format, piezo,
Nur Fresco 3200
Nur Salsa Ultima 1500, wide format, piezo, 60”
Other: Salsa 2532

**Océ**, OEMs Encad printers but with a better RIP than the EFI Fiery. Oce also sells reprographic printers for the CAD market. Oce OEMs Canon printheads for their CAD series.
Oce 5150, 360 dpi, A0 size, probably Canon bubble-jet
Oce 5200, A0 size, possibly Canon bubble-jet
Oce 9300
Oce CS 5050 42”, CS 5070 60”, their version of a 600 dpi Encad printer.
Oce CS 5075
Oce 5350, 42” and 60”
Oce CS5090, their version of the Encad 850, eight inks
Oce CS5095.
Océ CPS7000, seven color printer.
Océ bought Gretag last year so now it is Océ which sells the Arizona series of printers. It is rumored since DRUPA 2000 that Océ will eventually drop their rebranded Encads and sell instead a printer they developed more on their own. Someone else said Océ was working on an oil-based printer, but nothing has appeared at tradeshows so far.

**OLEC** Corporation, Spectra2 09612-31, 50 inches.
Comprehensive list of all wide format printers that ever existed

Olympus: don’t have any information on their large format printers. Indeed I do not know why they were in one industry list.

Opaate modifies a Polaroid DryJet II 2820 to accept wax based colorants to do fine art giclee prints. Longevity is not all that exciting but then again neither is that of iris.

OYO Instruments, GS 624-2, GS 636-2, GS 644-2 (for CAD)

Perfectaprint, Printmaster, Sheetmaster, uses UV curable inks. Hopefully these million dollar printers work better than the web site did during April 2001. The pages disappeared after displaying themselves. Neat trick. All the data disappears so you don’t have to waste any time reading about the product!

Pixation, seems to be the originator of the rather unusual printer which Friend or Faux Technologies sells. Pixation announced about two years ago that they had ceased manufacturing but later the printer reappeared.

Phoenix Precision Graphics, Phoenix 360e, a 400 dpi electrostatic printer, the lowest price of this technology ever produced. The company went bankrupt rather quickly.

RasterGraphics, PiezoPrint 5000, six color piezo.
RasterGraphics, PiezoPrint 6000
RasterGraphics Piezo Print 1000, evidently a rebranded Mimaki
RasterGraphics, Arizona 30, former ANAgraph SpectrumJet now the Gerber Orion
RasterGraphics Digital Color Station 5442, an electrostatic printer. Although no longer being manufactured, this electrostatic printer is still being sold by Specialty Toner Corporation. The combination of this printer and their toner offers the best quality we have yet seen in an electrostatic printer. Otherwise, RasterGraphics (Arizona) is now part of Gretag.

Roland DGA Corp, ColorCAMM Pro, a 24” thermal transfer printer using narrow ribbons
Roland CammJet CJ-60, CJ-70; prints and cuts.
Roland Hi-Fi Jet, nice quality; may experience banding; may occasionally get color inconsistencies; several widths.
Roland Hi-Fi Pro, 8 color; very nice quality, extremely slow (may take up to two hours for one single print) but can also be run with dual sets of 4 colors in less slow mode but at correspondingly at less quality.
One of the Roland 8-color models now comes in a 62” width. As of summer 2002 Roland still was using the older Epson printheads; no Roland printer yet successfully employs the newer Epson 10000 printheads (used in the Mimaki JV4 and Mutoh Falcon II).
Roland SoiJet is Roland’s version of a solvent ink printer. SoiJet also cuts.
There are also several after-market versions with a different name (SolventJet) with more aggressive solvent inks. See FLAAR Reports on solvent inks.

Salsa (Signtech), now owned by Nur.

**Scitex-Vision.** Not always easy to keep track of the various Scitex companies. The original Scitex prepress company was devoured by Creo. Scitex-Vision sells only solvent ink and/or grand format printers.

- Scitex Grand Jet S5, S3, S2 (ScitexVision), GrandJet V, ScitexVision, Idanit.
- ScitexVision, Green

Scitex also makes the Scitex Pressjet, and Scitex Pressjet-3M.

**Seiko Instruments** (Seiko I InfoTech), IP-4500, 54", Xaar heads, This uses oil-based paints; unimpressive output other than speed which is okay. Claims 720 dpi but unsure whether that is “apparent” or actual. Quality is not acceptable for true 720 dpi.

- Seiko IP-4500 Mk-II, 54" and 36" Seiko IP-4010 Mk-II
- Lyson inks has marketed a solvent ink version of the Seiko printer, their Tiara.

Selex, SG 950-T, 360 dpi, absorbed by Canon, resurrected as Canon BJ-7000, outmoded.

- Selex SG-950-E

Siasprint Sias Digital K1520, UV curable inks, for printing on rigid and/or thick materials.

**SignArt,** see GCC SignArt Nautilus

**Signtech,** PowerJet PJD-16, airbrush at a mere $653,000.

SignWarehouse, OEMs the Mutoh as the PrismJet. I don’t understand how a production shop can produce enough prints with a machine as slow as anything with an Epson piezo printhead. If you have to produce more than one print, such as 100 copies of the same POP sign, piezo printers are rather slow. Also, piezo printhead systems may not be ideal for doing backlit (ink is not adequate when illuminated from behind).

**SIM,** Steward of International Marketing. Rebranded solvent ink printer from D.G.I., Korea. Appears to be identical printer as sold by another company under their house brand Aztek. Offhand looks like a Mutoh with bulk-ink attachment but I have not analyzed this machine up close. Comes in four-color in 62 inch model (REX-62) and 92” model (VT-92). www.simmagic.com
Comprehensive list of all wide format printers that ever existed

Sintesi, ColorSurf, an Italian Mutoh redesigned for dye sublimation using ColorGate software RIP. Nice quality. Probably not available in the USA.

SolventJet, aftermarket retrofitted solvent ink HiFi Jet Roland. Sold by Ahern & Soper, All Graphics Supplies, NIDI Technologies, and Splash of Color. Before you buy be sure you speak with an independent sign shop who actually uses this printer. Ask about whether the solvent ink dissolves or clogs the Epson printheads. These printheads were not made by Epson to be used with solvent inks.

Specialty Toner Corporation, actually makes the toner for electrostatic printers but also has taken over the distribution of the RasterGraphics electrostatic printer.

**Stork Screens**, two of their models are relabeled Mimaki textile printers; their other model is herz technology from a different manufacturer. High quality from a well-known international company dedicated exclusively to printing on fabric.

Stork Amber, 7 head Mimaki design, reactive ink, acid ink, 720 dpi Epson piezo.

Stork Zircon, 8 heads, piezo, disperse dyestuff ink, roll to roll dedicated textile printer primarily for polyester. Direct printing on textiles.

**Summa** Digital Imaging Technology (formerly WestComp),

SummaChrome thermal transfer, 406 dpi
SummaCut, straightforward traditional vinyl cutter
SummaSignPro, straightforward traditional vinyl cutter
Sumagraphics Summajet
DuraSign, vinyl cutter for DuraChrome images.
DuraChrome, thermal transfer ribbons, CMYK but can switch colors among 8; 50” on 54” material.

SummaChrome seems to be an earlier model whose name has been discontinued; evidently replaced by the DuraChrome.

Syngery Scotchprint (don’t know anything but the name)

**TampoPrint**, DMD Typhoon, DMD-DMP Screen Press. Have no idea where I heard about this rare German printer. Piezo, 300 dpi, up to 4” thick.

TechJet 5500, brand name of CalComp

**Tektronix**, Phaser 600, formerly made by Mutoh for Tektronix, solid ink (melted wax). When Xerox bought Tektronix it allowed the Phaser 600 to gracefully disappear. Not recommended even when new.

Texjet 152, see Color Wings
**Tiara**  Sapphire, solvent ink printer from Lyson and partners, based on the Seiko Instruments printer, originally made to print with oil-based inks.

**Varitronics**, a Brady Company, poster printer, several models. Thermal transfer, somewhat outmoded, not recommended because this is only for simple signs not fully digital for text plus photographic realism.

- Varitronics Pro36 Color PosterPrinter
- Varitronics ProImage XL3000 PosterPrinter
- Varitronics ProImage Plus PosterPrinter

Veritas, Sys V36, thermal (old fashioned CAD printer).

Virtu, see Leggett & Platt Digital Technologies.

**Vutek** make a variety of grand format solvent ink printers; Ilford OEMs several of their models in the USA. DuPont OEMs a textile printer from Vutek. Following are all new or current models.

- Vutek PressVu for doing rigid thick objects.
- Vutek Press Vu UV 180 EC, UV-curable inks.
- Vutek 2360 EC, 2360 FC and 2360 SC, solvent ink, 80” printability on 82” substrate, six colors

- Vutek UltraVu 2600 EC
- Vutek UltraVu 3300, solvent-based inks, 138” width, probably 4 colors (brochure does not say)
- Vutek UltraVu 3360 EC, FC and SC 360 dpi (ads claim 720), eight color.
- Vutek UltraVu 5300, solvent-based inks, 204” width, probably 4 colors (brochure does not say)
- Vutek UltraVu 5330 EC

Vutek, like most manufacturers of billboard printers, started out with airbrush technology. Vutek 3200i sold for $600,000.

**Westcomp** (now Summa Inc).
Western Graphtec SignJet Pro, see Graphtec

**Xerox, ColorgrafX Xpress** (now XES, Xerox Engineering Systems)
Xpress, Xaar piezo heads, oil-based inks. Low quality due to being oil-based and with Xaar heads, excessively expensive (especially the RIP) and on these grounds many people were upset.

- Xerox VivagrafX XL and XL 50 (Encad OEM)
- Xerox 2230ij (Encad OEM)
- Xerox ColorgrafX electrostatic printers died out years ago.
- XES ColorgrafX X2, oil-based, Xaar printheads; introduced at CeBIT 2001. Fast but quality is only average. You need to add up what other printers you could obtain for the same price. If you can buy five other printers for the cost of a single XES ColorgrafX X2 then you need to decide which solution is better for your needs.
- XES X2-Tech, for CAD, GIS, but very very expensive. Compare your advantages of buying two, three, or four other normal printers for less than the price of one single XES X2-Tech.
ZBE, Chromira, photo printer, LED photo imager. These are digital darkroom printers so to speak, not inkjet. See also the competition, Durst Lambda and CymbolicSciences LightJet. If you are in this league, might as well get the best available, namely the LightJet.

Zund, UV cured; flatbed printer. Over $100,000. Made in Switzerland.
Zund UV120-F
Zund UV215-C

We welcome information from readers about printers we have never heard about. We also appreciate it when you point out errors or omissions. We try to correct our reports. Contact: FLAARtest@aol.com

We will gradually add more of the printer specs as time and funding permit.

Other reports, in PDF format for easy transfer via e-mail

The following reports are being made available in instant PDF download format directly from the FLAAR web sites.

List of all Major Manufacturers and Resellers of Media for Signs, CAD-GIS, Photos, and Fine Art Giclee Printing with Inkjet Printers

All the Kinds of Profitable Things you can Print with a Large Format Inkjet. Whether you have a commercial sign shop, print shop, repro shop, in-house graphics department, photo studio, artist studio, or even for home use as a hobby, this FLAAR report is an informative list of all the things you can print for fun and profit.

Comprehensive inventory of RIPS: alphabetical list of all hardware PostScript RIP plus all software PostScript RIPS.

Used large format printers (in most cases it’s not a good investment, but there are a few used printers that still have a long life ahead of them). So it helps to know which models are good and which to avoid. Currently you can obtain HP DesignJet 2000, 2500, 2800, 3000, 3500, and 3800 at super low prices on demo models yet still get full HP factory warranty. Thus you can get a 36” or even 54” professional printer at close to the price of a lesser 24” printer.

Topics FLAAR does not cover. Please do yourself a favor, and be kind to all of us who work at answering your questions, namely read this report if you are unsure whether FLAAR can help you. As the number of requests rises we can only answer the questions that pertain to our sphere of influence.

This means we are unable to answer countless other questions. So before you get your hopes up, please download this list and save both of us lost time and energy. There are about 10 areas of printing that we absolutely do not cover whatsoever. Nor are we able to suggest who can cover these topics. So please check out this “list of all the topics that FLAAR is unable to assist you on…. “
Reports themselves and this list prepared by Nicholas Hellmuth, FLAAR, sent to you by the staff of the Digital Imaging Technology Center, Francisco Marroquín University.

If you like the reports and appreciate this free service, if you can tell other people about our web sites, that's a nice way to say "thank you" for the reports.

**Credits:** lists originally compiled from [www.digit.hu/digitad.html](http://www.digit.hu/digitad.html); Seybold Report on Publishing Systems Vol. 24, No 21 and other numbers of this series; available on [www.seyboldseminars.com](http://www.seyboldseminars.com); Sign Business, April 2001, pp. 85ff. Another industry list was in the March 2002 issue of Electronic Publishing, pp. 24-25, but did not have a complete list.

We are very proud that the FLAAR list is longer and more complete than in any trade magazine or than on any other web site which we have found so far. When they in turn borrow from our list, we would appreciate an appropriate citation.

**Advisory**

We are quite content with the specific printers we have in the two FLAAR facilities at the two universities. We would obviously never ask for a printer that we knew in advance would not be good.

But we can't guarantee or certify any make or model because we don't know the conditions under which a printer might be utilized in someone else's facility. Heat, humidity, dust, experience level of your workers (whether they are new or have prior years experience): these are all factors that will differ in your place of business as compared with our two universities.

Actually you may have people with even more experience than we do, since we deliberately use students to approximate newbies. FLAAR is devoted to assisting newcomers learn about digital imaging hardware and software. This is why Nicholas Hellmuth is considered the “Johnny Appleseed” of wide format inkjet printers.

Just remember that every machine has quirks, even the ones we like. However it may be that the specific kind of printing you need to do may never occasion that shortcoming. Or, it may be that your printer was manufactured on a Monday and has defects that are atypical, show up more in the kind of media you use which we may not use as often during our evaluations. Equally possibly a printer that was a disaster for someone else may work flawlessly for you and be a real money maker for your company.

Thus be sure to test a printer under your own specific work conditions before you buy. Check with other people in your area, or in the same kind of print business that you do. Don’t rely on references from the reseller or manufacturer (you will get their pet locations which may be unrealistically gushy): find someone on your own.

Although we have found several makes and models to work very well in our facilities, how well they work in your facilities may also depend on your local dealer. Some dealers are excellent; others just sell you a box and can’t provide much service after the sale. If you pay low-bid price, you can’t realistically expect special maintenance services later on. Indeed some low-bid internet sales sources may have no technical backup whatsoever.

Most of the readers of the FLAAR Reports look to see what printers we use in our own facilities. Readers realize that we will have selected the printers that we like based on years of experience and research. Indeed we have met people at trade shows who told us they use the FLAAR web site reports as the shopping list for their corporate purchases.
Yes, it is rather self-evident that we would never ask a manufacturer to send a product which we knew in advance from our studies was no good. But there are many printers which are great but we simply do not have them in our facilities. For example there are three Mimaki printers we would love to have (their flatbed, their textile printer, their JV4).

We would definitely like to have a Gradco Mammoth (flatbed up to 3 inches). Would like to evaluate an Encad NovaJet 880 to print on thick material (up to half an inch if I remember correctly).

If Roland were to come out with an 8 color version of Epson’s 10000 printhead generation which offered 32 passes, wider than Epson’s 44 inch limit and no banding that would be the ultimate fine art giclée printing factory. But since that printer does not exist, the art students on our campus use our HP DesignJet 5000. The art department does museum exhibits and wins awards with the output.

We are also interested in the Western Graphtec cutter-printer with eight heads (their new model as of year 2001).

So again the suggestion: be sure to ask around in other print shops, with IT people in other corporations, at your local university or community college. Go to tradeshows….but don’t use the booth…ask questions of people in the elevator, in line at the restaurant, anywhere to escape the smothering hype you get in the booth.

Acknowledgements

Fortunately the two universities cover most of the operating costs of FLAAR on their campus, so our budget is lean and cost effective as you would expect for a non-profit research institute. Thus we do not really have much incentive to pocket hush money from producers of lousy products nor special funding from companies who make the better products. We feel that the pros and cons of each product speak more than adequately for themselves. Just position the ad claims on the left: put the actual performance results on the right. The unscrupulous hype is fairly evident rather quickly.

Does not take any money to see which printers function as advertised and which don’t. We saw one hyped printer grind to a halt, malfunction, or otherwise publicly display its incapabilities at several tradeshows in a row. At each of those same tradeshows another brand had over 30 of their printers in booths in virtually every hall, each one producing museum quality exhibits. Not our fault when we report what we see over and over and over again. One of our readers wrote us recently, “Nicholas, last month you recommended the …… as one of several possible printers for our needs; we bought this. It was the best capital expenditure we have made in the last several years. Just wanted to tell you how much we appreciate your evaluations…."

We thank BEST (RIPs), ColorDNA, ColorSpan, DWI Inc, Improved Technologies, Hewlett-Packard (May 2000 to May 2001), Parrot Digigraphic, PerfectProof (RIP), Scarab Graphics for providing funding to improve the design and appearance of the web sites of the FLAAR Information Network. We thank ColorSpan and HP for providing wide format printers to the two universities where FLAAR does research on wide format digital imaging. We thank Epson America for providing a printer to our facilities at Francisco Marroquin University and Parrot Digigraphic for providing a different model Epson to our facilities at BGSU. We thank 3P Inkjet Textiles, TAL, and HP for providing inkjet textiles so we could learn about the different results on the various textiles.
3P Inkjet Textiles, ColorSpan, Encad, HP, Nan Ya Pepa, Oracal, Tal and other companies have provided inkjet media so we can try it out and see how it works (or not as the case may be; several inkjet media failed miserably). We thank Aurelon, BEST, ColorGate, ColorSpan, HP, PerfectProof, PosterJet, Ilford, ScanvecAmiable, Wasatch and many other RIP companies for providing their hardware and software RIPs.

We really liked some of the results whereas some of the other products were a bit disappointing. Providing samples does not influence the evaluations because the evaluators are students, professors, and staff of Bowling Green State University and Francisco Marroquin University. These personnel are not paid by any inkjet printer company; they are all paid by their respective universities (as is also true for Nicholas Hellmuth). The testing person for the HP ColorPro (desktop printer) said he frankly preferred his Epson printer. When we saw the rest results we did not include this Hewlett-Packard ColorPro printer on our list of recommended printers, but we love our HP DesignJet 5000ps so much we now have two of them, one at each university.

Some of the media provided to us failed miserably. Three printers failed to meet common sense usability and printability standards as well. One costly color management software package was judged “incapable” by two reviewers (one from the university; second was an outside user who had made the mistake of buying this package).

So it’s obvious that providing products or even a grant is no shield from having your products fail a FLAAR evaluation. The reason is clear: the end user is our reader. The entire FLAAR service program is to assist the people who need to use digital imaging hardware and software. If a product functions we find out and promulgate the good news. If a product is a failure, or more likely, needs some improvement in the next generation, we let people know. If a product is hyped by what an informed user would recognize as potentially false and misleading nonsense, then we point out the pathetic discrepancies very clearly.

This is what you should expect from an institute which is headed by a professor.

Actually, most of our reviews are based on comments by end users. We use their tips to check out pros and cons of virtually every product we discuss. You can’t fool a print shop owner whose printer simply fails to function as advertised. And equally, a sign shop owner who earns a million dollars a year from a single printer brand makes an impact on us as well. We have multiple owners of ColorSpan printers tell us that this printer is their real money earner for example. We know other print shops where their primarily income is from Encad printers. Kinkos has settled on the HP 5000 as its main money maker production machine, and so on.

Yet we have documentation of several print shop companies whose business was ruined by specific brands that failed repeatedly. It is noteworthy that it is always the same two brands: one due to banding and printheads then simply no longer printing one color; the other brand due to pokiness of the printer simply not being competitively fast enough.

Grant funding, demonstration equipment, and training are supplied from all sides of the spectrum of printer equipment and software engineering companies. Thus, there is no incentive to favor one faction over another. Every printer, RIPs, inks, or media we have reviewed have good points in addition to weaknesses.

It is not our fault if some printers are more user friendly, print on more media than other brands. It is not our fault that the competing printers are ink guzzlers, are slow beyond belief, and tend to band or drop out colors all together.

We don’t need to be paid by the printer companies whose products work so nicely in both our universities on a daily basis. And actually we do try to find some redeeming feature in the slow, ink gulping brands: they do have a better dithering pattern; they can take thick media that absolutely won’t work in an HP.
So we do work hard at finding the beneficial features even of printers are otherwise get the most critique from our readers. Over one million people will read the FLAAR Information Network in the next 12 months; 480,000 people will be exposed to our reports on wide format printers from combined total of our three sites on these themes. You can be assured that we hear plenty of comments from our readers about which printers function, and which printers fail to achieve what their advertising hype so loudly claims.

We turn down offers of funding every month. These offers come from PO Box enterprises or products with no clearly visible point of manufacture. Usually the company making the offer presumes they can buy advertising space just by paying money. But that is not what our readers want, so we politely do not accept such offers of money.

Grant funding is, however, open to a company who has an accepted standing in the industry. It us helpful if the company has a visible presence and can provide references from both end users and from within the industry. Where possible we prefer to visit the company in person or at least check them out at a tradeshow. Obviously the product needs to have a proven track record too. Competing companies are equally encouraged to support the FLAAR system. We feel that readers ought to have access to competing information. Competition is the cornerstone of American individualism and technological advancement.

FLAAR also covers it’s costs of maintaining the immense system of 12 web sites in three languages and its two university facilities in part by serving as a consultant such as assisting inkjet manufacturers learn more about the pros and cons of their own printers as well as how to improve their next generation of printers. FLAAR also serves as consultants to Fortune 500 companies as well as smaller companies and individuals who seek help on which printers to consider when they need digital imaging hardware and software.

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